INTERPROFESSIONAL HEALTH CARE PRACTICE: RECOMMENDATIONS OF THE NATIONAL ACADEMIES OF PRACTICE EXPERT PANEL ON HEALTH CARE IN THE 21ST CENTURY

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BACKGROUND: NAP CONSENSUS FORUM – INTERPROFESSIONAL HEALTH CARE IN THE 21ST CENTURY, APRIL 28, 2000

The National Academies of Practice (NAP) is an organization of practice-oriented health professionals from ten disciplines: dentistry, medicine, nursing, optometry, osteopathic medicine, pharmacy, podiatric medicine, psychology, social work, and veterinary medicine. The NAP mission is to improve health care quality through interdisciplinary care by promoting education, research, and public policy.

A consensus conference was selected as the format for the April 2000 annual meeting of the NAP, which was intended to serve as a starting point for defining interdisciplinary health issues and initiating collaboration with other groups to promote national acceptance of interdisciplinary health care.

What Preparation Occurred for the Consensus Conference?

First, an extensive literature search in multiple sites and professional database identified more than 750 citations. Second, the literature was reviewed and narrowed to about 250 citations for review and an annotated bibliography. Third, specific evidence of the value of interdisciplinary health care was sought using the following criteria:

- Patient outcomes.
- Patient or provider satisfaction.
- Cost-benefit, cost-effectiveness, or cost-neutral impact.
- Models of interprofessional practice, education, and research.

Fourth, a panel of 17 experts representing all ten disciplines in the NAP was selected and convened. Additional experts from outside the NAP were selected to assure a more inclusive perspective on the issues. The panel defined the concept of interprofessional health care, developed the conceptual approach to the issue, and then developed position papers for review and comment by NAP members.

The practice subcommittee of the expert panel was asked to do the following:

- Review the current status of interprofessional health care practice.
- Formulate an overall goal for the future of interprofessional health care practice.
- Identify specific objectives toward which the NAP can work.
- Devise specific activities and methods that can be used by the NAP membership in pursuit of

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these objectives.

The panel members selected the term "interprofessional" rather than "interdisciplinary" for use with the consensus process. It was felt that the term interdisciplinary can be confusing because subspecialists within a professional discipline consider their collaborative practice to be interdisciplinary. Interprofessional care is the terminology used in the current literature.

The working definition of interprofessional health care used for the consensus process is a partnership among professionals involving individuals and communities based on (1) a shared mission, (2) a shared biopsychosocial paradigm, and (3) a shared responsibility for decision-making and problem solving, with leadership based on the expertise that is needed for improving health outcome in a shared relationship with individuals, families, and communities.

Draft position papers were presented at the annual meeting. Participants who attended were asked to provide comments and recommendations. Many of these suggestions were considered and integrated into the final papers.

GOAL

To promote implementation of cost-effective interprofessional health care practice that leads to better health care outcomes.

INTRODUCTION

At the start of the 21st century, the status of health care in the United States, embedded as it is in the larger social, cultural, economic, and political contexts, presents many challenges. At a time of rapid advances in knowledge (Akil & Watson, 2000; Clark, 1997; Lewis, 2000) and high levels of economic prosperity, access to quality heath care services remains fragmented, inadequate, and, for the uninsured, simply out of reach. The traditional focus of health care delivery has been on acute, unpredictable illnesses. In addition to a focus on health care delivery for acute and unpredictable illnesses, the necessity for further attention to complex and chronic illnesses will require sustained attention to the allocation of limited resources (Berkman, 1996).

The advent of managed care drastically changed the landscape of both the private and public health care delivery system by industrializing health care. Despite their stated goals, managed care organizations have not been able to provide a health care system that offers a consistent quality of care (Dumas, 1999). Private insurance in general, and managed care in particular, continue to be more restrictive in the coverage of services for mental health than somatic health. The same is true of public financing, particularly in regard to long-term care (*Mental Health: A Report of the Surgeon General,* 1999).

Many factors have converged, resulting in an urgent need to improve the health care delivery system. Such factors include:

- The range of the health care needs in a changing population (aging, uninsured, increased cultural diversity of patients and providers, survival of patients with complex medical conditions, etc.); and the perceived inadequacy of current care models in meeting these needs, particularly for the chronically ill and elderly.
- Shortages of health care professionals, particularly in rural areas of the country (Pion, Keller, & McCombs, 1997); and shortages of personnel in several health professions, driven in part by the unattractive work and payment models many traditional health care settings offer.
- Growing numbers of under- and uninsured individuals, along with gaps in the continuum and

integration of health care services.
- Dissatisfaction of the public and the professionals with the current system.

Interprofessional practice is thought by many to be one way of addressing some of these problems with the health care system. Collaborative practice models may better address many needs of the chronically ill and elderly than current, traditional, office-based primary care models. In areas that have a shortage of health care professionals, the underserved population could receive services by other members of the health care professions when physicians are in short supply. Advanced practice nurses and other health care professionals may find health care practice more attractive when they are treated as respected team members in interprofessional practice rather than subordinates, as in the traditional medical model. In addition, the public often shows great trust and confidence in aspects of the health care system in which physicians are not the only, or the perceived, dominant players. Thus, collaborative models may also help solve the problem of decreased public satisfaction with the system, especially outside the hospital. Although progress has been made in establishing interprofessional practice models, further refinement and evaluation are needed (Rice, 2000).

Literature Review: Interprofessional Practice Models

Professional collaborative models have been developed for several disciplines, as summarized below.

