

## ABSTRACT

**Objective:** *To determine how satisfied older American consumers are with physician assistant (PA) and nurse practitioner (NP) care.*

**Design:** *Cross-sectional national survey.*

**Setting:** *Noninstitutional, representative, random sample of people aged 65 years and older.*

**Participants:** *Medicare recipients from the 2000 and 2001 Medicare Satisfaction Survey, Consumer Assessment of Health Plans Survey section on Fee-for-Service, who identified a primary care provider.*

**Measurements:** *Patient sociodemographic characteristics, health care experience, and satisfaction data were compared in which a generalist physician, PA, or NP was identified as the personal provider.*

**Results:** *146,880 completed returns from 321,407 randomly sampled Medicare beneficiaries nationwide (45.7% of the total surveyed) were analyzed with regard to satisfaction with their personal providers. Of this number, 3,770 identified a PA or an NP as their personal provider. For questions on satisfaction with their personal care clinician, results were similar for all three kinds of providers. A significantly higher proportion of the patients who reported NPs as their primary care providers were Medicaid recipients than were those patients who reported receiving care from PAs or physicians. Conversely, a significantly higher proportion of patients who were supplemental insurance recipients reported physicians as their primary care providers than were those who reported receiving care from PAs or NPs.*

**Conclusion:** *Findings suggest that patients are generally satisfied with their medical care and do not distinguish preferences based on types of providers. PAs, NPs, and physicians in primary care seemed to be viewed similarly regardless of patient characteristics. PAs and NPs may be a workforce that could be expanded to care for the rising needs of the elderly.*

# Are older patients satisfied with physician assistants and nurse practitioners?

Daisha J. Cipher, PhD; Roderick S. Hooker, PhD, PA; Edward Sekscenski, MPH

Consumers' assessments of their medical providers are an important aspect of effective care because satisfied patients are more likely to follow through on a clinician's recommendations than are dissatisfied patients.<sup>1,2</sup> PAs and NPs are increasingly providing patient services, especially primary care for vulnerable populations.<sup>3</sup> For example, as of 2002, an estimated 110,000 PAs and NPs were clinically active, making them approximately one sixth of the medical workforce. Of this number, at least 5% of PAs and NPs were working in the specialty of geriatrics.<sup>4</sup> Reasons postulated for

Daisha Cipher is Assistant Professor, School of Public Health, University of North Texas Health Science Center, Fort Worth. Roderick Hooker is Director of Research in Rheumatology, Department of Veterans Affairs, Dallas, Tex. Edward Sekscenski is Team Leader, Medicare CAHPS FFS Survey, Centers for Medicare and Medicaid Services, Baltimore, Md. The authors have indicated no relationships to disclose relating to the content of this article.

### Competencies

Medical knowledge	◆
Interpersonal & communication skills	◆◆
Patient care	◆
Professionalism	◆◆
Practice-based learning and improvement	◆◆◆◆
Systems-based practice	◆◆◆◆

For an explanation of competencies ratings, see the table of contents.

the increased number of PAs and NPs practicing in geriatrics include an aging population with its increased demands for services and resources, coupled with a shortage of physicians willing to specialize in geriatrics. As a result, virtually all states, along with the federal government, have fashioned legislation that enables the PA and NP to work in traditional physician settings. This national health workforce policy has been a center of attention as the United States decides how many physicians will be needed in 2030, when the elderly population will be twice what it was in 2000.

