Quality among a diversity of health care providers

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Thirty years' experience in the US with non-physician clinicians shows they can deliver quality care

Like Australia, the United States is experiencing physician shortages,[1] and non-physician clinicians have become ever more important as providers of patient services. Most prominent among these are nurse practitioners (NPs) and physician assistants (PAs), as reviewed by Hooker in this issue of the Journal (*page 4*),[2] but others also contribute to providing "physician services" in the US. They include alternative and complementary medicine providers (chiropractors, naturopaths and acupuncturists), mental health providers (psychologists, clinical social workers, counsellors and therapists) and members of several specialty disciplines (optometrists, podiatrists, nurse anaesthetists and nurse-midwives). Over the past 30 years, all have struggled to obtain licensure in the various states, to expand their practice prerogatives, and to achieve broader reimbursement from third-party payers. The progress that NPs and PAs have made is evident in Hooker's review. The question is, do they contribute to quality? This editorial will comment on NPs, PAs and psychologists. A broader review, which forms the basis for this essay, assesses the full range of disciplines.[3]

***Characteristics of NPs and PAs*:** Although commonly evaluated together, NPs and PAs are trained quite differently. Most NPs work in primary care settings, and, while having the authority to practise independently in more than a dozen states, most work within the context of physician practices. However, the goal of NPs is independence and collegiality rather than dependence and supervision. Nursing educators recognise that achieving this goal requires more advanced training. To that end, a pathway (described below) has been developed for doctoral-level nurse practitioners (DrNPs) who could become the primary care providers of choice for patients with most chronic illnesses.[4]

In contrast to NPs, PAs retain their dependent relationship with physicians, working in a delegated or supervised manner, and while some PAs prefer greater independence, the American Academy of Physician Assistants is committed to retaining an "interdependent relationship" with physicians. Nonetheless, the autonomy of PAs is often substantial. For example, most states allow them to practise within a radius of 50 miles or a 1-hour drive from their supervising physician, as long as the opportunity for telephone contact is maintained. While direct contact is required, its frequency varies from daily in most states to weekly in some and only monthly in a few, and several states require supervising physicians to review only 10%–15% of the PA's patient charts.

Only half of PAs work in primary care. Others span a range of specialties, including cardiology, dermatology, gastroenterology, neurology, general surgery, the surgical subspecialties and obstetrics and gynaecology. PAs assist in surgery, oversee specialty clinics and perform minor procedures, such as endoscopies and biopsies. Like NPs, they participate in patient education, counselling and chronic disease management. Their prerogatives are commonly stylised to the particular relationship that they have developed with their supervising physician.

***NP and PA outcomes*:** A rich body of literature has assessed the quality of care provided by NPs and PAs. In a landmark study published in 1974, shortly after the inception of these two professions, NPs were shown to perform within their scope of office-based practice as effectively as physicians,[5] and, by the end of the 1970s, 40 studies evaluating both NPs and PAs reached similar conclusions.[6] These were reconfirmed not only for NPs and PAs, but also for nurse-midwives, in an even larger body of work, which was summarised by the Office of Technology Assessment in 1986[7] and by Brown and Grimes in 1993.[8] These assessments indicated that NPs and PAs could provide care for 60%–90% of the patients who present to primary care practices.

The period after Brown and Grimes' 1993 analysis[8] has been marked by a progressive expansion of the licensed prerogatives of both NPs and PAs. While most research on quality and effectiveness continues to focus on primary care, some has assessed the performance of NPs as case managers for patients with chronic conditions, as well as their effectiveness in areas of even greater complexity, such as oncology home care, care of at-risk pregnancies and care provided in hospital emergency departments and neonatal intensive care units. Throughout these studies, health outcomes of NPs were similar to those of physicians, with equal or lower costs, shorter waiting times and higher patient satisfaction. Conclusions were similar, whether the research was performed by physicians, nurses, health services researchers or combinations of these. The same general conclusions were reached in a broad series of reports on PAs' outcomes in both primary care and specialty practices. Collectively, they demonstrate that PAs perform competently within the framework of their delegated responsibilities, and that the levels of complexity and autonomy at which they function are greater when they have worked for sustained periods with the same physician.

***Doctoral-level NPs*:** The newly created DrNP degree is intended to further expand the capability of NPs.[4] These practitioners will be trained to practise at the level of family physicians, with hospital-admitting privileges and full parity of reimbursement. Unlike NP training, which is oriented to office-based primary care, DrNPs are expected to care for their patients at a range of sites — emergency department, hospital, office, home, rehabilitation centre or nursing home. A model of such a practice has been established by faculty members at the Columbia University School of Nursing, New York.[9] In a randomised study of follow-up care for patients who presented to an emergency department and had no personal physician, care by either physicians or Columbia nursing faculty showed similar outcomes at 1 year in terms of both clinical status and patient satisfaction.[10] While the patients in this study had unusual demographic characteristics (most were Hispanic, female,

young and poor), and follow-up was relatively brief (1 year), the remarkable success of this experience is inescapable.

