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A survey of physician attitudes and practices concerning cost-effectiveness in patient care

ABSTRACT ● **Objective** To identify physicians' views regarding cost-containment and cost-effectiveness and their attitudes and experience using cost-effectiveness in clinical decision making. ● **Design** A close-ended 30-item written survey. ● **Subjects** 1,000 randomly selected physicians whose practices currently encompass direct patient care and who work in the California counties of Sacramento, Yolo, Placer, Nevada, and El Dorado. ● **Outcome measures** Physician attitudes about the role of cost and cost-effectiveness in treatment decisions, perceived barriers to cost-effective medical practice, and response of physicians and patients if there are conflicts about treatment that physicians consider either not indicated or not cost-effective. ● **Results** Most physicians regard cost-effectiveness as an appropriate component of clinical decisions and think that only the treating physician and patient should decide what is cost-worthy. However, physicians are divided on whether they have a duty to offer medical interventions with remote chances of benefit regardless of cost, and they vary considerably in their interactions with patients when cost-effectiveness is an issue. ● **Conclusion** Although physicians in the Sacramento region accept cost-effectiveness as important and appropriate in clinical practice, there is little uniformity in how cost-effectiveness decisions are implemented.

The rising cost and the equitable distribution of health care resources are important social and political issues. A major contributor to cost inflation is the enormous capacity of biomedical science to create new and costly medical interventions.[1,2] Whereas purchasers—primarily employers and government—resist increases in health care premiums and reimbursements, physicians, medical groups, and health plans face legal, regulatory, and social pressures to provide all care that is "medically necessary."[3,4]

Reconciling the tension between finite resources and ever-increasing demands is not easy. One approach is for physicians to use cost-effectiveness as an explicit criterion when developing clinical policies applicable to broad populations or when considering treatment alternatives for individual patients.[5,6] Although using cost-effectiveness criteria to develop clinical policies (eg, drug formularies or practice guidelines) has long been considered an appropriate physician role,[7,8] limiting marginally beneficial and costly interventions for individual patients is controversial.[9-13] The literature on the cost-effectiveness of medical interventions is growing, but little is known about how physicians incorporate cost-effectiveness decisions at the bedside.

To explore the acceptability of explicitly incorporating cost-effectiveness into clinical and coverage decisions, a regional 15-member consortium (listed at the end of article) created the Visible Fairness project. Its goal is to develop recommendations that reflect consumer and provider values, interests, and concerns regarding cost-effectiveness. The first component of Visible Fairness was a written survey of local physicians seeking their views on 3 principal issues: cost containment and the role of physicians in providing cost-effective care, barriers to practicing cost-effective medicine, and experience with patients who insist on treatment that is viewed as not cost-effective.

METHODS

The 30-item survey, titled Cost-Effectiveness in Medical Practice, was designed in spring 2000 by Visible Fairness members, staff, and consultants. The following definition preceded the questions: For the purpose of this survey, a medical intervention (eg, a diagnostic test, procedure, treatment, or pharmaceutical) is cost-effective when, for example, the intervention achieves a benefit comparable to an alternative intervention but at a lower cost; or the intervention achieves a greater benefit than an alternative, and the added clinical benefit is worth the additional cost.

Survey sampling

The Sacramento-El Dorado Medical Society provided demographic and professional data on all 3,200 identifiable physicians in the 5-county region of California. The target group was physicians who practice in Sacramento, Yolo, Placer, Nevada, and El Dorado counties and whose primary role is direct patient care. Consequently, we excluded retired physicians, administrative physicians, pathologists, anesthesiologists, and radiologists, reducing the pool to 2,478 physicians. One thousand were then selected through systematic random sampling, a standard process of picking random names from an alphabetized list, ensuring that the entire list had an equal chance of being picked.

Main measures

Questions used to generate the data for this study were organized into 3 sections. The first addressed physicians' attitudes and beliefs about the role of cost containment and cost-effectiveness using 7 Likert-type items (from "strongly agree" to "strongly disagree"). The second section asked physicians to rate the importance of 9 possible barriers to cost-effective practice. The third section included several questions about the physician's experience with patients who insist on having a medical intervention that the physician considers either not indicated or not cost-effective.

Survey administration

The survey was administered by Sacramento Healthcare Decisions, a nonprofit, independent organization that facilitates collaboration on health care issues between consumers and health care providers. The initial survey was mailed June 5, 2000, accompanied by a cover letter explaining its purpose, the sponsoring organizations, the funding agency, and the confidentiality of individual respondents, as well as a $2 gratuity and a self-addressed stamped envelope. A follow-up letter was mailed 2 weeks later to nonrespondents. Of the 1,000 surveys mailed, 11 were returned as undeliverable, 15 were substantially incomplete and not usable, and 18 arrived after the cutoff date of July 15. Of the 989 deliverable surveys, 512 were returned and usable, a 52% response rate. The demographics of respondents—age, sex, and type of practice—were similar to those of nonrespondents. However, survey respondents were more likely than nonrespondents (53% vs 42%) to be affiliated with 1 of the region's 4 large physician-hospital organizations, suggesting that physicians in solo or small group practice were underrepresented. In presenting our results, we did not use inferential statistics or calculate *P* values because we are making inferences only to the sample of physicians who actually completed our survey. Some physicians did not respond to all questions.

