

findings brief

Getting Tools Used: Lessons Learned from Successful Decision Support Tools Unrelated to Health Care

key findings

- The success of decision support tools outside of health care derives from focusing on decisions important to consumers, tailoring content to consumers' concerns and needs, and sponsorship by an independent, trusted organization with a business model that supports sustained marketing and refinement.
- Current approaches to decision support tools within health care will benefit from basing future efforts on a clearer understanding of the interests and capacities of target audiences, as well as providing information that aligns with both the timing and range of decisions health care consumers face. In addition, there must be a thoughtful approach to building consumer trust accompanied by a long-term funding commitment or revenue model that will enable decision support tools to become a familiar, expected aspect of health care.

In recent years, an increasing number of consumers have sought health information from sources such as the Internet, magazines, and social networks. The number of people seeking health information increased from 38 percent in 2001 to 56 percent in 2007.¹ The quality of information available to consumers via the Internet and other sources has increased, and there is growing external pressure to use it. Many employers, for example, are offering consumer-driven health plans (CDHPs), which provide consumers information on health, costs, and quality with the intention that consumers will make cost-effective decisions, as a way to instill employees with greater responsibility for their health care decisions and behaviors.² Moreover, reduced face time with physicians has led many patients to research health conditions or treatments prior to a doctor's appointment.

Health care decisions are complex and often high stake, in terms of both health outcomes and costs. Moreover, decisions are often fraught with emotion given the personal nature and potential implications of

health care decisions. Some decisions, such as deciding which treatment to receive, may require patients to make an immediate decision, while other decisions, such as choosing a health plan, may allow consumers to conduct research well in advance to inform the decision. While the Internet has increased the amount of information available to health care consumers, the vast amount of information requires that consumers identify relevant information and appropriately apply it to their preferences, needs, and decisions, which may be challenging.

Public and private organizations recognize the need for tools that assist health care consumers in making informed decisions. A 2007 survey conducted by Thomson Healthcare, for example, found that 90 percent of executives at health plans, large employers, and government agencies perceive the development of health care decision support tools as a priority for their organizations.³ While some have developed these types of tools to inform health decisions, use and adoption remain low. To inform the efforts of health care



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decision support tool developers, Jessie Gruman, Ph.D., president of the Center for Advancing Health, and a team of researchers and experts examined decision support tools widely used in other industries. Gruman states, “The objective of this research was to help health care decision aid developers and sponsors improve their approaches to development, dissemination, and promotion—with the ultimate goal of increasing consumers’ use of decision aids to make informed decisions about health care.”

Methodology⁴

The researchers hypothesized that the variables contributing to the success of decision support tools in other industries differed among tools, and that adoption and use of the tools was likely due to a combination of variables, such as the context of the decision, the sponsoring organization, and the design and content of the tool. Moreover, the variables influencing adoption and use may change over time. Adapting a definition of health care decision support tools developed by researchers at RAND, the researchers defined a decision support tool as, “a paper or electronic aid, or both, to ‘help people make informed decisions by providing and managing information...and presenting the trade-offs involved in various possible choices’ by arraying comparative information.”^{5,6}

To test the hypotheses, the researchers completed case studies of four successful decision support tools in industries unrelated to health care. The tools were chosen based on whether they: 1) fit the definition of a decision support tool; 2) were highly visible and ubiquitously used by the public; 3) supported decisions in which there is no right answer; and 4) supported decisions for which the abundance of information impairs choice in the absence of a decision support tool. Ultimately, the researchers and an expert panel—including Margaret Holmes-Rovner, Ph.D., Michigan State University, David E. Kanouse, Ph.D., RAND Corporation, Stephen Parente, Ph.D., University of Minnesota, Dale

Shaller, Shaller Consulting, and Shoshanna Sofaer, Dr.P.H., Baruch College, CUNY—selected the following case studies:

- *U.S. News and World Report: America’s Best Colleges* (electronic and print)
- Nutrition Facts Panel
- eBay.com
- *Consumer Reports: Car Buying Guide* (electronic and print)

Using a framework developed by David Kanouse, Ph.D., et al., to evaluate quality improvement efforts, the researchers and expert panel developed a list of variables to examine each case study tool.⁷ The researchers used trade journals as well as interviews with key informants to answer the following research questions for each case study:⁸

- What are the primary characteristics of each tool in terms of development, design, dissemination and promotion, audience, use, external context, and business model—both now and in the past?
- Which variables, or combination of variables, for each tool appear to be more influential than others in achieving and maintaining wide audience use?
- How, if at all, did the combination of influential variables change over time for each tool?
- What measures and analyses did the tool developer use to assess the tool’s effectiveness, and design improvements?