Dentistry. In describing the dentist's role in end-of-life care, Chiodo, Tolle, and Madden (1998) stated that dentists have an ethical obligation to share their knowledge with physicians and patients to set a higher standard for comfort care of the terminally ill. Sharp (1995) discussed ethical decision-making in interprofessional team care and examined the process of collective decision-making in interprofessional patient care.

Medicine. Carrillo and de la Cancela (1992) described a multilevel strategy for services in an underserved Latino community health clinic that resulted in increased provider satisfaction, more effective treatment plans, and increased referrals to agencies. Because collaboration between nurses and physicians is no longer a choice, but rather a requirement, Fagin (1992) discussed the phenomenon of collaboration, the pros and cons of the relationship, and strategies to promote change. Green (1998), commenting on improvement of clinical effectiveness in an integrated care delivery system, described a program establishing a collaborative practice model that was instrumental in achieving significant financial and clinical performance improvements.

Nursing. Arcangelo, Firzgerald, Carrol, and Plumb (1996) stated that more information is needed about nurse practitioner functioning in four collaborative practice models (parallel, sequential, shared, and collaborative) in a primary care setting. How do the nurse practitioners provide primary care without regard for complexity of the patient's problem and co-manage with physicians during unstable or difficult periods? Aroskar (1998) described three interprofessional relationship models to promote organizational structures that are supportive of ethical practices and of benefit to both patients and caregivers. Bradford (1989) reported a lack of positive role

models for nurses and physicians in collaborative practice.

Optometry. Gelvin (1994) described a potential model for development and implementation of a successful glaucoma co-management team, including providers who could address the various stages of glaucoma therapy based on the needs of the patient. Communication among team members was the key to success.

Pharmacy. Beck, Dries, and Cook (1998) described an interdisciplinary, telephone-based care program at a Veterans' Affairs Medical Center in which the pharmacist was given practice privileges. The stated outcomes were successful response to patient concerns, improved access to care, and conservation of urgent care resources. Haddad, Keefer, and Stein (1993) discussed teamwork between nursing and pharmacy in home infusion therapy. Good communication between providers was critical, especially when providers were not in the same physical location. Klotz (1994) stressed the importance of strong communication as a key factor in pharmacist-physician linkage and effective outcome management. Shulkin (1994) reviewed methods for physicians and pharmacists to collaborate on cost-effective prescribing practices and to assess clinical outcomes.

Psychology. Bray and Rogers (1995) highlighted training issues and implications for future training as well as factors that promoted or hindered collaboration when describing a demonstration project in Texas and Wyoming. Cummings, Cummings, and Johnson (1997) described collaborative models for behavioral health care in primary care settings, including issues of funding and cost-effectiveness. Sack and Butler (1997) discussed a role for psychologists in dentistry, particularly in improving dentist-patient interaction and working with dental phobias.

Social Work. Levy, Lambert, and Davis (1979), in commenting on collaboration between social workers and dentists, stated that modern health care increasingly makes use of interdisciplinary collaboration to improve quality of care. Marett, Gibbons, Memmott, Bott, and Duke (1998) presented a method for organizing interdisciplinary clinic teams along overarching and interrelated psychological, physiological, sociocultural, spiritual, and developmental dimensions. Veeder, Hawkins, Williams, and Pearce (1999) reported on a new model for collaboration, the biopsychosocial individual and systems intervention model, following a qualitative study of social work and nursing collaborations.

Veterinary Medicine. Law and Scott (1996) discussed pet care programs for children with pervasive developmental delay/autism. Voelker (1995) described the health benefits associated with pet ownership and the evaluation of animals for therapy purposes. Olson (1999) used the National Academies of Practice (NAP) disciplines to describe a collaborative interprofessional practice model for guide dog schools.

Disease-based Models for Interprofessional Practice

In the traditional biomedical conceptualization of illness, the interprofessional practice design is focused on the particular treatment needs for a given illness (e.g., diabetes, Dunbar, 1994; craniofacial pain, Mock & Gordon, 1998; end-stage renal disease, Bolton, 1998, and Brisbon, Anderson-Somers, Gallardo, Lyman, Mindnich, et al., 1998; pressure ulcer, Orlando, 1998). In these models, two or more professionals have informal or formal arrangements for working together in a hospital or other agency setting. In some cases models were part of larger, community-based services involving the educational, business, or other community systems. For example, Lorber (1998) described a Diabetes Care and Information Center serving a multiethnic population in New York and emphasized the contribution of a referral practice. In this program, the intensive services to patients with type 1 and type 2 diabetes was managed by a physician, nurse educator, and dietitian team. The program resulted in significant changes in mean blood glucose levels. This program also provided routine screening and treatment for complications of diabetes, and early referral to podiatrists, vascular surgeons, and ophthalmologists.

With increasing recognition of the psychosocial variables in prevention and treatment of illness at various stages of life, more emphasis has been placed on integrating such services into interprofessional care models. Cherin, Simmons, and Hillary (1998) discussed a blended model of care, the "transprofessional model," for working with terminally ill AIDS patients in home health settings. The patients received both curative and palliative services throughout their care process from the care coordination team composed of nurses and social workers. The authors concluded that this model produced a biopsychosocial focus to terminal care that enhanced the quality of life.