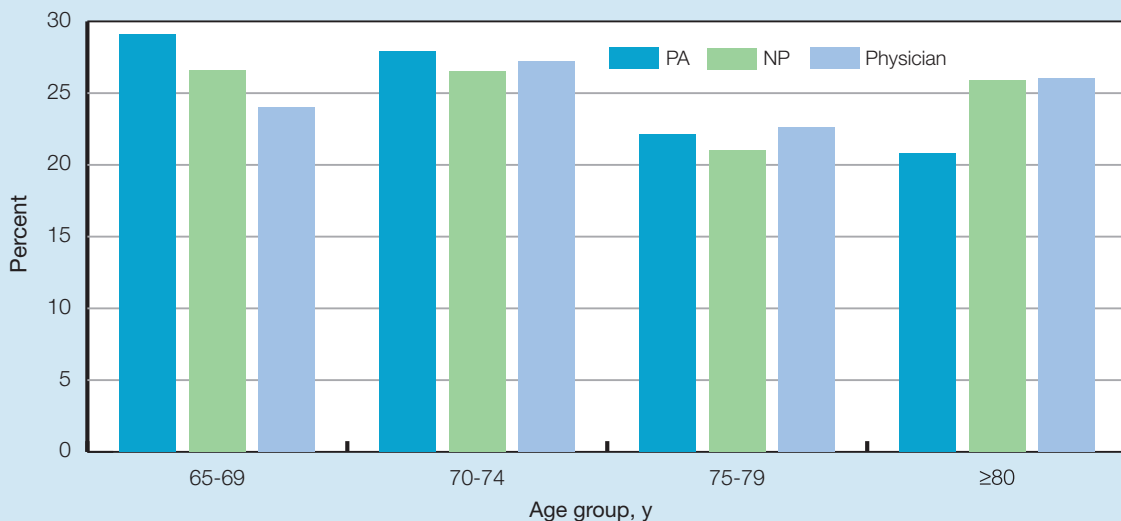
While attention to how patients perceive their PA and NP providers is critical to the successful deployment of these providers, documentation of patient attitudes regarding PAs and NPs is sparse. These attitudinal differences are important to know because if consumers are not satisfied with PAs or NPs, no alliance with organized medicine will ensure the future of these clinicians.

One of the first studies examining patient expectations of PAs in dealing with a series of personal, social, psychological, and health-related items indicated that patients expected the PA to be involved in these areas but did not expect the PA to be an expert.<sup>5</sup> A systematic review of the literature on NPs and how they compared to physicians concluded that the increasing availability of NPs in primary care is likely to lead to high levels of patient satisfaction and high-quality care.<sup>6</sup>

Few studies on patient satisfaction have simultaneously compared PAs, NPs, and physicians. In one study, patients assessed the confidence of primary care PAs and physicians after clinic visits for low back pain. Patients of providers who appeared confident in their overall rapport with patients and assessment were significantly more satisfied with the information they received than were patients of less confident providers. Differences could not be explained by years in practice, length of visit, patient demographics, or type of provider.<sup>7</sup> In an HMO study, members in the Pacific Northwest region of Kaiser Permanente rated the “technical competence, skill, and ability” of physicians, PAs, and NPs as “satisfied or very satisfied” more than 75% of the time.<sup>8</sup> Using a different instrument for validation purposes, the same population was reexamined over an 18-month period in the early 1990s with regard to how members view physicians, PAs, and NPs. A 57-item questionnaire asked specifically about satisfaction with a recent medical office visit and a specific provider. When health plan members were asked how satisfied they were with their latest encounter, adult practice PAs and NPs scored within 1% to 2% of physicians (88%-90% favorable globally). The

FIGURE 1

### Medicare beneficiaries by type of provider and age group: 2000-2001



technical skill of PAs and NPs rated within 3% to 4% of that of physicians. As for overall satisfaction, members regarded adult medicine physicians, PAs, and NPs almost the same and as statistically indistinguishable from each other, regardless of members' age or gender.<sup>9</sup>

From the literature, it appears that patients may hold NPs and PAs in the same regard as physicians, depending on the setting and how the study was undertaken. However, this information is limited to small studies and geographically isolated populations. The views expressed in attitude surveys may reflect patients' confidence in the ability of NPs and PAs to take care of their medical conditions in those settings, but a national study of patient satisfaction of PAs has never been conducted and few have compared PAs and NPs with physicians.

A number of factors point to the need for more patient satisfaction studies. The growing number of older Americans and the increasing demand for health services by all segments of the population will require a larger supply of health providers, especially among those trained in primary care and/or treatment of the elderly. However, as of 2005, a dwindling proportion of newly trained physicians is selecting primary care or geriatrics as a practice specialty. At the same time, the number of PAs and NPs assuming the roles of primary providers in American medicine is growing.<sup>4</sup> With this in mind, we undertook a survey study in order to expand on the empirical evidence regarding older patients' experiences with PAs and NPs. With this type of survey, we could assist policy makers in shaping the next generation of health care providers.

