

The Effect of Physician Disclosure of Financial Incentives on Trust

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Background: Many physicians receive financial incentives to limit their ordering of expensive tests and procedures. While Medicare mandates disclosure of incentives, it is not clear how to inform patients without undermining trust.

Methods: Our objective was to determine public opinion about physician disclosure of financial incentives and how this might be best communicated to patients. The 2002 General Social Survey included 2765 interviews from a probability sample of English-speaking US households. The interview included questions about financial incentives and an audiotaped scenario of a physician discussing the impact of financial incentives on ordering a magnetic resonance image. Respondents heard 1 of 6 randomly selected disclosure strategies. The measurements included ratings of trust, satisfaction, agreement with the physician's decision, and likelihood of remaining with the physician/health plan or seeking a second opinion.

Results: Nearly half (48.8%) of respondents had previously heard of financial incentives to limit test ordering. Of the respondents, 94.8% wanted to be told about incentives, at the time of enrollment in a health plan (80.5%), by a health plan representative (44.8%), their physician (17.1%), or both (38.1%). Of the 6 different disclosure strategies, "addressing emotions" and "negotiation" were associated with the best outcomes, while "common enemy" and "denying influences" were most negatively perceived. Black and Hispanic subjects were less likely to express satisfaction or trust and more likely to disenroll or seek a second opinion.

Conclusions: The public wants information about physician financial incentives. Specific communication styles enhance how this information is conveyed to patients, increasing trust and supporting the physician-patient relationship.

Arch Intern Med. 2005;165:625-630

TO CONTAIN HEALTH CARE costs, managed care programs have provided physicians with financial incentives aimed at reducing the ordering of expensive tests and procedures. While this may curb the use of high-cost tests, its effect on patients' trust in their physicians has raised concern.¹⁻⁷ Patients may wonder whether these financial incentives will place cost containment ahead of patients' best interests. In these circumstances, the trusting relationship between patients and physicians, essential to the practice of medicine, can inadvertently be undermined.

In daily practice, patients and their physicians make many decisions about diagnostic tests and treatment options. Some physicians argue that it is their professional responsibility to discuss medical options with their patients without regard to cost.^{8,9} In contrast, other physicians believe that it is their professional responsibility to incorporate cost considerations into regular decision making with patients.¹⁰⁻¹³ At the same time, the extensive media and

public attention on the impact of managed care on the physician-patient relationship has led the public and the profession to be increasingly concerned about the effect of financial incentives on care.¹⁴⁻²⁰ However, it is not known if, and how, patients would like to be informed about their physicians' financial incentives to control costs. In a large survey of US adults, we tested several different disclosure strategies that physicians could use to discuss financial incentives with patients.

METHODS

This study was performed using the General Social Survey (GSS), a biannual national survey conducted by the US National Opinion Research Center. The GSS uses probability sampling of households to obtain one English-speaking respondent per household. Surveys were conducted using face-to-face interviews, lasting approximately 90 minutes. In the 2002 GSS, a total of 2765 interviews were completed, with a response rate of 70.1%.²¹ All respondents completed the core section about age, race, sex, total household income, educa-

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Financial Disclosure: None.

