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Mid-Level Providers in Minnesota's Primary Care Centers: A Profile

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Mid-Level Providers in Minnesota's Primary Care Centers: A Profile

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Prepared in response to a charge by the Department of Health and Human Services, Bureau of Primary Health Care, for the Primary Care Cooperative Agreement

Introduction

This report was prepared in response to a charge by the Public Health Service, Bureau of Primary Health Care (BPHC), to the Office of Rural Health, as the Minnesota Primary Care Cooperative Agreement agency, to develop a report summarizing the factors that facilitate or inhibit the use of Nurse Practitioners (NPs), Certified Nurse Midwives (CNMs), and Physician Assistants (PAs) in community based primary care centers and recommending strategies to overcome barriers to the use of interdisciplinary practice models. The report will focus on several key issues, such as educational programs, licensing/registration/certification processes, scope of practice, and reimbursement. It will examine these issues and will go on to explore the use of mid-level providers in the State's Community and Migrant Health Centers (C/MHCs) and Health Care for the Homeless Project (HCHP).

Nurse practitioners, certified nurse midwives, and physician assistants are members of a broader group of health care professions commonly referred to as Mid-Level Providers (MLPs), Physician Extenders (PEs), or Non-Physician Providers (NPP). Nurse practitioners often serve as the regular health care provider for children and adults during health and illness. Although NPs independently manage the care of healthy and chronic patients, each NP is affiliated with a physician who is available for consultation and/or referral (American Academy of Nurse Practitioners, The Nurse Practitioner). Nurse midwifery practice is the independent management of care of essentially normal women and newborns. This care occurs within a health system which provides for medical consultation, collaborative management, and referral. PAs practice medicine under the supervision of licensed

physicians. The tasks PAs perform depend on practice setting and state laws and regulations (Wellever, Moscovice, Hill, & Casey, 1993).

Educational programs for nurse practitioners and physician assistants were initially established in the late 1960s in response to a perceived shortage and/or maldistribution of primary care physicians (Office of Technology Assessment, 1986). Mid-level providers have demonstrated the ability to perform many routine primary and preventive care functions with quality of care as high as or higher than that of a physician (American Nurses Association, 1992; Robyn & Hadley, 1980). In the past decade, relaxation of restrictions related to licensing and reimbursement have encouraged greater use of MLPs, and policy at both the state and federal level has fostered MLP practice in rural and medically underserved areas.

The data in this report was gathered from several different sources. Written surveys (see Appendix A, MLP Survey Instrument) were mailed to the Community and Migrant Health Centers and the Health Care for the Homeless Project, followed by structured interviews with administrators/directors (see Appendix B for List of Respondents). Questions were asked about MLP's practice, factors influencing current use of MLPs, and recommendations for changes that would facilitate greater use of MLPs. Information was also gathered by contacting MLP educational programs and state associations for MLPs. Secondary data sources included State statutes and administrative rules, Medicaid reimbursement manuals, reports from the Minnesota Academy of Physician Assistants and the American Nurses Association, a report from the University of Minnesota, Reimbursement and the Use of Mid-level Practitioners in Rural Minnesota; two reports from the Office of Technology Assessment--Nurse Practitioners, Physician Assistants, and Certified Nurse-

Midwives: A Policy Analysis, and Health Care in Rural America; and two reports from the Bureau of Health Professions, Interdisciplinary Development of Health Professionals to Maximize Health Providers Resources in Rural Areas and Access to Rural Health Care: Barriers to Practice for Non-Physician Providers.

This paper is divided into three sections. The first describes MLPs and profiles their use in Minnesota. It goes on to discuss available educational programs for MLPs in Minnesota, licensure/registration and certification requirements, scope of practice regulations, and reimbursement issues. The second section examines barriers to use of MLPs and factors that enhance their use at community based clinics. The third section discusses the recommendations of the primary care centers and concludes with an assessment of the potential for implementation of interdisciplinary practice models.

Mid-Level Provider Practice in Minnesota

Profile of Mid-Level Providers

Despite a shortage of primary care physicians in rural areas of Minnesota and for underserved populations (all or part of 52 of 87 counties are Health Professional Shortage Areas [HPSAs]), mid-level practitioners are not widely used in Minnesota.

The Minnesota Nurses Association (1993) estimates that about 1,000 NPs practice in Minnesota. This estimate is based on its membership list and certification lists of professional associations. No complete list of Nurse Practitioners in Minnesota exists, because the Board of Nursing's licensing records do not distinguish between registered nurses

and those in advanced nursing. Nor is a distinction made between practicing nurses and those who hold licensure but are not employed in nursing.