Once the case studies were completed, the expert panel evaluated which variables or combinations of variables for each case study contributed to the tool’s success. The experts then looked across all case studies to evaluate whether the variables contributing to the success of the tool were the same and discussed the implications of these findings for the design, development, promotion, and business model of health care decision support tools.

Findings

Key variables of each case study tool are summarized in the table located on page 5. The section below summarizes the experts’ views of which variables were integral to each tool’s success and the implications for health care.⁹

Consumer Reports: Car Buying Guide¹⁰

Consumer Reports: Car Buying Guide is successful in obtaining and maintaining a broad customer base due to *Consumer Reports’* reputation as a credible and trustworthy source, the resources available to conduct independent research and evaluation, and the tool design. *Consumer’s Union*, the sponsoring organization, is an independent, nonprofit organization that has a longstanding reputation (75 years) of producing objective, expert, and unbiased product ratings. *Consumer Reports: Car Buying Guide* relies on subscriptions to generate revenue and does not allow external advertising or donations from automobile industry affiliates. In addition, *Consumer Reports: Car Buying Guide* maintains its independence by creating its own methodology, testing automobiles at its own facility, and continually evaluating the rankings. The methodology is transparent and is clearly explained to consumers. Moreover, the low cost of subscriptions relative to the high cost of cars further supports the brand and mission of providing consumers with objective and adequate product information for high-stake decisions.

Consumer Reports has also been successful as a result of its ability to adapt the content of its tools to consumers’ changing preferences and to hot issues, such as gas mileage. While *Consumer Reports: Car Buying Guide* aims to provide information that fulfills consumers’ differing priorities, the design of the tool gently educates consumers about car features and characteristics that should weigh most heavily when considering and purchasing a car. Moreover, the tool design allows consumers to rank and sort based on these preferences, affording consumers with a customizable experience.

This summary of the findings is drawn largely from case studies, expert commentaries, and key findings documents that are available at www.cfah.org/activities/tools.cfm

eBay.com¹¹

eBay.com is successful in maintaining a world-wide user base as a result of its “first-mover” status in e-commerce, its use of the most current Web technology, its brand of trust, and the close alignment between the business model and tool. eBay.com was the first e-commerce company to facilitate a consumer-to-consumer market through an auction platform. Its use of Web 2.0 applications and regular incorporation of the newest technology has allowed users to generate content, such as reviews of buyers or sellers, and to customize their shopping experience through the “My eBay” feature. Allowing users to rate buyers and sellers has instilled a sense of trust in the tool and increased consumer engagement. Moreover, eBay.com serves as a source of entertainment for users, thus establishing brand loyalty.

eBay.com’s business model relies on generating revenue through seller fees. This business model is aligned with both the tool design and audience needs. For example, sellers may choose different sale features, such as “Buy It Now” at varying prices when posting a product to sell. eBay.com facilitates sales by allowing buyers to use eBay.com free of charge and by providing users with information about the seller.

Nutrition Facts Panel¹²

The Nutrition Facts Panel is an informational tool that allows the American public to make evidence-based decisions about the food they purchase. The tool’s success is a result of the government mandate that all manufactured food products display the label, the uniform and simple tool design, and the educational campaign used to promote and educate individuals about the tool. The U.S. Food and Drug Administration (FDA) mandated that all U.S. food manufacturers evaluate the nutrition of the food they produce and display a corresponding Nutrition Facts Panel on the packaging. Although the mandate was resource intensive for food manufacturers, it ensured that the information-support tool was available at the point of purchase

and was accessible and free to all individuals purchasing manufactured food.

Because the tool is sponsored by the government, and the government employed experts to inform the content and design of the tool, the tool is generally perceived by the public as credible and trustworthy. Trust was further cemented by educational campaigns that raised overall awareness about the tool and taught consumers how to use it. The information on the tool is presented in tabular format and is clear and easily read. The uniformity of the tool across products allows consumers to compare products. Moreover, the tool provides two tiers of information, one targeted at general consumers and the other at more knowledgeable consumers.