Table 1. Six Disclosure Strategies Presented to Respondents

Type of Strategy	Rationale	Sample Words
Cognitive		
Direct information	Emphasizes information about how financial practices and centers operate, without raising emotional issues.	"Our physicians' group does have financial incentives to keep costs down by avoiding tests when they are not necessary. However, no single decision about an MRI affects my salary. In my opinion an MRI is not needed in your case."
Expert	Emphasizes the expertise of the physician and the clinical situation and avoids direct discussion of incentives.	"I've had a lot of experience taking care of patients with problems like yours. The problem you're having is really quite common. You should follow the treatment I've outlined, and then I can re-evaluate the situation again in a month."
Denying influences	Emphasizes physician's personal role in decision making and denies outside influence of incentives.	"I usually don't order an MRI under circumstances like yours. There's no outside pressure that has made any differences in how I treat patients with headaches. You may set your mind at rest that I'm doing this because this is how I practice medicine."
Affective		
Addressing emotions	An approach that encourages the patient to express feelings and concerns, and encourages patients to share their concerns even if conflict surfaces.	"I can understand that you're worried about whether everything is okay. It also sounds like you're worried that I'm not ordering the test because it's too expensive. These days with Managed Care lots of people share your worries about this. I want to set your mind at rest because I truly do not think that the test is needed at this point."
Common enemy	Underscores the alliance between the patient and the physician against the policies of the health plan.	"It used to be that physicians were able to provide tests for patients just to set their minds at rest. Unfortunately, your health plan won't allow me to do it for that reason. Even though I'd like to order it for you, your plan is not going to pay for it."
Negotiation	An approach that emphasizes learning the patient's perspective, presenting the physician's perspective, and finding an acceptable plan for both parties.	"I understand that you'd like an MRI to make sure that everything is okay, but based on your symptoms, I really think you do not need one. I'd like to treat you for a month or so and then talk again about whether we need an MRI. Would that be acceptable to you?"

Abbreviation: MRI, magnetic resonance image.

tional level, self-reported health, insurance status, and attitudes about various social issues, such as trust in social institutions.

All GSS respondents were also asked an additional set of questions about financial incentives. Financial incentives were defined as follows: "Some doctors or groups may be paid more if they limit the use of expensive tests or the use of specialists. Such arrangements are known as financial incentives." Respondents were asked to imagine that their health plan had these types of incentives. They were then asked to respond to questions about whether they want to know this information, who should tell them, and when they want to be told.

DEVELOPMENT OF SCENARIOS AND DISCLOSURE STRATEGIES

A scenario of a patient seeking care for headaches was developed to test disclosure strategies physicians could use to address patients' concerns for financial incentives. The disclosure strategies were developed with an advisory group composed of practicing physicians, communication experts, and patient advocates. In this scenario, the physician examines the patient and decides the headaches are due to stress, and recommends medication and stress reduction management. However, the patient thinks that he or she needs a magnetic resonance image (MRI) to be sure everything is okay. More important, the patient tells the physician that he or she is worried that the MRI is not being ordered because it is an expensive test. This scenario was developed to present a case in which further testing is not medically necessary.

The advisory group and investigators developed disclosure strategies using typical physician language. Some strategies focused on providing information to the patient (ie, cognitive approaches), and others more directly addressed the patient's feel-

ings (ie, affective approaches). Some strategies developed were thought to be best for enhancing patient trust and satisfaction, while others, although believed to be those commonly used by physicians, would not necessarily leave a patient with a sense of satisfaction. Disclosure strategies were tested and revised based on focus groups of physicians who provided feedback on their practicality, realism, and effectiveness.²²

To ensure the respondents' accurate interpretation of the survey items, testing was conducted among 111 patients from Chicago and Portland, Ore. Based on the patients' feedback, the questions were revised and the disclosure strategies were reduced to 6, to include those deemed most realistic and conceptually original. The 6 strategies included "direct information," "expert," "denying influences," "addressing emotions," "common enemy," and "negotiation." The rationale and exact words of each strategy are presented in **Table 1**.

TESTING THE DISCLOSURE STRATEGIES IN THE SURVEY POPULATION

By using computer randomization, the National Opinion Research Center at The University of Chicago randomly assigned each respondent to hear 1 of the 6 disclosure strategies. Respondents were asked to imagine they were a patient in the following scenario:

Imagine you've been experiencing headaches. You visit your doctor and talk to him about your symptoms. You also tell the doctor that you've been feeling a lot of stress lately. After doing a complete examination the doctor decides that the headaches are probably due to stress. The doctor wants to work with you over the next month to reduce your stress. You want to have a[n] MRI to make sure everything is okay. (Explains the MRI.) Remember that after your complete examination the doc-

tor thinks you don't need the MRI. Then imagine that you have the following conversation with the doctor about the MRI and financial incentives.

After the scenario, 1 of the 6 possible strategies was played, each beginning with the following patient statement: "I'd feel better if I had a(n) MRI. I'm worried that you won't order it because it's too expensive."