The health care needs of children (Sargent, 1985; Schowalter & Solnit, 1998; Wood, 1995) and the elderly (Evans, Yurkow, & Siegler 1995; Gariola, 1997; Wieland & Kramer, 1996) present a particular challenge. Stal, Cherbrett, and McElroy (1998) discussed a team approach for managing congenital and acquired deformities in children. Descriptions of tools (team meetings, flow charts, and care plans) integral to interdisciplinary team functioning were provided. Racine et al. (1998) discussed the need for innovative strategies by academic centers in response to the changing health care environment, finance issues, and training priorities. The reorganization of a major academic center's pediatric service into a vertically integrated system of four independent practice teams that provided comprehensive care in both the ambulatory and inpatient settings was described. A pre- and postreorganization comparison of four measures of inpatient resource use per case (mean certified length of stay, mean number of radiological tests, mean number of ancillary tests, and mean number of laboratory tests) was conducted. Findings demonstrated that this type of service was achievable at an inner-city municipal hospital; and that it improved continuity of care training, increased participation of senior clinicians, and had the potential to significantly conserve inpatient resources.

Collier and Early (1995) described the complementary practice model, a team approach to geriatric case management. Core members of the diverse, multidisciplinary team were the patient, family, physician, nurse practitioner, social worker, and registered nurse. Anderson et al. (1994) described the W. K. Kellogg outreach program, which provided interdisciplinary team training in geriatrics to six small- and medium-sized Michigan communities. This program was instituted to address the growing need for skills and knowledge to provide effective clinical

services to the elderly. Analysis of team activities revealed that financially stable and supportive sponsoring agencies and supportive communities were essential for successful implementation of the program.

Mental Health and Health Models for Interprofessional Practice

Integration of mental health services into the overall system of care has long been supported by randomized studies. Findings indicated that psychiatric consultation and treatment improved the health status and subsequent health care expenditures for patients with somatization disorder (Hellman, Budd, Borysenko, McClelland, & Benson, 1990; Kashner, Rost, & Cohen, Anderson, Smith, 1995; Smith, Monson, & Ray, 1986; Smith, Rost, & Kashner, 1995). Various forms of psychotherapy, alone or in combination with monitored medications, had favorable outcomes in primary care services for acute and continuation phases of depression (Katon, Robinson, & Von Korff, Lin, Bush et al., 1996; Katon, Von Karff, Lin, Simon, Walker et al.,1995; Mynors-Wallis, Gath, & Lloyd-Thomas, & Tomlinson, 1995; Schulberg, Block, Madonia, Scott, Rodriquez, et al., 1996; Scott, Tacchi, Jones, & Scott, 1997). Mental health services improved cancer survival rates (Fawsey, Fawsey, Hyun, Elashoff, Guthrie, et al., 1993; Spiegle, Bloom, & Kraemer, 1969). Mental health treatment improved the outcome of the behavioral changes necessary for treating patients with hypertension and coronary heart disease (Linden, Stossel, & Maurice, 1996; Morisky, Levine, Green, Shapiro, Russell, et al., 1983; Ornish, Brown, & Scherwitz, Billings, Armstrong, et al., 1990).

The integration of mental health service consultation in primary care settings, using either liaison or attachment-liaison models, was initially used by psychiatrists and primary care physicians (Lieberman & Rush, 1996; Oxman, 1996; Paulsen, 1996; Robinson, 1998; Schuyler & Davis, 1999). These models have been increasingly applied to other mental health professionals (Visotsky, 1991; McDaniel, 1995). Studies reported the cost-effectiveness of the collaborative models (Brown & Schulberg, 1995; Katon et al., 1995, Von Korff et al., 1998).

Community-based Models for Interprofessional Practice

Increasingly, factors such as cost-effectiveness, provision of services along a continuum of care, and the advocacy stance of patients and their families have led to increased access to community-based services in both the public and private health care delivery systems. In these models, the interprofessional practice collaboration extends to include patients, their families, and other systems in the community such as schools, businesses, and academic institutions. "Partnership" is often the term used to describe these relationships, which can vary from an informal, short-term "handshake" to a written, legally binding, long-term contractual relationship. For example, Maurana and Goldenberg (1996) described a successful partnership among the health professional schools (medicine, social work, psychology, nursing) of two academic institutions, more than 200 grassroots neighborhood individuals and civic leaders, and 50 health and human service organizations in the Dayton, Ohio, area. The authors suggested that successful community health programs should be looked upon as "health development," similar to the concept of "economic development."

OBJECTIVE 1

Identify and disseminate information about successful models of interprofessional practice in a variety of settings.

Need

- Comprehensive, evidence-based models for the conduct and coordination of care in all health care settings--from home to institutional care, and from rural to urban settings.

Barriers to the Development of Successful Models

As the literature review on the interprofessional practice models suggests, an increasing number of published studies have reported positive outcomes regarding different aspects of collaborative work. However, no comprehensive and evidence-based picture of "successful" models for use in a variety of settings has emerged, and more work is needed (Rice, 2000). This is particularly true regarding the conceptual and structural elements of interprofessional practice (Marett et al., 1998). A variety of factors has contributed to the slow development of successful models.

No Clear Definition of Successful Interprofessional Practice. Today's health care systems emphasize accountability, cost containment, and quality of care. The definition of success by all stakeholders (purchasers, insurers, patients, professionals, regulatory agencies, and accreditation organizations) is framed in the language of measurement. However, consensus among stakeholders is not uniformly sought regarding what, when, how, and why to measure success. Understanding the value-base for the success definition is essential. For instance, "success" for a managed care health plan with a primary focus on cost containment through the reduction of services (Smith, Wong, & Eichert, 1996) does not necessarily translate into success for either the recipient of services or the professionals providing care (Exline, Bastian, & Siegler, 1999).