According to a 1991 estimate based on Minnesota Nurses Association NP membership lists and a national obstetrics-gynecology NP certification list, 16 percent of Minnesota NPs were practicing outside of the state's five metropolitan statistical areas (Minnesota Department of Health, 1991), (see Appendix C for a map of Nurse Practitioners in Minnesota Counties). Although this map does not accurately represent the number of practicing NPs, it illustrates that the majority of NPs are based in major metropolitan areas. Most non-urban counties have a maximum of 1 to 2 nurse practitioner residents. Based on the same data set, the ratio of NPs-to-population for rural Minnesota was 6.8:100,000. The ratio for the five urban counties was 21.5:100,000. The statewide ratio was 16:100,000 (Minnesota Department of Health, 1991). In 1988, the NP-to-population for the United States was approximately 22.9:100,000 or approximately 43 percent greater than the Minnesota ratio (OTA, 1990).

Approximately 106 licensed CNMs were practicing in Minnesota, based on figures of the American College of Nurse Midwives (1990). About 15 other CNMs were licensed to practice, but had temporarily or permanently withdrawn from practice (Wellever et al., 1993). In 1990, there were 13 certified nurse-midwife practices in the state: 4 in Minneapolis, 3 in Fargo/Moorhead, 2 in Fergus Falls/Perham, 1 in Long Prairie, and 1 in Alexandria. The non-metro county practices together employed 5 CNMs (ACNM, 1990). The CNM-to-population ratio of Minnesota (2.4:100,000) was comparable to the national average (OTA, 1990).

Physician assistants are not abundant in Minnesota, with only 170 PAs practicing in the State, according to membership rosters of the Minnesota Association of Physician Assistants (MAPA, 1992). According to MAPA, approximately 44 percent of Minnesota PAs work in communities with populations of less than 50,000, and almost 24 percent work in communities with fewer than 5,000 residents (MAPA, 1992), (see Physician Assistants in Minnesota map in Appendix D). The ratio of PAs to population is 2.6:100,000, the lowest in the Midwest, with North Dakota, South Dakota, and Wisconsin having rates more than double the Minnesota rate (MAPA, 1992).

The Office of Rural Health (ORH) is currently involved in efforts to collect comprehensive data on number, location, and practice of nurse practitioners, certified nurse midwives, physician assistants, and other health professionals. ORH staff are working with the State Board of Nursing to finalize a form that will be included with licensure materials (see Appendix E, Draft Registered Nurse Practice Related Data Form) to gather accurate and comprehensive information on the nurse practitioners and certified nurse midwives in Minnesota. The data will include nurses' professional activity, practice setting, educational level, FTE, and will identify advanced nurses who are certified, seeking certification, or practicing, and document their specialties. The collection of data on NPs and CNMs will begin this year, but the data set will not be complete until December of 1995 because nurses renew their licenses biannually. The ORH is also cooperating with the State Board of Medical Practice to gather data on registered PAs in the State and their practice location. The first complete set of data will be available by June, 1994.

Educational Programs for Mid-Level Providers

There are currently three nurse practitioner programs located in Minnesota: the College of St. Catherine, the University of Minnesota, and Planned Parenthood of St. Paul. The College of St. Catherine offers a nurse practitioner program with sequences in neonatal, adult, gerontologic, and pediatric primary care. Pediatric and adult/gerontological nurse practitioner education began in the School of Public Health at the University of Minnesota in the late 1960s and early 1970s. These programs were moved to the College of St. Catherine as a certificate program in the early 1980s. St. Catherine's began offering a master's degree in 1990. A total of 103 students have graduated from the program. The University of Minnesota School of Nursing reinstituted its nurse practitioner program with an emphasis on gerontology in 1991; students earn a master's degree through this program. A pediatrics area was added in 1992 and a family practice specialty in 1993. These programs have graduated 17 students and have 40 current enrollees. Planned Parenthood in St. Paul established an obstetrics/gynecology program in 1975, it remains a certificate program and has 10 students enrolled.

Recent legislation has lent further impetus to the expansion of training opportunities for mid-level providers. Minnesota's 1992 state health care reform legislation established a grant program for colleges or schools of nursing located in Minnesota that operate programs of study to prepare registered nurses for advanced practice as nurse practitioners. The graduate nursing education programs at the College of St. Catherine, College of St. Scholastica, University of Minnesota, and Winona State University to recruit students in greater Minnesota to nurse practitioner education and to develop clinical sites in rural areas.

