Getting Tools Used

Lessons for Health Care from Successful Consumer Decision Aids
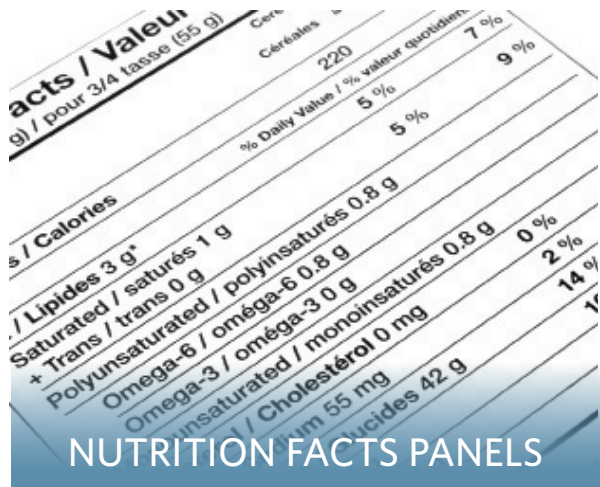
U.S. News & World Report:
AMERICA'S BEST COLLEGES

CONSUMER REPORTS:
CAR BUYING GUIDE

eBay.com

NUTRITION FACTS PANELS

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Foreword by Jessie Gruman

President & Founder, Center for Advancing Health

Advances in knowledge about the determinants of disease and the tools available to improve its prevention, management and cure have increased exponentially in the past two decades, promising improvements in the length and quality of life for many Americans. And the number and types of health professionals, diagnostic and treatment venues and insurance arrangements has multiplied to accommodate these advances.

The wealth of healthcare options that appear to be available can seem overwhelming to us, whether we are sick or well. On what basis should we choose one health plan over another? How do we know which hospital offers better care, the one down the street or the one in the next town? Which of the possible treatments for my breast cancer will work best for me? We rarely feel that we are qualified to pass judgment and often struggle to find the answers to these questions.

Over the past decade, healthcare experts have attempted to provide information that would ensure that we make informed decisions about our healthcare. In some cases by measuring different aspects of the quality and outcomes of different delivery and treatment options and then by organizing this information so that the options can be compared with one another. Report cards on health plans, physicians, hospitals and nursing homes are also available in various formats in many communities across the country, and a steady stream of decision support "tools" to aid patients in treatment decisions are making their appearance on various Websites.

These efforts are truly important. Many of these choices are complex, high stakes decisions and there is simply *no way* we can comprehend the trade-offs of coverage of multiple health plans or prostate treatment options without seeing the key information systematically arrayed.

And so it is puzzling that Americans show so little interest in making use of these decision support tools. Survey after survey shows that we aren't aware of such tools, don't think we need them and are resistant to using them when we know they are available. What gives? After all, we have a long tradition of looking up the cost of our used cars in the Blue Book and most of us trust the conclusions of *Consumer Reports* on refrigerators and weed-whackers, even

though we may not subscribe to the magazine. So it's not as though the idea of "comparison shopping" is novel. We just don't seem to find this model of decision-making relevant to healthcare.

Unfortunately, regardless of the outcome of healthcare reform, the success of electronic health records, or the growth of the patient-centered medical home, the number of choices we make about our healthcare – when we are sick or well – will only increase in the future. If we are to fully benefit from the healthcare available to us, we need decision tools targeted to options that are meaningful to us, from sources we can trust, that answer our questions and that clarify our options.

The "Getting Tools Used" initiative is an effort to gain insights into the success of familiar decision support tools from outside healthcare and derive the implications of those insights for the development and dissemination of such tools within healthcare. It contributes to the considerable efforts of employers, health plans, voluntary health organizations, physicians, patient groups, hospitals, and local, state and federal governments, to ensure that all of us are able to find and use safe, decent healthcare in order to live as long and as well as we can.

Jessie Gruman, PhD
President
Center for Advancing Health

Executive Summary

Research Objective:

Americans use a variety of purchasing guides to help make choices about the cars they drive, the schools they select for higher education, and other consumer goods and food they purchase routinely. Such guides have successfully helped many consumers consider a wide array of features when they have multiple options and limited time or access to information from which to do their own analyses.

In the healthcare sector, both private and public sector groups have developed tools to help people make informed decisions about health plans, hospitals, long-term care facilities, doctors, and medical treatments. But these tools are not being used as widely and frequently as hoped by their developers, even as the health and healthcare decision-making role for consumers grows.

Through in-depth case studies of the following four successful commercial, non-health related decision support tools; *Consumer Reports: Car Buying Guide*; eBay; *US News & World Report*:: *America's Best Colleges*, and the FDA's federally mandated Nutrition Facts Panels (NFP), our research identified the key variables for the success of these popular tools; and describes the implications of these finding for the development of healthcare decision aids.

Methods:

The Center for Advancing Health (CFAH) used a framework developed by David Kanouse and his colleagues,[1]that defined seven basic principles for successful quality-reporting as the template for the case study research. CFAH obtained in-depth background on the four cases through both research of available literature and discussions with private and public sector officials and industry analysts. Inquiries focused on identifying the key factors in the development, marketing, dissemination and application of the four purchasing guides that contributed to their widespread use.

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[1] Kanouse DE, Spranca M, Vaiana M. (2004). Reporting about health care quality: A guide to the galaxy. *Health Promotion Practice* 5(3): 222-231.

In the second project phase, a review panel of five leaders with expertise in the development and dissemination of decision support tools for healthcare examined the four cases to extract lessons that developers and marketers of healthcare-related tools can apply to increase adoption and utilization. The review panel subsequently created individual commentaries analyzing the cases for variables of success and for the implications for healthcare. These commentaries were later supplemented by responses from key healthcare leaders at a meeting convened by CFAH, and with additional support from the Foundation for Informed Medical Decision Making (FIMDM) and the California Health Care Foundation (CHCF) in March of 2009.

The panel of reviewers were: Margaret Holmes-Rovner, PhD: Professor of Health Services Research in the Department of Medicine, Michigan State University; David Kanouse, PhD: Senior Behavioral Scientist at RAND Corporation; Stephen Parente, PhD, MPH: Academic Director, Medical Industry Leadership Institute, Associate Professor School of Finance at the Carlson School of Management, University of Minnesota; Dale Shaller: Shaller Consulting; Shoshanna Sofaer, PhD: Professor of Health Care Policy, Baruch College, CUNY.

Lessons Learned: Key Variables of Success from the Getting Tools Used Case Studies

Our research identified several specific variables that led to the marketplace success of our cases. A few of the key variables for success follow:

Consumers Must Trust the Source
Sponsorship identity affects adoption, use, and referral of decision aids. The case study tools attracted users, in part, because the sponsoring organizations have strong brand legacies and consumers perceive them as trusted sources of information.

Tools Must Be Consumer-Centric
In successful decision aids, the content and functions are closely matched to the attributes and concerns of the target audience. Target audiences are also more likely to use a decision aid when they have a clear, compelling need for external information or support in making a choice. Such audiences understand that alternative choices have important differences, are motivated to seek information and decision support, and possess sufficient ability (such as knowledge, skills, etc.) to use the tool competently.

There Must Be a Viable Business Model.

A viable business model for the decision aid is defined as a way to generate revenue that supports ongoing production of and investment in the tool, or as in the case of the NFP, the target industry operates with very explicit regulatory/disclosure requirements. In each of the cases, the sponsor has devoted resources to ongoing marketing, promotion, and dissemination, which are paramount to their widespread use.

A National Strategy is the Most Effective

The marketing, and dissemination of our case study decision tools all benefited from a national approach and contributed to robust brands and recognition across diverse consumer populations. For every tool we studied, successful and consistent "branding" was a powerful force in building consumer awareness and use of tools and such "branding" was extremely influential in establishing and maintaining consumer trust.

Advancing Healthcare Decision Aids: Implications from the Getting Tools Used Research

Our research also identified strategies that sponsors, developers, and promoters of healthcare decision aids can employ to improve use of their tools. There are six key messages for healthcare stakeholders:

Tools Must Provide Information that is Otherwise Unavailable to the Consumer

The most important implication is that for healthcare decision aids to be successful they must first, target decisions that users deem important and sufficiently complex to require assistance.