After hearing the audiotape, each participant was asked for his or her reaction to the scenario. Responses to 8 such questions were the primary outcome variables. The questions, "Do you believe what the doctor just told you?", "Do you think the doctor provided enough information about financial incentives?", and "Do you agree with the doctor's decision to not order the MRI at this time?" allowed possible responses of "yes," "no," "maybe," or "don't know." The participants were also asked how satisfied they would be with the clinical visit, rated on a 5-point scale from "excellent" to "poor," and how much they would trust the physician to prioritize their health above the financial costs, using a 5-point scale from "completely" to "not at all." Respondents were asked 3 additional questions about whether they would switch physicians, change health insurance plans, and seek a second opinion from another physician, with a possible response of yes, no, maybe, or don't know for each.

STATISTICAL ANALYSIS

Participant demographic variables were compared across the 6 disclosure strategies using an analysis of variance for age, logistic regression for binary variables such as sex, and proportional-odds regression for ordered categorical variables such as education or income level. The 23 income categories reported by the GSS were collapsed into 5 categories of approximately equal size. Race and Hispanic ethnicity were separate questions in the GSS. Consequently, we included 2 indicator variables, 1 for black vs all other racial categories (95.3% of whom were white or nonblack Hispanic) and 1 for Hispanic ethnicity (7.3% of all respondents).

The principal analyses were based on the proportional-odds regression model. The disclosure strategies were represented by a set of indicator variables in the models, adjusted for the effects of sex, race, Hispanic ethnicity, age, education, and income, knowledge of incentives, and likelihood of or asking about incentives. Self-reported health status, which is highly correlated with education and income, was not included in the final models. Because the GSS samples households, rather than individuals, we used survey weights to reflect the number of adults in each household.²¹

RESULTS

The demographic characteristics of the 2765 respondents are presented in **Table 2**. The mean (SD) age of the respondents was 45.2 (17.0) years. With the exception of a small difference in the number of persons of Hispanic ethnicity, there were no significant differences in the demographic characteristics across disclosure strategies.

Almost half (48.8%) of respondents had previously heard of financial incentives to limit test ordering. Among those without a regular physician, only 38.3% had heard of such arrangements, compared with 50.9% among those with a regular physician ($P < .001$). Among black persons, 37.5% had heard about incentive use, compared with 50.7% of white respondents ($P < .001$). Similarly, those who reported excellent health were substantially more

Table 2. Demographic Characteristics of the 2765 Subjects

Characteristic	% of Subjects
Female sex	55.6
Race	
Black	14.5
Hispanic	7.3
Education	
<High school	14.5
High school	53.8
>High school	31.6
Self-rated health	
Excellent	26.2
Very good	28.1
Good	28.7
Fair	13.4
Poor	3.6

likely to have heard of incentives than those reporting poorer health (55.1% vs 44.9%; $P = .02$).

Of all respondents, 2588 (94.8%) of the 2729 respondents who answered the question believed that it is either somewhat or very important to be told about the presence of financial incentives. Most indicated that the best time to be informed about this would be at the point of enrollment in a health plan (80.5%), and less often at the first visit to their physician (13.0%) or only at the time that the test was actually needed (6.5%). About half of the respondents (44.8%) believed that they should be told about financial incentives by a health plan representative, 17.1% by a physician, and 38.1% by both parties. When surveyed if they would ask their regular physician about whether he or she had financial incentives that limit the use of expensive tests, 1712 (63.2%) of 2711 indicated that they would be somewhat or very likely to ask, while 26.4% said they would be somewhat or very unlikely to ask. In the multivariate analysis, women (adjusted odds ratio [OR], 0.86; 95% confidence interval [CI], 0.75-0.99) and black persons (OR, 0.74; 95% CI, 0.61-0.91) seemed less inclined to inquire about financial incentives.