Both the College of St. Scholastica and Winona State University are planning to enroll students in family and adult nurse practitioner sequences respectively in Fall 1994 (M. Wright, personal communication, October 27, 1993). The University of Minnesota established a partnership model with Moorhead State University in the 1992-1993 academic year to offer course work and clinical rotations for the master's degree in northwestern Minnesota, and Mankato State University plans to submit a proposal to the Higher Education Coordinating Board for a Master of Science in Nursing as a collaborative program with Metropolitan State University in St. Paul (M. Miller, personal communication, October 27, 1993). A part of that program includes a family nurse practitioner option.

There is one Certified Nurse Midwife Program, located at the University of Minnesota School of Nursing. The University of Minnesota program graduated its first class in 1975. It is a master's level program and graduates approximately 10 to 15 students per year. None of the states contiguous to Minnesota currently have nurse-midwifery programs, although one is being developed by the University of Wisconsin-Milwaukee, and the University of Iowa is evaluating the feasibility of starting a program (Wellever et al., 1993).

There are no physician assistant programs in Minnesota, although all of the states bordering Minnesota have training programs. There have been discussions regarding the joint development of a PA training program by Augsburg College in Minneapolis and the University of Minnesota-Duluth School of Medicine, focused on training family practice PAs oriented to practice in rural or other underserved areas. All PAs currently practicing in Minnesota have been recruited from other states (MAPA, 1992).

Licensing, Registration, and Certification Regulations

Nurse practitioners are certified by national professional nursing organizations representing the various specialties. The American Nurses Association certifies nurse practitioners in the specialties of gerontology, adult, family, school health, and pediatrics. The National Certification Board of Pediatric Nurse Practitioners and Nurses also certifies pediatric nurse practitioners and the Nurses Association of the American College of Obstetrics and Gynecology Certification Corporation certifies obstetric-gynecological nurse practitioners. The American Council of Nurse-Midwives or its designated certification board certifies graduates of accredited nurse midwifery programs. These organizations all administer national certification examinations. They attest to the clinical competence of nurses in specific areas of nursing practice and are recognized by the State of Minnesota as organizations capable of granting certification (see Appendix F, Advanced Nursing Practice Rules).

Nurses in advanced nursing practice (defined as health services by certified nurse practitioners, certified nurse midwives, certified clinical specialists, and certified registered nurse anesthetists) are licensed by the Minnesota Board of Nursing. The Advanced Nursing Practice Rules contain no additional licensing requirements beyond those for registered nurses (RNs). It is the certification by recognized professional nursing organizations that enables NPs and CNMs to engage in advanced practice. Licensing requirements for registered nurses include graduating from an approved nursing program and passing an examination administered by the Board of Nursing (see Appendix F, Advanced Nursing Practice Rules).

Physician Assistants are certified by the National Commission on Certification of Physician Assistants (NCCPA) after passing an examination developed by the National Board of Medical Examiners. In Minnesota, PAs are registered by the Minnesota Board of Medical Practice. There are currently three basic requirements for registration: 1) completion of a PA training program "approved by a national accrediting body of PA training"; 2) passing an examination "approved by the Board as assessing physician assistant skills"; and 3) an agreement between physician and physician assistant including plans for supervision of the PA, a description of the PA's duties, and a statement by the physician assuming full medical responsibility for the PA's patient services. Draft amendments to the PA rules, if passed, will modify the language to make the Committee of Allied Health Education and Accrediting the accrediting body for PA programs and to enable the National Commission on Certification of Physician Assistants to provide the PA examination.

In 1990, legislation was passed allowing informally trained PAs with 7 years of PA work experience prior to 1987 and certified by the NCCPA to be registered without requiring graduation from an accredited program. This legislation also permits permanent registration of a few PAs who were grandfathered into the registration system. Finally, PAs who have passed the National Board for Certification of Orthopedic Physician's Assistants are registered, but their practice is generally confined to orthopedics (see Appendix G, Physician Assistant Rules).

Scope of Practice

Advanced nursing practice is defined in Minnesota statute as the performance of health services by certified registered nurse anesthetists, certified nurse midwives, certified

nurse practitioners, and certified clinical specialists in psychiatric or mental health nursing. The Minnesota Nurse Practice Act, however, defines the practice of professional nursing broadly, as: 1) providing a nursing assessment of the actual or potential health needs of individuals, families, or communities; 2) providing nursing care supportive to or restorative of life by functions such as skilled ministration of nursing care, supervising and teaching nursing personnel, health teaching and counseling, case finding, and referral to other health resources; and 3) evaluating these actions.

The American Academy of Nurse Practitioners defines nurse practitioners scope of practice as providing nursing and medical services to individuals, families, and groups, emphasizing health promotion and disease prevention, as well as the diagnosis and management of acute and chronic diseases. Since 1990, NPs in Minnesota have had legislative authority to prescribe drugs and therapeutic devices if they have written agreements with a physician based on standards established by the Minnesota Nurses Association and the Minnesota Medical Association that define the delegated responsibilities related to the prescription of drugs and therapeutic devices (see Appendix H, Nurse Practitioner Prescribing Protocol).

