

## Quality and Cost of Healthcare: A Cross-National Comparison of American and Dutch Attitudes

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### **Abstract**

**Objective:** To compare attitudes of consumers in America and Holland toward the quality and cost of healthcare.

**Study Design:** Data were derived from one American (n = 466) and two Dutch (n = 260, n = 1629) surveys.

**Patients and Methods:** Questionnaires were completed by respondents. Pairwise comparisons requiring respondents to compare statements with one another were used to assess preferences for quality of care. Respondents were asked to "indicate the extent to which each of the factors listed plays a role in placing demands on the American (Dutch) healthcare system." Factors included the public's tendency to consume, high technology, defensive medicine, decrease in informal care, increase in standard diagnostic procedures, and medicalization.

**Results:** Americans reported comparatively greater concern with empathy, whereas the Dutch were more interested in the continuity of care. Effectiveness, knowledge, information, and patient-physician relationships were ranked higher in both nations than waiting time, autonomy, and efficiency. Respondents in both countries attributed the increase in healthcare cost primarily to the high cost of technology. Compared with their Dutch peers,

Americans were less likely to attribute increases in the cost of healthcare to the public tendency to consume and to the decrease in informal care and were more likely to implicate defensive medicine and an increase in diagnostic procedures.

**Conclusion:** As both nations experience pressures to reduce costs while maintaining and augmenting the quality of healthcare, planners and government officials should tailor their approaches to each nation's problems within the context of their public perspectives. Replication of such studies should help assess the impact of changing societal values on healthcare delivery.

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The 2 most salient healthcare issues addressed by Western nations are cost and quality.<sup>1</sup> A wide range of activities have been initiated during the last decade to enhance the quality of care.<sup>2</sup> The quest for enhancing the quality of care in the face of cost containment has been accompanied by concern for the ways in which consumers of healthcare can contribute to these policies. Cost containment efforts include reductions in insurance coverage, organization of providers into competing managed care organizations, tailoring of coverage for specific high-cost illnesses, reductions in compensation for providers, incentives to providers to assume financial risk for the cost of services, increase in authority for primary care physicians to provide specialty care, utilization review, and the rating of providers' efficiency with respect to resources.<sup>3</sup> The challenge of cost reduction in the minds of many "is not to deny it, but to find a way to do it that not only avoids harming quality, but enhances it."<sup>4</sup>

The quality of healthcare is considered the joint responsibility of providers, consumers, and insurers

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in the Netherlands.<sup>5</sup> A major portion of the costs for care are borne by governments, which are forced to increase taxes, lower expenditures, or incur greater budget deficits—options that are unpalatable for politicians, health planners, and the citizenry alike.<sup>6</sup> The cost of healthcare in the Netherlands amounts to 8.7% of the gross national product, whereas in the United States it is approximately one-third higher (about 14%) and increasing steadily.<sup>7</sup> A survey in the Netherlands revealed that 8 of every 10 respondents agreed with the statement that everyone has a right to medical treatment notwithstanding its cost.<sup>8</sup> Important differences also have been discerned among Western nations regarding satisfaction with healthcare.<sup>9</sup> In 1990, the Dutch expenditure for healthcare was \$1041 per capita (in US dollars), whereas the United States spent almost twice as much (\$2051). Yet these expenditures were unrelated to satisfaction among consumers in both nations. Almost six times as many American consumers (29%) as Dutch consumers (5%) agreed with the statement, “Our healthcare system has so much wrong with it that we need to completely rebuild it.”

Assuming stable morbidity patterns and constant healthcare technology, costs are likely to rise over the next quarter century 1-3% in Holland<sup>10</sup> and to rise steeply in the next 3 decades in the United States.<sup>7, 11</sup> The rise in healthcare costs in the United States has been attributed to a myriad of causes, including the aging population. Other factors cited include the spiraling costs of sophisticated technology,<sup>12</sup> shifts in morbidity patterns from the acute to the chronic forms of diseases associated with the aging populations,<sup>10</sup> and an increasing life expectancy (albeit in an unhealthy state) as a function of more effective treatments for cancer, stroke, and heart disease.<sup>13</sup> This so-called autonomous growth also has been attributed to lower productivity in healthcare compared with other sectors of the government.<sup>14</sup>