U.S. News & World Report: America’s Best Colleges¹³

U.S. News & World Report: America’s Best Colleges remains the predominant decision support tool for higher education as a result of its unique business model, marketing strategies, and transparent and changing methodology. *U.S. News & World Report: America’s Best Colleges* was the first organization to create a decision support tool focused on higher education, and did so at a time when attending an esteemed college became more important to students and families and the college choice process became more complex. The business plan is unique in that the tool was developed to increase magazine subscriptions and sales. The rankings are available in magazines and online, which allows broad distribution, generates revenue, and drives consumers to the Web site.

Because *U.S. News & World Report: America’s Best Colleges* is sponsored by a news organization, consumers perceive the rankings to be credible and objective. The methodology used to develop the rankings relies on both statistics and subjective information and is transparent. To maintain perennial interest in the college rankings, the tool developers adjust the methodology to alter the rankings slightly. The new rankings are released each August when high school seniors are consider-

ing college. The new rankings generate significant media attention and colleges and universities often release their own press releases—in some cases drafted by *U.S. News & World Report: America’s Best Colleges*—to announce their ranking, which further promote the product and brand.

Variables Contributing to Success and the Implications for Health Care

When analyzing findings from the case studies together, the experts identified the following variables and characteristics to be integral components contributing to the successful adoption and use of the decision support tools.¹⁴ They considered the implications of these variables for the development of health care decision support tools.¹⁵

Consumer-centric—The decision support tools meet unique needs of the audience, in terms of information presented, the context of the decision, and the cognitive abilities required to use the tool. In addition, the tools are designed to be user-friendly, using rank-ordered ratings, expert recommendations, and in some cases, such as eBay.com and *Consumer Reports: Car Buying Guide*, are customizable based on an individual’s preferences. The tools are perceived as trustworthy and objective as a result of their transparent methodology, the sponsoring organization, buyer/seller feedback, etc.

Target audience—The decision support tools are designed for targeted users with specific needs and interests. Moreover, the tool is designed to deliver the appropriate information during the appropriate time in the decision-making process. The tool design and content reflects both the frequency of purchase and cost of the purchase.

Sponsorship—Adoption and uptake of decision support tool use is in part due to the branding and perceived objectiveness of the sponsoring organization. These organizations instill consumer trust by maintaining independence from external advertising, employing experts to creating rankings, allowing consumers to contribute content, and by displaying the methodology for rankings.

Viable business model—The decision support tool sponsors all have business models that are aligned with the decision support tool, allowing the decision support tool to generate revenue that sustains and allows continued production of and investment in the tool. The business models are dependent upon the success of the tool, a large audience, and the ability of the tool to adapt and to take advantage of changes in environmental or market changes.

Marketing—Branding allowed decision support tool sponsors to increase awareness about the tool and establish trust in the tool. In each of the case studies, the tools were marketed to a national audience and media coverage—such as through the release of new rankings—helped to promote the product.

The lessons learned from the case study tools can inform efforts to develop, produce, market, and evaluate decision support tools in health care. For example, online participatory platforms, such as that used by eBay.com, may help to engage consumers in health care decision-making and serve as a repository for health information and resources. In addition, tool developers may consider offering tools that provide side-by-side comparisons and other resources, such as expert opinions or consumer reviews that further inform the decision. The design of the tools should be accessible, easy to read and comprehend, and designed to emphasize the most important information. Suggestions for marketing the decision support tools and promoting a brand of trust and objectiveness include using social media, media coverage, word-of-mouth referrals, placing the decision support tool at the point of need (similar to the Nutrition Facts Panel), and providing decision support tools at low or no cost.

While decision support tools have been successful in other industries, there are unique challenges with creating and implementing decision support tools in health care. The scope of health and health care is vast, encompassing a broad number of topics

fraught with difficult decisions. Creating one decision support tool to address health insurance, medical treatment, and providers would be difficult and may not allow the tool developer to provide the targeted information that is most useful to consumers. Similarly, decisions about which insurance plans to purchase or health care provider to visit depend on consumer and provider location and the insurance plans offered in a particular region or state. While it may be challenging to develop tools that are salient on a national level, such efforts are worthwhile to prevent duplication of effort and to maximize the impact of resources.

Moreover, the current market environment may not yet be ready for health care decision support tools. Unlike the case studies described above, consumer engagement in health care is low and many consumers do not believe they need decision support tools. Therefore, efforts will be needed to show the importance of tools for making informed health care decisions. Educational campaigns, such as those used by the FDA during the introduction of the Nutrition Facts Panel, may be necessary to educate consumers—particularly low literacy users—about how to use decision support tools, why consumers need such tools, and how consumers benefit from their use. Educational campaigns may also increase awareness about the tool.

