

Department of Health and Human Services

**OFFICE OF
INSPECTOR GENERAL**

**ENHANCING THE UTILIZATION OF
NONPHYSICIAN HEALTH CARE
PROVIDERS**



MAY 1993

OFFICE OF INSPECTOR GENERAL

The mission of the Office of Inspector General (OIG), as mandated by Public Law 95-452, as amended, is to protect the integrity of the Department of Health and Human Services' (HHS) programs as well as the health and welfare of beneficiaries served by those programs. This statutory mission is carried out through a nationwide network of audits, investigations, and inspections conducted by three OIG operating components: the Office of Audit Services, the Office of Investigations, and the Office of Evaluation and Inspections. The OIG also informs the Secretary of HHS of program and management problems and recommends courses to correct them.

OFFICE OF AUDIT SERVICES

The OIG's Office of Audit Services (OAS) provides all auditing services for HHS, either by conducting audits with its own audit resources or by overseeing audit work done by others. Audits examine the performance of HHS programs and/or its grantees and contractors in carrying out their respective responsibilities and are intended to provide independent assessments of HHS programs and operations in order to reduce waste, abuse, and mismanagement and to promote economy and efficiency throughout the Department.

OFFICE OF INVESTIGATIONS

The OIG's Office of Investigations (OI) conducts criminal, civil, and administrative investigations of allegations of wrongdoing in HHS programs or to HHS beneficiaries and of unjust enrichment by providers. The investigative efforts of OI lead to criminal convictions, administrative sanctions, or civil money penalties. The OI also oversees State Medicaid fraud control units which investigate and prosecute fraud and patient abuse in the Medicaid program.

OFFICE OF EVALUATION AND INSPECTIONS

The OIG's Office of Evaluation and Inspections (OEI) conducts short-term management and program evaluations (called inspections) that focus on issues of concern to the Department, the Congress, and the public. The findings and recommendations contained in these inspection reports generate rapid, accurate, and up-to-date information on the efficiency, vulnerability, and effectiveness of departmental programs.

This report was prepared under the direction of Mark R. Yessian, Ph.D., Regional Inspector General, and Martha B. Kvaal, Deputy Regional Inspector General, Boston Region, Office of Evaluation and Inspections. Participating in this project were the following people:

Boston
Russell W. Hereford, Ph.D., *Project Leader*
Lori Rutter, *Lead Analyst*

Headquarters
Alan S. Levine

To obtain a copy of this report, contact the Boston Regional Office at 617-565-1050.

Department of Health and Human Services

**OFFICE OF
INSPECTOR GENERAL**

**ENHANCING THE UTILIZATION OF
NONPHYSICIAN HEALTH CARE
PROVIDERS**



MAY 1993 OEI-01-90-02070

EXECUTIVE SUMMARY

PURPOSE

To assess the potential for utilizing nonphysician health care providers in more productive ways.

BACKGROUND

National health care reform stands at the top of the domestic policy agenda. In order to meet the demands and stresses that any national health care reform undoubtedly will place on the existing delivery system, using our resources more effectively will be critical. In short, we must develop new ways of combining our health labor, capital, and knowledge resources if we hope to solve problems of cost, access, and quality.

To meet the emerging demands, attention must be directed toward improving the utilization of the large cluster of nonphysician health care providers, such as nurse practitioners (NPs), physician assistants (PAs), certified nurse midwives (CNMs), occupational therapists, and medical technologists. While health care professionals are licensed by the States, the Federal government influences their training and use both through its educational assistance programs, such as the Health Professions Education Act, and through Medicare and Medicaid payment policies.

This report focuses on making the delivery of health care more productive by using nonphysician providers differently. It is not a formal evaluation of the success or failure of health care organizations in reaching this goal. Rather, the report identifies and describes approaches that some organizations are taking to make better use of such personnel. We also describe fundamental barriers that inhibit the broader use of such approaches.

We reviewed literature on health care provider utilization and regulation. We interviewed Federal and State officials, health care providers and educators, representatives of trade associations, and other experts in the field. We also visited two hospitals and one managed care delivery system to examine their utilization of health care personnel. Our companion study, *Enhancing the Utilization of Nonphysician Health Care Providers: Three Case Studies* (OEI-01-90-02071), describes these site visits in detail.

FINDINGS

In different kinds of settings, health care organizations are utilizing nonphysician providers in new ways to address concerns about cost, access, and quality.

- In acute care settings, some hospitals are training workers from different disciplines to provide a wider range of services directly at the bedside.

- In long term care settings, nurse practitioners and physician assistants are playing a larger role in providing health and medical care services to nursing home residents.
- In ambulatory settings, clinics and managed care programs are using physician assistants, nurse practitioners, and certified nurse midwives to increase access to primary care services.