Healthcare Decision Support Tools Must Meet a Ready Audience

Tools must provide users with information and support tailored to their needs and preferences at a salient point in their own decision-making process.

Tools Created within the Healthcare Industry Will Have Less Resonance with Consumers than Those Created by Independent Groups

A high degree of independence freed the sponsors of the four decision aids we examined to apply their full technical expertise in informing and supporting a consumer's decision, as exemplified by *Consumer Reports: Car Buying Guides*. In current report card and decision support tool efforts within healthcare, pressure from many stakeholders makes it difficult for decision aid sponsors to focus on the public (or subgroup of the public) as the audience, let alone deliberately develop customizable tools that resonate with consumer users, because of actual or possible stakeholder reactions.

Further, formal and informal alliances, among tools sponsors and the entities they are evaluating, undermine appearances of objectivity and trustworthiness.

The critical importance of objectivity regarding the "good" being evaluated strongly suggests that there is a need for an independent entity with a board constituted exclusively of people committed to the interests of healthcare consumers and patients and with a staff that has a wide range of experts in measurement, report design, marketing, and evaluation to lead the development of successful decision aids in healthcare.

Tools must have a strong brand identity

There is clear need for ongoing strategic marketing of the decision aid – both to build the "brand" and also to ensure widespread awareness.

Sponsors must develop a self sustaining business model, allowing the sponsor to reinvest in the evolution of the tool toward the consumer

No feasible private sector business models have yet emerged within healthcare to support sponsorship with these characteristics.

The success of a healthcare decision support tool largely depends on strategic timing

There is not significant evidence that an audience has yet been created for these tools. There may need to be more investments in public awareness campaigns to create an environment to support the tool.

Future Research

The Getting Tools Used research merits further analysis to develop implications for specific types of decision aids. We hypothesize that in addition to these broad determinants of success, there are unique aspects of quality reports and ratings which have not been captured in this analysis and recommend refinements on these broad conclusions be pursued for tools for support choices of institutions, health plans professionals, and treatments, and e-health platforms helping people manage their health. More generally, the field needs research that will:

- Support audience segmentation, identifying groups of early adopters.
- Improve tool developers' understanding of priority audience segments' needs and preferences.
- Indicate the investment needed to prepare new audiences for using decision aids.
- Explore whether people need a wholly different type of decision aid than is now available.
- Figure out effective branding, messaging, placement, and dissemination strategies to achieve widespread adoption.

About CFAH

The Center for Advancing Health (CFAH) was founded in 1992 by the John D. and Catherine T. MacArthur Foundation and the Nathan Cummings Foundation. CFAH's initial activities were directed toward learning more about the non-biological determinants of health, such as behavior, education, and socioeconomic status. As the evidence describing the role of behavioral and social factors in health mounted, our focus moved to ensuring that this knowledge shaped chronic health disease care, health policy, and health care practice. We have worked through health professional organizations, health plans and elected officials. We reach the general public with key research findings to support health decisions through CFAH's science-based news bureau, the Health Behavior News Service (www.hbns.org).

As the national debate on the cost and quality of health care reaches a fever pitch, we are concerned that the critical role of individuals in the success of the health care enterprise has been overlooked: *Unless each of us participates fully and competently in our own care, we will not realize its benefits.* Health care that requires such a high level of engagement by patients in order to be successful also places those who are already ill and those who lack knowledge, skills and confidence at a disadvantage.

CFAH conducts research, communicates findings and advocates for policies that support everyone's ability to engage effectively in—and thus optimally benefit from—their health care.

Our vision is for an America where everyone is prepared to make good choices about health and health care.

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Introduction

As the 20th century ended, leaps in computing speed and capacity propelled three developments that collectively shaped changes in how Americans shop and what they buy. The three phenomena were better informed consumers, shifts in sources of authoritative information, and the proliferation of highly distinctive products and services. This marketplace transformation also helped spur initiatives designed to assist people as healthcare "consumers," including paper or electronic aids (i.e., "tools" or "decision aids") that support people in making choices about healthcare providers, health plans and treatments. Yet the adoption and use of healthcare decision aids, such as comparative quality report cards, has been disappointing.

To assist healthcare groups in developing better and more popular decision aids, the Getting Tools Used project reviewed four widely used consumer guides that help people shop for non-healthcare products. Healthcare groups can use the results to improve their approaches to developing, marketing and promoting tools that help consumers make informed decisions.

The 21st Century Consumer Marketplace

The modern consumer marketplace is quite different from the one in the mid-1990s. Namely, technology advances have vastly increased both computer capacity for processing voluminous data and the speed of electronic communications; in turn, these advances facilitated changes in how informed consumers are, which information sources people trust and what types of goods and services are available. These three developments contributed to shifts in consumer behaviors. The next sections provide a brief snapshot of these phenomena and related changes in how consumers shop and what they buy.[1]

Better Informed Consumers

Wharton economist Eric Clemons, management consultant Rick Spitler and Wharton e-commerce fellow Steve Barnett (2005) have described a "profound change in the quantity, quality, reliability, and nature of the information available to consumers." As a result, "customers finally know … accurately and with certainty … what is available to them," along with where to buy it and what it will cost.[2]

Classic economics explains that when prices fall, demand increases. This dynamic also occurs with information. Even when it is free, consumers must spend time to access information and apply it in decisions about which products to buy.

In the 1990s and into the current decade, technology advances greatly reduced consumers' time-costs of researching products. More and more consumers tapped into a growing trove of online resources, user reviews and other data to inform their shopping. Pew Internet & American Life Project provides one snapshot of this trend. The project's data indicate that Internet use for product-related research nearly doubled between 2000 (35 percent) and 2007 (60 percent).[3]

Different Sources of Authoritative Information

High-speed, super-capacity communications technologies transformed the media environment and marketing. Before the digital age, mass advertising was powerful because consumers were captive to a small set of dominant communications channels. Now people obtain information from thousands of content sources, access points and formats. In this fragmented media environment, the impact of mass advertising has lessened, making it difficult for companies to control branding.

Consumer-to-consumer sources of market information, in particular, have made great strides in capturing Americans' attention. These sources include social media forums, such as blogs, specialized communications platforms like Epinions.com, social networking sites, Twitter, online communities and other interactive or user-driven web applications (sometimes referred to as "Web 2.0"). Consumers came to value peer ratings, reviews and recommendations as useful and entertaining; these positive experiences prompted further participation in this new information source. In fact, Edelman national surveys have documented a rapid shift in which authorities and institutions consumers view as credible information sources; trust in "a person like me" rose from 20 percent in 2003 to 68 percent in 2006, surpassing trust in healthcare providers, academics and accountants.[4]

At the same time, online social media can blur the lines between commercial marketing and independent content. Customers and companies both have access to online forums (such as Web sites with product descriptions and reviews, Facebook pages and mobile device applications) where sources are frequently anonymous and lack accountability.

Highly Distinctive Products Come of Age

Technology advances in the 1990s made it economically viable to design, produce and distribute highly distinctive goods and services. Design and manufacturing innovations, for example, enabled the development of niche and specialty consumer offerings tailored to deeply resonate with specific audiences.[2] A few examples of highly distinctive products include craft beers from micro brewers, made-to-order Dell computers, boutique hotels and the first iPhones.

E-commerce is another result of computing advances. From a business perspective, e-commerce was an important development because it:

- Reduced the costs of entering a market.
- Enabled instant geographic scale, which improved the profitability of specialized niche offerings.
- Created new retail efficiencies, such as virtual storefronts.

From a consumer perspective, online shopping offered convenience, expanded access to niche products or bargains, and new ways to do comparative shopping.

These e-commerce advantages supported a relatively new business model that made specialized niche markets profitable. *Wired* magazine's Chris Anderson called this the "long tail" model, which represented a break from the traditional model of capturing the hefty middle of the mainstream market. Anderson emphasizes profitability in the long-tail model occurs through the use of e-commerce platforms that not only aggregate "millions of niche markets," but also "treat consumers as individuals, offering mass customization as an alternative to mass-market fare."[5]

Thus, consumer options expanded with the increase of specialized niche products and the ability to shop online. Consumers now anticipate highly tailored offerings to be readily available. Growth in consumer spending in most years from the mid-1990s to 2007 may have magnified this market progression.