**Methods**

Upon human subjects committee approval, we analyzed data from the 2000 and 2001 Medicare Satisfaction Survey, Consumer Assessment of Health Plans Survey (CAHPS) section on Fee-for-Service (FFS), yielding information on the health care experiences of beneficiaries who were enrolled in the Medicare program for 6 months or longer, using the Statistical Package for Social Sciences (SPSS 10.0). Findings were derived from a nationally representative sample of the approximately 85% of beneficiaries who were enrolled in the original FFS Medicare health plan (but not in a Medicare managed care plan). The 92-question survey was designed to meet the need for reliable information about the quality of services provided to persons who receive their health care through the Medicare program from a beneficiary/consumer perspective. Characteristics of patients were grouped by age, gender, race, and size of population. Information collected in the survey included the presence of (and beneficiary satisfaction with) a personal health provider and whether that provider was a PA, an NP, or a generalist or specialist physician.

In an attempt to examine experiences of beneficiaries with similar health care needs, this study focused on beneficiaries who reported that their personal provider was a PA, an NP, or a generalist physician. Excluded from the analyses were beneficiaries who reported that their personal provider was a specialist physician, as well as beneficiaries who may have received care from a PA or NP secondary to care received from a physician whom they reported to be their personal provider. To examine patient satisfaction from a geriatric standpoint, we excluded respondents who were younger than 65 years.

The survey asked each recipient a series of questions relating to the care they received from their medical provider, measuring responses on a five-item scale ranging from *never* to *always*. Responses were then recoded to quantities 1 to 5 for purposes of these analyses. Questions were as follows:

- How often does your health provider listen carefully to you?
- How often does your health provider explain things in a way you can understand?
- How often does your health provider show respect for what you have to say?
- How often does your provider spend enough time with you?

The survey included characteristics of Medicare FFS beneficiaries and the health services they received in the 6 months before the survey, including information on physician office, clinic, and emergency department

**FIGURE 2**  
**Characteristics of Medicare beneficiaries with additional insurance by type of providers**

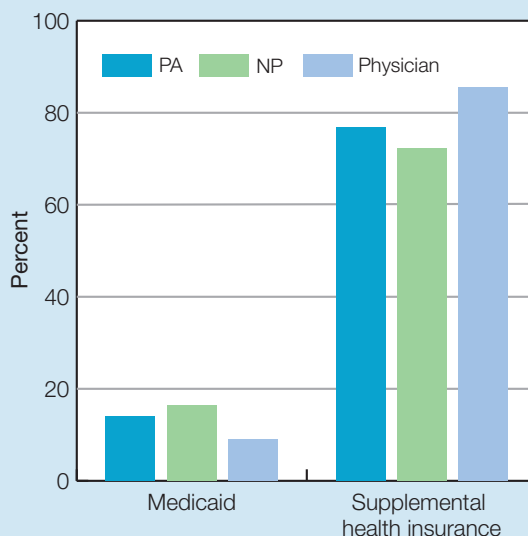
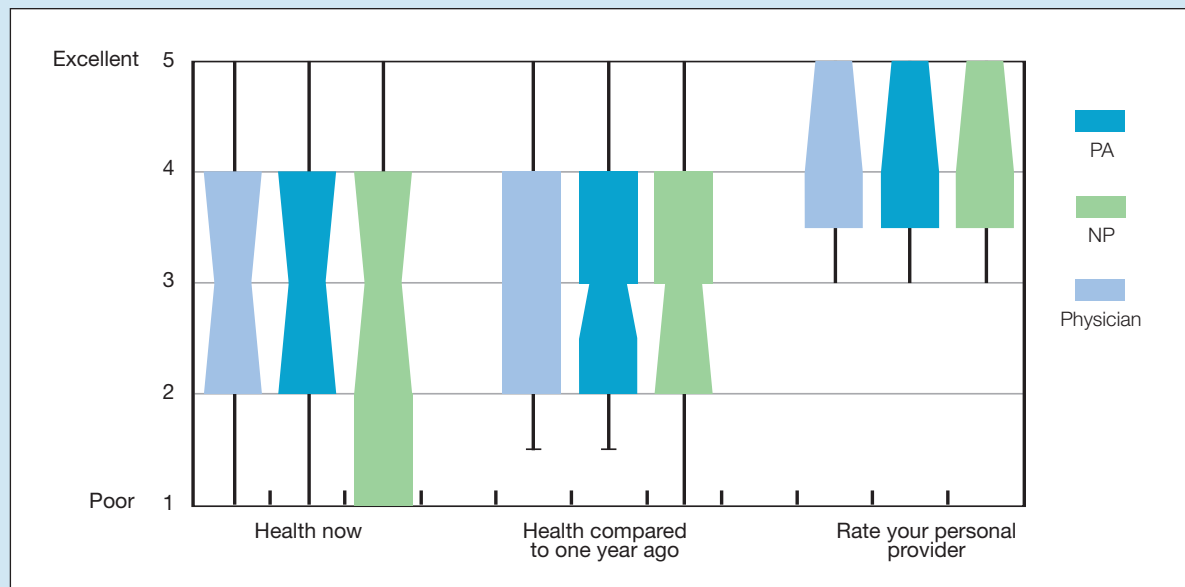


