



Choice or control: what do patients really want?

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When it comes to selecting a health care provider, patients want choice. Gone are the days when patients were willing to accept a passive role in their own care (1). There is also a strong demand for comparative information on the quality of health care providers, such as reports on risk-adjusted outcomes or patient satisfaction. Given that many patients now have access to such information, one would think that “quality compare websites” would play a significant role in patient decision-making. Yet research has found that no more than about 5% of patients actually use such information when choosing a health care provider (2).

A standard assumption of microeconomics is that of the “rational consumer.” Before purchasing a washing machine, for example, the rational consumer will evaluate all options using the best available evidence and then choose the one that maximizes her utility (3). As noted previously, the market for cardiac surgery functions differently than the market for washing machines, and real patients rarely behave like the rational self-maximizers of economic lore (4,5). There are many reasons for this. Unlike robots, humans are subject to various “cognitive biases” that affect how they perceive the world. When a physician informs a patient that he requires heart surgery, the patient may feel overwhelmed, afraid, confused, or beaten-down.

Given the accessibility of social media websites that enable patients to share their ratings and opinions of their providers, researchers have sought to better understand how patients can be educated to use such information to improve the quality of their health care (6). In a recent study, Zwijnenberg and colleagues asked 38 Dutch subjects about the utility of various quality websites that contain patient

ratings and reviews for choosing a hospital for total hip, knee, or cataract surgery (7). While the subjects preferred to have a choice of at least two or more hospitals, they did not want too many choices, e.g., no more than six. They were also indifferent as to the reviewers' age, gender, or ethnicity. That is, subjects were unconcerned as to whether the sample of respondents was representative of some broader population or were like themselves in terms of demographics. They also preferred to have information on the surgeon, not just the hospital. This study is a reminder of the importance of listening to patients and incorporating their perspectives in the design phase of consumer websites.

In many rural areas in the United States, there are only one or two hospitals within a 30-minute drive. Thus the local hospital is the default choice for many rural patients (8). For many reasons, patients are inclined to view their local hospital favorably, even if they are somewhat dissatisfied with the “health care system” as a whole. For example, the local hospital may be the town's largest employer, the facility recommended by the family physician, and the place where their daughter was born (9). A fundamental principle of marketing is that people prefer the familiar to the unfamiliar, also known as the *mere-exposure* effect. Other cognitive biases may also play a role, such as the *status quo trap* and the *sunk cost bias* (10). *Confirmation bias* occurs when a patient emphasizes evidence that confirms his prior beliefs, while ignoring disconfirming evidence.

One of the first uses of comparative health information occurred in 1989, when the New York State Department of Health published risk-adjusted mortality rates of hospitals and surgeons following coronary artery bypass graft surgery (11).

Within 5 years, risk-adjusted mortality fell by 41 percent across the state, mainly due to internal quality improvement efforts. Yet contrary to expectations, the report's publication had almost no impact on consumer behavior when it came to choosing hospitals. That is, there was no significant difference in hospital market share in the year after the report was published for either the best or worst performers. The worst-performing hospital in the state was a public facility with a mortality rate of 17.6%, compared with the state average of 4.9%. Although this occurred prior to the internet era, some anecdotal evidence suggests that this hospital already had a poor reputation within its local community. Yet even this cannot explain why the market share for the worst performing hospitals actually increased from 7.8% to 9.1% in the year following the publication of the report.

Within the US, two percent of hospital revenue is now contingent on the results of a national survey of patient satisfaction, known as the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey. A more recent study of the patient ratings found on the website "Yelp" were strongly correlated with HCAHPS scores (12). Whereas the HCAHPS survey is based on extensive empirical research and has been thoroughly validated, Yelp ratings are based on the subjective rankings of hundreds or thousands of respondents from a "non-random" sample. The authors concluded that the Yelp reviews provided a valuable complement to the HCAHPS scores, due to both its timeliness and comprehensiveness.

While patients who are familiar with a particular hospital may tend to ignore negative publicity about that facility, even confirmation bias has limits. In September 2014, a Dallas hospital proved to be unprepared in responding to the first reported case of Ebola within the US (13). Though the patient, who had recently come from Liberia, had a high fever and intense pain, he was sent home before returning in an ambulance three days later. By then the hospital was unable to save the patient's life or contain the spread of the virus as two emergency nurses had become infected with Ebola. In the wake of this incident and the ensuing media coverage, the hospital's emergency visits decreased by more than 50% and its revenue declined by 25% (14). Yet even the patients' decision to avoid this hospital appears to have been driven more by fear than by rational analysis, given that their actual risk of contracting the Ebola virus was infinitesimal.

In a well-known study, Mills and Krantz sought to better understand the role of personal choice on patients'

stress levels (15). Forty blood donors at a blood bank were randomly assigned into four groups. One group watched a short, informational video; a second group was asked to choose from which arm (left or right) to draw blood; a third group received both treatments; and the fourth group received no treatment. Subjects who either watched the video or were given the choice of left or right arm had less pain and discomfort compared with the baseline group. However, the independent effects of "information" and "control" were not additive. The authors concluded that having moderate levels of control generally reduced patient anxiety but that too much information or control had the opposite effect.