The requirement that NPs have physician supervision to prescribe medications notwithstanding, NPs are independent practitioners. They are permitted to manage patients without physician supervision, to charge for services, and to receive payment directly for services. NPs typically establish collaborative relationships with physicians to assure continuity of care in cases where referrals are necessary. NPs may establish solo or group

independent nurse practitioner practices, joint practices with physicians, or they may work as employees of physicians, clinics, hospitals, or nursing homes (Wellever et al., 1993).

The American College of Nurse Midwives defines certified nurse midwife practice is the independent management of women's health care, focusing particularly on pregnancy, childbirth, the postpartum period, care of the newborn, and the family planning and gynecological needs of women. Certified Nurse Midwives were granted prescriptive authority in Minnesota in 1988. In contrast to the legislation granting NPs prescriptive privileges, there were no requirements for written physician agreements in the legislation governing nurse midwives.

Like NPs, certified nurse midwives practice independently; however, the Standards of Practice for Nurse-Midwifery promulgated by the American College of Nurse Midwives state that CNMs practice within a health care system that provides for consultation, collaborative management, or referral as indicated by the health status of the client. Thus, their practices are administratively independent, but not clinically independent from physicians.

PAs, on the other hand, must work with or under the supervision of physicians. In Minnesota, PA-delivered patient services are generally limited to services within the training or experience of the physician assistant; services customary to the practice of the supervising physician; and services delegated by the supervising physician. Specifically, services are limited to: taking patient histories and reviewing patient records; performing physical examinations; interpreting and evaluating patient data; initiating requests for, or performing, diagnostic procedures; performing therapeutic procedures; providing instructions and guidance regarding medical care matters to patients; assisting the supervising physician in the

delivery of medical services in the home and in health care institutions; and prescribing and administering legend drugs other than controlled substances, and medical devices, subject to the limitation of Minnesota Statutes, Section 147.34 and Chapter 151, and Minnesota Rules 5600.2600 to 5600.2670 (see Appendix G, Minnesota Medical Practice Act and Physician Assistant Rules). The legislation allowing prescriptive privileges was enacted in 1990. For PAs to use this prescriptive authority, an individualized protocol identifying the categories of medications which the physician will permit the PA to prescribe must be part of the PA's supervisory agreement.

Regarding general supervision requirements, Minnesota Administrative Rules 5600.2630 have established the following criteria:

1) A supervising physician must be able to be contacted within 15 minutes either in person or by telecommunication.
2) The supervising physician shall review and evaluate patient services provided by the PA on a daily basis from information in patient charts or records. Review may either be in person or by telecommunication.
3) A supervising physician shall be on site at facilities staffed by a PA if they are separate from the usual practice site of the supervising physician at least twice a week for at least eight hours a week during patient contact time.
4) A supervising physician may not supervise more than two PAs.
5) The prescribing, administering, and dispensing of legend drugs shall be done in accordance with Minnesota Statutes, Chapters 151 and 152.
6) The physician assistant and supervising physician shall ensure that an alternate physician is available to supervise if the supervising physician is absent.

Draft amendments to the PA rules would modify requirements for on-site supervision from once a week for at least 8 hours to once biweekly for a time sufficient to carry out supervisory duties but no less than a minimum of 5 percent of patient contact time. Other draft revisions include provisions for countersignature of therapeutic orders within 48 hours and expansion of the scope of practice to allow properly trained PAs to accompany

ambulances and provide emergency care under specific circumstances (Draft PA Amendments, 1993).

Reimbursement Policies

In recent years, the coverage of MLP services has broadened considerably. Although Certified Nurse Midwives under certain circumstances may be granted payments that are equal to those of physicians by some payers, PAs and NPs are generally reimbursed at rates lower than those of physicians (Wellever et al., 1993). The current reimbursement policies for Medicaid, General Assistance Medical Care (GAMC), and MinnesotaCare, and the general policies of private insurers are summarized below.

Medicaid, General Assistance Medical Care, and MinnesotaCare

The same reimbursement policies for mid-level providers apply to the State's Medicaid program, Minnesota Medical Assistance (MA), and to the programs for low-income, uninsured Minnesotans who do not qualify for Medicaid--General Assistance Medical Care (GAMC), and MinnesotaCare. Although Federally Qualified Health Center status entitles the community and migrant health centers in the State to cost-based reimbursement from Medicare and Medicaid, payment for GAMC and MinnesotaCare clients is on a fee-for-service basis and subject to the following policies.