Changes in Consumer Behaviors

Consumers having and using more information, a clear shift in peoples' preference for peer information and an expanded supply of highly distinctive products are all factors relating to changes in consumer behaviors over the last decade. As portrayed by Clemons et al (2005), consumers are "abandoning their traditional choices in order to achieve better fit." Written

before the current recession, the Clemons analysis indicates that informed consumers were getting exactly what they wanted by trading:

- *Up* to a more expensive, specialized item to attain a custom or nearly perfect fit with their preferences.
- *Out* to a similarly priced item in a related category (such as from Coke to a Nantucket Nectar juice drink).
- *Down* to a less expensive offering if quality does not matter or if the choice is among commodity items.[2]

Growth and profitability rates for highly distinctive products are one indicator of these altered patterns of consumer behaviors. In many categories, specialized niche products are outperforming mass-market products.[2; 6]

Market Trends and the Healthcare Sector

The broad based changes in the consumer marketplace, as described above, have impacted the healthcare sector in varying degrees. For example:

- *Consumers' access to information* about health and healthcare is growing, as exemplified by rising concerns about variations in quality and the safety of care. Health news is a frequent subject in U.S. news media, both on the Internet and in traditional television, radio and print formats.[7]
- *New sources of consumer information* about health and healthcare now abound. Specifically, new Web-based applications (sometimes referred to as "Health 2.0") have created online patient communities for people to interact with experts and peers. Other Internet platforms host personal health records or provide personalized support to help people manage diets and chronic diseases.[8]
- *Growth of highly distinctive products* is also occurring in the healthcare sector, widening consumer options about providers, services, treatments, durable medical equipment, nutritional foods, hygiene and home medical goods, and more.[9; 10]

About the Getting Tools Used Project

In this environment, both commercial and non-profit groups have developed decision aids or tools that help people make informed decisions about health plans, hospitals, long-term care facilities, doctors and medical treatments. The Center for Advancing Health defines these "tools" as paper or electronic aids, or both, that "help people make informed decisions by

providing and managing information . . . and presenting the tradeoffs involved in various possible choices" by arraying comparative information.[11]

Even with significant investments in resources such as health quality report cards, Americans' use of healthcare decision aids lags behind expectations. For example, in a recent Kaiser Family Foundation survey, only 14 percent of adults indicated they had seen and used comparative health quality information for health insurance plans, hospitals or doctors in the past year.[12]

Outside the healthcare sector, Americans do use a variety of decision aids to help make choices about the cars they drive, the schools to which they send their children and the mutual funds in which they invest. Such resources have helped many consumers consider a wide array of features and multiple options when they have limited time or expertise to do their own research and analysis.

The Getting Tools Used project aimed to inform healthcare groups about ways to improve their approaches to developing, marketing and promoting tools that help consumers make informed decisions about various aspects of their care. To obtain these insights, the Center selected four popular consumer guides outside the healthcare sector for case studies.

- *Consumer Reports: Car Buying Guide*
- eBay (as an online decision aid used by individual consumers)
- Nutrition Facts Panels on processed foods, as mandated by the federal government
- *U.S. News & World Reports: America's Best Colleges*

Using a research protocol, the Center assembled insights from top industry leaders and analysts, research studies in journals and other findings in trade publications. Each case study provided a robust and detailed picture of the impetus, development, relevant evolution and current use of the four tools.

In the second project phase, a panel of five leaders with expertise in the development and dissemination of healthcare decision aids examined the four case studies. They created individual commentaries that provided their analyses of success factors for the cases and lessons that developers and marketers of healthcare-related tools can apply to attain widespread use.

CFAH hosted a March 2009 meeting to present the case studies and commentaries to a small, select group of stakeholders. Together, the panelists and stakeholders reviewed the case studies and commentaries and then discussed implications for healthcare decision aids.

About Getting Tools Used Sponsors

The Changes in Healthcare Financing & Organization (HCFO) national program of the Robert Wood Johnson Foundation supported the initial Getting Tools Used research. Together, the California Healthcare Foundation, the Foundation for Informed Medical Decision Making and the Center for Advancing Health sponsored the March 2009 conference.

About the Center for Advancing Health

The Center for Advancing Health works to ensure that every person is a prepared patient. Increasing the quality and years of healthy life and eliminating health disparities are only possible if people have the knowledge, confidence and skills to make informed health decisions and interact productively with healthcare providers. CFAH is an independent non-profit organization that receives funding from the Annenberg Foundation, the W.K. Kellogg Foundation and others.

Endnotes

[1] The next sections summarize the observations and findings reported in these publications. Clemons EK, Spitler R, Barnett S. Finding the New Market Sweet Spots: The Art and Science of Being Profitably Different In the Era of the Informed Customer. The Wharton School. 2005. http://opim.wharton.upenn.edu/~clemons/files/Find_New_Market.pdf. Accessed Oct. 8, 2008. Clemons EK, Gao F, Hitt L. Consumer Informedness and Diverse Consumer Purchasing Behaviors: Traditional Mass Market, Trading Down, and Trading Out into the Long Tail. (Draft Sept. 8, 2006). 2006. http://digital.mit.edu/wise2006/papers/5A-2_ConsumerInformednessV2-2.pdf. Clemons EK, Gao F, Hitt L. When Online Reviews Meet Hyperdifferentiation: A Study of the Craft Beer Industry. Journal of Management Information Systems. Nov. 13, 2008 2006;23(2):149-171. Anderson C. The Long Tail. Wired. 2004(October). Anderson C. The Long Tail: Why the Future of Business is Selling Less of More (Revised and Updated). New York: Hyperion; 2008.

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Getting Tools Used
Case Study Research Framework

Objective

The objective of this research is to help healthcare 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 choices about healthcare.

Hypothesis

We hypothesize that:

a. Decision aids – those that are popular in the commercial sector as well as those developed within healthcare – vary along a number of common variables;

b. Wide audience use of a decision aid depends on some combination of variables, such as the characteristics of the audience, the context of the decision the individual is making, the tool itself and its content, the context in which the tool is presented, the marketing and promotion of the tool, and the organization that is sponsoring the tool; and

c. For any given tool, the combination of variables related to wide audience use may change over time.

The hypothesis will be tested through a set of four case studies of successful decision aids for non-healthcare products and services.

In this hypothesis and research, the Center for Advancing Health defines "decision aid" as a paper or electronic aid, or both, to "help people make informed decisions by providing and managing information . . . and presenting the tradeoffs involved in various possible choices" by arraying comparative information. (Adapted for tools concerning non-healthcare decisions from The RAND Corporation for healthcare-specific tools.)[1]

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[1] Carlisle E, Spranca M, Kanouse DE. (2003). *Empirical studies of decision aids for consumers.* Santa Monica: The RAND Corporation. As cited in: Shaller Consulting. (2006). *Consumers in health care: Creating decision-support tools that work.* California Health Care Foundation.

Research Questions

For each unit of analysis (i.e., decision aid), the case study will explore:

a. 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?

b. Which variables, or combination of variables, for each tool appear to be more influential than others in achieving and maintaining wide audience use?

c. How, if at all, did the combination of influential variables change over time for each tool?

d. What measures and analyses did the tool developer use to assess the tool's effectiveness and design improvements?

Cross-case analysis will explore:

e. How are these influential variables (or variable combinations) the same and different across case studies?

f. What are the implications of the case study findings for the design, development, promotion, and business models of potential healthcare decision aids?

Variables

To organize potential variables affecting wide audience use, the project team adapted the Kanouse et al framework of seven basic principles for a successful quality-reporting effort.[2] (Although presented linearly in Figure 1, the Kanouse principles inform an iterative process to develop objectives; understand and shape context, design and test; implement with promotion and dissemination; and evaluate and continue testing.)

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[2] Kanouse DE, Spranca M, Vaiana M. (2004). Reporting about health care quality: A guide to the galaxy. *Health Promotion Practice 5*(3): 222-231.