Despite the promise that these approaches hold, significant barriers exist that constrain their widespread adoption. These include:

- ***Professional Territorialism.*** Rather than encourage a teamwork approach to providing care, professional boundaries can inhibit cross-discipline sharing of knowledge and information. Professional territorialism limits health care organizations' ability to take advantage of opportunities to enhance utilization of nonphysician providers.
- ***Licensure Restrictions.*** Licensure laws are designed to protect the public's health, safety, and economic well-being by restricting entry into the occupations to those with the proper credentials. These regulatory laws also can inhibit flexibility in how nonphysician providers may be utilized, reduce access to services, and impose higher costs.
- ***Educational Isolation.*** Health professions education rarely includes interdisciplinary training. This exclusion divides the professions from each other, rather than encouraging cooperative practice styles and team building.
- ***Physician Resistance.*** Although some physicians are working closely with NPs, PAs, and CNMs, other physicians resist broader scopes of practice for these providers. Their foremost concern is quality of care, but their resistance may also result from unfamiliarity with how to utilize these providers effectively, or possibly self-interest. This resistance could hinder access to care, since these providers are able to extend the capacity of individual physicians to deliver care.
- ***Institutional Inertia.*** Health care organizations, like most organizations, are naturally resistant to change. Redefining organizational boundaries requires a significant change in how all health care staff--both physician and nonphysician providers--are utilized.

CONCLUSIONS

The Public Health Service, operating under authorities in the Health Professions Education Act, has an opportunity to strengthen its national leadership role in encouraging more productive use of personnel. The PHS could act as a catalyst to bring to the forefront a more extensive examination of how nonphysician health care providers can help increase access and control costs without sacrificing quality.

We offer the following ways that PHS could take advantage of this opportunity:

- *The PHS, in its funding of health care educational institutions, could give increased emphasis to curricula that teach supervisory and management skills needed to take advantage of opportunities for using health care personnel in more productive ways.*
- *The PHS, in its funding of health care educational institutions, could pay increased attention to programs that encourage the development of cooperative practice models among different health care professions.*
- *The PHS could convene a national symposium to explore the potential for using health care personnel more productively.*

TABLE OF CONTENTS

	PAGE
Executive Summary	
Introduction	1
Findings	
New approaches to organizing and staffing health care services	4
Acute care settings	4
Long term care settings	5
Ambulatory settings	6
Barriers that constrain widespread adoption of new approaches	7
Professional territorialism	7
Licensure restrictions	8
Educational isolation	9
Physician resistance	10
Institutional inertia	11
Conclusions	12
Appendices	
A: Endnotes	A-1

INTRODUCTION

PURPOSE

To assess the potential for utilizing nonphysician health care providers in more productive ways.

BACKGROUND

Pending National Health Reform

National health care reform stands at the top of the domestic policy agenda. Health care expenditures rose from 9.2 percent of gross national product in 1980 to 14 percent in 1992, when expenditures reached \$820 billion.¹ Despite these growing health care costs, more than 36 million people are uninsured.² Even the quality of care has been called into question.³

In order to meet the demands and stresses that any national health care reform will undoubtedly place on the existing delivery system, using our resources in more productive ways will be critical to success. Improved productivity in the health care field does not mean merely a faster way of producing services at the lowest possible cost. Rather, improved productivity challenges us to expand the public's access to quality services that are delivered in an efficient manner. In short, we must develop new production functions--new ways of combining our existing health labor, capital, and knowledge resources--if we hope to solve problems of cost, access, and quality. Developing new approaches compels us to challenge fundamental notions about how we organize and deliver health services, and most importantly, how we utilize health personnel.

Despite this need, a recent Institute of Medicine study observes that within health care organizations "there has been little research and experimentation in structuring staffing policies and working environments."⁴ As the Chairman of the Prospective Payment Assessment Commission has pointed out, "It is not sufficient merely to have an idea about how to improve productivity. It is also necessary to understand the factors that might limit or prohibit these changes. . . . For too long issues of productivity have been missing in the debate over national health policy. It is time to focus attention on this important dimension of the organization and delivery of health services."⁵

The Growth of Health Professions

In 1970, 13 health occupations were regulated by all the States.⁶ By the 1980's, 15 occupations were regulated in all the States, 22 in more than half the States, and 50 health occupations in at least one State.⁷ Fourteen of the 36 fastest growing occupations cited by the Bureau of Labor Statistics are in the allied health field.⁸ To meet emerging demands, attention must be directed toward improving the utilization

of the large cluster of nonphysician health care providers "whose functions include assisting, facilitating, or complementing the work of physicians and other specialists in the health care system."⁹

As we use the term in this report, nonphysician providers include a wide range of workers in the health care setting. Some have extensive training and graduate education, such as nurse practitioners (NPs), physician assistants (PAs), and certified nurse midwives (CNMs). Others are workers whose training consists primarily of on-the-job education, such as aides, laboratory assistants, and dietary assistants. Health care providers in each of these categories will have an important role to play in meeting the American public's health care needs in the years ahead.

Federal Support for Health Professions

While health care providers are licensed by the States, the Federal government influences their training and use both through its educational assistance programs and through Medicare and Medicaid. Fiscal Year 1993 appropriations under the Health Professions Education Act¹⁰ are \$4.9 million for physician assistant programs, \$3.5 million for allied health special projects, and \$15.4 million for nurse practitioner and certified nurse midwife programs. The National Health Services Corps Scholarship program includes a set aside of at least 10 percent of total scholarship funds for PAs, NPs, and CNMs willing to serve in Health Professional Shortage Areas.¹¹

The Congress has stated that "these professions will play a pivotal role in reaching the national goal of making access to primary health care more widely available and of reducing unnecessary health care costs."¹² In an extensive review of the literature, the Office of Technology Assessment determined that, "The weight of the evidence indicates that, **within their areas of competence, NPs, PAs, and CNMs provide care whose quality is equivalent to that of care provided by physicians. . . . Patients are generally satisfied with the quality of care provided by NPs, PAs, and CNMs, particularly with the interpersonal aspects of care.**"¹³

Medicare Part B covers the services of a number of nonphysician providers on a fee-for-service basis, although the amount varies depending on the setting. These providers include NPs, PAs, and CNMs, as well as certified nurse anesthetists, clinical psychologists, clinical social workers, occupational therapists, physical therapists, speech therapists, and audiologists.¹⁴ Most State Medicaid programs now cover the services of NPs, PAs, and CNMs. In addition, Medicare's DRG payment system has given hospitals a financial incentive to be more efficient, which should lead them to examine how they can utilize their labor resources more effectively.