In order to receive reimbursement as an advanced nurse under these programs, NPs must apply for enrollment. The ability to practice independently and a unique MA provider number constitutes enrollment. MA enrollment is open only to certified family, adult, geriatric, obstetric-gynecological, and pediatric nurses. Covered services for enrolled NPs are limited to services that are otherwise covered as physician services and within the scope

of practice of the nurse practitioner's license as a registered nurse. Enrolled NPs bill MA under their own provider number and are reimbursed at 90 percent of the physician rate. All non-enrolled NPs are considered physician extenders and reimbursed at 65 percent of the amount that the physician would have received for the same service (Department of Human Services, 1993). According to McMorran (1993), because the Minnesota nurse licensing procedure does not distinguish between registered nurses and advanced practice nurses, enrollment is the mechanism that allows Medicaid to distinguish between services provided by NPs and RNs.

CNM services for maternity and newborn care through the maternity cycle are covered by MA. MA reimburses CNMs for obstetric care at rates which are equal to those of physicians. When billing for services, CNMs do not use modifier codes. For services other than maternity and newborn care during the maternity cycle (such as well-woman gynecology), CNMs are required to use modifier codes when billing and receive 65 percent of the physician rate.

Under the MA program, PAs are also considered physician extenders (along with non-enrolled NPs, RNs, genetic counselors, or respiratory therapists); however, because of their broader scope of practice and prescriptive rights, they are reimbursed at 90 percent of the physician rate. PAs may be employed by physicians, by a provider organization, or be self-employed; however, they must be supervised by a physician. The Medicaid supervision requirements for physician extenders exceed those of the state practice law. MA policy dictates the following conditions: 1) The physician must be present and available on the premises more than 50 percent of the time when the supervisee is providing health services

to MA clients; 2) the diagnosis must be made or reviewed, approved, and signed by the physician; 3) the plan of care for a condition other than an emergency must be reviewed, approved, and signed by the physician before care is begun. The supervisee may carry out the treatment, but the physician must review and countersign the record of treatment within 5 working days after the treatment. PAs services are reimbursable only if they replace or substitute for physician services. PAs may provide any service within their scope of practice or as delegated and supervised by a physician (Department of Human Services, 1993).

Private Health Insurance

Minnesota law requires that all health and nonprofit health service group policies cover services provided by licensed registered nurses who are "certified by the profession to engage in advanced nursing practice" (Accident and Health Insurance Act, Minnesota Chapter 62A.15). As examples of advanced nursing practice, the statute cites nurse anesthetists, nurse midwives, nurse practitioners, and clinical specialists in psychiatric or mental health nursing (see Appendix I, Minnesota Accident and Health Insurance Statute). According to Wellever et al. (1993), the right of advanced nurses to receive direct payment is recognized implicitly. PAs are not specified in the statute, but most insurers cover their services.

The provision of the law "is not intended to add to the benefits provided for in [accident and health] policies or contracts" (Accident and Health Insurance Act, Minnesota Chapter 62A.15). In other words, the extension of coverage to NPs and CNMs is for traditional medical services of the type routinely provided by physicians. Third-party payers are not required to cover specific nursing services such as patient education and counseling.

Although the law settles the issues of coverage and direct payment, it provides no direction on the issue of conditions and payment parity. Consequently, private third-party payers vary considerably in their treatment of MLPs (Wellever et al., 1993). Each insurance company has a different procedure for enrollment and billing, and some discount MLP services or limit payment under certain conditions.

Factors that Affect Use of Mid-level Providers in Minnesota's Bureau of Primary Health Care Funded Primary Care Centers

In order to identify factors that affect use of mid-level providers in Minnesota's seven Community and Migrant Health Centers (C/MHCs) and the Health Care for the Homeless Project (HCHP), a survey was distributed and follow-up telephone calls were made. The respondents included the administrators, directors, supervisors, or executive directors of the following primary care centers: Cook Area Health Services, Inc.; Cook County Community Clinic, Inc.; Fremont Community Health Services, Inc.; Hennepin County Community Health Department (Health Care for the Homeless Project); Indian Health Board of Minneapolis, Inc.; Migrant Health Service, Inc.; Model Cities Health Center, Inc.; and West Side Community Health Center (La Clinica). These centers and projects exhibit marked differences in their client populations and practice settings--four are urban centers serving ethnically diverse populations of Native American, Hispanic, Hmong, African-American people, as well as the homeless and residents of public housing projects. Two operate in sparsely populated rural areas (one is in a frontier county) and one serves the State's migrant population. Directly and indirectly, these factors can impact their use of MLPs.