A good beginning has been made in articulating the value-base of ethical guidelines of interprofessional practice (National Academies of Practice, 1999). However, more work is needed to integrate these values in specific models of interprofessional practice, making them amenable to measurement.

Another important aspect in defining success has to do with determining which elements of interprofessional practice team composition, structure, and process have an impact on outcomes, in contrast to other forms of service delivery. A consensus is developing with regard to the overall definition of success regarding systems of care in terms of access, quality/appropriateness, outcomes, structure, management, and early intervention/prevention domains. Significant effort has resulted in the development of several indicator sets to measure how a system is performing along all these domains when addressing a specific issue or health care problem. Examples of these indicator sets include:

- Health Employer Data Information Set (HEDIS), developed by the National Committee for Quality Assurance (NCQA).
- Mental Health Improvement Statistics Program (MHISP), developed by a task force representing major stakeholders.
- Partnership Performance Grants (PPG), developed by the U.S. Department of Health and

Human Services.
Several health goal sets exist as well, such as *Healthy People 2010*.

No criteria are available for choosing one indicator set over another (Adams & Martinez, 1998). With some modifications, elements of many available indicator sets could be used to study the structural aspects of interprofessional practice models in relationship to their effect on health outcomes.

The inherent difficulties of the measurement itself create another barrier in delineating success or conducting research for all health care models, including interprofessional practice models. For a variety of reasons, the current measures do not yet capture the enormous complexities of the health care systems. As a result, "today's measures tend to be blunt, expensive, incomplete, and distorting. And unless great care is taken, they can easily be inaccurate and misleading" (Edy, 1998, p. 16).

No Definitive Data on Cost-Effectiveness. Interprofessional practice is a method of health care delivery organization rather than a result or an outcome. In today's cost-conscious, competitive health care industry, payors and group health practice executives are unlikely to pay attention to or support changes in current practice models without clear and demonstrated benefit. To drive change, data are needed on interprofessional practice models related to costs and outcomes of care, market share growth, and professional and employee recruitment and retention.

Many studies report cost-effectiveness of interprofessional practice (Burl & Bonner, 1991; Burl, Bonner, & Rao, 1994; Felten, Cady, Metzler, & Burton, 1997; Groth-Marnat & Edkins, 1996; Pugh et al., 1999). More cost-of-care studies are needed regarding structural elements of interprofessional models, such as internal costs of practice, health system costs, and costs of staff recruitment and retention. For example, studies comparing outcomes and costs of care between interprofessional practice and traditional care models, using matched populations and diseases, could reveal much information about cost-effectiveness. Access to services in rural or inner-city areas where issues of co-location of services and outreach programs are important elements of the service delivery system must also be studied for cost and outcome. Development of referral forms, record-keeping procedures, and other management tools to promote interprofessional collaboration and efficiency (reduction of cost and duplication of efforts) could also be studied.

These studies are expensive, and the methodological issues are challenging. Advocacy and funding for such studies are critical to gain answers to the many questions regarding interprofessional practice.

Lack of Theoretical and Conceptual Clarity. Systems of care are designed, in part, based on the system goals. Such goals should also be based on the theoretical and conceptual understanding of the issues. For a variety of reasons, this simple logic is not always observed. Examples of overarching theoretical perspectives that have contributed to the development of interprofessional practice include systems theory, the attributes of open, dynamic living systems (Berrien, 1968), and the biopsychosocial perspective.

Although systems theory has been applied successfully, the dominant theoretical perspective for health and illness continues to be the traditional, disease-based biomedical model. The biopsychosocial perspective emphasizes the fact that the complexities of human functioning in health and in illness require consideration of transactions among biological, psychological, and social factors. The biopsychosocial perspective made an important contribution to the shift from an exclusive focus on illness to the promotion of wellness, an emphasis on prevention, and a more comprehensive definition of health. An example is the World Health Organization's definition of health, which states: "Health is a state of complete physical, mental and social well-being" (WHO, 1964, p. 1). While the biopsychosocial perspective is gaining value among health professionals (McDaniel, 1995; Wood, 1995), its implementation remains difficult for many reasons, including interprofessional issues, and financial and human resource constraints.

On the other hand, increasingly, health care professionals are suggesting that the biopsychosocial model continues to be used in the context of the medical model and there is a need for a change in our conceptualization of health care delivery from "illness" to "wellness" and "prevention" perspectives. In recent years, there has been much progress in prevention of a variety of physical disorders (Department of Health and Human Services, 1991). However, one of the main barriers to a holistic prevention approach to service delivery has been lack of integration of mental health issues in the large-scale prevention programs. In regard to mental health, it has been suggested that, based on a "continuum of care" conceptualization, prevention should be considered in the three major categories of (1) universal prevention for the whole population, (2) selective prevention pertaining to certain at-risk groups, and (3) indicated prevention related to high-risk individuals (Mrazek & Haggerty, 1994).

Another theoretical concept that should be integrated into the larger biomedical and biopsychosocial perspective has to do with the interaction of several important factors, including the following:

- The typology of illness (acute, chronic, practical and affective demands, morbidity and mortality, and cultural meaning).
- The particular characteristics (instrumental and affective styles) of the individual or family.
- Developmental stage.
- Values and transgenerational history (Roland, 1989).
- Systems of care.

Consideration of these interactions could promote more focused and flexible structures within systems of care.