Focus of this Report

This report focuses on making the delivery of health care more productive by using personnel differently. It is not a formal evaluation of the success or failure of health care organizations in reaching this goal. Rather, the report identifies and describes

approaches that some health care organizations are taking to make better use of nonphysician providers. These initiatives are in the midst of implementation, so definitive measures of success are not yet available; nonetheless, the early signs appear positive. While the approaches that this report identifies may not be widespread or fully implemented yet, they do represent specific efforts to let nonphysician providers play the fullest possible role in delivering health care services.

This report also describes fundamental barriers that inhibit the broader use of nonphysician providers. We hope that this effort will help clarify how Federal and State governments can facilitate experimentation and progress in this important area.

METHODOLOGY

We used three data sources in this inspection:

- (1) The professional and research literature on the utilization and regulation of nonphysician health care providers.
- (2) Interviews with Federal and State officials; health care providers and educators; representatives of trade associations, including the American Academy of Physician Assistants, American College of Nurse Midwives, American Hospital Association, American Medical Association, American Nurses Association, American Occupational Therapy Association, American Society of Allied Health Professionals, and National Association of Pediatric Nurse Practitioners; and other experts in the field.
- (3) Site visits to three health care organizations that have undertaken initiatives to enhance the utilization of health care personnel. St. Joseph's Hospital in Atlanta and Mercy Hospital and Medical Center in Chicago are two hospitals that have developed programs to reorient the work of their staff. Evercare, in Minneapolis, is a managed care system that provides health and medical care services to nursing home residents. We did not intend for these organizations to be representative of other organizations. We selected them precisely because of the atypical nature of what they were doing. Our criterion for selection was that each organization was attempting to expand the range of work and services being done in more traditional settings, not that these necessarily represent "best practices." In our companion study, *Enhancing the Utilization of Nonphysician Health Care Providers: Three Case Studies* (OEI-01-90-02071), we describe these approaches and their impact in detail.

We conducted this study in accordance with the *Quality Standards for Inspections* issued by the President's Council on Integrity and Efficiency.

FINDINGS

IN DIFFERENT KINDS OF SETTINGS, HEALTH CARE ORGANIZATIONS ARE UTILIZING NONPHYSICIAN PROVIDERS IN NEW WAYS TO ADDRESS CONCERNS ABOUT COST, ACCESS, AND QUALITY.

In acute care settings, some hospitals are training workers from different disciplines to provide a wider range of services directly at the bedside.

U.S. hospitals averaged 3.4 staff for every occupied bed in 1990, up from 2.6 in 1980 and 1.6 in 1970. These 1990 figures compare with 2.8 in Canada and 1.3 in Germany.¹⁵ Patient care in most U.S. hospitals is organized around relatively small, clinically focused units where bedside nursing care is delivered. Other services needed for treatment--x-ray, phlebotomy, pharmacy, laboratory, and transport, for example--are provided through separate departments by specialized workers who report to central hospital administration rather than to the patient care unit.

Recently, some hospitals have begun to address the challenge of reorganizing how they utilize nonphysician providers to deliver care. Various terms used to describe this change include patient-focused care, operational restructuring, worker cross-training, and work redesign. Some of these approaches are advocated by consulting firms. Others, such as multiskilled health practitioner development, are outgrowths of training programs offered by hospitals and colleges.¹⁶ The goal of each of these approaches is to expand the range of work that nonphysician providers do by training them to carry out new functions.

We examined the efforts of two hospitals that are moving in this direction. In Atlanta, St. Joseph's Hospital has created a new position of "service associate" for workers who have traditionally performed a limited range of duties such as housekeeping, delivering meals, or transporting patients. The hospital has trained these workers to also provide basic patient care under the supervision of nurses on the individual units. Rather than report to centralized hospital management, as in most hospitals, the service associates are responsible directly to the patient unit on which they work.

In Chicago, Mercy Hospital and Medical Center has trained staff from central hospital departments such as lab, housekeeping, and food services to work in teams with registered nurses. These "clinical partners," as they are called, provide a variety of nursing assistant and technical tasks, such as drawing blood, performing basic respiratory therapy, reinforcing physical and occupational therapies, and taking EKGs.

Managers and health care providers in both settings credit these changes with improving patient care. They cite benefits such as reduced waiting time for services and tests, as well as greater responsiveness to the immediate demands of patients, nurses, and physicians on their unit.

Although this approach is new for many urban hospitals, some lessons can be learned from hospitals in rural areas. Driven by necessity in the face of personnel shortages, rural hospitals have been using workers in multiple roles as a normal way of doing business. One executive we interviewed, who has worked with several rural hospitals, described the situation particularly well. "The nursing staff really are much more flexible; they are expected and willing to do more. There is a blending of job lines--you have to do that to survive."