Of the 8 CHCs and HCHPs in Minnesota, 6 employ nurse practitioners or certified nurse midwives. One employs physician assistants, and 1 had previously employed a PA. Two employ no mid-levels. Of the 6 who employ mid-levels, all but 1 have employed mid-levels for at least 5 years; one has employed nurse practitioners for 20 years and another for 22 years. One center employs CNMs and an Ob-Gyn NP; the rest employ family, pediatric, and adult nurse practitioners. Of the two without MLPs, one is a migrant health center whose seasonal operations preclude the employment of full-time staff. The center operates on a "voucher system," whereby registered nurses provide basic screening and preventive services and dispense vouchers that clients can use to obtain health care from practitioners in the community. The other, a community health center, serves a large, sparsely populated rural geographic area and does not employ MLPs because of its requirement that practitioners staff the emergency room of the local hospital in addition to providing outpatient clinical services.

Minnesota has recently addressed several barriers to MLP practice by actions such as enacting legislation giving prescriptive privileges to nurse practitioners and physicians assistants, extending third-party coverage to MLPs, and increasing the level of payment for services through Medicaid. In terms of the issues of continuing concern to Community and Migrant Health Centers in the State of Minnesota, the results of the survey follow.

Reimbursement Issues

When asked about factors that affected use of mid-level providers, four of the clinics reported that reimbursement issues had a negative impact. Although C/MHCs receive cost-based reimbursement from Medicare and Medicaid, community insurers vary considerably in

their payment to mid-level providers. Furthermore, for clients that are on state General Assistance Medical Care or MinnesotaCare, fees are reimbursed on the discounted fee-for-service basis. Several administrators believed that Medicare and Medicaid's reduced payment schedule for services provided by mid-level practitioners along with the increased supervisory requirements negatively influenced MLP practice generally.

Liability Issues

According to one clinic administrator, physician's liability for services provided by MLPs is a barrier to MLP practice. Because physicians can be sued for malpractice by virtue of their supervisory capacity for PAs or can be sued jointly with NPs due to their collaborative relationship, they bear some legal risk even when MLPs are making the primary diagnostic and therapeutic decisions.

Prescriptive Privileges

Prescriptive privileges were cited as a hindrance by two clinics, but for divergent reasons. In one instance, the stated problem was that NPs wanted more aggressive prescribing privileges than the physicians and administrator believed were appropriate for their training. In another case, the administrator thought that the range of drugs that the NPs were able to prescribe should be broadened. A third clinic mentioned that the ability to prescribe medication positively affected its decision to employ MLPs.

Supply

The major recruitment problem for Community and Migrant Health Centers and Health Care for the Homeless Projects in Minnesota was supply. As stated earlier, there are no physician assistant programs in the state, and until recently, there was only one program

in the state that trained family NPs. The University of Minnesota's family nurse practitioner program and the planned programs at St. Scholastica and Winona State University should help address this problem. Three clinics mentioned their difficulties recruiting family nurse practitioners with appropriate experience because of the shortage of education programs in the State. Another mentioned the possibility of employing a PA, if such a provider were readily available. Other than for family NPs, most clinics expressed a satisfaction with their ability to recruit mid-level providers. One administrator said that she expects the recruitment of mid-levels to become increasingly difficult as the professions gain recognition and acceptance as providers of primary health care. Even now, recruitment and retention is becoming more competitive as recruitment firms have begun to seek out nurse practitioners for private practice settings.

Scope of Practice

Four clinics reported that the inability of nurse practitioners, and MLPS generally, to provide hospital or trauma care without supervision was a major disadvantage of their practice. According to one rural CHC administrator, mid-levels are used only when the clinic is unable to recruit physicians. Because they cannot provide the full range of health care services, such as hospital inpatient and emergency room care without physician backup, employing MLPs does not ease the other physicians' on-call emergency workload. In solely primary care clinical settings, it appears MLPs can fit in quite well; but, in settings where trauma and hospital inpatient care constitute a significant share of providers' responsibilities, it is preferable to have a full physician staff, according to the administrator.

Attitudes toward Mid-level Providers

Physician attitudes are a major factor in the successful practice of MLPs in community health centers and other community-based clinics. Because they practice in collaborative or in direct supervisory relationships, a cooperative relationship between physicians and MLPs (as members of a health care team) is imperative to their successful practice. Four clinics stated that physicians accepted NP practice and had very positive attitudes toward NPs. Two clinics further explained that physicians consider NPs an essential part of the health care team; these positive attitudes were a major recruitment factor. On the other hand, one clinic identified physician attitudes as a barrier to increased use of MLPs, specifically nurse practitioners, due largely to "turf" issues and scope of practice issues.