Elements of Successful Structures

The recent emphasis on integrated and interprofessional service delivery is beginning to pay off in several initiatives. One example is the report from the National Institute of Mental Health's Center for Mental Health Services and the Health Resources and Services Administration's Substance Abuse and Mental Health Services Administration, *Promising Practices: Building Collaboration in Systems of Care* (Hodges, Nesman, & Hernandez, 1999), which delineates the essential aspects of successful structures. This report is based on the study of a collaborative

interagency model for child and adolescent mental health services in nine communities across the United States. The study findings are applicable to models of interprofessional practice.

Establishing a Governance Structure. Structure is an essential element of success. Collaboration must occur at all organizational levels (from administrators to supervisors) and include direct service providers both within and across agencies. The structure needs to be formal (bylaws, other codified instruments), but flexible and dynamic to accommodate change.

Group Decision-Making. Power and authority, and their related issues, are an inherent part of the collaborative process. Shared decision-making across different member agencies, rather than decisions by one entity holding power, helps build trust and the ownership of the project.

Funding Collaboration. Funding issues in a time of scarce resources and managed care rules and accountability remain a fundamental variable in the success of collaborative work. The concept of "pooled funding" often generates suspicion and fear of lost resources. Two collaborative funding strategies have been used. In one, each member contributes money to the pooled funds. This strategy often results in anxiety and fear about the success of the project and loss of resources. A more successful strategy is the creation of a pool of new dollars for collaborative work.

Personnel Decisions. A difficult, but successful strategy, for personnel decisions involves the participation of interagency representation in interviewing and hiring. The establishment of reward and promotion policies organized around the demonstrated capacity for collaborative work is also important.

Staff Training. Training strengthens the structural changes in the organization. Successful strategies for staff training include agency/academic partnership for education about collaborative processes and learning about each agency's paperwork.

Neutral Ground. The physical location of collaborative meetings is an important factor in the project's success. Using community facilities or other neutral settings, rather than a site in one participating agency or another, is a useful strategy.

Relationship-building Strategies. Collaboration is a developmental process and the following steps are important for success:

- Starting small and strategically (identifying the willing partners).
- Building on strengths (identifying individuals in each agency committed to collaborative work and issue identification).
- Recognizing limitations.
- Nurturing collaboration (building trust).
- Encouraging innovation and risk.
- Ensuring communication and regular meetings.

- Demonstrating patience and persistence.

Involving Family Members. Family involvement in successful collaborative projects goes beyond respecting family members' wishes. Family members become part of the team and participate in all aspects of the decision-making processes regarding the service delivery.

Evaluation. The responsibility for outcomes is shared in collaborative systems of care. Both process and outcome evaluations are necessary to demonstrate effectiveness. Evidence-based satisfaction measures of patients, professionals, and families; cost-effectiveness; and evidence-based measures of achieved treatment goals are among the essential elements of evaluation.

Activities and Methodology

The role of the NAP, alone or in collaboration with other interested organizations, can be as follows:

- Partner with other interested organizations to promote interprofessional practice models.
- Contact other organizations interested in interprofessional practice to initiate relationships and identify potential projects for collaboration. Include health care administrators as a group to participate.
- Develop NAP web site "hot links" to the web sites of these interested organizations to promote information exchange.
- Use an electronic mail list to facilitate communication among interested organizations and individual professionals.
- Showcase progress at the NAP annual forum and invite members from other interested organizations to attend this meeting and serve as speakers. Consider holding the NAP annual forum in association with another organization's meeting.
- Prepare meeting proceedings and post them on the NAP web site.
- Collect, compile, and analyze interprofessional practice models that demonstrate successful or improved patient outcome and/or cost-effectiveness or cost-benefit data.
- Secure funding to convene a panel of experts to critically assess the models for definitions of success.
- Develop a position paper defining success and potential measurements of success for future research on interdisciplinary team performance.
- Inform NAP members and other practitioners about known interprofessional practice models, definitions of success in these models, and potential measurements through articles published in the *NAP Forum* and posted to the NAP web site.
- Keep the funding community (including federal agencies and major national foundations) informed about what is known and the need for more studies. Targeted agencies and foundations should include the Health Resources and Services Administrations' Office for Rural Health Policy, Bureau of Health Professions, and Substance Abuse and Mental Health Services Administration; the National Institute of Mental Health's Center for Mental Health Services; and the W. K. Kellogg and Robert Wood Johnson foundations and Pew Health

Professions Commission.
- Encourage these funders to support interprofessional practice demonstration and research projects with required program evaluation of specified measurements of success.
- Encourage these funders to support demonstration and research projects comparing interprofessonal practice models with varying professional team members.
- Attempt to secure funding to convene a national conference focused on measurements of success and methods to monitor outcomes (process research). A beginning list of organizations that could participate has been identified, and others could be added.

OBJECTIVE 2

Increase opportunities for health professionals to make interprofessional referrals and to practice collaboratively.

Needs
- Interprofessional job descriptions.
- Collaborative practice agreements.
- Changes in licensure laws that impede collaborative practice.
- Interprofessional practice resources and guidelines for collaborative practice.
- Evidence-based interprofessional practice and referral guidelines.

Barriers to Interprofessional Practice Collaboration

A review of the interprofessional practice literature identified many interrelated obstacles to successful collaboration at the individual, intraprofessional, interprofessional, and institutional levels.

Individual Factors. Individual team members bring unique attitudes and styles to the process of care, and these characteristics influence the outcome of collaboration. For example, a study of nursing home-based social workers in the interdisciplinary health care team examined the association between commitment and seven individual characteristics: styles of teamwork, age, educational background, educational level, years of work in interdisciplinary care planning, training in group processes, and role clarity. Findings indicated that styles of teamwork, educational background, and role clarity were significantly associated with commitment (Nandan, 1997).