While the tool sponsors in the case studies were able to establish trust with consumers by maintaining independence from outside influence and stakeholders, doing so in health care would be extremely difficult due to the numerous stakeholder groups involved as a result of the government's role in regulating and paying for health care. Many health care consumers do not trust the government and other third parties that pay for health care to provide objective and unbiased information about health care. Therefore, health care tool developers must work to instill trust with consumers. Moreover, decision support tool development may rely on information obtained from stakeholders, who may be reluctant to provide the information. Therefore, the

researchers suggest that an independent body overseen by a board composed of individuals representing consumer and patient interests and staffed by experts may be a solution for promoting public trust.

Policy Implications and Next Steps

Providing consumers with health care decision support tools has the potential to increase consumer engagement in health care, improve quality, and decrease costs. Despite the generally low interest in decision support tools and low level of consumer engagement in health care, there are groups of activated health care consumers. Efforts to develop and promote decision support tools could target these groups first, and adoption by such users may catalyze further development and utilization of health care decision support tools. More research is necessary to inform the efforts of health care decision support tool developers, including which decision support tool design is best suited for which type of health care decision, which segments of the population will likely be early adopters, and what investment is necessary to encourage adoption.

Gruman states, “As the complexity of consumer health decisions grows, there is simply no way individuals can make informed decisions without access to tools that systematically array the tradeoffs of different options. It is imperative that we—sick or well—have access to solid information about health care choices that matter to us presented...in formats we understand by sponsors we trust. This research provides guidance to fulfilling that aim.”

For More Information

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Case Study Focus	Consumer Reports: Car Buying Guide (online and print)	eBay.com	Nutrition Facts Panel	U.S. News and World Report, America's Best Colleges (online and print)
Audience	Approximately 16 million readers, many of whom are mature adults, college educated, and have higher household income than the U.S. average	Primarily middle class adults	American adults	High school students and parents of high school students, many are middle/upper class
Readership/ Customer Base	Approximately 16 million readers	84.5 million buyers/sellers in 2008, some people may have registered using different user names	62 percent of Americans surveyed in 2005-2006 reported "always/often and sometimes use" Nutrition Facts Panels	More than 15 million Web page views in August 2008, when the 2009 rankings were released
Context of Decision	Purchasing a car is expensive and is not done frequently	Deciding whether to buy a particular good from a certain seller or whether to sell a good to a particular buyer—purchases can range from low to high cost	Deciding whether to purchase a food product based on its nutritional value—individual purchases are typically low in cost and are made on a frequent basis	Deciding which college to attend is typically a one-time decision; college is extremely expensive and has implications in the future (such as academic experience, career)
Context of Tool	Tool is often used by consumers during the research stage of the decision process, prior to visiting a car dealership	Tool is most often used by consumers at the point of purchase	Tool is most often used by consumers at the point of purchase	Tool is used when students and parents are researching schools, often assisting with developing or refining their list of potential schools
Sponsoring Organization	Consumer's Union, a non-profit organization that has provided objective product ratings for consumers since 1936	eBay, Inc., aims to provide shareholders value through its online auction tool	U.S Food and Drug Administration mandates food industry compliance and convenes experts to design/evaluate methods	U.S. News Media Group, which provides news and actionable information
Business Plan	Subscriptions; does not allow external advertising or donations from industry affiliates	Seller fees, including insertion fees to sell item, final value fees based on the final price of sale, and optional feature fees	Congressional appropriations	Magazine sales, online subscriptions, and advertising
Tool design	Online and print mediums; includes profiles, reviews, recommendations, and comparative ratings; methodology and testing are completed independently by Consumer Reports experts	Electronic; design is intended to activate consumers and create an online community; Web site allows users to buy/sell items, provide feedback about their shopping experience, and rate buyer/sellers; search filters allow users to look for products based on product characteristics, seller information, and format of sale; users customize the way information is displayed; customizable control panel	The tool is uniform in design; allows easy comparability between products; uses tabular format, and was designed to maximize legibility. Nutrition Facts Panels were designed to provide information at a level comprehensible by the general public and more advanced information for more knowledgeable consumers	Online and print mediums; includes rankings, tables, college and university profiles, and interactive online databases; methodology is proprietary and is based on objective information (scores, enrollment, retention) and subjective information (college administrators' assessment of academic quality)
Tool content	Information on pricing; Consumer Reports rating, predicted reliability, owner satisfaction, safety, overall miles per gallon	Buyer/seller ratings, buyer/seller reviews, shipping fees, time remaining before item is removed, the number of bids	Serving size, calories, calories from fat, total fat, cholesterol, sodium, total carbohydrate, protein, vitamins, percent daily values	Information on <i>U.S. News & World Report</i> score, peer assessment scores, average freshman retention rate, graduation rates, percentage of classes by size, SAT/ACT of entering freshman class, acceptance rate
Marketing and Promotion	Media attention, word-of-mouth, market research	Internet marketing, word-of-mouth	Multi-year consumer awareness and educational campaign to educate consumers to use tool	Annual release of rankings generate media; colleges often publicized their ranking, further promoting the product
Objective of tool	To assist consumers in obtaining the "right car at the best price"	Provide a safe and functional venue for shopping and to facilitate and community of users	To make more informed and nutritious decisions about food purchases	Provide comparative information on the quality of colleges/universities
Source	"Consumer Reports: Car Buying Guide: A Case Report for Getting Tools Used"	"eBay.com: A Case Report for Getting Tools Used"	"Nutrition Facts Panel: A Case Report for Getting Tools Used"	"U.S. News and World Report: America's Best Colleges: A Case for Getting Tools Used"