To some degree, "turf issues" may reflect professional territorialism. Physicians are uncertain about the training and capabilities of nonphysician providers and question their ability to make medical decisions that were historically the province of physicians alone. Another physician concern is that quality of care may be compromised by use of MLPs. Physician-MLP collaboration requires a great deal of trust in the MLP's abilities as well as a willingness to let go of many routine aspects of patient care. A related issue was that of defining the parameters of NP practice. The absence of a definition in the State practice law leads some physician providers to question the boundaries of appropriate NP practice and to have difficulty differentiating their respective roles when practicing in a cooperative relationship. In one clinic, it was reported that a nurse practitioner treated conditions that exceeded his/her capacity to provide care and put patients in jeopardy.

The complementary role of nurse practitioners was identified as one major advantage of interdisciplinary practice by 6 out of the 8 clinics. The majority of the clinics who employed nurse practitioners agreed that they provided services complementary to physicians and that their nursing backgrounds in community/public health and education were particularly relevant to working with low-income, medically underserved populations. The two nursing skills most highly valued were those of patient education and case management. One administrator stated that NPs had an increased sensitivity to the particular needs of high-risk populations. Another considered their teaching skills "absolutely essential" for the community practice setting. According to a third, their nursing training gives them a more holistic approach to patients and their families, and their case management skills enable them to help the family deal with a range of economic and psychosocial issues that ultimately impact their health. A fourth reported that NPs were highly successful at educating patients and encouraging self-care and lifestyle changes to prevent disease recurrence or reduce symptoms. NPs' ability to conduct outreach education and services, such as immunization clinics, was singled out as another area of expertise that was highly relevant to community health clinics. In the opinion of several clinic administrators, their ability to practice with limited physician support was clearly an advantage.

Physician assistants were viewed as playing a different role than nurse practitioners by clinic administrators. According to the two clinics who had employed PAs, they have excellent technical skills and are capable of and competent in managing chronic diseases and assisting with minor surgery.

Five clinics reported that patients were very satisfied with MLP care. Client attitudes were identified as a barrier by only one clinic. Patients were reported to prefer seeing a doctor for their health care problems; this may be due to their unfamiliarity with the scope of nurse practitioner practice, a bias toward medical doctors, or simply bias toward male health care providers. On the other hand, a bias toward female providers for gynecological screening and related services was reported by two clinics.

Productivity

Productivity, defined as the number of clinic visits handled by a provider in a given period of time, was generally lower for mid-levels than for physicians, the clinic directors agreed. However, this "lower productivity" elicited both positive and negative comments. MLP "productivity" was considered a disadvantage associated with their practice in three clinics, because it affects access to services, length of wait for appointments, and fees generated for the clinic. One of the negative consequences of the mid-levels' lower productivity is that they tie up the facility's exam rooms. Furthermore, spending more time with individual patients and their families results indirectly in limiting the number of patients to which the clinic can provide services. Increased appointment time for each client leads to greater waiting times for walk-in patients, particularly for those clinics with substantial numbers of walk-in visits. Finally, lower productivity results in lower fees generated. On the other hand, it was posited that the increased appointment time is necessary because MLPs emphasize patient education and counseling for health promotion and disease prevention. This preventive approach, although requiring a greater time investment for each patient visit,

is believed by several administrators to benefit patients by helping them better understand their management plan and ultimately enhancing self-care.

Cost-Effectiveness

Although many of the primary care centers who responded to this survey rely heavily on cost-based reimbursement mechanisms and grant funds, four clinics stated that they considered mid-level providers to be cost-effective in providing routine care. Because of the lower costs associated with the education and employment of mid-levels, the use of MLPs is one means for providing affordable health care, several administrators acknowledged.

Recommendations of Primary Care Centers

In response to questions on how the state and/or federal government could facilitate their use of MLPs, the community and migrant health centers and the health care for the homeless projects had several recommendations. The recommendations include suggestions in both the regulatory and educational arenas.

Regulatory

Regulatory changes recommended include: 1) indemnifying physicians in legal/malpractice suits related to MLP practice; 2) clearly defining advanced nursing practice by setting practice parameters; 3) supporting coverage by all insurers for services provided by MLPs in the State's health care reform rules; 4) freeing advanced nurses from regulations that restrict their ability to practice independently; and 5) reimbursing MLPs at the same rate as physicians for providing the same services.