Table 3 shows responses to the questions overall and by disclosure strategies. Overall, 55.8% of respondents found what the physician said believable, only 25.7% believed that enough information had been given, about half did agree with the physician's decision not to order the expensive test, and 36.7% believed based on this interaction that they could trust the physician to put their health above financial cost considerations. Only about 16.6% expressed satisfaction with this clinical visit.

Table 4 shows the results of a multivariate analysis, which adjusts for the independent effects of age, sex, race, ethnicity, education, income, knowledge of incentives, and expressed likelihood of asking about incentives. With respect to respondent perceptions, the common enemy and addressing emotions statements generated the greatest belief in what the simulated physician said; the adjusted OR was 2.40 (95% CI, 1.76-3.05) for common enemy compared with denying influences. Although only 25.7% believed the vignette offered them adequate information, the odds of the direct information approach being adequate was substantially larger than the expert

Table 3. Effects of Communication Strategies on Outcomes

Disclosure Strategy Used	Outcome*							
	Believes Physician†	Provided With Adequate Information†	Agrees With Decision Not to Order Test‡	Confident Physician Puts Patients Ahead of Costs‡	Satisfied With Clinical Encounter‡	Would Switch Physicians‡	Would Switch Insurance Plans‡	Would Obtain a Second Opinion‡
Direct information	51.1	39.1	46.6	41.1	17.7	54.7	51.5	79.2
Common enemy	64.2	33.3	37.7	25.6	11.2	61.1	74.8	86.0
Addressing emotions	59.4	25.6	53.2	38.7	18.4	46.8	42.0	76.7
Negotiation	59.0	17.3	53.1	44.1	19.3	43.5	45.3	69.6
Expert	54.1	14.9	49.5	36.1	16.2	48.3	45.4	68.7
Denying influences	47.5	23.5	48.0	34.3	16.6	55.0	45.8	80.0
Overall§	55.8	25.7	48.0	36.7	16.6	51.6	50.8	76.7

*Data are given as the weighted percentage of subjects endorsing each satisfaction characteristic, by strategy.

†Higher percentages are wanted.

‡Lower percentages are wanted.

§ $P < .001$ for all outcomes.

(OR, 4.08; 95% CI, 2.88-5.76) or negotiation (OR, 3.39; 95% CI, 2.42-4.75) approach. The results for agreeing with the no MRI decision, trust in the physician, and satisfaction showed that negotiation and addressing emotions produced the most positive responses, while denying influences and common enemy produced the least positive. For patient satisfaction, the OR for the best strategy (negotiation) was 2.07 (95% CI, 1.58-2.70) relative to the worst strategy (common enemy).

With respect to respondents' self-reports of likely action they would take, about half stated they would switch physicians or health plans, and 76.7% said they would seek a second opinion (Table 3). The strategies associated with the most positive response were negotiation, addressing emotions, and expert.

Several demographic factors of outcomes were important in the multivariate analyses shown in Table 4. Female (OR, 0.84; 95% CI, 0.71-1.01), black (OR, 0.55; 95% CI, 0.42-0.71), and Hispanic (OR, 0.80; 95% CI, 0.57-1.12) respondents were less likely to believe the physician, and were more likely to want a switch in physicians or a second opinion. Black respondents were significantly more likely to want to switch insurance plans (OR, 1.49; 95% CI, 1.14-1.95). Black and Hispanic respondents were significantly less likely to agree with the physician's decision not to order the test. Increasing respondent age corresponded to significantly more positive responses to scenarios. Generally, there were few strong effects associated with income, although those in the lowest quintile of income found the scenarios more informative than did others. Higher levels of formal education were associated with a greater tendency to believe the physician, to agree with the no MRI decision, and to not want to change physicians.

COMMENT

Federal and state agencies, including the Centers for Medicare & Medicaid Services, require that health care organizations disclose to their enrollees the use of physician financial incentives to limit test ordering and refer-

als.^{10,23,24} The American Medical Association Council on Ethical and Judicial Affairs^{25,26} has charged that health care entities and physicians have an ethical responsibility to disclose financial incentives that may potentially lead to underuse of services. However, there are concerns about whether such disclosure will enhance the trust and ability of patients to make informed choices about their care. Our study provides empirical data, derived from a large and representative sample of Americans, on patients' opinions about disclosure of physician financial incentives. We also provide evidence for which specific disclosure strategies might be most likely to enhance the physician-patient relationship.