FIGURE 1. Variables of Interest for Exploratory Case Studies

Kanouse Basic Principles[2]	Variables
Planning Phase *to develop objectives that make sense in a particular context*	
Audience Know your audience; clearly identify who they are, what they care about and what actions they can take; tool design, promotion, and dissemination must all accommodate a specific audience's goals, preferences, values and ability	• Basic demographics (e.g., age, gender, language) • Psychographics (e.g., social class, lifestyle, behavior, opinions, values, motivators) • Cognitive ability for processing information and learning style • Awareness of having a choice • Awareness of reasons to attend to choice • Audience goals for choice • Context(s) in which audience would typically make a choice
Resources and Constraints Identify resource and other constraints that may limit what is possible	• Resources of sponsor (e.g., financial, technical skills, brand/reputation, partners) • Business model for the tool • Resources of target audience • Social context • Political considerations • Organizational capabilities • Trade-offs (e.g., audience size, tool scope, and features) • Time and schedule • Availability of authoritative information to integrate into the tool • Sponsor goals and expectations • Conflicts of interest with sponsor or information source(s)

Kanouse Basic Principles[2]	Variables
Barriers and Facilitators Consider barriers and facilitators to achieving objectives and figure out how to overcome them and/or turn them to your advantage	• Nature of choice (e.g., frequency, number of options, range of consequences for different choices, number and salience of dimensions along which attributes differ, difficulty of choice absent information or a tool) • Physical environment for choice • Social environment for choice • Prevailing norms for target audience • Potential champions and messengers • Potential benefits to promote • Audience comprehension of content of tool • Convenience (time and cost) for audience • Barriers to audience use (e.g., literacy levels, habits, technology access, pricing, sponsor credibility) • Risks
Objectives Define your objectives – the decisions of your audience that you want to inform and the outcomes you want to effect – and set priorities	• Target audience (user, perhaps provider) • Dimensions of choice seek to have audience use tool to inform • Desired outcomes from audience using the tool to make choice • Desired outcome for market penetration • Prioritization (e.g., trade-offs)
Design Phase *to create a design for a tool and a marketing plan that will accomplish the prioritized objectives*	
Tool Design Design a tool that specifically incorporates the results of the priority-setting and trade-off process and looks at everything from the audience's perspective	• Format(s) • Relevance of information for audience • Presentation of information in terms audience understands • Ease for target audience in navigating or using tool accurately • Features (e.g., customization, displays that support decisionmaking) • Optional services
Promotion and Dissemination Develop a plan for promotion and dissemination at the project's outset	• Positioning of tool relative to choice (e.g., point in decision process, promoted benefits, time needed to effectively use tool) • Placement of tool relative to choice (e.g., locations, distribution channels) • Promotion (e.g., frequency and relevance of messages about tool, messengers, communication channels, publicity, partnerships with intermediaries) • Pricing (e.g., list price, discounts, terms)

Kanouse Basic Principles[2]	Variables
Testing and Evaluation Build in ongoing testing and evaluation – formative work to shape the reporting effort and "after-the-fact" evaluation to identify successes and areas needing improvement	• Consumer testing of tool pre- and post-release • Impact of tool on audience(s) included in sponsor's objective • Deliberate feedback loop from users and non-users to tool sponsor and partners, including designers, for ongoing monitoring and improvement • Resources for periodic evaluations to measure success and learn from experience for future modifications

Case Study Tasks and Methods

At their first meeting on August 11, 2008, the specialist panel finalized the overall research framework (this document, as revised) and the specific research questions (page 18). The panel discussed and agreed on the criteria for case inclusion and will confirm or modify the case study selection via e-mail after the potential cases are arrayed in a matrix. Among the decision aids considered are:

- Best Buy Home Theater Recommendation Center
- *Consumer Reports New Car Buying Guide* and *Used Car Buying Guide* (print publications) and *ConsumerReports.org Car Buying Guide* (electronic)
- eBay[3]
- Nutrition Facts Panels
- *U.S. News & World Report: America's Best Colleges* (print and electronic)

Case Study Selection Criteria

The unit of analysis is a decision aid for consumers. To be selected for a case study, the tools had to meet all five of the required criteria, as presented in Figure 2.

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[3] The focus would be on eBay's decision aids that assist individual consumers with making auction and shopping choices on nondurable goods through the provision of comparative information such as cost, location, etc.

FIGURE 2. Required Criteria for Case Study Tools

REQUIRED CRITERIA FOR INCLUSION AS A CASE STUDY	POTENTIAL TOOLS FOR CASE STUDIES			
	Consumer Reports/ Cars	eBay/ Non-healthcare	Nutrition Facts Panels	U.S. News & World Report/ Colleges
Fits definition of "decision aid" (pg. 17)	X	X	X	X
Is familiar and widely used by the public, from lower-middle to upper-income consumers	X	X	X	X
Supports a non-healthcare decision	X	X	X	X
Supports decisions about products or services for which there is no one "right" answer	X	X	X	X
Supports decisions for which it would be almost impossible for an individual to accurately compare relevant attributes without the aid of some tool	X	X	X	X

To aid application of the research findings to the healthcare sector, the project team and panel wanted some variation in case study characteristics. Figure 3 lists the desired characteristics that at least one case study among the four should have.

FIGURE 3. Desired Characteristics for Case Study Set

DESIRED CHARACTERISTICS FOR *SET* OF CASE STUDIES	POTENTIAL TOOLS FOR CASE STUDIES			
	Consumer Reports/ Cars	eBay/ Non-healthcare	Nutrition Facts Panels	U.S. News & World Report/ Colleges
Readily accessible to low-income consumers[4]			X	X
Engages user in considering	X	X		X

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[4] The other tools are widely available in public libraries that offer patrons free computer access.

DESIRED CHARACTERISTICS FOR *SET* OF CASE STUDIES	POTENTIAL TOOLS FOR CASE STUDIES			
	Consumer Reports/ Cars	eBay/ Non-healthcare	Nutrition Facts Panels	U.S. News & World Report/ Colleges
his/her budget				
Tool Content[5] — Data only			X	
Global recommendation	X			X
Comparative functions with multiple variables	X	X		X
Tool Format[5] — Print and static	X		X	X
Web-based, with static and customizable forms	X	X		X
Tool Context — For unassisted use	X	X	X	X
For assisted use in some cases				X
Decision Type — Yes or no decision		X	X	
Comparative decision	X	X	X	X
Decision Subject — Product	X	X	X	
Service				X
Sponsor — Nonprofit	X			
Commercial		X		X
Government mandate			X	

After reviewing the tools against the criteria, the project team and panel selected the four case studies: *Consumer Reports Car Buying Guide*, eBay, Nutrition Facts Panels, and *U.S. News & World Report: America's Best Colleges.*

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[5] Some tools may fit several types.

The next steps of the project are listed briefly below with the final research reports released publicly in June of 2009.

1. Establish the Data Collection and Reporting Protocol
2. Collect Data and Prepare Case Reports
3. Commentaries: Interpretive and Comparative Process and Reports
4. Plan and Conduct a Small Meeting of Experts
5. Prepare Final Research Reports
6. Disseminate Findings

CONSUMER REPORTS: CAR BUYING GUIDE

A Case Report for Getting Tools Used

Table of Contents

Background

This case report addresses these four versions of the *Consumer Reports*: *Car Buying Guide*.

- ConsumerReports.org Car Buying Guide (electronic[1])
- Consumer Reports New Car Buying Guide (print)
- Consumer Reports Used Car Buying Guide (print)
- Consumer Reports annual auto magazine issue, published each April (print)

Each format offers independent vehicle profiles, test results, ratings, rankings and recommendations to inform consumers' purchasing decisions for cars, minivans, sports utility vehicles (SUVs) and pick-up trucks.   This report uses "*Consumer Reports: Car Buying Guide*" to refer to these products.

Other *CR* publications offer similar car information, but with different packaging.

- *CR Buying Guide*, a compendium summary of *CR* magazine issues for the year
- Quarterly car ratings and pricing guides (black and white)
- Quarterly four-color special-interest magazines, primarily with ratings and reviews[i]

The *Consumer Reports: Car Buying Guides* have national scale because they include a considerable breadth of new and used vehicles in the U.S. market. The scope is national with the *CR* readership base of 16 million people and with an average of 50 million media impressions per year.