In long term care settings, nurse practitioners and physician assistants are playing a larger role in providing health and medical care services to nursing home residents.

Some nursing homes and physician practices are taking advantage of expanded authority under Medicare and Medicaid to increase their utilization of NPs and PAs. Under collaborative arrangements with physicians, NPs and PAs are providing services such as physical examinations and x-ray interpretations that have traditionally been reserved to physicians. NPs and PAs also are recertifying nursing home residents as eligible for continued coverage under Medicaid.¹⁷

We examined the approach used by Evercare, a managed care delivery system in Minneapolis-St. Paul. Evercare uses geriatric nurse practitioners (GNPs) and physicians to provide medical care services to about 700 nursing home residents. Under a collaborative agreement with a physician, Evercare's GNPs may prescribe drugs and order tests, send residents to the hospital when necessary, and make recertification visits required by State and Federal regulation. The GNP also makes urgent medical visits when needed and often decides whether the physician should see the resident. Because of its focus on preventive care within the nursing home, Evercare reports that its members use about half as many inpatient hospital days as the national nursing home population.¹⁸

Other studies have also cited the benefits of using PAs and NPs to provide nursing home care. The Massachusetts Nursing Home Connection Program tested the use of NPs and PAs to improve quality of care in nursing homes. With physicians retaining overall responsibility for patient care, NPs and PAs performed duties and responsibilities delegated under written protocols, such as ordering tests, special diets, and rehabilitation therapy, and adjusting medications upon oral physician orders. A RAND Corporation evaluation of this program found that the use of NPs and PAs for primary care in nursing homes "achieved modest improvements in quality of care without increasing costs. Further, both nursing home administrators and directors of nursing homes expressed higher levels of satisfaction with the process of care delivered."¹⁹

These types of arrangements appear to improve productivity by enabling physicians to concentrate on providing care that requires more medical intervention, rather than the preventive care, monitoring, and maintenance that many nursing home residents need. A GNP practicing at Evercare believes her caseload is typical. She estimates that 75 percent of the problems she sees do not require the urgent attention of a physician

(e.g., a slight change in activities, rewriting or revising restraint orders, or a minor change in medication). From our study at Evercare it appears that NPs have been effective in facilitating communication, both with nursing home staff--conveying orders, visiting a home more regularly to treat residents while the office-based physician also cares for a regular case load--and with the residents and their families.

In ambulatory settings, clinics and managed care programs are using physician assistants, nurse practitioners, and certified nurse midwives to increase access to primary care services.

On the basis of a comprehensive review of the research literature, the Congressional Office of Technology Assessment (OTA) reports that NPs and PAs can provide, without consultation, between 50 and 90 percent of the primary care tasks normally performed by physicians. The OTA also cites evidence that, working under physician supervision, NPs and PAs can increase physician practice output and productivity by 20 to 50 percent.²⁰

PAs, NPs, and CNMs have been working for some time now in clinics and managed care settings. They work in primary medical care, including pediatrics, internal medicine, family practice, and obstetrics, as well as in surgical specialties such as ophthalmology, orthopaedics, and neurology. Within primary care services, NPs and PAs treat minor acute illnesses; they may handle outpatient orthopaedic cases, such as uncomplicated fractures, dislocations and sprains; others perform minor surgery, such as suturing; and others may provide well baby examinations and general pediatric care. They also perform routine health maintenance exams, including immunization tracking, counsel patients on topics such as nutrition and family planning, and provide gynecologic and women's health services.

As managed care systems expand, it is likely that the role of NPs, PAs, and CNMs will grow as these organizations seek to hold down costs, while maintaining a commitment to providing high quality services. These providers already work on a large-scale basis in private practices. During the course of our research, we spoke with PAs at two large group practices to gauge the extent of their involvement. Pennsylvania's Geisinger Clinic, a private, multi-specialty group practice, employs more than 100 PAs and NPs to complement the work of over 500 physicians associated with the clinic. Community Health Plan, an Albany, New York staff model HMO, reports that over 150 PAs, NPs, and CNMs deliver care to their patients.

In addition to their work in private clinics and practices, these nonphysician providers improve access to health care services in other ambulatory settings. A recent OIG study indicates that 27 percent of urban community health centers use CNMs, 43 percent use NPs, and 17 percent use PAs to provide perinatal services.²¹ A 1992 report prepared for the Bureau of Health Professions found that 88 percent of rural community and migrant health centers employ or are seeking NPs, PAs, or CNMs.²² Other settings in which nonphysician providers furnish services include school-based clinics, jails, homeless shelters, and HIV treatment programs.

DESPITE THE PROMISE THAT THESE APPROACHES HOLD, SIGNIFICANT BARRIERS EXIST THAT CONSTRAIN THEIR WIDESPREAD ADOPTION.

