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Patient Satisfaction: Comparing Physician Assistants, Nurse Practitioners, and Physicians

Objective: *To evaluate patient satisfaction with care as managed by different types of providers: physician assistants (PAs), nurse practitioners (NPs), certified nurse midwives (CNMs), and physicians.*

Methods: *Questionnaires were mailed to members of a large health maintenance organization who visited medical offices in any of five medical specialties during 1995 or the first half of 1996. Patient-generated scores for eight provider attributes were combined to generate a mean score for each attribute by provider type. Scores were then compared.*

Results: *Satisfaction was reported by 89% to 96% of patients of PAs, NPs, CNMs, and physicians with regard to courtesy, understanding of problem, ability to explain, use of understandable words, listening, time spent, and confidence in provider. Clinicians in orthopedics and in obstetrics and gynecology scored slightly higher than did primary care clinicians. No statistically significant differences in scores were seen between providers by type, by age, by gender, or by length of employment.*

Conclusion: *Patient satisfaction with interpersonal care appears to depend on communication and style and not on type of provider. These findings suggest that policy decisions to incorporate PAs, NPs, and CNMs into medical practice have gained patient acceptance.*

" ... our findings suggest that patient satisfaction with care appears to depend on the communication skills and style of the provider, and not on the type of provider. "

Patient acceptance and satisfaction with care has only recently received attention in the medical literature.[1] Interest has grown concomitantly with increasing competition among health plans: Because they need to attract and retain members, health plans are particularly interested in ensuring member satisfaction. Measurement of satisfaction levels is believed important also because evidence indicates that satisfied patients are more likely to feel they have participated in decision-making and will more likely follow through on those decisions when compared with those who are not satisfied.[2] Understanding patient satisfaction with care is therefore critical if health plans are to be successful. Having a variety of types of providers for health plan members to choose from has helped to meet diverse needs of members. However, little research is available comparing the satisfaction of patients when different types of providers see similar types of patients.

One type of health maintenance organization (HMO), Kaiser Permanente of the Northwest (KPNW), has been a site for member health plan population studies for more than 25 years. An extensive personal interview of a cross section of members was done from 1970 through 1971 (in which a 92% response rate was attained), and this cross section was retested in 1974. This work has laid the foundation for the Current Membership Survey series by researchers Pope, Freeborn, and Marks at the KPNW Center for Health Research.[3] A second series of annual mail questionnaire surveys, The Surveys of Medical Office Visits, was initiated in 1991 and supplements the Current Membership Survey. These evaluations of visits to physicians, PAs, NPs, and other providers focus on patient satisfaction.[3]

Results from these membership surveys consistently reported that about 75% of members were either satisfied or very satisfied with providers. The attributes examined were medical knowledge, technical skill, communication, and interpersonal skills. When the same set of data was examined with the focus on member satisfaction with all primary care providers, satisfaction levels ranged between 78% and 94%. When types of providers were examined within specialties, members rated PAs and NPs nearly the same as physicians except that pediatricians were rated higher than pediatric PAs and NPs.[4]

Recently, a new survey tool was developed to provide individual clinicians with feedback from patients about the care they experienced during a recent office visit. Titled *"The Art of Medicine,"* this survey instrument was developed by Mekl, a pediatrician in the Kaiser Permanente Rocky Mountain Division. He examined the literature, reviewed communication surveys, and after extensive research, introduced the survey instrument to the Colorado Permanente Medical Group in 1990. Used in 10 of the 12 Kaiser Permanente Regions* to date, the instrument has been extensively tested and its format modified to comprise 8 questions.

It was this survey tool that was used in the current study to examine effectiveness of communication of physicians, PAs, or NPs with patients.

This study explored differences in patient satisfaction with physician and nonphysician providers.

* Currently restructured into 7 Divisions and Hawaii

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Table 1. Questionnaire items derived from Art of Medicine Survey and sent to selected members of Kaiser Permanente Northwest Region (KPNW)

1. How COURTEOUS and RESPECTFUL was the clinician?
2. How well did the clinician UNDERSTAND your problem?
3. How well did the clinician EXPLAIN to you what he or she was doing and why?
4. Did the clinician USE WORDS that were easy for you to understand?
5. How well did the clinician LISTEN to your concerns and questions?
6. Did the clinician spend ENOUGH TIME with you?
7. How much CONFIDENCE do you have in the clinician's ability or competence?
8. OVERALL, how satisfied are you with the service that you received from the clinician?