FIGURE 3

Comparison of health and provider ratings by Medicare recipients: 2000-2001



use, as well as any hospital stays in past 12 months and use of selected preventive health services.

Data from the CAHPS were identified for the years 2000 and 2001. The health care experiences of beneficiaries who reported their personal provider as being a PA, NP, or generalist physician were also cross-tabulated with information on beneficiary health status and presence and type of insurance in addition to Medicare. Analyses of variance were performed, with type of provider as the independent variable and the following as dependent variables: number and types of visits to health care providers, problems and delays in obtaining necessary care, how well the beneficiary's provider listened, how well the provider explained things, whether the provider showed respect and spent enough time with the patient, and an overall rating of the personal provider. Patient characteristics included age, gender, and presence of chronic illness. The 95% confidence intervals around the means and proportions were computed using Taylor approximations. Differences between the types of variables for each group of providers were investigated using analysis of variance and Cohen's *d*. Chi-square analyses determined whether differences in type of provider and other variables were present.

**Results**

A total of 321,407 randomly sampled beneficiaries who were enrolled in the original Medicare Health Plan for at least 6 months in the 2000 and 2001 surveys were deemed eligible to complete the survey in the 2 survey

years. The criteria for this study identified 146,880 completed returns (or 45.7% of the full sample) for 2000 and 2001 in which a 65-year-old or older recipient identified a generalist physician, a PA, or an NP as being his or her personal health provider. The majority of respondents were female (57.6%), with somewhat even age distribution across provider types by age group (see Figure 1, page 39). Almost one quarter (23.7%) were 80 years or older. Most (93.3%) lived in their personal home or apartment, with the remainder residing in assisted living facilities (1.8%), long-term care facilities (1.9%), or other (3.0%).

Analyses revealed a disproportionate number of Medicaid enrollees who reported an NP (16.5%) or a PA (14.1%) as their primary care provider, as opposed to Medicaid enrollees who reported a physician (9.0%;  $\chi^2(2)=169.36, P<.001$ ; odds ratio [OR]=1.15). Also significant was the difference in the proportion of patients who had supplemental insurance in addition to Medicare and identified a physician (85.6%) as opposed to a PA (76.8%) or an NP (72.3%;  $\chi^2(2)=189.05, P<.001$ ; OR=1.68) as their primary care provider (see Figure 2, page 40).

Among those who said that they had a personal provider, more than three quarters (76.1%) said they had been going to this provider for more than 2 years. Among all beneficiaries, 3,770 identified a PA or an NP as their personal provider. This group represents our main study subjects. In our analyses, we compared these respondents with those who identified a generalist physician as their personal provider.

Fewer than 5% of all beneficiaries in the study said they had a “considerable problem” finding a provider with whom they were happy. In the aggregate, two thirds said their health was excellent, very good, or good; one third said their health was fair or poor. When asked how the beneficiaries would rate their health now compared to 1 year ago, most reported that their health was about the same (57.3%), followed by somewhat worse (20.1%). When sorted by type of provider, the percentage of beneficiaries who reported being in fair or poor health was 30.5% for those whose personal provider was a generalist physician, 33.3% for those whose personal provider was a PA, and 38.7% for those reporting that an NP was their personal provider. In other words, health ratings from those recipients who saw an NP were significantly worse than those from respondents who saw a physician or PA ( $F(2,146811)=33.87, P<.001$ , Cohen’s  $d=.20$ ). When recipients were asked to rate their provider, the ratings were consistent across those who received care from a physician, PA, or NP ( $F(2,144840)=3.5, P=.03$ , Cohen’s  $d=.08$ ) (see Figure 3, page 42).