In terms of indemnifying physicians, the legislation that speaks to MLP liability precludes this approach to some degree. The Board of Medical Statutes (147.36) exempts registered PAs from prosecution as along as the PA acts within the scope of the registration system, the supervising physician agreement, and other requirements of Minnesota rules. The issue of malpractice as it impacts on NPs and CNMs and physicians with whom they have supervisory or collaborative relationships is less clear and varies depending on the type of relationship and the employment arrangement. According to the American Academy of Nurse Practitioners (1993), successful malpractice suits against NPs are rare. The liability issue is one that should be examined more closely; providing clinics and physicians information on the liability associated with MLP practice might be a positive approach to promoting interdisciplinary practices.

Clearly defining the duties and skills specific to a particular profession is considered one way to overcome professional territorialism (Department of Health and Human Services, 1993). A clear definition of practice parameters might promote better understanding and enhance the collaboration between various health care practitioners. PAs scope of practice is specifically defined in State rules. NP and CNM standards of practice are promulgated by the national certification organizations, but not defined in State statute. As in the statutes governing physician practice, this broad legislative definition allows flexibility as practice adapts to the changes in society (S. Stout, personal communication, October 20, 1993). This is a subject upon which there is no clear consensus.

Regarding the status of coverage for MLP services in the health care reform rules, MinnesotaCare legislation mandated that the health care reform rules must "encourage and

facilitate the participation of midlevel practitioners and pharmacists, and eliminate undesirable barriers to their participation in providing services" (Integrated Service Networks, Minnesota Laws, 1993). The draft rules have not yet been released, and the method by which that participation will be encouraged and the degree to which it will be regulated are still being determined.

The recommendation about freeing NPs from regulations that inhibit their ability to practice independently would involve several changes. The supervisory requirements for Medicaid and Medicare exceed those of State practice laws. The regulations that apply to MLPs vary depending on the patient populations that they serve and the areas in which they practice. For example, in Medicare policy, the level of reimbursement, the application of the "incident to" provision (which prohibits reimbursement for medical services by someone other than a physician except for those incident to the physician's professional services), and the option for direct payment vary depending on the practice site (clinic, hospital, nursing facility) and whether it is in a rural or urban area. Furthermore, private insurers' conditions have an effect on determining the potential for MLPs to practice independently.

Lastly, the recommendation about reimbursing MLPs at the same rates for physicians is quite controversial. Proponents argue that reimbursement should be based on the service provided, not the provider type, as long as that provider possesses the necessary training and skills and is operating within the legislated scope of practice. Opponents state that the costs of training and employing mid-levels is significantly lower than those for physicians; therefore, they should not be reimbursed at the same rate.

Educational

The two main recommendations by community and migrant health centers were to increase the supply of mid-level providers by establishing a physician assistants training program and by expanding the education of family nurse practitioners. Expanding the educational opportunities for family NPs was advocated by 4 of the 6 clinics/projects that employed nurse practitioners. Two centers expressed interest in employing physician assistants. In addition, a state MLP loan repayment program that would involve practice in urban community settings was suggested, and it was recommended that providers be educated on the roles of the various mid-level providers.

As stated earlier, several educational initiatives are underway at the state level that will result in an increased supply of nurse practitioners. These educational programs are increasingly focusing on providing clinical experiences for students in medically underserved areas and for medically underserved populations. ORH will be working with the NP educational programs to identify potential communities and clinical sites.

The 1992 MinnesotaCare legislation also established a loan forgiveness program for mid-levels agreeing to practice in rural areas. The ORH is making efforts to ensure the coordination of the state MLP loan repayment program with the National Health Service Corps program in order to best serve students practicing in underserved areas.

In terms of educating providers, the Office of Rural Health is currently developing rural nurse practitioner promotion teams, the purpose of which are to provide rural physicians and medical clinic administrators with information on the benefits of joint

practices between NPs and physicians and various methods of establishing and maintaining joint practices.

Conclusion

There is a strong tradition of use of mid-level providers in the Bureau of Primary Health Care funded centers/projects in Minnesota, and licensing and registration regulations are, in comparison to other states, not unduly restrictive. In the past several years, Minnesota has reduced barriers to mid-level provider practice considerably. Legislation giving prescriptive privileges to nurse practitioners and physicians assistants has been enacted. Third-party coverage has been extended to MLPs, and as of February 1993, the reimbursement differential (between physicians services and those of enrolled NPs and PAs) for Medicaid, General Assistance Medical Care, and MinnesotaCare has been decreased to 10 percent.

Consequently, the Office of Rural Health is emphasizing educational approaches as a means of increasing the supply of mid-level providers and enhancing their ability to engage in collaborative practice arrangements. ORH is working with various institutions to expand educational opportunities for mid-level providers and to target underserved areas statewide for clinical experiences. Finally, there is strong support for participation of mid-levels in the health care reform initiatives.

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