Professional Territorialism

Rather than encourage a teamwork approach to providing care, professional boundaries often inhibit cross-discipline sharing of knowledge and information. The Pew Health Professions Commission summarizes this barrier by stating, "The carefully defined boundaries for the various health professions have . . . limited interprofessional contacts. Although the care delivery system would benefit from professionals who are capable of relating to other professionals through team efforts, there is little encouragement from accreditation, licensure or the professions to support inter-professional educational experiences."²³

In our case studies, we saw examples that show how professional territorialism can inhibit hospitals from using nonphysician providers in new ways. In one of the hospitals we visited, respiratory technicians and pharmacists rebelled against working directly with the nursing staff in an expanded role. They feared that they would become subordinate to nurses, thus limiting their own autonomy; that they would become jacks-of-all-trades, rather than skilled professionals; that they would have to report to someone in a different profession who would not understand their work; that nursing's philosophy focuses on holistic aspects of patient care, rather than the individual body systems with which they were familiar; and that they would in effect become pseudo-nurses. The remarks of one RT summarized the views of his colleagues: "If I'd wanted to be a nurse, I would have gone to nursing school."

Utilizing nonphysician providers more productively requires a fundamental shift in approaches to delivering health care. It demands an accompanying change in the views of health care professionals, who may have to alter their traditional roles. These changes presume that those trained in different professions are able to perform additional tasks for which they have similar technical skills. Enhancing the utilization of nonphysician providers does not mean establishing new professions, or "letting nurses' aides perform brain surgery." Rather, it encompasses a *blending* at the margins where technical skills and knowledge overlap. This blending encourages health care providers to cross boundaries and barriers that result from professional orientation and training, rather than from patient care needs.

In many cases, providers' concerns involve more than pure self-interest. The concerns reflect sincere beliefs about what they regard as best for their patients. Nevertheless, professional territorialism limits health care providers' ability to take advantage of opportunities for improvement. Sherry Makely, who has studied efforts to change how health care personnel are used in a number of institutions, expresses how many professionals feel: "Professional territorialism concerns influence our motivations and priorities as care givers, educators, supervisors, and managers. They may impede our willingness to consider new approaches and to participate in bringing about necessary change. For many of us, our individual identities are rooted in our work as

professionals. Threats to our profession often translate into threats to us as people."²⁴

Licensure Restrictions

The Institute of Medicine, in its study of allied health personnel, concluded that "widespread use of licensure carries with it higher costs to consumers, reduced access to health care services, and reduced flexibility for managers. . . . Although these control mechanisms are designed and carried out in the stated interest of protecting the health and welfare of the public, their effectiveness in this regard has been mixed at best."²⁵ The IoM goes on to note that "in a time of great ferment in health care, these control mechanisms take on even greater significance. The proliferation of health care occupations, changing models of health care delivery, and new reimbursement methods, along with cost-control efforts by industry and government, place stress on these controls."²⁶

The purpose of State licensing and regulatory laws is to protect the public's health, safety, and economic well-being by restricting entry into the occupations to persons who have the proper training and competency. Yet these regulatory laws have other effects, including establishing the identity and power of different health professions as "the various occupations battle among themselves over which parts of health care and which parts of the patient fall under their jurisdiction."²⁷ The comments of a former attorney for a State licensing board show the implications of these divisions. She noted that she had argued on behalf of podiatrists that the ankle is part of the foot, since the podiatric practice act limits their scope to the foot. Despite its inefficiencies from a systemic viewpoint, regulation is a goal of many newer health professions that have arisen. The lobbyist for one allied health profession typified this view when she told us, "We have to do it because everyone else does. Allied health professions seek licensure to be on an equal footing with other groups and professions."

Licensure laws are not immutable, however, as changes in training, practice, and public acceptance permit new roles. Barriers confronting NPs, PAs, and CNMs have diminished to some degree, as the contributions of these providers have been recognized. For example, requirements for direct on-site supervision by physicians have become less restrictive in response to recognition of PAs', NPs', and CNMs' judgement and capabilities, as well as advances in technology that make instantaneous communication readily available. As of December 1992, 32 jurisdictions authorized PAs and CNMs and 43 jurisdictions authorized NPs to write prescriptions.²⁸ In our case study of Evercare, we found that GNP's were taking advantage of Minnesota's law authorizing nurse practitioners to write prescriptions upon approval of the State Board of Nursing and subject to a collaborative physician-NP protocol. In contrast, Evercare staff told us that their development of a second program in Illinois has been hindered by the lack of prescriptive authority for NPs in that State.

At a more subtle level, obstacles remain as changes in nonphysician providers' scopes of authority are instituted. These obstacles limit the nonphysician provider's ability to

take his or her authority to a new practice setting or job. For example, prescription writing privileges may require that a State's Board of Medicine--which oversees physicians--rather than its Board of Nursing authorize NPs and CNMs to write prescriptions. In that situation, the power to write prescriptions becomes a responsibility delegated by a collaborating physician, rather than an authority the NP or CNM maintains in his or her own right. In some States, PAs are licensed on their own, and they must merely notify the State Board of Registration as to the name and address of their supervising physician. In other States, a PA's license to practice is tied to an individual physician; the PA cannot change employers or practice sites without going through another State approval process.