The economics of healthcare differ from other transactions. There is an acute imbalance between the clinician and the patient with respect to medical sophistication; in addition, there is an extant uncertainty regarding time, duration, extent, and efficacy of treatment.<sup>15</sup> The asymmetry in medical knowledge and experience opens the door for supplier-induced demand. The widespread use of insurance to reduce marginal costs to the individual is conducive to overconsumption, otherwise known as “moral hazard.” In the words of Arrow, “the price system is intrinsically limited in the scope of our inability to make factual distinctions needed for optimal pricing under uncertainty.”<sup>15</sup>

We report the findings from an analysis that compares the preferences of American and Dutch healthcare consumers with respect to cost and quality. Data from this study are potentially useful: patterns of similarities regarding the relative desirability of specific aspects of healthcare suggest universality; differences can help facilitate potential adjustments in the provision of healthcare. Such a comparative analysis is helpful because both healthcare systems are modern and share many values, including the obligation for confidentiality.<sup>16</sup> They differ, however, in important ways. First, the Dutch healthcare system involves universal coverage.<sup>17</sup> Americans consumers share a small fraction of the cost with employers, but still bear the highest portion. This fact helps explain why US healthcare costs have been rising more rapidly than most other sectors of the economy.<sup>18</sup> Financing for the American healthcare system is derived primarily from the private sector, despite the increased contribution of public resources in the last 3 decades. The Dutch system is very largely dependent on public resources.<sup>17</sup> The policy-making system differs also in both countries. In the United States, a broad range of policy makers and legislators are necessary to monitor a relatively fragmented system. In Holland, by way of contrast, the concurrence of a few ministers and several bureaucrats may suffice to implement policy goals.<sup>17</sup>

Few studies compare and contrast preferences for various desirable dimensions of healthcare; none to our knowledge report on cross-national comparisons. In a study by Smith and Armstrong, consumers were asked to compare 20 aspects of healthcare formulated independently by the government and consumers.<sup>19</sup> In another, consumers and physicians were requested, in separate brainstorming sessions, to evaluate a series of healthcare dimensions.<sup>20</sup> Hares et al examined the preferences of small groups of diabetic patients as well as small groups of providers using a nominal group technique.<sup>21</sup> In an earlier publication,<sup>22</sup> samples of specialists in and patients treated for chronic obstructive pulmonary disease, rheumatoid arthritis, and diabetes were compared regarding their preferences regarding nine dimensions of healthcare.

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... METHODS ...

Items involving preferences in healthcare delivery were derived from the Rotterdam Quality of Health Care Study<sup>22</sup> and included 9 statements,

each representing an aspect of healthcare. Pairwise comparison, which requires respondents to compare each statement with others, was used. A list of preferences is derived thereby. The results reflect the relative importance attributed by the respondent to the various dimensions of health delivery. The nine attributes of healthcare and their associated descriptions are presented in Table 1. In addition to face validity, and as noted elsewhere,<sup>2</sup> confidence in the instrument was enhanced by the involvement of both physicians and patients in the selection of aspects of care to be evaluated. An average of only 25% of respondents in the Dutch study provided additional items for inclusion in the instrument.

According to the formula  $n(n-1)/2$ , and as formulated by Bock and Jones,<sup>23</sup> employment of 9 statements should result in 36 pairs of statements for comparison. This represents a relatively high number of comparisons. A suitable design developed by Cochran and Cox was found for presentation to respondents.<sup>24</sup> Nine statements were represented in 12 blocks, each block consisting of 3 different statements in an Incomplete Block Design.<sup>23</sup> Each statement is presented three times, always in comparison with two other statements. In each of the 12 blocks, respondents were asked to assign the 3 statements a priority number of 1, 2, or 3 (1 being the most important).<sup>22</sup> Table 2 shows the first 3 blocks of the questionnaire. Information also was solicited about consumers' age, sex, and level of education.

Respondents were requested to identify the causes for the rise in healthcare, and more specifically, to "indicate the extent to which you think that each of the factors listed plays a role in placing demand on the American (Dutch)

healthcare system." Items involving cost were derived from a study by Tymstra et al.<sup>25</sup> Factors included the public's tendency to consume (little

**Table 1.** Dimensions of Care and Their Corresponding Descriptions

Dimension	Description
Knowledge	A physician with sufficient substantive data about/and training in and chronic diseases
Empathy	A physician who attempts to understand all the needs of his/her patients
Information	A patient who receives all the information involving his/her health status and treatment
Physician-patient relationship	A healthcare provider who allocates sufficient time for his/her patients
Effectiveness	Treatment which results in a favorable outcome
Efficiency	A physician who does not order excessive diagnostic procedures
Continuity	Seeing the same healthcare provider
Waiting time for treatment	A patient who may visit his/her physician soon after making an appointment
Autonomy	Allowing the patient to make choices among different types of treatment