Sponsor

Consumer Reports® (*CR*) and ConsumerReports.org® are published by Consumers Union, which describes itself as an expert, independent nonprofit organization whose mission is to work for a fair, just and safe marketplace for all consumers and to empower consumers to protect themselves. To achieve this mission, Consumers Union (CU) tests, informs and protects. CU began testing products in 1936.

Business Model for the Consumer Reports: Car Buying Guides

To support the car buying guides, which currently offer information on more than 260 new vehicles, CU sells information products and services (such as CR books, magazine subscriptions, car pricing reports). Donations from individuals are an additional but smaller revenue source. In 2008:

- Subscriptions and other sales generated $229 million, or 92 percent of total revenues.

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[1] The CR online car buying guide is at http://www.consumerreports.org/cro/cars/. The Web site has a beta new-car selection tool at http://www.consumerreports.org/cro/cars/car-selector/select.htm, which this case study also features.

- Individual contributions topped $17 million, for 7 percent.[ii]

To minimize commercial influence, CU refuses outside advertising and free samples for testing (see Figure 2). According to CU, "No other consumer-information site can claim and prove this total freedom from commercial influence."[iii]

Historic Milestones for the Consumer Reports: Car Buying Guides

For more than 50 years, the *Consumer Reports: Car Buying Guides* have provided consumers with detailed information about new and used vehicles.

1936	CU begins testing cars.
1953	CU publishes the first annual CR auto buying guide in its May issue.[iv, v]
1985	CU expands distribution of *Consumer Reports: Used Car Buying Guide* when it makes all *CR* books available in bookstores and other retail outlets.[vi]
Mid-1990s	CU introduces an interactive, multimedia CD-ROM alternative of the car buying guide. It also directly distributes car ratings and reviews to Internet users through aggregator sites such as Yahoo! and MSN.[vii]
1997	ConsumerReports.org debuts online, a new age in *CR* online publishing.
2006	CU creates a beta interactive selection tool on ConsumerReports.org to help users find new cars that meet their needs and budgets.

(See also Appendix B for historical context.)

Consumers' Decision Making on New and Used Cars

Many consumers experience anxiety when deciding on and buying a car because it is a big-ticket item that is purchased only occasionally. Often, the purchasing process involves negotiating with a dealer or salesperson whom the consumer perceives as having negotiating advantages (such as better information, negotiation skills and leverage). It is a purchase made seriously as a commitment to years of future car payments, taxes, maintenance and operating costs. Most will also spend a lot of time in the vehicle they buy. Because of these high economic and social stakes, stress levels can be high.[viii]

Consumers are more likely to consult ratings and information as perceived risk increases on any type of purchase.[ix] Car buying is no different, with consumers devoting multiple hours to collecting information from multiple sources and considering numerous criteria.[viii] The car-buying process may involve these steps.

- Collecting information about attributes on different vehicles.

- Narrowing choices to a small consideration set.
- Test-driving vehicles in the consideration set.
- Selecting which vehicle from the consideration set to buy, perhaps after collecting additional information for comparison.
- Obtaining information about pricing on the selected car.
- Determining the potential value of a trade-in.
- Comparing financing options, perhaps getting pre-approved for a loan.
- Requesting offers from, comparing and negotiating with dealers or sellers.
- Closing the deal.

The decision-making process and criteria for used cars may differ from new vehicles. For new cars, consumers can reasonably expect uniform quality and features for any given make/model/year. Most expect to buy a new car from a commercial dealer. Used cars offer a much wider selection of models, years and types of sellers. The perceived risk may be higher given the potential for misleading or concealed information about a car's condition.

Factors Influencing Decision Making

In a 2000 *CR* survey, consumers ranked the following factors as most important in their decision about which car to buy.

- Vehicle reliability
- Model reputation
- Driving performance
- Vehicle price information
- Safety ratings[x]

As a big-ticket item, cars also can convey social status. For some consumer groups, this factor may be an important consideration.[liv] Other factors influencing decision making include household size and planned use of car (such as commuting, long-distance recreation or teenager transportation). Today's consumers are more concerned about fuel efficiency, as suggested by a 30 percent drop in SUV sales in this year with its record high gas prices.[xi]

Surveys have found car shoppers differ considerably in the number of sources consulted and amount of time spent with a source.[xii, xiii] Consumers go to information sources that provide useful data on the attributes they care about. Attributes of interest vary widely.[xiv, xv]

Individual characteristics influence decision making, with personal finances weighing prominently.[xviii] Consumers with higher educational levels and those with more car-shopping experience are more likely than others to search for information prior to buying cars or other durable goods.[xvi] Surveys in the early 2000s of new-car buyers in Buffalo, NY, found consumers with more education and income were more likely to use Internet-based information than others; Internet use was also more common for younger car-buyers than older ones.[xvii] Studies have also found first-time car buyers behave in slightly different ways than consumers with prior car-buying experience. For example, first-time car buyers tend to heavily depend on online information sources.[xviii]

People who are less likely to search for information before buying a car are those who have decided on a car dealer or a manufacturer.[xix]

Information Sources

In any product line, consumers have little incentive to search for information when they perceive few differences. Information that consumers obtain on big-ticket items has a greater influence on the purchasing decision than for lower priced items.[xx]

Americans today understand considerable variation exists even within a brand or type of vehicle; thus, many research cars before buying. About one fifth of car shoppers search extensively for car information before buying (such as visiting more than five dealers or spending more than 30 hours).[xxi] In a J.D. Power and Associates national survey in 2008, new-car buyers reported spending nearly seven hours on online research to inform their decision.[xxii]

Common external information sources for consumers include auto manufacturers, dealers, third-party information sources, classified ads, and family and friends. Use of online information has risen steadily, with surveys suggesting that consumers substituted Internet car information sources for search time at the dealer and use of independent print sources.[xxiii] Use of family and friends for information on cars was unchanged by Internet use.   Compared to Internet non-users, online consumers:

- Spent more time searching for car information – especially for price along with performance and reliability.
- Considered a wider range of models and dealers than Internet non-users.
- Appeared to better informed when they entered the dealership.[xxiv, xxv, xxvi]
- In the 2003 New Autoshopper.com Study[SM], 89 percent of Internet users went online to do research before actually visiting a dealership.[xxvii]

Online information can aid the decision-making at several stages in the process.

- J.D. Power and Associates reports in 2007 almost half (47 percent) of new-vehicle buyers using the Internet in their shopping process visited an independent site when *initiating* research for their new vehicle, and 46 percent *first* visited a manufacturer site.[xxviii]
- More used-car buyers who get information from the Internet are using online sources for *locating* the vehicle they ultimately purchase. In 2007, 23 percent of these buyers used an Internet vehicle locator or classified ad service (such as Autotrader.com, CarMax.com, Cars.com, eBay Motors and online classified ad services) to find the vehicle that they purchased. In 2006, just 16 percent used one of these services.[xxix]
- Based on its national survey of new-car buyers, J.D. Power and Associates has found that consumers' use of various auto Web sites demonstrates an understanding of their differential benefits. Shoppers describe:
    - Independent, third-party sites as being most useful for researching vehicle pricing, ratings and reviews.
    - Manufacturer Web sites as most useful for information about vehicle model options, features and specifications.
    - Dealer sites as most useful for inventory information.[xxx]

Increasingly, car buyers seek, trust and inform their decision with ratings and reviews by other consumers. Two thirds of used-car buyers who get information from the Internet accessed consumer-generated content.[xxxi, xxxii] Until the early part of this decade, consumer-generated content (in bulletin boards and chat rooms) on cars was little used. As consumer reviews became popular for movies, dining and as social networking sites like Facebook took hold, a societal shift occurred. People searching for information on cars began using consumer comments. Concurrently, many car-information Web sites changed designs so consumer-posted comments and blogs were more prominent and accessible.[xxxiii]**Error! Bookmark not defined.**

Objectives for Consumer Reports: Car Buying Guide

The objective of the *Consumer Reports: Car Buying Guides* is to help consumers "get the right car at the best price,"[xxxiv] through the provision of the best expert guidance, ratings and reviews, and information. "Best" refers to information:

- Based on extensive testing by experts so it is reliable.
- Written and organized to be accessible to the average consumer.
- Created independently of commercial interests.