RESULTS

Attitudes about cost-effectiveness

Physicians agreed that there is a legitimate need for cost containment and that individual physicians should help in

Summary points

- Although cost-effectiveness has an accepted role in broad clinical policies, little is known about how physicians incorporate it into decisions at the bedside
- Physicians regard cost-effectiveness as an appropriate criterion when making treatment decisions for their patients
- Physicians appear divided on whether they have a duty to offer all treatment options when the chance of success is small and the cost is great
- Despite their support for cost-effectiveness in theory, physicians appear inconsistent in how they apply it in practice
- If cost-effectiveness is to be used as a visible criterion in patient decisions, physicians, consumers, and other stakeholders need to develop consensus on process and communication issues

containing costs (table 1). Seventy-two percent (371 of 512) felt that "it is inappropriate for anyone other than the treating physician and patient to decide if a treatment is worth the cost," suggesting resistance to the intrusion of others in these decisions. Whereas 447 of 512 (88%) thought physicians should consider cost-effectiveness when weighing different medical interventions for their patients, and 425 of 512 (84%) were comfortable with clinical practice guidelines that took account of cost, 271 of 512 (53%) agreed, nevertheless, that "if a medical intervention has any chance of helping the patient, it is the physician's duty to offer it."

Perceived barriers to cost-effective practice

Most respondents viewed all 9 issues as contributing "a great deal" or "somewhat" to difficulties in practicing cost-effective medicine (table 2). The most strongly affirmed barriers were societal issues: "society unwilling to acknowledge limited resources" (336 of 512 [66%] thought it contributed a great deal) and "patients with unrealistic expectations of medicine" (317 of 512 [62%] a great deal). On the other hand, physicians were less ready to blame themselves (of the possible barrier "physicians unaware of costs of medical interventions," 122 of 512 (24%) answered "a great deal"; and of "physicians unwilling to refuse patients' demands," 104 of 512 (21%) answered "a great deal") than they were to blame external factors such as direct-to-consumer advertising and lack of cost-sharing by patients.

Medical decision making and discussions with patients

Almost all physicians reported encounters with patients who insist on having unnecessary or cost-ineffective medical interventions: 272 of 512 (54%) "occasionally," 167 of 512 (33%) "several times a week," and 46 of 512 (9%) "several times daily" (data not shown in tabular form). On average, physicians "try to explain why the intervention is not appropriate and do not order it, even if the patient insists" 56% of the time; they try to "explain why the intervention is not appropriate but order it anyway, if the patient continues to insist" 34% of the time; and they "do not try to talk the patient out of the intervention and will order it anyway, unless it will do the patient harm" 7% of the time (3% of the time they employ other strategies). Classified on the basis of their responses, 232 of 471 (49%) of physicians usually (2/3 of the time) provided an explanation and did not order the requested intervention, 95 of 471 (20%) usually ordered the intervention if pa-

Table 1 *Physician attitudes about cost-containment**

Do you agree or disagree with the following? (n = 512)	Agree strongly	Agree somewhat	Disagree somewhat	Disagree strongly
There is a legitimate need for cost containment in today's health care environment	288 (56)	186 (36)	28 (5)	9 (2)
As individual clinicians, physicians should play a role in helping to control health care costs	313 (61)	174 (34)	18 (4)	7 (1)
It is inappropriate for anyone other than the treating physician and patient to decide if a treatment is "worth the cost"	215 (42)	156 (30)	116 (23)	25 (5)
If a medical intervention has any chance (no matter how small) of helping the patient, it is the physician's duty to offer it regardless of cost	118 (23)	153 (30)	149 (29)	88 (17)
The only time the cost of a medical intervention should be considered is when the patient must pay all or most of the cost	25 (5)	48 (9)	155 (30)	281 (55)
It is appropriate that clinical practice guidelines include cost-effectiveness as a criterion	150 (29)	274 (54)	50 (10)	35 (7)
It is appropriate that physicians consider cost-effectiveness when weighing different medical interventions for their patients	208 (41)	239 (47)	47 (9)	16 (3)

*Data are given as the number of physicians responding, with percentage in parentheses.

tients insisted, and 144 of 471 (31%) employed mixed strategies.

Physicians varied considerably in the frequency with which they referred to cost or cost-effectiveness when talking with patients. Thirty percent reported that they frequently or always mentioned cost or cost-effectiveness when explaining why a treatment is not appropriate, and 21% of physicians said they never do. On average, physicians reported that 45% of patients get "angry or upset if cost or cost-effectiveness is mentioned," and 49% of patients accept explanations that incorporate costs "once they understand that the intervention would waste resources."