Endnotes

- 1 Tu, H.T. and G.R. Cohen. "Striking Jump in Consumers Seeking Health Care Information," Tracking Report, Center for Studying Health System Change, No. 20, August 2008.
- 2 Tynan, A. and J.B. Christianson. "Consumer-Directed Health Plans: Mixed Employer Signals, Complex Market Dynamics," Issue Brief, Center for Studying Health System Change, No. 119, March 2008.
- 3 "Thomson Survey: Consumer Healthcare Information Tools Are a Priority for Employers, Health Plans, and Government Agencies," Healthcare, Thomson Reuters, May 9, 2007.
- 4 For more information on the methodology, see "Getting Tools Used: Research Framework," Center for Advancing Health, 2009. Also see www.cfah.org/activities/Getting_Tools_Used/framework.pdf.
- 5 Carlisle, E. et al. "Empirical Studies of Decision Aids for Consumers," Santa Monica: The RAND Corporation, 2003. As cited in: Shaller Consulting, "Consumers in HealthCare: Creating Decision-Support Tools That Work," California HealthCare Foundation, June 2006. Also see www.chcf.org/documents/insurance/CreatingDecisionSupportTools.pdf.
- 6 "Getting Tools Used: Research Framework," Center for Advancing Health, 2009. Also see www.cfah.org/activities/Getting_Tools_Used/framework.pdf.
- 7 Kanouse, D.E. et al. "Reporting About Health Care Quality: A Guide to the Galaxy," *Health Promotion Practice*, Vol. 5, No. 3, 2004: pp 222-31.
- 8 For more information on the methodology, see "Getting Tools Used: Research Framework," Center for Advancing Health, 2009. Also see www.cfah.org/activities/Getting_Tools_Used/framework.pdf.
- 9 For more information about each decision support tool see the case studies and expert commentaries, respectively, available at www.cfah.org/activities/tools.cfm. Also see Appendix A of "Lessons Learned: Key Variables of Success," www.cfah.org/activities/Getting_Tools_Used/lessons.pdf, for a summary of the key variables of success for each case study.
- 10 See "Consumer Reports: Car Buying Guide: A Case Report for Getting Tools Used," Center for Advancing Health, 2009. Also see www.cfah.org/activities/Getting_Tools_Used/consumer.pdf.
- 11 See "eBay.com: A Case Report for Getting Tools Used," Center for Advancing Health, 2009. Also see www.cfah.org/activities/Getting_Tools_Used/ebay.pdf.
- 12 See "Nutrition Facts Labels: A Case Report for Getting Tools Used," Center for Advancing Health, 2009. Also see www.cfah.org/activities/Getting_Tools_Used/nutrition.pdf.
- 13 See "U.S. News and World Report: America's Best Colleges: A Case Report for Getting Tools Used," Center for Advancing Health, 2009. Also see www.cfah.org/activities/Getting_Tools_Used/usnews.pdf.
- 14 See "Getting Tools Used: Lessons Learned: Key Variables of Success," Center for Advancing Health, 2009. Also see www.cfah.org/activities/Getting_Tools_Used/lessons.pdf.
- 15 See "Getting Tools Used: Advancing Healthcare Decision Aids," Center for Advancing Health, 2009. Also see www.cfah.org/activities/Getting_Tools_Used/implications.pdf.