As shown in Figure 4, the distribution of responses to these questions was similar across all three provider groups. The response means for the six satisfaction-related items ranged from 3.5 to 3.7 for physicians, 3.6 to 3.7 for PAs, and 3.5 to 3.6 for NPs. The standard deviation was between 0.55 and 0.70 and the 95% confidence interval was between 3.50 and 3.70 for all four questions and all three providers. Although many of the responses differed significantly among the three

providers, these differences were small with regard to effect size (Cohen’s  $d<.20$ ).

Because the main four satisfaction variables (provider listens, explains, shows respect, and spends enough time) were significantly intercorrelated ( $r=.55$  to  $.65, P<.001$ ), they were submitted to multivariate analyses of covariance (MANCOVA) in order to investigate potential provider differences on the satisfaction variable set, controlling for patients’ self-reported health. MANCOVA results revealed a significant difference (Wilks  $\lambda=1.00, F(8,230718)=4.14, P<.01$ ). However, the effect size ( $\eta^2$ ) was  $.01$ , meaning that the provider variable accounted for approximately 1% of the variance in the satisfaction variable set.

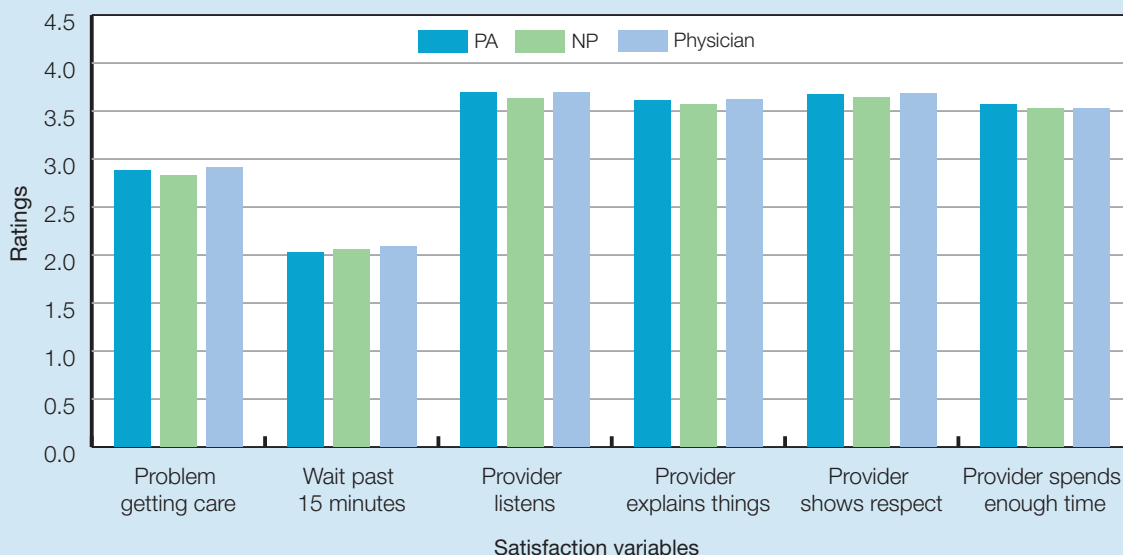
We further sorted results of the above analyses to identify any patient characteristics that might rate providers differently. Specifically, we examined whether any of the following patient characteristics were predictors of greater or lesser satisfaction for the services provided by one type of provider over the other:

- Age
- Gender
- Number of physician office visits
- Problems obtaining necessary care within the past 6 months
- How often respondents had to wait 15 minutes past their appointment times to be seen by their provider
- Whether they were seen more than twice for the same condition in the past 12 months.

In each instance, using analysis of variance, we found

FIGURE 4

Satisfaction ratings by provider



no statistically significant differences in satisfaction with the care received by beneficiaries according to type of provider. Nor did we find differences among beneficiaries by provider type regarding a measure of health status change obtained in the survey. When asked how they would rate their health now compared to 1 year ago, 57.3% of beneficiaries said it was the same as in the prior year.

### Discussion

We present the first national cross-sectional study on patient satisfaction comparing and contrasting physician, PA, and NP care. This study is unique because it incorporated not only attitude ratings by older Americans but also quality-of-care indicators along with economic status. In all indices of satisfaction, PAs and NPs were rated as favorably as physicians. An unexpected finding was that a higher proportion of elderly poor received their care from NPs, as opposed to PAs or physicians.