**Table 2.** The First Three Blocks of Statements in the Questionnaire

<ul style="list-style-type: none"> <li>◦ A physician with sufficient knowledge of chronic diseases</li> <li>◦ A healthcare provider who attempts to understand the needs of his/her patients</li> <li>◦ A patient who receives all the information involving his/her health status and treatment</li> </ul>
<ul style="list-style-type: none"> <li>◦ A healthcare provider who allocates sufficient time for his/her patients</li> <li>◦ Treatment which results in a favorable outcome</li> <li>◦ A physician who does not order excessive diagnostic procedures</li> </ul>
<ul style="list-style-type: none"> <li>◦ A healthcare provider who attempts to understand the needs of his/her patients</li> <li>◦ A physician who does not order excessive diagnostic procedures</li> <li>◦ Seeing the same healthcare provider</li> </ul>

tolerance of health complaints and exaggerated focus of attention on sickness and health); high-technology medical care (such as organ transplantation, positron emission tomographic scan, magnetic resonance imaging, and genetic investigations); defensive medicine (increasing referrals and diagnostic tests for fear of missing something or making the wrong diagnosis); decrease in informal care (ie, lay care provided by the social network); increase in the number of standard diagnostic procedures (eg, routine tests and preoperative investigations); and medicalization (increased medical interference with the healthy and an increased number of medical solutions to nonmedical problems). Response categories included "very large role, large role, small role, no role and do not know/no opinion."

**Subjects**

In 1996 a convenience sample was drawn from Americans residing throughout the United States. It included 600 respondents ranging in ages from 18 to 79 years. Upperclass college students were instructed to hand out the questionnaires, which were collected in sealed envelopes. A total of 466 Americans responded (response rate = 78%), including 231 males (49.6%) and 235 females (50.4%). The average age of American respondents was 39.7 years (standard deviation = 13.2 years). The age and sex distributions of the samples were as follows: 18-29, males = 23.9%, females = 23.1%; 30-39, males = 31.3%, females = 26.2%; 40-49, males = 25.5%, females = 28.4%; 50-59, males = 12.2%, females = 15.3%; 60-69, males = 4.7%, females = 5.2%; 70+, males = 2.6%, females = 1.8%. Data were missing in 7 cases, representing 1.5% of the sample.

Approval for the study was secured from the Institutional Review Board of the New Jersey Medical School before data were collected. One of the Dutch samples was derived from a mailed questionnaire to 1700 citizens<sup>25</sup>; it yielded 1629 respondents (response rate = 95.8%), including 731 males (44.9%) and 898 females (55.1%). The questionnaire included items related to cost. The average age of the Dutch respondents was 45.3 years (standard deviation = 11.3 years).<sup>25</sup> A second Dutch study involving 271 randomly selected individuals with chronic diseases (of whom 260 [96%] responded) provided the items from which the quality-of-health-care instrument was derived.<sup>22</sup> The sampling procedure has been described elsewhere.<sup>22</sup> Comparison of the participants with nonparticipants suggested no major differences.

**Data Analysis**

Data were imported in a SPSS (Chicago, IL) data file and adapted for analysis. The  $\chi^2$  test was used to test for differences in percentages between study populations, and the Bock and Jones'  $\chi^2$  test<sup>23</sup> was used to determine differences in ranking orders between the study populations. An alpha level of 0.05 was accepted as a nominal level of significance.

... RESULTS ...

**Preferences for Healthcare Delivery**

Data provided in Table 3 reveal significant differences in the ordering of various dimensions among respondents from the United States and Holland. We note that it is unacceptable to compare the scale

**Table 3.** Rank Order of Dimensions of Care With Scale Values: American and Dutch Consumers (High to Low)\*

Dimension	Dutch (n=260)	Dimension	American (n=466)
Effectiveness	1.36	Effectiveness	1.32
<b>Continuity</b>	<b>1.09</b>	<b>Empathy</b>	<b>1.03</b>
Knowledge	1.08	Information	0.90
Information	0.91	Patient-physician relationship	0.80
Patient-physician relationship	0.73	Knowledge	0.68
<b>Empathy</b>	<b>0.58</b>	<b>Continuity</b>	<b>0.62</b>
Waiting time for treatment	0.17	Autonomy	0.45
Autonomy	0.06	Waiting time for treatment	0.36
Efficiency	0.00	Efficiency	0.00