Educational Isolation

For the most part, health professions education is conducted within the specific disciplines--physicians train physicians, nurses train nurses, physical therapists train physical therapists, and so on. This approach to education divides the professions from each other, and reinforces professional territorialism, at the earliest stages of the career. As the Pew Health Professions Commission notes, "these parameters create a box. If problems fall within the limits of the box they can be solved by the extremely sophisticated resources of the current system's paradigm. If they fall outside of the box, as will many of the problems now and in the next century, we will not have the capacity to recognize the problem, adequately analyze it, or bring the appropriate resources together to develop a solution."²⁹

There is little encouragement or support from accreditation or licensure bodies, or from the professions themselves, to develop interprofessional education. Preparing health care personnel for new roles requires that educational programs provide training for those roles. Yet, "strategies that call for new work relations among caregivers are bound to fail as long as medical schools and residency programs continue to neglect training on cooperative practice styles and team building between physicians and other health professionals. In general, education programs for all levels of health workers need to be subjected to a new level of scrutiny."³⁰ The need for this team building was highlighted in our case study at Evercare. We found that such a collaborative practice arrangement requires physicians to work with GNPs in a partnership that shares authority and responsibility. As one GNP there told us, "For this model to really work, you have to have a physician or medical group that is willing to work with GNPs as primary providers, not just have them on staff."

Health professions education focuses on clinical and biomedical skills, while paying only limited attention to other areas, such as management and human resource skills that would prove beneficial in the workplace. For example, in both of our hospital case studies, we encountered nurses who were uncomfortable with their ability and skill in delegating tasks to other workers, and in how to supervise them. Both Mercy and St. Joseph's decided to invest their resources into training nursing staff on management and task delegation.

Physician Resistance

Many physicians have resisted broader scopes of practice and independence for nonphysician health care providers. To be sure, the expanded use of NPs, PAs, and CNMs in recent years indicates greater physician acceptance and recognition of these providers among some components of the medical community. Nevertheless, resistance to expanding their role further remains.

To some degree, physician resistance may reflect professional territorialism or economic self interest. Some physician concerns relate to their own training and tradition. Physicians question how the expanded use of nonphysician providers will change medical practice and the physician's role in the health care system. For example, physicians who work directly with Evercare's nurse practitioners expressed to us a very positive view of the GNPs' capabilities and their comfort with the collaborative arrangement that has developed. These physicians, however, also told us that other physicians have not readily accepted the expanded GNP role. The authority of the GNPs to write prescriptions appears to be particularly difficult for many physicians, despite the clear authority in the State law. Coupled with the specific concerns over prescriptive authority, there also appears to be a fear among some physicians that NPs eventually will want to set up independent practices that could threaten physicians' practices.

Physicians raise other concerns that shed further light on their resistance. Perhaps foremost are questions about the impact on the quality of care. As the traditional entry point into the health care system, physicians question whether using an NP, PA, or CNM as the primary decision maker on health care is in the patient's best interest. They raise questions about the training and capabilities of nonphysician providers. Some of their concern relates to uncertainty about the role of nonphysician providers. For example, physicians may question whether NPs, schooled in nursing diagnosis and care, should be making what physicians see as essentially medical decisions. Consequently, organized medicine, represented by the American Medical Association (AMA), argues that the services of PAs, NPs, and CNMs, "should only be provided under the supervision of, or minimally in collaboration with, the physician to ensure that medical needs are appropriately recognized and met."³¹

Resistance to greater use of nonphysician providers may sometimes result from physicians' lack of familiarity with ways to utilize and work effectively with NPs or PAs. Effective use of these providers requires a great deal of trust and confidence. A supervisory or collaborative relationship, as advocated by the AMA, calls for supervisory and managerial skills--something rarely taught in medical school.

Limited acceptance of NPs, CNMs, and PAs could hinder access to care, especially since they can extend the capacity of the individual physician to deliver care. At Evercare, for example, we saw that the GNPs can provide alternate regulatory visits and write prescriptions, and that they also facilitate communication both between the physician and the facility, and between the physician and the family. This experience

shows a complementary relationship, resulting in services to more people than one physician acting alone could provide.

Finally, as health care organizations, such as hospitals, consider expanding their use of nonphysician providers, few physicians are eager to invest substantial time in these deliberations. Rather than sit in meetings to discuss who should do what, they prefer to be practicing medicine. The organization of the delivery system is likely to become an issue to some only when these changes begin to directly impact their practice. As a consequence, physicians' involvement, although very likely to be critical to the success of new initiatives, is rarely forthcoming. We found this lack of interest to be true in our case studies at both St. Joseph's and Mercy Hospitals. Except for a very few physicians, the involvement of the medical staff in establishing the new positions of service associates and clinical associates was marginal.

Institutional Inertia

Health care organizations, like any organization, are naturally resistant to change.³² Reorganizing how nonphysician health care providers are utilized entails substantial risk. Any reorganization is likely to be threatening to the staff and disruptive to ongoing operations. It establishes new roles and responsibilities; coordination and lines of supervision change; new quality assurance mechanisms may be required. At the same time, a health care organization may incur substantial training costs, with a payoff likely only over the long term. Any financial benefit is likely to be difficult to quantify. Other anticipated gains, such as better positioning in a competitive marketplace, may be equally difficult to identify.

Within the health care system, hospitals face particularly difficult challenges in reorganizing the work force because they are such large, complex institutions. In our visits to St. Joseph's and Mercy Hospitals, we saw how these challenges made change difficult. Some staff resisted taking on new responsibilities; people felt excluded from the decision making process; some departments actively fought and attempted to undermine the changes.

Changing the role of nonphysician providers also affects other organizations, as well as hospitals. In nursing homes we visited in the Evercare program, for example, we found that the staff in the medical records department initially refused to accept nurse practitioners' signatures on medical orders or prescriptions because they were used to recording only physicians' orders.