In the general population, only half of respondents, and even fewer minorities, had previously heard about financial incentives to limit the use of expensive tests or specialist care. Overwhelmingly, people wanted to know about these existing incentives, and believed that a health plan representative or physician should provide this information at enrollment, which is consistent with prior legal and ethics expert views.^{7,10,11,20} While some practicing physicians have argued that disclosure of financial incentives is the exclusive responsibility of the health care plans' representative,²² these findings suggest that physicians should be prepared to engage in such potentially challenging conversations.

There seem to be reasonable strategies for physicians to reveal to patients the presence of financial incentives limiting test ordering, without undermining trust. Of course, physicians should not enter into arrangements with an insurer that might seriously undermine proper patient care. Given that is the case, revealing the presence of such financial incentive strategies contributes to a truth-based relationship with one's patients and provides them with an opportunity to raise their concerns. Pearson suggested that physicians should initiate these rather tough discussions because the physician-patient relationship "can survive this frank conversation at the bedside."^{11(p148)} At the same time, patients themselves may initiate this discussion,^{27,28} as evidenced by that fact that 63.4% of our respondents stated that they would do so.

Table 4. Multivariate Analysis of Outcome as a Function of Communication Strategy and Demographic Variables*

Variable	Outcome															
	Believable†		Informative†		Agree‡		PT Over Cost§		Satisfaction†		Switch Dr		Switch Plan		Second Opinion	
	OR	P Value	OR	P Value	OR	P Value	OR	P Value	OR	P Value	OR	P Value	OR	P Value	OR	P Value
Disclosure strategy																
Direct information¶	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
Common enemy	1.82		0.72		0.70		0.65		0.63		1.38		2.89		1.46	
Addressing emotions	1.52	<.001#	0.43	<.001#	1.30	.001#	1.04	<.001#	1.28	<.001#	0.75	<.001#	0.72	<.001#	0.80	<.001#
Negotiation	1.41		0.29		1.25		1.26		1.30		0.70		0.74		0.55	
Expert	1.28		0.25		1.14		1.02		1.15		0.80		0.74		0.54	
Denying influences	0.75		0.42		0.95		0.87		0.84		1.23		0.82		0.93	
Female sex	0.84	.06	0.84	.10	0.88	.16	0.94	.46	0.87	.10	1.19	.05	1.15	.11	1.01	.92
Black race	0.55	<.001	0.91	.51	0.46	<.001	0.72	.03	0.62	<.001	2.08	<.001	1.49	.004	2.11	<.001
Hispanic ethnicity	0.80	.19	0.93	.73	0.60	.003	0.78	.11	0.89	.45	1.49	.01	1.17	.32	1.70	.01
Age (per decade)	1.18	<.001	1.31	<.001	1.19	<.001	1.21	<.001	1.29	<.001	0.85	<.001	0.88	<.001	0.84	<.001
Education																
<High school	0.90		1.36		0.94		0.82		0.96		1.33		1.32		1.03	
High school¶	1.00	.003#	1.00	.16#	1.00	.02#	1.00	.08#	1.00	.10#	1.00	.05#	1.00	.13#	1.00	.97#
>High school	1.42		1.04		1.32		1.14		1.21		0.89		0.98		0.98	
Income, \$																
<17 500¶	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
17 500-30 000	0.77		0.70		0.95		0.91		0.80		1.08		1.22		1.00	
30 001-50 000	0.99	.44#	0.63	.02#	0.91	.75#	0.88	.46#	0.78	.31#	1.19	.66#	1.21	.48#	1.02	.20#
50 001-75 000	0.90		0.69		1.07		1.09		0.88		1.18		1.07		0.75	
>75 000	0.91		0.65		1.07		0.93		0.92		1.23		1.23		0.84	

Abbreviation: OR, odds ratio.