A second objective was to examine concurrently the attitudes of patients of three types of providers to see if previous observations could be supported by a large-scale study.

The introduction of PAs and NPs into both primary care and certain aspects of specialty care is of interest for a number of reasons. PAs and NPs have been an integral component of the medical staff for more than 25 years, but their status has been viewed differently among managers in different programs. Some Kaiser Permanente Regions intensively integrate these providers within staff; others have introduced them in more limited and restricted fashion. Because decisions about how these nonphysician providers are used seem to be more a function of physician attitude than organizational rationale, we believed this study might be important for those contemplating expansion of PA or NP roles. We hypothesized that patients could be satisfied with their care regardless of the type of provider delivering the care.

Methods

Research setting

The setting for the study was the Northwest Division of Kaiser Permanente (KPNW). KPNW is a prepaid, group-practice HMO which provides integrated, comprehensive inpatient and outpatient care for an enrolled population of 400,000 members, including Medicaid recipients, and is largely located in the Portland, Oregon, and Vancouver, Washington, metropolitan areas. The enrolled population is representative of the area population in sociodemographic characteristics such as gender, age, and ethnic and racial composition.

KPNW maintains one hospital and 20 ambulatory care medical offices. Each hospital and medical office facility has an outpatient pharmacy, laboratory, and imaging service. The KPNW physician group employs 550 physicians, 75 physician assistants, 75 nurse practitioners, and 10 nurse midwives.[5]

Study design

This is a secondary analysis of the ongoing Art of Medicine Survey. The survey is an 8-item questionnaire (Table 1) mailed to patients who saw a provider in a KPNW medical office in any of five departments (internal medicine, family practice, pediatrics, obstetrics and gynecology, orthopedics) during 1995 or during the first half of 1996. Patients who saw more than one provider in one day were excluded from the sample. Visits to anesthesiologists, emergency physicians, and radiologists were not included. Questionnaires were randomly mailed to patients whose appointments were entered on the daily schedule. Typically, one to four patients per working day were contacted, and the return rate averaged about 40%.

Respondents were asked to rate the most recent visit by using a line score of 1 to 9. All line scores were converted into a percentage score between 1 and 100. Survey results were based on about 100 completed questionnaires for each provider. The scores were reported as a percentage of the highest possible score. In making comparisons, a difference of 3 percentage points was considered notable. The eight questions were scored individually from 1 to 9 and were reported as individual scores in percentage points up to 100%. The eighth question provided an overall satisfaction score. Beneath the questions was an invitation to the member to comment. Written comments with the numeric results were distributed to the clinician. To encourage candor, responses were anonymous.

All questions were chosen on the basis of strong statistical correlation with overall satisfaction. Comparison of pilot efforts with an expanded list of 18 questions showed that correlation did not change when the list was pared to 7 questions.

Table 2. Number and results of returned patient satisfaction questionnaires sent to patients seeing nonphysicians (PA or NP) or physicians (MD or DO) in any of five hospital departments.

Department of Provider	Average Number of Questionnaires Returned: By Patients Seeing PA or NP	Average Number of Questionnaires Returned: By Patients Seeing Physician	Mean Difference in Questionnaire Scores (95% CI)*
Internal Medicine	90	94	-1.000
Family Practice	90	96	-2.146
Pediatrics	83	90	2.000
Obstetrics-Gynecology	73	71	1.000
Orthopedics	79	72	-1.000
Overall			0.638

PA or NP = physician assistant or nurse practitioner; MD or DO = medical doctor or osteopath.

*Values expressed as mean difference confidence internal, comparisons between providers are based on paired t tests, $p < .05$

"From a membership standpoint, the policy decision to include PAs and NPs in primary care and certain subspecialties seems to be sound."

Figure 1.