Audience and Use

CU's primary audience for its car buying guides is *CR* subscribers. CU reports having:

- 4.3 million subscribers, placing *CR* among the top 10 magazines in the U.S., with an estimated readership base of 16 million.[xxxv]
- 3 million ConsumerReports.org subscribers, unmatched among other consumer information Web sites. This base continues to grow at a rate of 80,000 new annual subscribers per month.
- Across all of its products, *CR* has a total of 8.5 million subscribers for its products and services.[xxxvi, xxxvii]

Also, more people read the *CR* annual car and truck issue than any other issue; the April 2007 issue sold 345,000 copies.[xxxviii]

Secondary audiences are consumers who do not subscribe to *CR*, but who purchase any or a combination of the following products. (See Background section; Figure 3 has pricing information.)

- Online ConsumerReports.org subscription
- Annual *CR* magazine auto issue at a newsstand
- *Consumer Reports: Car Buying Guide* books, quarterly car ratings and pricing guides, or colored newsstand magazines
- *Consumer Reports: Buying Guide* compendium book

Data from external sources indicate the car buying guide on ConsumerReports.org is a key information source for consumers, but not the leading online source. Auto manufacturers' Web sites are the most visited source of information.[xxiv, xxxix, xl]

Seventy to 80 percent of car buyers collect information from third-party Web sites, with Kelley Blue Book and Edmunds receiving more visits than ConsumerReports.org, as recalled by consumers in regional and national surveys.[xxiv, xli, xlii, xliii] In the 2003 New Autoshopper.com Study[SM], *Consumer Reports* was an information source for 33 percent of new-car buyers.[xliv]

Descriptions of Users

The number of ConsumerReports.org subscribers has grown steadily over time; 100,000 people subscribed in 1998, building to 500,000 in 2000, then 1 million in 2002 and 2.3 million in 2007.[xlv, xlvi, xlvii, xlviii] Figure 1 presents CU data on its readers and online subscribers, who tend to be mature adults, college educated and more affluent than most U.S. households.

Figure 1. Select CR Demographic Information

Characteristic	*CR* Readers	ConsumerReports.org Subscribers
Male	60%	55%
Female	40%	45%
Mean Age	60 years	50 years
Mean Household Income	$83,000[a]	$94,000
Completed College	60%	75%
Some Graduate Training	about one third	not available
Post-Graduate Degree	not available	33%

[a] Reported for *Consumer Reports* subscribers (not readers).

Source: Consumers Union. (2007). *Consumer Reports* Demographic Information.

(CU does not have data on:
- Demographics of non-subscribers who use *CR* car products and services, such as people who buy the annual auto issue at a newsstand or who learn about *CR* car recommendations through a news source.
- How people use the *Consumer Reports: Car Buying Guides* or what influence the *CR* car information and tools have on their decision making.
- Overall consumer awareness of *Consumer Reports: Car Buying Guides*.)

The *Consumer Reports: Car Buying Guides* may be more popular in rural communities, in part because the Cooperative Extension Service, a trusted resource, widely promotes its use.[cxl]

Descriptions of Nonusers

A significant portion of consumers has a habit of low information search.[xlix, l, li] These persons are less likely to use any third-party source to inform their car purchasing decision. Two other groups of car-buyers who are less likely than others to use *Consumer Reports: Car Buying Guides* are consumers who:
- Have made up their mind on a specific car, make or a dealer, perhaps in part from a long-standing relationship with the manufacturer or dealer.
- Perceive little benefit in obtaining information on their purchase, so they do not seek it out. Often, this group is an older generation.[lii]

Nonusers would include some disadvantaged populations with more limited access to information resources than others.[liii] The digital divide also gets blamed for differences in consumer use of online information. The divide exists, but has lessened.[liv] Persons with weak literacy skills tend to depend more on word-of-mouth from people they trust than information from outside experts.[lv]

Resources

Consumers value credible and reliable information and are willing to pay the direct and time costs of accessing such information. Americans think of *CR* as a good source of reliable information and of CU as a nonprofit organization that advocates for consumers in the marketplace and in capitals. Thus, the CU and *CR* brand of being an impartial information source is the nonprofit's core asset.[lvi, lvii] Some important aspects (described in more detail later in this section) are as follows.

- The *CR* brand is familiar, a household name. In 2004, *Automotive Industries* described *CR* as the "best known" of auto consumer survey firms.[lviii]
- A 2007 article in *PR Week* noted that *CR's* "entire brand is built on trust" and that this resource has enabled CU to prosper while other large media organizations have struggled.[lix]
- CU has built trust by extensively testing products using its own methodologies and consistently emphasizing this practice in its communications.
- Trade journal *Design News* describes CU testing as objective, noting the nonprofit has removed subjectivity from its tests to the extent possible (such as using a gyroscope to help identify vehicles that could be prone to rollovers).[lx]
- CU adheres to its policies that purposefully avoid potential conflicts of interest, such as its refusal to accept donations of items to test.
- CU and *CR* messaging emphasizes their reputation as a trustworthy source of information.
- As both a defendant and plaintiff, CU has rigorously defended its product reviews and its independence.

Another resource is its large, devoted base of individual consumer subscribers. Donations and subscription fees from this base enable CU to:

- Claim financial independence from auto manufacturers and other commercial interests.
- Own and operate its 327-acre specialized vehicle testing facility and maintain a sizable staff of experts to test cars, monitor the industry and communicate with the public.
- Keep the CU and *CR* names familiar through word-of-mouth.
- Augment its CU car test results with information on subscribers' experiences with used cars and crash tests from the Insurance Institute for Highway Safety and the National Highway Traffic Safety Administration (NHTSA).

Also, *CR* is adept at providing consumers with content that is useful and relevant to their needs. For example, *CR* ratings and reviews help users differentiate between major and minor problems, something that J.D. Power and Associates surveys do not.[lxi] Further, on the oldest model cars, *CR* offers 10 years of car data based on its own reviews and data collected from annual surveys of its large subscriber base, whereas J.D. Power covers only three model-years.[lxii]

By putting *CR* content online, CU expanded its audience and, in particular, attracted younger Americans. *CR* also had the advantage of being a widely used print source, which helped it attract Internet users when consumers first began going online for information.

Outlays

CU's accounting system does not track expenses for the car-buying-guide product line. In general, expenses include:

- Anonymous buyers, who purchase about $3 million of test cars, minivans, SUVs and pickup trucks each year.
- Outlays for operating and maintaining a 327-acre specialized vehicle testing facility in Connecticut (both infrastructure and the actual extensive battery of 50 tests covering thousands of miles over several months). The facility has about 20 full-time equivalent staff.
- Eight full-time equivalent editorial staff members who develop *CR* auto content.
- Additional car testing data, such as the Insurance Institute for Highway Safety as well as an annual car-reliability survey of *CR* magazine and Web site subscribers asking about serious problems with their cars in the past year.
- Research staff who monitor and report on the automobile industry and consumer trends.
- Design and publication of *CR* products and services.
- Outlays for updating, operating and improving ConsumerReports.org.
- CU staff in various departments (such as administration, external affairs, copy, publishing and production, marketing, customer relations and public policy and advocacy) support *CR* products and services, including the car buying guides.

CU Policy and Tradeoffs

Early in its history, CU adopted several policies that bolster its credibility as an independent, unbiased source of objective information for consumers. Figure 2 presents some of the most important CU policies and describes tradeoffs.