Intraprofessional Factors. Significant barriers to future interprofessional practice include:
- The traditional educational separation of health professional students (Wong, 1978).
- The lack of a sense of community in health profession schools.
- Political, economic, and turf battle issues among different departments in universities (Bulger, 1995).
- The unique requirements of each professional for achieving competency.

The Pew Commission recommended a restructuring of these educational experiences to address

the future need for health care practitioner competency in interdisciplinary care (Larson, 1995).

Interprofessional Factors. Various barriers in this category include:

- Differences in the perceived value of collaboration; inappropriate, inadequate communication; and inadequate knowledge about other disciplines (Bradford, 1989; Larson, 1999, Liedka & Whitten, 1997).
- Disagreements about the theoretical orientation of care, usually between the biomedical and biopsychosocial perspectives (Vinicor, 1995).
- Feelings of omnipotence by one group, and issues of power or authority with regard to decision-making (Taylor-Seehafer, 1998; Wong, 1978).
- Value conflicts, such as "saving life" versus "quality of life," or patient autonomy in setting treatment goals (Roberts, 1989).
- Ethical issues such as tension over sharing client confidences, decision-making about treatment choices in difficult cases, and different views of legal responsibilities (Aroskar, 1998; Cloonan, Davis, & Burnett, 1999; Shannon, 1997; Sharp, 1995).

Institutional Factors. In the current managed health care system, all health professionals are under pressure. The impact of changes to capitation from fee-for-service, changes in professional autonomy regarding the scope of patient treatment, reduced access to specialists, heavier caseloads, resulting in less time for each patient, and sometimes being asked to abide by rules that present ethical dilemmas may discourage creative use of interprofessional practice models (Berkman, 1996; Dumas, 1999; Graham, 1999; Shapiro, 1995).

On the other hand, managed care systems have promoted collaboration to enhance cost-saving measures, coordination of care, and improved patient outcomes. This paradoxical situation, generated by an emphasis on money, has resulted in public and professional dissatisfaction. Battles over the Patient's Bill of Rights and the establishment of guilds or unions to protect the rights of members by more professional organizations have resulted.

Elements of Successful Interprofessional Practice Collaboration

Important factors and feasible strategies for success are increasingly described in the professional literature.

Interdisciplinary Educational Programs. Establishing interdisciplinary educational programs at the university level and in other settings is an essential first step in promoting and facilitating interprofessional practice (Bassoff & Ludwig, 1979; Bauman, Duerst, Boh, Girdley, & Heiss, 1999; Betz, Raynor, & Turman, 1998; Bracht & Briar, 1979; Brandon & Majumdar, 1997; Brickell, Huff, & Fraley, 1997). This early experience in interprofessional practice is an important factor in the socialization of new professionals. (Refer to the accompanying article, "Interdisciplinary Health Care Education: Recommendations of the National Academies of Practice Health Care in the 21st Century Expert Panel"). Training in team theory, leadership skills, and communication, including conflict resolution, are essential components of interdisciplinary education (Zeiss & Steffen, 1996).

Important skills and attributes of successful collaboration have been described by numerous authors:

- Cooperation, assertiveness, responsibility, communication, autonomy, and coordination (Norsen, Opladen, & Quinn, 1996).
- Clinical competence, credibility, consistency, assertiveness, and knowledge of how to structure meetings, value time, and market the work of the team (Warren, Houston, & Luquire, 1998).
- Utility, acceptability, authenticity, equity, sensitivity, convergence, congruence, and collaboration (Bagnato & Neisworth, 1999).

Institutional and Environmental Support. Institutional and environmental support are critical to achieve successful outcomes (Drotar, 1993; Weir et al., 1999). Frequent team meetings contribute to collaboration and increased awareness of services available to patients (Bennett-Emslie & McIntosh, 1995). The opportunity to participate in decision-making, and thus become a stakeholder in the final outcome of the program, is an important environmental support to interprofessional practice (Bradford, 1989; Ray, 1998).

Practice Guidelines and Protocols. The current health care system demands accountability, cost containment, and evidence-based treatment choices. Disease-specific treatment guidelines for individual professional groups and physician-nurse guidelines are common. Such practice guidelines need to be updated and standardized in an evidence-based format. Interprofessional practice guidelines must be developed and evaluated for use in different settings. For example, by developing one clear, acceptable set of practice guidelines, a group of collaborating nurses and physicians in a university setting found that 91% of the participants incorporated the guidelines into practice, 55% felt the guidelines promoted standardization of care, and 77% believed the guidelines promoted collaborative practice (Weinstein, McCormack, Brown, & Rosenthal, 1998).

In the biopsychosocial individual and systems intervention model (BISIM) of social worker-nursing collaborative practice in home health care, the case manager practice guidelines are handled flexibly, depending upon the expertise needed by the patient (Veeder et al., 1999). Another interprofessional clinical practice guideline for emergency department treatment of children and adolescents with self-injurious behavior describes roles for the physician, nurse, clinical social worker, pediatric psychiatrist or psychologist, and a case manager (Brown et al., 1999). As these examples suggest, the challenge in the design of any guideline is to achieve a balance between rigorous implementation of the theoretical underpinnings and flexibility so that there is room for creative solutions and use of "clinical" judgments.

Activities and Methodology

- Identify all the barriers to interprofessional practice in collaboration with other interested organizations.
- Secure funding to convene interprofessional work groups to discuss and analyze the most significant barriers and develop strategies for overcoming such barriers.