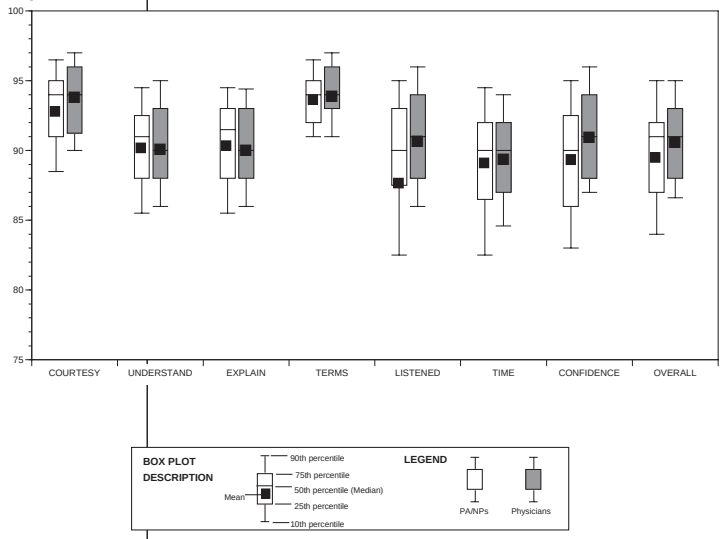


Figure 2.

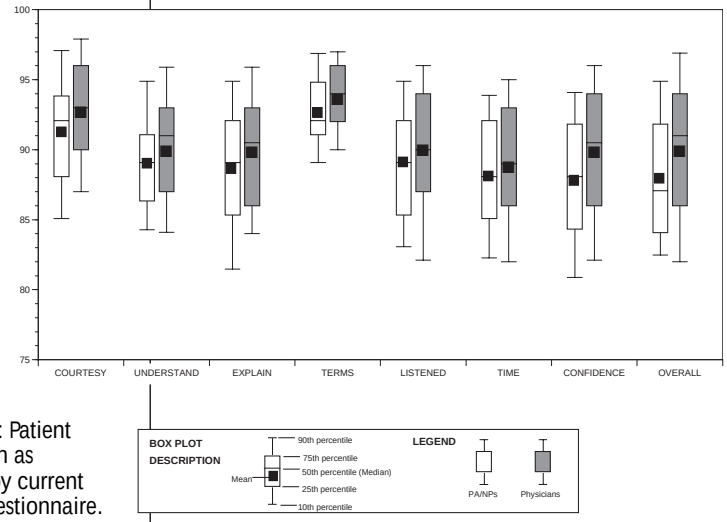


FIGURE 1: Patient satisfaction as reported by current 8-item questionnaire. Comparison of scores for PA/NPs and physicians in the department of internal medicine.

FIGURE 2: Patient satisfaction as reported by current 8-item questionnaire. Comparison of scores for PA/NPs and physicians in the department of family practice.

Results

Analysis based on data from the Art of Medicine survey supports the finding that patients are satisfied with their care regardless of type of practitioner delivering the care. First, when an 8-item patient-reported measure of clinician style of encounter was used, we found no statistically significant differences between scores for physicians and for nonphysicians when combined for statistical purposes (Table 2). This observation was supported when provider practice was differentiated by specialty.

Second, no statistically significant differences were seen among the primary care specialties (Figures 1 through 5).

Discussion

After amassing five years of experience and reviewing over 30,000 returned patient surveys, we found this instrument to be a valid and reliable indicator of quality of interpersonal care. In other similar studies, both in this health plan and nationally, these observations did not seem to differ when age and gender were examined.[1] As part of the much-celebrated Medical Outcomes Study,[1] Kaplan and colleagues found that physicians who scored the highest in encouraging patients to participate in their care retained the greatest number of patients. Conversely, among patients of physicians who were rated in the lowest quartile of participation, one third of patients changed physicians the next year. Higher scores were directly associated with greater patient satisfaction. Kaplan and colleagues observed that lower practice volume, primary care training, and satisfaction with personal autonomy were all associated with higher participatory decision-making style ratings. Physicians in busy, high-volume practices, regardless of type of practice organization, were rated as less participatory than those in lower-volume practices.