Figure 2. Select CU Policies and their Implications as Resources or Constraints

Consumer Union Policy	Resource Implications	Constraint Implications
External Advertising Revenue CU does not accept outside advertising or free product samples.[lxiii]	• Protect credibility by eliminating potential conflicts of interest that could undermine, or be perceived as undermining, objectivity and independence[lxiv]	• Forego a lucrative revenue stream • Increase CU costs to purchase test products and services through anonymous buyers
Donations The Consumer Reports Foundation accepts donations only from individuals, not businesses or corporations, including employer matching gifts. Individual and foundation gifts are accepted only if there is no direct or indirect connection with a corporation.[lxv]	• Eliminate a potential source of bias, perceived or real, arising from possible conflicts of interest • Provide another opportunity to engage subscribers in supporting the CU mission	• Reduce size of potential donor pool, especially sources that could readily contribute sizable donations
Noncommercialization CU's published information may not be used by others in advertising or promoting a company's product or service. Without prior written purpose, this policy precludes commercial use of CU's published information or of the names of CU, *CR*, or any CU publication or service.[lxvi]	• Protect against use of *CR* content in advertising, which, as free information, could weaken demand for CU's information products[lxvii] • Reduce vulnerability to outsiders claiming *CR* content is anything but independent and objective[lxviii]	• Forego secondary promotion of its products and test results by prohibiting the use of its information for commercial or promotional purposes. • May reduce exposure of new audiences to *CR* • Forego potential to increase revenue through co-branding or licensing arrangements with commercial sector

CU has been vigilant in upholding these policies. When learning of an action that may violate a policy, CU investigates the usage and contacts the entity to request an immediate end.[lxix] When voluntary compliance has not occurred, CU has sued these companies, often with favorable results.[lxx]

When CU discovers serious errors in its testing methods or reports, the practice is to quickly and publicly apologize, inform subscribers directly through letters and e-mails, and publish a correction in a future magazine issue. In the case of its flawed car seat tests, CU also changed its policies regarding the use of external labs.[lxxi]

Litigation

During its long history, a few car and other product manufacturers have sued Consumers Union for negative *CR* reviews; consequences have included negative publicity and the direct and indirect costs of legal defense.[lxxii] In more than 12 lawsuits since it was founded, CU has vigorously defended itself in court and in the media. For example, the press frequently published the *CR* photo of the Samurai tipping in coverage of the Suzuki Motor Corporation lawsuit against the nonprofit. In this and other lawsuits, CU has never paid plaintiffs any money or retracted test results, a factor that has helped it preserve its reputation as an unbiased evaluator for consumers. Notably, in the Suzuki Samurai case, CU clarified the test results and conceded to not mention Samurais in future promotions. For their part, Suzuki ceased to accuse CU of rigging the test of the 1988 Samurai to gain publicity.[lxxiii]

Constraints

As described above and in Figure 2, CU policies to maintain independence entail tradeoffs. One constraint is that these policies indirectly restrict *CR* car content. While other car information Web sites offer consumers ways to solicit pricing from dealers and check inventories, *CR* tends to provide generalized information.[lxxiv]

The business model is a related constraint. Full access to *CR* content requires a subscription, with additional fees required for some adjunct services. Other third-party car Web sites (such as Kelley Blue Book or Edmunds) do not charge for full access to their information because they rely on advertising income and fees from referrals.[lxxv] For example, J. D. Power and Associates receives fees from its auto manufacturer clients, dealers, and suppliers.[lxxvi]

Another constraint is external criticism of CU testing methods and reviews. A few industry engineers, competitors, analysts, and others have raised concerns that CU testing is not as objective or realistic as it could be, but most concerns do not enter the public realm.[lxxvii, lxxviii]

Barriers

With the advent of the Internet came a proliferation of new information services vying with *CR* for consumers' attention. Online media blurred the lines between commercial marketing and independent content. Web sites like Epinions.com allowed consumers to exchange opinions on products and services. To compete, CU has had to launch new or redesign products and services.[lxxix, lxxx]

Other barriers include:
- Auto manufacturers have cut traditional advertising, channeling these resources into digital media and search-engine marketing to attract consumers to their Web sites.[lxxxi]

The result, according to J.D. Power and Associates, is an increase in visitation to auto manufacturers' Web sites and a steady decline in visitation rates to independent sites.
- J.D. Power and Associates also suggests automotive manufacturer sites may have better navigation, speed and content offerings than independent sites.[lxxxii]

Economic downturns can affect subscriptions. In 1981, *CR* subscriptions dropped to 2.6 million from a peak of 3.1 million.[lxxxiii, lxxxiv] Rhoda Karpatikan, then-executive director, told the *New York Times* that the sluggish economy was a primary cause: "People were not buying products. If they aren't buying products, the last thing they want to buy is a consumer-products magazine." With improvements in the economy, along with a series of internal changes, CU rebuilt its subscriber base to a new all-time high of 3.4 million in 1983.[lxxxv] By the end of the decade, *CR* had a circulation of more than 4 million.[lxxxvi]

Facilitators

As noted elsewhere in this report:
- Differentiation in the car market, consumer concern about safety and fuel efficiency, and economic expansion are three external factors that contributed to consumers seeking information to aid their selection.
- Highly publicized lawsuits against CU have increased *CR* visibility and educated consumers about safety differences between car makes and models.

Tool Design

CR vehicle profiles, reviews, recommendations and comparative ratings intend to inform consumers early in their decision-making process. *Consumer Reports: Car Buying Guides* do not help users with information about dealerships or sellers. Over the years, CU has expanded its line of car buying guides so consumers can access *CR* content in multiple formats and settings.

Tool Description

Based on its ratings, CR has multiple types of rankings and lists because consumers have different priorities. Examples include:

- Top picks.
- Most and least expensive to own.
- Most and least reliable cars.
- Best and worst models based on owner satisfaction.
- Best and worst used cars.
- Great bang for the buck.
- Best for teenagers.
- Best in fuel economy.

Print and online ratings and reviews offer these types of summary information.

- Pricing
- Overall *CR* road-test score
- A "*CR* Recommended" stamp, if applicable
- Predicted reliability
- Owner satisfaction
- Accident avoidance
- Crash protection
- Overall miles per gallon

For many of these aspects, *CR* readers can obtain more detailed comparison tables. In summary and detailed comparison tables, as well as individual car profiles, *CR* uses symbols to provide visual cues for readers. Cars that *CR* recommends have a check (✔) or a check in a circle to denote the recommendation tier. Ratings and test results appear as colored circles with shading variances to help readers readily spot best and worse. The overall vehicle score displays as a bar chart. Buttons with an "i" enable online users to drill down for more details or to access an explanation.

The online car buying guide offers additional features.

- Timely information on product recalls
- "Car forums" for subscribers to post their opinions, questions and advice on more than 100 car models and also to read thousands of reviews from other car-owners; some forums are open to non-subscribers
- Online expert forums with *CR* staff who answer specific subscriber questions

- Through a partnership with the Insurance Institute for Highway Safety, the online version provides access to 250 videos of performance in front- and side-crash tests; *CR* added commentaries to help viewers interpret videos

The online beta new-car selector offers a customized, interactive search tool. The beta tool enables users to fine-tune their searches by:

- Applying additional filters, based on user-identified needs and budgets, to reduce the number of cars displayed.
- Sorting vehicles by base price, *CR* recommendation, overall score, and other parameters.
- Drilling down to obtain the fine details or readily click to other sections for a specific vehicle.
- Obtaining side-by-side comparisons of up to 10 vehicles.

Context of Use

Although mobile devices can bring *CR* car ratings and reviews to the point of purchase, the full set of *Consumer Reports: Car Buying Guide* information is most accessible when used before entering the dealer. The *Consumer Reports: Car Buying Guides* are designed to assist consumers who are in the research stage of car shopping.

Adjunct Offerings

In addition to the vehicle profiles, reviews, ratings, rankings and recommendations in its car buying guides, *CR* offers guidance on buying cars in both its print and electronic guides. *CR* says the guidance aims to "take the advantage out of the salesperson's hands and put you in charge of the buying and negotiating process."[lxxxvii] The guidance:

- Has one format with detailed advice in a sequential format that encourages consumers to do their homework (such as setting a budget, figuring out what kind of car they need, using reliable information to match a vehicle type with their needs and then focusing on the best models) before they go to a dealer.
- Is integrated into various *CR* print articles.
- Discusses traits to assess when test driving, reasons to get preapproved for financing, tips for negotiating the purchase price and trade-in value, comparison shopping for car insurance, and a list of tasks to complete before driving the vehicle off the dealership lot.
- Provides hyperlinks for online *CR* users to internal tools (such as *CR* calculators and worksheets relating to buying cars) and external resources (such as Edmonds.com).