DISCUSSION

Principal findings

If cost-effectiveness has the potential for addressing issues of equity and fiscal responsibility, it must be understood and accepted by physicians, patients, and other health care stakeholders. This survey provides new data on physicians' views of the issue. There are several important observations from the survey results.

First, although physicians accept the legitimacy of cost-effectiveness within their medical practice, when and how they consider cost in managing their patients vary considerably. Although most think that only the physician and patient should decide if a treatment is "worth the cost," more than half also think that the physician has a duty to offer any intervention with a chance of benefit, regardless of cost. In addition, many, if pressed, will provide an intervention even when they think it is not indicated or not cost-effective. In sum, physicians accept cost-effectiveness as an appropriate criterion for decision making, but many appear inconsistent in its application or hesitant to apply it in practice.

Second, variations in attitudes extend to communication with patients. Although physicians think that patients' unrealistic expectations are a major barrier to practicing cost-effective medicine, 339 of 483 (70%) infrequently or never discuss cost or cost-effectiveness when it is relevant to decision making. Their reluctance to address this directly with patients may be due to physician discomfort with incorporating costs into treatment decisions, limited time for discussions, or concern about patient reactions—such as the 45% of patients who physicians report becoming angry or upset if cost or cost-effectiveness is mentioned.

Finally, because physicians vary considerably in their willingness to provide care they judge to be cost-ineffective or inappropriate, inconsistencies in patient care are inevitable. Similar patients may not receive similar care, depending on their physician's views on cost-effectiveness. At a time when many patients appear to mistrust the health care system, such inequities—perceived or real—could exacerbate already strained relationships.

Limitations of the study

The results of this survey must be interpreted in light of its limitations: the survey definition of cost-effectiveness was not all-inclusive, the nonresponders (477 of 989 [48%]) might have answered differently, Likert scales can capture only broad perspectives, complex issues do not easily compress into simple answers, and what physicians say may differ from what they do. In addition, this survey does not assess the reasons for variations in physicians' responses,

Table 2 *Perceived barriers to cost-effective practice**

	Contributes to the difficulty			
	A great deal	Somewhat	A little	Not at all
Inadequate information on the cost-effectivelness of medical interventions	204 (40)	231 (46)	63 (12)	7 (1)
Patients with unrealistic expectations of what medicine can do	317 (62)	160 (31)	28 (6)	3 (1)
Coverage decisions that consider only the short-term benefits for patients but not the long-term benefits	203 (41)	225 (45)	55 (11)	17 (3)
Patients not directly sharing the cost of their health care interventions	217 (43)	211 (42)	61 (12)	17 (3)
Society unwilling to acknowledge limits to health care resources	336 (66)	135 (27)	28 (6)	7 (1)
Physicians being unaware of the cost of medical interventions	122 (24)	252 (50)	109 (22)	23 (5)
The need to practice defensive medicine	195 (39)	230 (46)	72 (14)	7 (1)
Direct-to-consumer advertising about drugs and treatment	222 (44)	193 (38)	78 (15)	14 (3)
Physicians unwilling to refuse patients' demands for unnecessary interventions	104 (21)	268 (53)	112 (22)	22 (4)

*Data are given as the number of physicians responding, with percentage in parentheses.

such as the cost of interventions being considered, the severity of medical problems, or the payer source.

Implications of the study

Despite the limitations, the survey results provide a sound basis for initiating a public dialogue. Is the public willing to accept cost-effectiveness as a treatment criterion? If so, what role does it want physicians to play? Should physicians discuss cost-effectiveness with patients when it is a factor in decision making? How can discussions lead to understanding rather than patient anger? Does the public prefer a system with general rules about what services will or will not be provided—a system perhaps more consistent but less sensitive to the particularities of individual cases?

Future research

The next phase of Visible Fairness will be to pursue answers to these questions with community-based focus groups. In 2001, Visible Fairness will reconvene physicians and consumers for more in-depth discussion of cost-effectiveness in making patient care decisions.

Visible Fairness partner organizations (representative in parentheses): American Association of Retired Persons (Stephanie Zack); CalPERS (Nancy Welsh); Fred Simmons Insurance (Fred Simmons); Health Net (Steven Raffin): Health Rights Hotline (Shelley Rouillard); Kaiser Foundation Health Plan (Edward S Glavis); Mary J Griffin & Associates (Mary Griffin); MedClinic/Mercy Healthcare Sacramento (Jennifer Nuovo); Sacramento-El Dorado Medical Society (William A Sandberg); Sacramento Healthcare Decisions (Marjorie Ginsburg); San Juan School District (Charles Diggs); Sutter Medical Group (Gary Fields); The Permanente Medical Group (Jack Rozance); University of California, Davis, Health System (Robert Chason); and Western Health Advantage (Donald Hufford).

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