Donald Berwick, a widely recognized expert on quality management in health care organizations, writes in the *New England Journal of Medicine* that for health care organizations to "organize for quality, . . . flexible project teams must be created, trained, and competently led to tackle complex processes that cross customary departmental boundaries."³³ However, redefining traditional boundaries requires a significant change in how all health care staff--both physician and nonphysician providers--are utilized.

CONCLUSIONS

The Public Health Service, operating under authorities in the Health Professions Education Act, has an opportunity to strengthen its national leadership role in encouraging more productive use of personnel. By acting as a catalyst, PHS could bring to the forefront a more extensive examination of how nonphysician health care providers can help increase access and control costs without sacrificing quality.

Clearly, there is widespread recognition that nonphysician health care providers will be important in resolving issues of cost, access, and quality. In some places, nonphysician providers such as nurse practitioners, physician assistants, and certified nurse midwives are delivering health care services traditionally provided by physicians. The Congress has noted that these providers "will play a pivotal role in reaching the national goal of making access to primary health care more widely available and of reducing unnecessary health care costs."³⁴ The Office of Technology Assessment has stated that "within their areas of competence, NPs, PAs, and CNMs provide care whose quality is equivalent to that of care provided by physicians."³⁵ The Department's Bureau of Health Professions is working to expand the supply and distribution of primary care providers, both physicians and nonphysicians.

We believe that it is also important to encourage changes in how health care is delivered at the practice level. Such an effort must consider the whole spectrum of nonphysician health care workers in addressing issues of cost, access, and quality. In this report, we have focused on approaches to integrating nonphysician providers into the service delivery system at the practice level. As we have reported here, such efforts are underway in acute care, long term care, and primary care settings. These efforts, however, are made more difficult by a number of constraints that inhibit widespread adoption of new methods for using health care personnel more productively.

While this inspection has shed some light on the opportunities and constraints, it is clear to us that efforts such as those described in this report are only a beginning. We believe that more focused attention on these issues and on similar approaches would make important contributions to improving access to high quality health care services within the reality of budgetary constraints.

We offer the following ways that the PHS could take advantage of this opportunity:

- *The PHS, in its funding of health care educational institutions, could give increased emphasis to curricula that teach supervisory and management skills needed to take advantage of opportunities for using health care personnel in more productive ways.*

Our case studies found that health care professionals were unfamiliar or unskilled in how to utilize other health care personnel effectively. Developing these management

skills could be included in the basic educational curriculum for health care providers. This training could include, for example, determining how to delegate tasks, how to supervise and encourage workers in other professions, and how to monitor and assure quality.

- ***The PHS, in its funding of health care educational institutions, could pay increased attention to programs that encourage the development of cooperative practice models among different health care professions.***

Increasing emphasis on managed care and teamwork in delivering health care services will require cooperation among the different health care professions. The PHS could provide assistance to health professions schools to develop curricula that bring together professionals from different disciplines, where appropriate. Such an approach would help health professionals develop a broader understanding of their colleagues' approaches to providing care and of their capabilities, and could encourage multi-disciplinary approaches to problem solving.

- ***The PHS could convene a national symposium to explore the potential for using health care personnel more productively.***

By involving a wide range of interested parties, the symposium could seek to include all relevant viewpoints on how the barriers identified in this report might best be addressed. The symposium could pay particular attention to addressing these barriers in the context of primary care services. We expect that the symposium would include Federal, State, and local governments; public and private licensing and credentialing organizations; groups representing professions, such as medicine, nursing, and allied health care; health care organizations such as hospitals, nursing homes, and managed care systems; consumer advocacy groups; health services researchers; and labor, business, and insurance.

By soliciting and/or commissioning papers that showcase examples of effective change in the health care work place, the PHS could use the symposium to draw attention to the potential for and benefits from these changes, the problems and barriers that confronted these efforts, and how such obstacles can be overcome. PHS could publish the symposium papers and proceedings to ensure broad dissemination of the results.

APPENDIX A

ENDNOTES

1. Sally T. Burner, Daniel R. Waldo, and David R. McKusick, "National Health Expenditure Projections through 2030," *Health Care Financing Review*, vol. 14, no. 1, Fall 1992, pp. 1-29.
2. Prospective Payment Assessment Commission, *Medicare and the American Health Care System: Report to Congress*, June 1992, p. 11.
3. Institute of Medicine, *Medicare: A Strategy for Quality Assurance*, National Academy Press, Washington, DC, 1990, pp. 207-232.
4. Institute of Medicine, *Allied Health Services: Avoiding Crises*, National Academy Press, Washington, DC, 1989, p. 231.
5. Stuart H. Altman, Susan Goldberger, and Stephen C. Crane, "The Need for a National Focus on Health Care Productivity," *Health Affairs*, vol. 9, no. 1, Spring 1990, pp. 112-113.
6. Benjamin Shimberg, *Occupational Licensing: A Public Perspective*, Educational Testing Service, Princeton, NJ, 1982, p. 7.
7. Council of State Governments, National Clearinghouse on Licensure, Enforcement, and Regulation (CLEAR), *State Regulation of the Health Occupations and Professions: 1985-86*, Lexington, KY, March 10, 1987; Eugenia S. Carpenter, "State Regulation of Allied Health Personnel: Trends and Emerging Issues," Background paper for the Institute of Medicine Committee to Study the Role of Allied Health Personnel, August 1987.
8. Karen Glenn, "Coming up Short: Hospitals Seek Workers," *Medicine & Health Perspectives*, June 12, 1989.
9. Department of Health and Human Services, Bureau of Health Professions, *Seventh Report to the President and Congress*, March 1990, p. A-1.
10. P.L. 102-408.
11. 42 U.S.C. section 254-l.
12. Congress of the United States, "Joint Explanatory Statement of the Committee of Conference on H.R. 3508," Health Professions Education Extension Amendments of 1992, P.L. 102-408.