\* $\chi^2 = 106.30, P < 0.001$ . Boldface indicates a significant difference in the ordering.

values between populations as described elsewhere.<sup>22</sup> The rankings made by the respective populations should be compared. The Dutch ranked *continuity* of care significantly more important than their American counterparts, whereas the Americans were significantly more concerned with *empathy* ( $\chi^2 = 106.30, P < 0.001$ ). Thus, although the Dutch ranked *continuity* second, the Americans ranked this aspect of care sixth. And although the Americans ranked *empathy* second, their Dutch peers ranked this quality sixth. Respondents from both societies considered *effectiveness*, *knowledge*, *information*, and *patient-physician relationships* more important than *waiting time*, *autonomy*, and *efficiency*.

We next sought to determine the relationship between sociodemographic status and preferences in healthcare. In the American sample, gender alone was found to be related to healthcare preferences, with the American women significantly more likely than their male peers to rank autonomy higher ( $\chi^2=31.18, P < 0.005$ ). Significant differences were found between Dutch and American men ( $\chi^2=51.40, P < 0.001$ ) and between Dutch and American women ( $\chi^2 = 75.12, P < 0.001$ ), with the Dutch ranking continuity higher than the Americans. As reported elsewhere,<sup>22</sup> younger Dutch respondents expressed a greater preference for information than their older peers, whereas the less educated among them were more likely to prefer continuity of care.

**Table 4.** Rank Order of Dimensions of Care With Scale Values: American and Dutch Consumers (High to Low), by Age\*

Age: <47 years <sup>†</sup>			
Dimension	American	Dimension	Dutch
Effectiveness	1.32	Effectiveness	1.50
<b>Empathy</b>	<b>1.02</b>	Information	1.12
Information	0.94	<b>Continuity</b>	<b>0.98</b>
Patient-physician relationship	0.82	Knowledge	0.95
Knowledge	0.69	Patient-physician relationship	0.80
<b>Continuity</b>	<b>0.63</b>	<b>Empathy</b>	<b>0.64</b>
Autonomy	0.50	Autonomy	0.15
Waiting time for treatment	0.38	Waiting time for treatment	0.11
Efficiency	0.00	Efficiency	0.00
Age: >47, but < 65 years <sup>‡</sup>			
Effectiveness	1.33	Effectiveness	1.25
<b>Empathy</b>	<b>1.06</b>	<b>Knowledge</b>	<b>1.02</b>
Information	0.78	Continuity	1.00
Patient-physician relationship	0.77	Information	0.69
<b>Knowledge</b>	<b>0.72</b>	Patient-physician relationship	0.53
Continuity	0.57	<b>Empathy</b>	<b>0.38</b>
Autonomy	0.35	Autonomy	0.00
Waiting time for treatment	0.35	Efficiency	0.00
Efficiency	0.00	Waiting time for treatment	0.00
Age: < 65 years <sup>  </sup>			
Effectiveness	1.28	Effectiveness	1.37
<b>Empathy</b>	<b>1.11</b>	<b>Continuity</b>	<b>1.37</b>
Information	0.70	<b>Knowledge</b>	<b>1.32</b>
Patient-physician relationship	0.65	Information	0.96
Continuity	0.59	Patient-physician relationship	0.95
<b>Knowledge</b>	<b>0.28</b>	<b>Empathy</b>	<b>0.73</b>
Autonomy	0.22	Autonomy	0.53
Waiting time for treatment	0.14	Waiting time for treatment	0.07
Efficiency	0.00	Efficiency	0.00

\*Boldface indicates a significant difference in the ordering.

<sup>†</sup>There were 329 American and 84 Dutch consumers in this age group.

<sup>‡</sup>There were 85 American and 97 Dutch consumers in this age group.

<sup>||</sup>There were 18 American and 74 Dutch consumers in this age group.