- Collaborate with other organizations to develop interprofessional job descriptions and collaborative practice agreements.
- Disseminate strategies, job descriptions, and collaborative practice agreements on the NAP web site.
- Seek opportunities to speak at conferences of interested organizations to raise awareness of the issues and potential strategies to overcome barriers.
- Collect and compile descriptions of the unique discipline skills and knowledge important for collaborative practice among health professionals.
- Seek funding to develop, print, and widely disseminate a fact sheet that describes these unique professional discipline skills and their contribution to interprofessional practice.
- Seek opportunities to raise awareness of these unique skills among private and public payors, including managed care health executives.
- Secure funding to conduct a review of the collection of practice guidelines available in the National Guideline Clearinghouse, jointly sponsored by the Agency for Healthcare Research and Quality, American Medical Association, and American Association of Health Plans, to identify interprofessional practice guidelines.
- Categorize these practice guidelines by practice disciplines involved and make the list available on the NAP web site. Submit an article to the *NAP Forum* and other publications.
- Secure funding to convene a task force to further review selected interprofessional practice guidelines and identify opportunities to expand the number of disciplines that could provide the care.
- Collaborate with other interested organizations to identify sites to implement and evaluate the utility of these guidelines with a broader interprofessional mix. Seek funding to support the implementation and evaluation in these sites.
- Seek support to research cost-effectiveness, patient outcomes, and patient and provider satisfaction associated with these interprofessional practice guidelines.
- Collect and compile interprofessional referral guidelines and procedures.
- Seek funding to convene a consensus meeting to discuss common elements of these guidelines and to recommend essential elements for interprofessional referral guidelines.
- Publish the consensus meeting report in the *NAP Forum* and on the NAP web site. Seek opportunities to present the findings at meetings of interested organizations.
- Collaborate with other interprofessional practice organizations to identify sites to test the utility of the interprofessional referral guidelines having all recommended elements.
- Seek funding to research the effectiveness of interprofessional referral guidelines that incorporate the recommended essential elements.

OBJECTIVE 3

Advocate for changing legal and reimbursement policies to make interprofessional practice feasible and attractive to health professionals and health care administrators.

Needs

- Legal strategies supportive of interprofessional practice.
- Reimbursement mechanisms supportive of interprofessional practice.
- Sufficient funding so that interprofessional practice models can be sustained long enough to evaluate outcomes.

Strategies for Feasible Interprofessional Practice

Health care delivery systems face increased clinical and financial risk in today's managed care environment. Strategies for clinical integration and care management are essential if an integrated health care system is to survive. Integrated health delivery systems seek to coordinate physician and other health care services, administrative functions across agencies, and health care delivery sites over the continuum of care. The goals are to demonstrate the best practices and patient outcomes possible for a specific type of case, and to coordinate a person's wellness and illness treatment over time at all service delivery sites (Hill, 1998). There may also be a growing emphasis on integrated health delivery systems as a cost-containment, quality improvement, and consumer satisfaction strategy (Strosahl, 1997). The delineation of the components of successful collaboration between health professionals will become increasingly important given the context of contemporary health care (Rice, 2000).

Although not specifically discussed in the academic literature, the legal and reimbursement barriers to collaborative practice are well known to practicing health professionals. Disputes play out, often at the state level, concerning which provider can do what and at what payment level. The laws and regulations of the current health care system are still based primarily on medical model concepts, and turf wars continue among health care disciplines. Pharmacists and nurse practitioners have made some progress in developing collaborative practice agreements with physicians (Aroskar, 1998; Beck et al., 1998; Fagin, 1992; Klotz, 1994). Some reimbursement progress has also been made.

To successfully implement interprofessional health care, financial disincentives must be removed from the health care system. One essential element is to provide reimbursement to all participant health professionals on an equitable basis. In addition, the process activities (such as team meetings) necessary for successful interprofessional practice must be reimbursable services. Many reimbursement models are currently used, but any could be adapted to finance interprofessional models.

The current capitation method of reimbursement may be a disincentive for interprofessional practice as the capitated rate may be insufficient to cover all the services needed by the patient, particularly when other health professionals must be paid for provision of services. However, capitation may create opportunities for interprofessional practice as cost-effective practice options are sought. Health professionals not previously included in a practice group may be added because some costs may be lower.

If it could be demonstrated that interprofessional teams, including physicians, nurses, pharmacists, nutritionists, mental health professionals, and others, meeting weekly to manage a panel of patients (e.g., in the home) improved quality and reduced system cost, then reimbursement should be fully provided for the team meetings.

Legal barriers must be removed to permit "best practice" models to exist. If model

legislation could be created to incorporate best practice job descriptions and to define the relationships among currently unrelated private practitioners (i.e., physicians, nurse practitioners, pharmacists, and others) advocates at the state level would have a better basis from which to educate others.

More generally, advocates for interprofessional practice are needed to inform and educate health professionals, health care administrators, and payors about the advantages of interprofessional practice. Such advocates may encourage the involvement of financially stable and supportive agencies and payors to sponsor interprofessional practice. Advocates may also inform and educate individuals in communities to seek health care provided in an interprofessional manner.

Activities and Methodology

As stated in Objective 1, the NAP cannot advance an agenda for health care system change independently. It must work with other interested organizations and individuals.