*This was a multivariate proportional-odds logistic regression analysis of outcome variables on strategies for financial disclosure and demographic characteristics.

†Large ORs are wanted.

‡Indicates that the subject agrees with the physician's decision.

§Indicates that the subject believes the physician would place patients' welfare over cost considerations.

||Small ORs are wanted.

¶Reference group.

#Tests for the complete set of categories were performed (eg, education levels).

While a smaller percentage may actually raise the issue, this figure suggests that the public is eager to discuss whether financial incentives might affect whether they will receive a certain medical test or referral.

We found that the common enemy strategy, which physicians may intuitively think is a useful approach,^{22,28} is actually negatively perceived by the public. While respondents were more likely to believe the physician with this strategy compared with others, this approach had an adverse effect on the relationship, including lower satisfaction, less agreement, lower trust, and greater likelihood of disenrollment. If the physician is perceived to be part of a responsible health care system, while at the same time blaming that system, this strategy will undermine the trusting relationship wanted by patients enrolled in a medical care plan.

Some physicians may think that it is useful to tell patients directly that they are not influenced in their decision making by such financial incentives.²² Most physicians do not make individual patient decisions based on such incentives, because financial risk is generally spread out across a broad panel of patients and individual patient health plan data are not typically made available at the clinical encounter. Nevertheless, a communication strategy of denying influences of money on decision making did not fare well with our respondents, because it was less believable and it was associated with lower perceived patient satisfaction and trust.

These study findings point to the use of more positive approaches to financial incentive disclosure, includ-

ing the addressing emotions and negotiation strategies (Table 1). Both strategies incorporate the principles of patient-centered communication and conflict resolution,²⁹⁻³⁷ by soliciting the patient's feelings and perspectives on the problem. In our study, the negotiation approach was least associated with concerns that cost was overriding patient needs and was most strongly associated with maintaining a relationship with the current physician and health plan.

Can practicing physicians apply the results of our study to the actual clinical encounter? While we presented a hypothetical situation using just one discrete communication strategy, in reality, physicians could combine several communication elements into their conversation. The successful disclosure conversation likely provides patients with information about incentives, addresses their emotions, and negotiates a fair plan. We have tested and compared some of the available strategies that we believe physicians can use. We speculate that similar communication strategies might be useful in discussions of other types of financial disclosure, like physician relationships with pharmaceutical companies.

Black and Hispanic respondents were less satisfied than white respondents about certain elements of the physician-patient relationship. Critical elements included trusting the physician and agreeing with the decision to not order the test. In parallel with these features was a greater want to request a second opinion or to disenroll from care. This is consistent with much literature showing that black patients were less likely to trust physicians or health care

institutions.³⁸⁻⁴² Our findings about race reinforce the need for physicians to concentrate on how they communicate with persons in whom trust may be tenuous.

Our study was limited by the use of a hypothetical vignette, as opposed to a real clinical situation. However, the random allocation of different disclosure strategies allowed us to compare their relative effectiveness based on the participants' reactions. Because the GSS only included English-speaking patients, we cannot predict whether the described scenarios would have been received differently if language translation was required. Replication of the use of these and other methods of disclosure, in real clinical practice, would ensure that our findings are applicable to most physicians and patients.

Most of the US public wants to know about physician financial incentives designed to curb test ordering. It seems that some disclosure strategies are more likely to invoke patient trust, a clearer understanding of physician motivation, and a greater willingness to remain with their physician and health plan. Cost containment strategies may evolve, but health care systems will probably continue to use methods that limit the use of expensive tests and procedures. Physicians should acquire the skills needed to openly discuss if, and how, they are influenced by financial constraints and cost containment programs.

Accepted for Publication: August 20, 2004.

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Funding/Support: This study was supported by grant RO1 HS09982-03 from the Agency for Healthcare Research and Quality, Rockville, Md.

Disclaimer: The views herein represent those of the authors and not of the funding agency or the authors' affiliated institutions.

Acknowledgment: We thank Barry Egner, MD, and Joel Ray, MD, for their helpful suggestions on the manuscript.

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