Data adjusted for age (<47 years, 47-64 years, and 65 years and above) were used in the Dutch study<sup>25</sup> and adopted in the analysis of the American sample (Table 4). They suggest that the Dutch were significantly more likely to prefer continuity of care and knowledge than their American age peers, whereas

the Americans were more likely to prefer empathy. The respective  $\chi^2$  values and associated probabilities for each age category were as follows: <47 years,  $\chi^2=18.00$ ,  $P < 0.001$ ; 47-64 years,  $\chi^2=70.04$ ,  $P <$

0.001; >65 years  $\chi^2=86.37$ ,  $P < 0.001$ . (The findings were not influenced significantly by level of education. Categories of the education variable were as follows: low = <4 years of high school; medium = high school graduate; high = partial college. The respective  $\chi^2$  values and their associated probabilities for each education category were as follows: low  $\chi^2 = 90.73$ ,  $P < 0.001$ ; medium,  $\chi^2 = 69.83$ ,  $P < 0.001$ .; high,  $\chi^2 = 65.50$ ,  $P < 0.001$ .) Differences remained when data were stratified according to educational levels.

**Table 5.** Opinions of American and Dutch Consumers Regarding Factors Associated With Increasing Healthcare Costs, in Percent

Opinion	American (n=466)	Dutch (n=1629)
Public tendency to consume		
Very large role	15.5	19.4*
Large role	35.3	45.8
Small role	27.4	27.7
No role	6.0	2.8
Do not know/No opinion	15.7	4.3
High-technology medical care		
Very large role	33.2	39.6 <sup>†</sup>
Large role	42.0	45.1
Small role	17.5	12.8
No role	0.6	0.9
Do not know/No opinion	6.7	1.6
Defensive medicine		
Very large role	27.9	13.7 <sup>‡</sup>
Large role	41.8	38.8
Small role	21.2	37.2
No role	2.8	3.8
Do not know/No opinion	6.3	6.5
Decrease in informal care		
Very large role	6.6	17.3 <sup>§</sup>
Large role	25.9	41.6
Small role	37.3	30.6
No role	12.9	6.0
Do not know/No opinion	17.3	4.6
Increase in diagnostic procedures		
Very large role	22.2	11.5 <sup>  </sup>
Large role	45.3	38.7
Small role	21.9	37.4
No role	3.9	6.4
Do not know/No opinion	6.2	5.9
Medicalization		
Very large role	12.2	13.4 <sup>¶</sup>
Large role	29.5	34.0
Small role	30.4	30.7
No Role	11.4	8.2
Do not know/No opinion	15.9	13.8

\* $\chi^2 = 91.06$ ,  $df = 4$ ,  $P < 0.001$ . <sup>†</sup> $\chi^2 = 44.83$ ,  $df = 4$ ,  $P < 0.001$  <sup>‡</sup> $\chi^2 = 72.77$ ,  $df = 4$ ,  $P < 0.001$ . <sup>§</sup> $\chi^2 = 158.49$ ,  $df = 4$ ,  $P < 0.001$ . <sup>||</sup> $\chi^2 = 64.51$ ,  $df = 4$ ,  $p < 0.001$  <sup>¶</sup> $\chi^2 =$  not significant.

**Attribution of Cost Factors**

Data provided in Table 5 suggest that American and Dutch respondents attributed the rise in healthcare costs to different factors. Although both groups ranked high technology as the primary cause for the rise in healthcare costs, differences between the groups were significant, with the Dutch more likely to harbor this view than their American counterparts ( $\chi^2 = 44.83$ ,  $df = 4$ ,  $P < 0.001$ ). Defensive medicine was ranked second by the Americans, and they were significantly more likely to hold this opinion ( $\chi^2 = 72.77$ ,  $df = 4$ ,  $P < 0.001$ ). Americans ranked the increase in diagnostic procedures third and did so in higher proportions than the Dutch ( $\chi^2 = 64.51$ ,  $df = 4$ ,  $P < 0.001$ ). From the American perspective, the public's tendency to consume was ranked next, with lower proportions of Americans believing that this factor played a role in healthcare cost increases ( $\chi^2 = 91.06$ ,  $df = 4$ ,  $P < 0.001$ ). Medicalization was ranked next by the Americans, and although they considered this factor less important than their Dutch peers, the difference between the two groups was not statistically significant. Decrease in informal care was ranked last by the Americans, who reported also that this issue played a significantly smaller role in the rise of healthcare cost ( $\chi^2 = 158.49$ ,  $df = 4$ ,  $P < 0.001$ ). The

findings regarding differences in the attribution of cost factors between the American and Dutch consumers remained when age and gender were introduced into the analysis (data not shown).

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... DISCUSSION ...