Psychologists: Like NP and PA training, the training of doctoral-level psychologists expanded in the 1970s in response to a desire for low-cost community services. Both counselling psychologists and primary care physicians now provide these services for patients with anxiety, mood disorders and other common psychiatric conditions. However, the care delivered has been judged appropriate in 90% of patients treated by psychologists, compared with fewer than 20% of those treated by primary care physicians.[11] Indeed, primary care physicians fail to detect mental disorders 50% of the time, prescribe pharmacological agents for only 60% of those who are diagnosed correctly, and use adequate levels of treatment less than half the time.[12] The value that psychologists bring to this patient population is without question.

The second aspect of care by psychologists is more controversial — the use of psychopharmacological agents. Although leaders in psychology in the early 1990s looked with disdain on prescriptive authority, efforts to obtain such authority had already begun in Hawaii in 1984, and proceeded without success in 14 other states.[13] In 1991, the US Congress authorised a pilot program for prescribing psychologists in the military, and 10 subsequently completed the required 2-year training program. Their prescribing was limited to a formulary, and they initially practised under the supervision of a psychiatrist, but within several years almost all were permitted to practise independently. Indeed, each became the chief of a clinic or department.[14] While this program was discontinued because of the training costs and redundancies, the psychologists who participated were judged to have prescribed safely and effectively, and the quality of their care was rated as good to excellent. However, even when practising "independently", these psychologists were working within institutional settings rather than in community practices.

In 2002, New Mexico became the first state to license prescribing psychologists, patterning its program after the military.[13] Similar legislation is pending elsewhere. However, even without such state action, a small group of psychologists who also trained as NPs have been prescribing under their nursing licences, and many psychologists prescribe de facto through their relationships with family physicians. Nonetheless, psychiatrists protest that psychologists are not adequately prepared for this role, and many psychologists agree. And while most psychology graduate students have no interest in pharmacotherapeutics, the profession is attempting to integrate the use of psychotropics into its training programs and to build for a future in which such practices are common.

Conclusion: A large body of evidence supports the principle that NPs, PAs, psychologists and others provide quality care. Based on this experience, the expectation is that their contributions will progressively broaden over time as the US adjusts to its growing physician shortage.[1] The strongest body of evidence in support of their effectiveness and safety is derived from care that is at the least complex end of the clinical spectrum or that is provided under the umbrella of physician involvement. Fewer studies have critically examined outcomes at the leading edge of their practice prerogatives and under conditions that are free of physician oversight. Therefore, as the scope of practice of non-physician clinicians continues to expand, more research will be needed to examine outcomes under conditions of greater clinical complexity and autonomy.

Acknowledgements

The content and ideas expressed in this editorial have been largely drawn from my previous article (co-authored with Stoflet), *Diversity and consistency: the challenge of maintaining quality in a multidisciplinary workforce.*[3]

Competing interests

I have spoken about this subject at many professional meetings and have often been given an honorarium and usually had my expenses covered by the organisation that sponsored the meeting.

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References

1 Cooper RA. Weighing the evidence for expanding physician supply. *Ann Intern Med* 2004; 141: 705-714.
2 Hooker RS. Physician assistants and nurse practitioners: the US experience. *Med J Aust* 2006; 185: 4-7.
3 Cooper RA, Stoflet SJ. Diversity and consistency: the challenge of maintaining quality in a multidisciplinary workforce. *J Health Serv Res Policy* 2004; 9 (Suppl 1): 39-47.
4 Mundinger MO. Twenty-first-century primary care: new partnerships between nurses and doctors. *Acad Med* 2002; 77: 776-780.
5 Spitzer WO, Sackett DL, Sibley JC, et al. The Burlington randomized trial of the nurse practitioner. *N Engl J Med* 1974; 290: 251-256.
6 Sox HC Jr. Quality of patient care by nurse practitioners and physician's assistants: a ten-year perspective. *Ann Intern Med* 1979; 91: 459-468.
7 Office of Technology Assessment. Nurse practitioners, physician assistants, and certified nurse-midwives: a policy analysis. Washington, DC: Government Printing Office, 1986. (Health Technology Case Study 37, OTA-HCS-37.)
8 Brown SA, Grimes DE. A meta-analysis of process of care, clinical outcomes, and cost-effectiveness of nurses in primary care roles: nurse practitioners and certified nurse-midwives. Washington, DC: American Nurses' Association, 1993.
9 Mundinger MO. Can advanced practice nurses succeed in the primary care market? *Nurs Econ* 1999; 17: 7-14.
10 Mundinger MO, Kane RL, Lenz ER, et al. Primary care outcomes in patients treated by nurse practitioners or physicians — a randomized trial. *JAMA* 2000; 283: 59-68.
11 Young AS, Klap R, Sherbourne CD, Wells KB. The quality of care for depressive and anxiety disorders in the United States. *Arch Gen Psychiatry* 2001; 58: 55-61.
12 Speer DC, Schneider MG. Mental health needs of older adults and primary care: opportunity for interdisciplinary geriatric team practice. *Clin Psychol: Sci Prac* 2003; 10(1): 85-101.
13 Yager J. The 2002 psychologist prescribing law in New Mexico: the psychiatrists' perspective. *Md Med* 2002 Fall; 3(4): 21-23.
14 United States General Accounting Office. Prescribing psychologists — DOD demonstration participants perform well but have little effect on readiness or costs. Report to the Chairman and Ranking Minority Member, Committee on Armed Services, US Senate, 1999. ❑