- Obtain federal assistance to convene interested individuals and organizations to begin the process of building group consensus on an agenda and approach to promoting interprofessional practice among all stakeholders. This meeting represents a start. Extensive information and education will be necessary to persuade decision-makers within the health care system to support interprofessional practice and an equitable reimbursement for services.
- Develop relationships with the following organizations: Campus-Community Partnerships for Health, the Primary Care Policy Fellowship, the National Fund for Medical Education, the Bowling Green Conference for Interdisciplinary Studies, the National Association of Geriatric Education Centers, and the Primary Care Fellowship Society. All were invited to this consensus development meeting.
- Organize regular meetings with key representatives in federal agencies. Identify paid staff of collaborating organizations and volunteer advocates to attend these meetings.
- Seek opportunities to participate on task forces addressing key health care practice models. Funding must be identified for volunteer advocates from various geographic regions to participate on these task forces.
- Seek funding to develop educational and marketing materials describing successful characteristics of interprofessional practice.
- Seek funding to hire a communications expert to develop materials using a variety of media.
- Customize materials for the different populations targeted for education by the advocates (the public, health professionals in practice and in education settings, health care administrators, and payors).
- Integrate into all materials produced explanations of the need for and potential cost-benefit of reimbursement for all appropriate health professionals working with patients.
- Obtain testimonials of satisfied patients and health care providers in interprofessional practice to include in educational materials.
- Seek sources of funding to develop and disseminate public service announcements (PSAs),

print brochures, and a display board for use at professional meetings.

- Identify particular health care conditions or circumstances in which interprofessional practice models may be most beneficial. Advocates can then be prepared to discuss these models when opportunities arise.
- Identify the "value added" to care of the population when interprofessional practice is provided. Advocates can then be prepared to discuss and potentially persuade payors to test an interprofessional practice model.
- Develop a strategy for advocates to use when informing the stakeholders and decision-makers about the benefits of interprofessional practice.
- Identify the key professional organizations and health care agencies to target. Examples of organizations may include the following: all professional organizations represented by members of the NAP, American Association of Health Plans, Health Insurance Commissioners, National Council of State Legislators, and American Bar Association. Examples of health care agencies to target may include the Agency for Healthcare Research and Quality, Health Care Finance Administration, Health Resources and Services Administration, and National Institute for Mental Health.
- Identify key elected officials at the state and national level to be educated by advocates.
- Select key organizational meetings to attend; make presentations; and place an exhibit.
- Obtain funding to pay staff of collaborating organizations who may need to attend these meetings and staff the exhibit to pass out information and respond to questions. Advocates need to attend and network with key decision-makers in these organizations to increase the visibility of interprofessional practice issues and needed reimbursement for care. Presentations about successful models of interprofessional practice may be good venues to promote the issue with many health professionals, health care adminstrators, and payors.
- As consensus is reached on best practice models that positively affect health care costs, propose amended reimbursement patterns that permit interprofessional practice. Examples include percentage of compensation relationships among team members, all-inclusive rates, and special payments for services not covered such as team meetings.
- Network with professional organizations to identify opportunities to participate on committees where issues related to practice models and reimbursement are discussed. Some national organizations provide travel funds for official organization representatives on such committees.
- Develop practical "model" materials to assist those trying to incorporate interdisciplinary practice concepts into their practice patterns. Examples include sample job descriptions, the interdisciplinary referral form developed by the NAP, model legislation to permit collaborative practice, sample team communication templates, and sample training modules for team collaboration.

CALL TO ACTION

Before the costs of American health care in its current form crush us, let us seek a paradigm shift in American health care. The simple "one patient, one professional" caregiver structure upon

which American health care is built is not equal to the task of providing optimal care to all in our population. We do not manage prevention or chronic processes and diseases well, including mental and emotional disorders. We manage expensive institutional care far better than we manage the across-the-care continuum. Why? These issues require management of care relationships far more complex than one patient and one caregiver. But we do not have defined, agreed upon "social health" or "team health" care models that optimally relate the individual patient, the professional caregiver(s), family, and community. In the 21st century, filled as it is with advanced technology and systems thinking, we can now manage a previously unheard of complexity of care. We can, indeed we must, create a future with models of care that will be better able to prevent and treat the complex, and often long-term, conditions that are present today and will, with the aging of the population, dominate our future.

Promising interdisciplinary practice models have been described. In our egalitarian, compassionate hearts, we know they are "right." Now it is time to take this work beyond the "pet project," academic incubator stage. It is time to assess these efforts with a critical eye, and to take the steps necessary for "real-world" health care practice. Teams are an increasingly pervasive feature of American corporate life. Delegation, equal rights for all qualified professionals, and diversity management are practiced in so many fields. Why not in health care? Why can't interdisciplinary health care become a parallel, if not dominant, form of health care in the 21st century? The answer is clear: change can occur. But those of us who care about this field must accept the challenge and do the work necessary to ready this field for the health care mainstream. To quote Ghandi, we must "be the change we want to see."

We need to get our act together . . . and then act in concert to achieve our agenda:
--Defining "best practice" interdisciplinary health care models on a population-specific basis and educating the relevant publics.
--Agreeing on "critical success factors" for the structure, operation, and measurement of these team models and disseminating this knowledge.
--Through research, defining the comparative cost and quality advantage of these models versus "traditional" practice and encouraging adoption.
--Defining and working to eliminate barriers to success--in reimbursement, laws and regulations--and gaps in clinical knowledge and practice management, and working at the federal, state, and local levels to achieve our aims.

No major change in American health care has come about without the efforts of visionary activists. Most often these individuals have come from the ranks we represent--interested health care professionals from practice and academic settings. If not us, who? If not now, when? Let us team together now--for together, we ***can*** achieve more.

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