The comparatively greater concern among the Dutch for continuity of care may reflect the fact that the patient-physician relationship in European systems often is not merely a private one but is rather more social in nature, with the larger society assuming greater responsibility for providing needed care than is the case in the United States.<sup>17</sup> Longer term relationships ensue, fostered by the high proportions of general practitioners. The Dutch may accordingly be more predisposed to value the interpersonal nature of their medical relationships and be more loathe to jeopardize it. The capitation system for paying general practitioners has been criticized for rewarding inefficient delivery of healthcare by encouraging referrals in the Netherlands.<sup>26</sup> An increase in the numbers of referrals and the perils associated with that increase were heralded years ago by the distinguished late Professor of General Practice F. J. A. Huygen of the University of Nijmegen, who argued for an improved gatekeeper function in which much higher proportions of patients could be treated by general practitioners, resulting in reductions of both iatrogenic diseases and costs.<sup>27</sup> These data confirm others from Britain, where consumers of healthcare also were relatively highly concerned about the continuity of care.<sup>19</sup>

The finding suggesting a greater concern with empathy among American consumers compared with Dutch consumers may reflect the rapid transformation in the patient-physician relationship observed in the United States.<sup>28, 29</sup> In the past physicians could not rely on a technology as sophisticated as that extant currently; therefore, they were forced to draw from an armamentarium of qualities that define the essence of human nature: sympathy, empathy, sensitivity, and commitment to maximize therapeutic efficacy. This transformation is described poignantly by Lewis Thomas when he reflects that "the close-up, reassuring, warm touch of the physician, the comfort and concern, the long, leisurely discussions in which everything including the dog can be worked into the conversation, are disappearing from the practice of medicine, and this may turn out to be

too great a loss for the doctor as well as for the patient."<sup>30</sup> For Thomas this is an important loss for both patients and physicians; these data similarly suggest that patients feel the same way. Other explanations include restriction of patient choices of physicians due to managed care, time pressures in American healthcare (in which the average patient contact time is only 7 minutes), and lack of training in empathy in medical schools.

Another factor that may be conducive to relatively less concern with empathy among the Dutch is that the proportion of general healthcare practitioners to specialists in Holland<sup>31</sup> is greater than that in the United States.<sup>32</sup> In addition, 85% of Dutch visits to physicians involve no further referrals, and 15% of contacts involve house calls. Efforts also have been under way to promote an "integrated work style" among general practitioners, who are urged to pay close attention to the cultural, social, and psychological dimensions of medical care.<sup>33</sup>

Americans seem to be telling us that they seek greater warmth in their relationships with physicians and are "annoyed" with the high cost of technology and diagnostic procedures, which perhaps is enhanced by the need for the practice of defensive medicine. The Dutch are most concerned with continuity of care but unlike their American peers attribute the rising cost of healthcare to technology, the tendency for the public to consume, and a decrease in informal care.

Members of each society assign different weights to factors when attributing the rise in cost for care and also express concern over different qualities in the provider-consumer relationship. These data suggest that in an era of managed care, the twin concerns of quality of physician-patient relationships and cost of medical care as perceived by consumers are tied to their respective sociocultural systems. This suggests that education and learning are important components. Balancing cost and quality will require a measure of education on the part of physicians, allied health practitioners, and patients. Physicians need to appreciate their dual role as agents of both their own private patients and the other enrollees in a given plan. This will require an assessment of each procedure to help ensure that the resources expended offer true value for the patient. Failure to do this assessment results in costs to administrators and insurers in a given plan and ultimately to other patients. Physicians serve also as major sources of patient education and accordingly will need to present many cost-effective options in more palatable forms.<sup>4</sup>

It is important to note some of the strengths and weaknesses in the pairwise comparison used in this study. Among its strengths is that it forces respondents to choose between different alternatives, offers the possibility for quantification, helps ensure that the final position of each aspect on the scale is a result of the independent comparison of each statement with others, simplifies the identification of competitive aspects on the major ranking scale, and provides more information regarding reliability. A disadvantage is the limitation on the number of statements and thus the potential omission of concepts, which could compromise validity.<sup>22</sup>

... CONCLUSION ...

Data from this study are useful because patterns revealing similar opinions about the relative desirability of specific aspects of healthcare suggest universality, whereas differences can help facilitate potential adjustments in the provision of healthcare. Healthcare planners in each society must be sensitive to the needs and demands of their own clientele as they seek to enhance the quality of healthcare delivery as well as patient satisfaction. Replication of this and similar studies over time is suggested to assess the impact of changes in societal values on healthcare delivery.

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