13. Congress of the United States, Office of Technology Assessment, *Nurse Practitioners, Physician Assistants, and Certified Nurse-Midwives: A Policy Analysis*, December 1986. Emphasis in original.
14. Physician Payment Review Commission, "Paying Nonphysician Practitioners under the Medicare Fee Schedule," *Annual Report to Congress, 1991*, March 1991, pp. 183-207.
15. George J. Schieber, Jean-Pierre Poullier, and Leslie M. Greenwald, "U.S. Health Expenditure Performance: An International Comparison and Data Update," *Health Care Financing Review*, vol. 13, no. 14 (Summer 1992), table 17, pp. 48-49. Data are from the Organization for Economic Cooperation and Development. (The German data are from 1989.)
16. An umbrella group advocating the development of multi-skilled health practitioners defines such a provider as "a person who is cross-trained to provide more than one function, often in more than one discipline. These combined functions can be found in a broad spectrum of health related jobs ranging in complexity from the nonprofessional to the professional level, including both clinical and management functions. The additional functions added to the original health care worker's job may be of a higher, lower, or parallel level." (Richard Bamberg, ed., *Multiskilled Health Practitioner Education*, National Multiskilled Health Practitioner Clearinghouse, Birmingham, AL, 1989, p. 6.)
17. Section 1902(a)(44) of the Social Security Act, effective October 1, 1990, governs recertification for Medicaid residents. Section 1861(s)(2)(K) of the Act provides Medicare reimbursement on an assignment basis for PA services (effective January 1, 1987) and NP services (effective April 1, 1990).
18. Evercare reports 1,700 hospital days per 1,000 beneficiaries, versus about 3,400 days in the national population.
19. Joan L. Buchanan, Robert L. Kane, Judith Garrard, Robert M. Bell, Christina Witsberger, Alan Rosenfeld, Carol Skay, Deborah Gifford, *Results from the Evaluation of the Massachusetts Nursing Home Connection Program*, The RAND Corporation, Santa Monica, CA, October 1989.
20. Office of Technology Assessment, p. 6, p. 39.
21. Unpublished data from *The Perinatal Service Capacity of the Federally Funded Community Health Centers: Urban Centers*, OIG-OEI-01-90-02330, December 1992.
22. Michael E. Samuels and Leiyu Shir, "Report on the Survey of Community and Migrant Health Centers Regarding Utilization of Nurse Practitioners, Physician Assistants, and Certified Nurse Midwives," prepared under Health Resources and Services Administration contract No. 240-89-0037 (1991 continuation).

23. Pew Health Professions Commission, *Healthy America: Practitioners for 2005*, October 1991, p. 15. The Pew Charitable Trusts, a private nonprofit philanthropy, convened the Commission to examine "How do we ensure that today's students will contribute to and thrive as practitioners in tomorrow's radically different and ever-changing new health care environment?" The Commission comprised 27 individuals, including public officials, educators, health care professionals, and representatives of labor and business.
24. Sherry Makely, "Acknowledgements and Observations," *Healthy Hands: Customizing Your Health Team for Institutional Survival*, W.K. Kellogg Foundation, Battle Creek, MI, May 1992, p. xiv-xv.
25. Institute of Medicine, *Allied Health Services*, pp. 235-6.
26. *Ibid.*, p. 253.
27. *Ibid.*, p. 242.
28. American Academy of Physician Assistants, "Physician Assistants: Prescribing and Dispensing," December 1992; American College of Nurse Midwives, "Fact Sheet: States in which CNMs have Prescriptive Authority," October 1992; Linda J. Pearson, "1992-93 Update: How Each State Stands on Legislative Issues Affecting Advanced Nursing Practice," *The Nurse Practitioner*, January 1993, pp. 23-38.
29. Pew Health Professions Commission, p. 11.
30. Altman, Goldberger, and Crane, p. 112.
31. Lonnie R. Bristow, American Medical Association Statement to the Physician Payment Review Commission, December 9, 1992, p. 18. A recent example of how this opposition is expressed comes from Massachusetts, where the State Medical Society opposed legislation to change the role of advanced practice nursing. "Through this bill nurses practicing in the advanced role are attempting to replace physicians. . . . **We particularly need female physicians to testify against Senate Bill 457.**" (emphasis in original). Massachusetts Medical Society Legislative Report, XI, no. 1, Member Alert, February 1993.
32. See, for example, Donald A. Schon, *Beyond the Stable State*, W.W. Norton & Company, New York, 1971. Schon describes this resistance to change as "dynamic conservatism--a tendency to fight to remain the same."
33. Donald J. Berwick, "Continuous Improvement as an Ideal in Health Care," *New England Journal of Medicine*, vol. 320, no. 1 (January 5, 1989), p. 55.
34. U.S. Congress, "Statement of the Conference Committee."
35. Office of Technology Assessment, pp. 5-6.