Findings from this analysis of Medicare beneficiaries' experiences with their health providers suggest that differences in satisfaction by provider type are unaffected by beneficiaries' sociodemographic characteristics and health status. Moreover, patients did not report differences in receiving immunizations or smoking cessation advice from one provider over the other. However, there were significant differences in providers based on whether patients had additional health insurance. Beneficiaries who were dually enrolled in Medicare and Medicaid received proportionally more care from NPs than from PAs or physicians. That is, a significantly higher proportion of those patients who reported NPs as their primary care providers were Medicaid recipients than were those who reported receiving care from PAs or physicians. Conversely, a significantly higher proportion of patients who had supplemental insurance reported physicians as their primary care providers than did those who reported receiving care from a PA or NP. This suggests that PAs and NPs may be taking care of the elderly poor proportionally more than physicians.

The number of patients who reported a PA or NP as their primary care provider was lower than expected and lower than what the literature suggests it might be, given that PAs and NPs make up one sixth of the health workforce.<sup>4</sup> One explanation is that the vast majority of PAs and NPs work in physician offices, sharing the practices as interprofessional team members, and in the eyes of patients they may be viewed as extensions of the physicians. While we selected rigid criteria to distinguish the primary care services of each kind of provider over those of the other, the patient may perceive the care she or he receives as a group effort, con-

sidering the doctor to be the primary care provider even when the PA or NP delivers all the care.

Another explanation is the lack of consistency in the regulatory care system. Each state has different enabling legislation, reimbursement laws other than Medicare and Medicaid, and prescribing regulations. At the time of this study, not all PAs and NPs were using the Medicare practitioner identification number. These combined differences could account for how patients perceive their providers.

A final possible explanation of the low percentage of nonphysician primary care providers is that beneficiaries are self-selecting for answering the questionnaires if their providers are physicians, or if their health care is perceived as satisfying—the so-called “halo effect,” in which the physician is held above reproach. Beneficiaries may perceive PAs or NPs the way they do physicians and thus mark the physician checkpoint instead of the PA or NP checkpoint.

We conclude that the policy decision to incorporate PAs and NPs in the American medical system appears to be justified, at least from the older patient's viewpoint. With the elderly population expanding at a time when the supply of physicians is static, we suggest that incorporating PAs and NPs in geriatric medical care is warranted. Clearly, more work is needed in this area. Future studies should not only validate these findings but also begin linking the patient's level of satisfaction with the diagnosis and the provider, to see whether there is further sorting out of clinician types. This information may lead to an improved division of labor in the overall delivery of team-based care. □

---

### Acknowledgments

Data were made available and purchased through the Centers for Medicare and Medicaid Services and their ongoing Consumer Assessment of Health Plans Surveys (CAHPS). This study was funded in part by a grant through The Association of Physician Assistant Programs Research Institute.

---

### REFERENCES

1. Hershey C, Grant BJ. Controlled trial of a patient-completed history questionnaire: effects on quality of documentation and patient and physician satisfaction. *Am J Med Qual.* 2002;17(4):126-135.
2. Janis IL. An analysis of psychological and sociological ambivalence: nonadherence to courses of action prescribed by health-care professionals. *Trans NY Acad Sci.* 1980;39:91-110.
3. Hooker RS, McCaig LF. Use of physician assistants and nurse practitioners in primary care, 1995-1999. *Health Aff (Millwood).* 2001;20(4):231-238.
4. Hooker RS, Berlin LE. Trends in the supply of physician assistants and nurse practitioners in the United States. *Health Aff (Millwood).* 2002;21(5):174-181.
5. Elizondo E, Blessing JD. The ability of PAs to solve patients' psychosocial problems. A preliminary report on patient expectations. *Physician Assist.* 1990;14(2):79-82.
6. Horrocks S, Anderson E, Salisbury C. Systematic review of whether nurse practitioners working in primary care can provide equivalent care to doctors. *BMJ.* 2002;324:819-823.
7. Bush T, Cherkin D, Barlow W. The impact of physician attitudes on patient satisfaction with care for low back pain. *Arch Fam Med.* 1993;2(3):301-305.
8. Freeborn DK, Pope CR. *Promise and Performance in Managed Care: The Prepaid Group Practice Model.* New York, NY: Johns Hopkins University Press; 1994.
9. Hooker RS. The roles of physician assistants and nurse practitioners in a managed care organization. In: Clawson DK, Osterweis M, eds. *The Roles of Physician Assistants and Nurse Practitioners in Primary Care.* Washington, DC: The Association of Academic Health Centers; 1993:51-68.