These observations are not new and do not seem to vary by specialty. Rubin and colleagues[6] examined outpatient visits in different practice settings and among a variety of specialties. They concluded that, regardless of the type of practice (solo, single-specialty or multispecialty group, fee-for-service, or prepaid payment arrangement), physicians with patient satisfaction visit ratings in the lowest 20% were nearly four times as likely to experience patients leaving within six months than physicians in the highest 20th percentile. Patient ratings predict what proportion of patients, on average, will probably leave their physicians in the next several months.

Physician assistants and nurse practitioners were introduced into the United States health workforce in 1967 and into HMOs in 1970.[7] Patient acceptance and satisfaction studies were some of the earliest survey work done on these providers. These studies consistently showed that, compared with physicians, they function at comparable levels, use no more health care services, and are accepted by patients at a comparable level.[6,8,9,10,11,12,13,14,15]

Some argue that differences in expectations may exist between organized systems and traditional indemnity practices, especially among those of higher economic status, who may have higher expectations of care.[16,17] Weinerman's view is that "the physician in managed care accepts the role of analytic and detached scientist—particularly when reinforced by the colleague-oriented professionalism of the medical group. The patient, on the other hand, alienated in an impersonal society, threatened by illness, confused by the health center complex, seeks personal involvement and reassurance from his or her doctor."[18]

These assumptions are not generally supported by research. Most studies show that people are generally satisfied with their health plan or provider, regardless of plan or type of provider.[1,9,12]

Patient perception of care seems to transcend interpersonal provider style, and remarkable similarity exists in care as perceived by patients of PAs, NPs, CNMs, and physicians when measured at the same time in the same setting. Care seems to be valued highly by patients, and quality of interpersonal care can not only be measured but also has outcome implications. This observation is borne out by this survey and supports work done both in this setting and elsewhere. From a membership standpoint, the policy decision to include PAs and NPs in primary care and in certain subspecialties seems to be sound.

Cost-containment strategies were ongoing in this setting during this study and did not have much impact. The results of each of the three phases of the study were higher overall when compared with the results of the study done during the prior six months. During the entire study period, several fiscal restraints were implemented which tended to increase volume for most providers.

Although a study of this magnitude has credibility, limitations must be addressed.

Large, mature HMOs such as KPNW have members spanning three or more generations. In many instances, these members have had limited experience outside this health plan with which to compare providers who might treat them differently. As Freeborn and Pope point out, "In fee-for-practice settings, physicians depend on attracting enough members to maintain a viable practice. Under these circumstances, physicians are less subject to influence by colleagues but more responsive to patients' wishes (even though the patients' requests may not always make sense or be justifiable from a purely technical perspective)."[3]

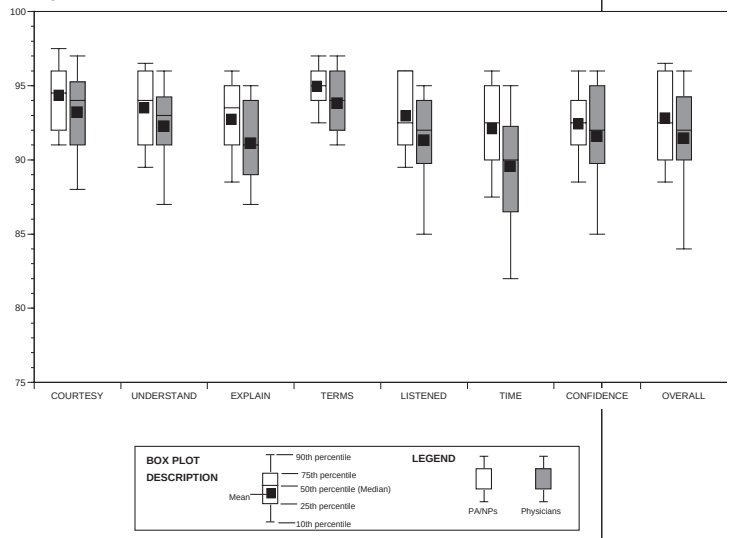
Because of anonymity of the responders, social class and age are excluded from this study. Work done at the Kaiser Permanente Center for Health Research suggests that satisfaction with care is higher in the middle and upper-middle social classes, in persons making frequent visits, in those in better health, and in older persons.