The Zwijnenberg *et al.* study also found that subjects preferred to limit the number of hospitals from which to choose (7). Several subjects preferred no more than 5–6 choices, while others wanted to choose the number of hospitals. Rather than proscribe a "one size fits all" approach, the authors argued that patients should be able to choose the number of hospitals, how they are ordered, and so forth. This emphasis on customization and flexibility invariably leads to more choice and more complexity. It also puts the onus of 'routine' decision—making back on the patient, in spite of the stated preference of many subjects for fewer choices. There is a similar concept known as "bounded rationality" (16). It states that people have limited time and energy to expend on choosing among alternatives, and that once a reasonable solution is found, the opportunity costs of additional searching make it difficult to improve upon the initial solution. In other words, life is short, time is limited, and most people simply want to get on with it.

For the blood-drawing subjects, the mere fact of having a choice reduced their anxiety. Yet the option of left or right was not a "rational decision," so much as a personal preference. One could imagine that increasing the number of arms from which to choose would not make their decision any more "rational". Similarly, some airline passengers may feel decreased anxiety after watching a two-minute demonstration on the proper technique for fastening their seat belts. Yet a one-hour explication of the redundant circuitry of the electrical system of a Boeing 787 would likely have the opposite effect.

A similar issue arises in the context of Personalized Health Records (PHRs). This refers to the ability of patients to access their own health records through a patient portal website. Even as the HIPAA law in the US guarantees patients the right to access their own medical records, it does not ensure that patients will have the requisite training to understand or interpret the medical jargon they find therein (17).

For example, “Ca²⁺” is the abbreviation for “calcium” not “cancer”. The phrase “rule out” is ambiguous, as in “rule out MI (myocardial infarction)”, whereas the phrase “heart attack” is familiar but nonsensical from a medical perspective.

Conclusions

Whereas the internet has made comparative health information widely accessible, little has changed with respect people’s behavior or the propensity of most consumers to discount such information when choosing a provider. Even as the formatting of health care quality websites is an important issue, the more fundamental question is how to change consumer behavior. A careful examination of the studies in this essay, that span almost four decades, reveals how much has changed in terms of technology and information and how little has changed in terms of the human psyche itself. By now it should be evident that research in this area is hard, and the tree of inquiry is long bereft of low-hanging fruit. Yet I believe that there is still some cause for optimism. Even if only five percent of consumers currently use such information to improve the quality of their own health care, this is far better than none. Moreover, these early adopters may hold the key to a broader shift in thinking that will ultimately lead to improved population health by enabling patients to take a more active role in their own care.

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Footnote

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References

1. Rozenblum R, Bates DW. Patient-centred healthcare, social media and the internet: the perfect storm? *BMJ Qual Saf* 2013;22:183-6.
2. Faber M, Bosch M, Wollersheim H, et al. Public reporting in health care: how do consumers use quality-of-care information? A systematic review. *Med Care* 2009;47:1-8.
3. Deaton A, Muellbauer J. *Economics and Consumer Behavior*. Cambridge University Press, 1980.
4. Rice TH, Unruh L. *The Economics of Health Reconsidered*, Fourth Edition. Chicago: Health Administration Press, 2015.
5. O'Neill L. If more competition is the answer, why hasn't it worked? *Anesth Analg* 2015;120:3-4.
6. Ranganathan M, Hibbard J, Rodday AM, et al. Motivating public use of physician-level performance data: an experiment on the effects of message and mode. *Med Care Res Rev* 2009;66:68-81.
7. Zwijnenberg NC, Hendriks M, Bloemendal E, et al. Patients' Need for Tailored Comparative Health Care Information: A Qualitative Study on Choosing a Hospital. *J Med Internet Res* 2016;18:e297.
8. Finlayson SR, Birkmeyer JD, Tosteson AN, et al. Patient preferences for location of care: implications for regionalization. *Med Care* 1999;37:204-9.
9. Peltier JW, Boyt T, Schibrowsky JA. Obstetrical Care and Patient Loyalty. *Marketing Health Services* 1999;19:4-12.
10. Hammond JS, Keeney RL, Raiffa H. The hidden traps in decision making. *Harv Bus Rev* 1998;76:47-8, 50, 52 passim.
11. Chassin MR. Achieving and sustaining improved quality: lessons from New York State and cardiac surgery. *Health Aff (Millwood)* 2002;21:40-51.
12. Ranard BL, Werner RM, Antanavicius T, et al. Yelp Reviews Of Hospital Care Can Supplement And Inform Traditional Surveys Of The Patient Experience Of Care. *Health Aff (Millwood)* 2016;35:697-705.
13. Sack K. Downfall for Hospital Where Ebola Spread. *The New York Times* 2014;October 15. Available online: <https://www.nytimes.com/2014/10/16/us/infamy-for-dallas-hospital-where-virus-spread.html>
14. Jacobson G. Revenue drops 25 percent at Presbyterian Dallas, ER visits decline 50 percent after Ebola case. *Dallas News* 2014, October 22. Available online: <http://www.dallasnews.com/business/business/2014/10/22/revenue-drops-at-presbyterian-dallas-after-ebola-cases>
15. Mills RT, Krantz DS. Information, choice, and reactions to stress: a field experiment in a blood bank with laboratory analogue. *J Pers Soc Psychol* 1979;37:608-20.
16. Simon HA. *Models of Bounded Rationality: Empirically grounded economic reason*. MIT Press, 1997.
17. Wang CJ. Medical documentation in the electronic era. *JAMA* 2012;308:2091-2.

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