The method of continuous sampling until about 100 questionnaires have been returned is a technique which differs from the method used in the ongoing Current Membership Survey. Rate of return using the Art of Medicine survey averaged about 40%, whereas the Current Membership Survey return rate consistently averaged over 70%. Differences between the two techniques suggest that members who tend to be satisfied with care are more likely to return a survey examining that care. Studies of observed physician behavior are needed to overcome the "halo effect"—the belief of some patients that their physician is above reproach.

Finally, it is our experience that some patients perceive PAs and NPs as somewhat indistinguishable from physicians. This perception may persist in spite of combined efforts of support staff and providers alike to differentiate between physicians, PAs, and NPs. At recall, the differences may tend to blur.

In summary, our findings suggest that patient satisfaction with care appears to depend on the communication skills and style of the provider, and not on the type of provider. Policies to incorporate PAs and NPs in health care seem to be justified. Use of these providers deserves further exploration as do the out-

Figure 3.



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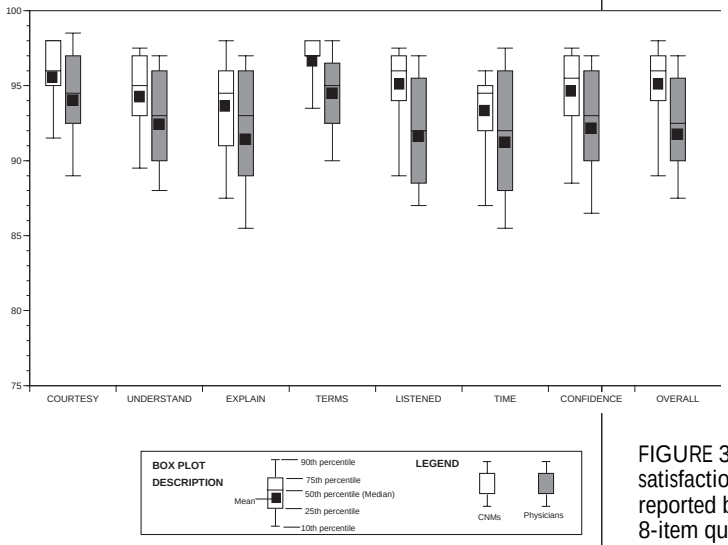

FIGURE 3: Patient satisfaction as reported by current 8-item questionnaire. Comparison of scores for PA/NPs and physicians in the department of pediatrics.

FIGURE 4: Patient satisfaction as reported by current 8-item questionnaire. Comparison of scores for NP/CNMs and physicians in the department of obstetrics and gynecology.

Figure 5.

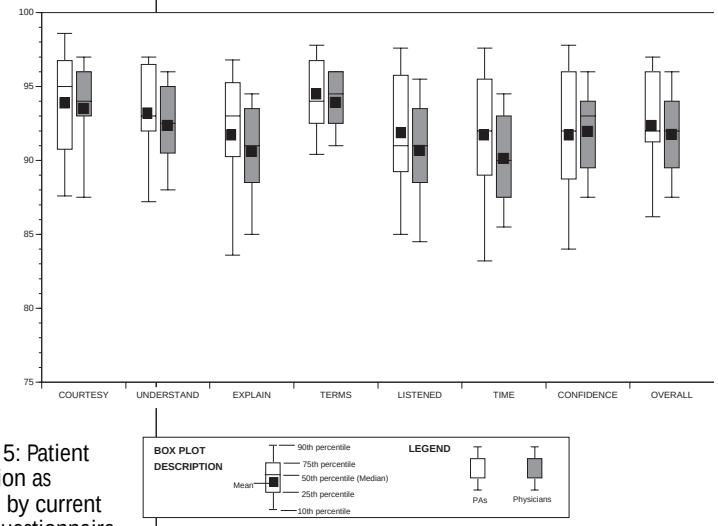

FIGURE 5: Patient satisfaction as reported by current 8-item questionnaire. Comparison of scores for PAs and physicians in the department of orthopedics.

comes of care by various types of providers and the reasons why patients value and why providers choose certain style of patient management. ❖

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"A strategy is generally based on an organizational skill that, in turn, is based on people."
David A. Aaker, Strategic Market Management