Other adjunct offerings include:

- *CR* Bottom Line Price reports, which let users compare the manufacturer's suggested retail price, dealer invoice price, and the price that CR suggests offering when starting to negotiate a specific make/model purchase.
- Ratings and reviews of, recommendations on and buying guidance on a variety of car-related products and services, such as global positioning systems (GPS), auto insurance and extended warranties.
- An interactive game to assess and develop negotiating skills on the 1996 *CR* Cars multimedia CD-ROM, in which users could haggle with a dealer and receive an assessment of their performance at the end.[lxxxviii]
- Concierge telephone service to individuals who donate $1,000 or more to the Consumer Reports Foundation, as part of the benefits of being a President's Circle donor. Through the service, donors can call CR and have them send information on a given product by fax, e-mail or mail.

In addition, Consumers Union state offices in California, D.C., New York and Texas advocate for consumer rights and interests. The nonprofit indicates it has 500,000 consumer e-activists.[lxxxix]

Updating

- *CR* publishes its annual car and truck issue each April.
- Every month *CR* updates the online car buying guide, primarily with the results of that month's testing group results.
- *CR* blogs and the Auto News section of the Web site, all of which is written by *CR* editorial staff, offer supplemental expert information and guidance on timely topics. Car forums change daily as visitors and subscribers post comments and questions.
- CUR constantly tweaks the beta new-car selector as users submit feedback. After the initial launch, *CR* quickly discovered the original beta tool was too slow to be practical to use because it loaded the entire *CR* database with car information. Subsequent versions of the beta tool have users pick selection criteria as a first step, which reduces the volume of data that the system uploads and processes for users.
- CR offers *Cars Newsletter*, which it describes as featuring "the latest car-related trends and news, maintenance information, insight into upcoming tests, and provides the expert, independent, and unbiased autos information and advice that only Consumer Reports can offer."[xc]
- CU added an A-to-Z index as an online navigation aid that, in the words of a CU librarian, enables "serendipitous discovery" of other *CR* content.[xci]
- As technology changes, *CR* updates its vehicle test methods and review process.

Marketing, Promotion and Dissemination

In the words of Jim Guest, executive director, CU is "doing more than ever to provide, unbiased, research-based information to consumers – when they need it, where they need it, and how they choose to receive it."[xcii]

Positioning

Consumers are more likely to seek out and use information that they perceive is unbiased. For this reason, CU has deliberately positioned *CR* as a credible, third-party source of objective and unbiased information (for example, it describes *CR* as the best source of information for consumers).[xciii]

- The *CR* tagline is "Expert. Independent. Nonprofit.[©]"
- One link to ConsumerReports.org on MSN Autos emphasizes "expert automotive advice."
- In 2007, trade journal *Design News* quoted Ford spokesman Bill Murray as saying that Consumer Reports has "'got enormous credibility with the public and they've been building on it for 70 years.'"
- The *CR* page on Facebook tells readers that "nobody tests the products you buy like Consumer Reports. Consumer Reports and ConsumerReports.org accept no outside advertising, no free test samples, and have no agenda other than interests of consumers. Consumer Reports has no relationship with advertisers on this site."[xciv]

Pricing

Subscriptions are the primary route to gaining access to the complete set of *CR* vehicle profiles and comparative rankings. Figure 3 provides some *CR* subscription options.

Figure 3. CR Pricing for its Car Buying Guides by Format and for Adjunct Services

Consumer Reports: Car Buying Guides and Adjunct Services	Pricing	Term
Print-only Consumer Reports® magazine subscription (13 issues, including the annual auto issue, and two additional *CR* publications)	$26.00	1 year
Online-only subscription to ConsumerReports.org®	$26.00	1 year
Monthly online-only subscription to ConsumerReports.org	$5.95	1 month
Combination print (*CR* magazine and two publications) and electronic (ConsumerReports.org®) subscription	$45.00	1 year
Newsstand issue for the annual *CR* auto issue	$3.99	n/a
CR New Car Buying Kit • Unlimited new car price reports with the *CR* Bottom Line Price, which *CR* describes as the price where buyers should start negotiating; subscribers can fully print these or save them online.[xcv] • Side-by-side comparisons of vehicles with the ability to filter and sort by ratings, price range or vehicle type. • Expert technical reports that provide the CU test driver's report that informed the *CR* ratings.	$36.00	3 months
CR Used Car Buying Kit • Benefits included in the new car buying kit (pricing = fair market value of used car) except content covers most vehicles from 1997-2007. • *CR* reviews and ratings. • *CR* list of the most reliable cars. • *CR* Generation Comparison that provides a timeline on make and model redesign.	$24.00	3 months
Consumer Reports to Go (for wireless and mobile handheld devices)	$14.95	1 year

CU offers some free *CR* content online, especially product recalls and safety alerts. In most communities, Americans can gain free access to *CR* through public libraries. Another low-cost option is a monthly digital subscription, available since the late 1990s for short-term access.[xcvi, xcvii]

Placement

The print *Consumer Reports: Car Buying Guides* are available to non-subscribers at newsstands. The annual *CR* auto issue and the *CR* buying guide (which includes auto content as well as content from other *CR* issues in a given year) is sent by mail to print subscribers.

Beyond its print and online car buying guides, CU places *CR* car content in these distribution channels to attract visitors to ConsumerReports.org.

- In 2005, CU and MSN Autos (http://autos.msn.com) started a partnership that provides select *CR* content ("ratings snapshots"). MSN listings with *CR* content have multiple direct links embedded. A couple links promote and connect to a page on ConsumerReports.org where visitors can buy a *CR* Bottom Line Price report for a specific vehicle. Other links direct visitors to a *CR* Web page with a 30-day free online subscription trial for MSN users. MSN pages with *CR* content have a click-through advertisement to ConsumerReports.org. MSN receives a share of revenues from online *CR* subscriptions originating with MSN Autos.[xcviii]

- To develop the *CR* relationship with the Hispanic market and extend the brand, CU entered a content distribution agreement with Univision Online in 2002. The agreement opened free access to *CR* article summaries and buying advice on cars and electronics, in English and Spanish, to Univision.com's visitors.[xcix]

- Prior to launching ConsumerReports.org in 1997, CU reached online consumers through America Online (AOL), LexisNexis and CompuServe.[c] In 2002, it had one-way content distribution agreements with Amazon.com, AOL, Babycenter.com, Computers.com, Dealtime.com, MSN, MySimon.com, Yahoo! and ZDNet.[ci] The CU content distribution agreement with Amazon.com, signed in 2000, provided the online retailer's 25 million customers with free access to *CR* purchasing advice summaries or the opportunity to buy a full report for $2.95. These distribution channels expanded consumers' ability to use *CR* content in popular online settings and exposed nonsubscribers.[cii]

- Prior to 1985, CU primarily promoted *CR* books, such as the *Consumer Reports: Used Car Buying Guide*, to its magazine subscribers; commercial publishers did the printing. Direct mail marketing also generated some sales. Along with a decision to expand its book publications, CU began publishing in-house and widened distribution by making them available in bookstores and other retail outlets.[ciii]

CU uses mainstream news media as an additional distribution channel. For example, it has worked with the media to publicize "not acceptable" ratings and provided photos and videotapes. It occasionally invites journalists to its vehicle testing facility to learn more about the process.[civ]

Promotion

CU has been effective in obtaining earned media coverage through traditional and modern outreach. When a new *CR* issue comes out, the media picks it up right away because many Americans find comparisons of different products to be interesting. People like rankings so they know the standing of their car or another product they own.[cv] Media coverage creates a buzz and provides external validity that *CR* is a credible source.[cvi]

Every day at least one U.S. media outlet features a CU expert or *CR* content; often CU has multiple impressions per day ranging from national level to small town coverage.[cvii] On average, CU and *CR* have 50 million media impressions each year. This publicity helps keep *CR* top of mind as a leading information source.

CU has a syndicated *CR* newspaper column, television show and a 90-second radio feature. In 1983, 300 newspapers carried the column, and the *CR* radio feature was heard five times a week in 40 markets.[cviii]

CU has relied on word-of-mouth marketing to attract new *CR* subscribers, both print and online. For most of its history, CU policy restricted itself from advertising in other media, including online car retail Web sites; placing its car buying guides in dealerships; or doing other promotions that could be viewed as undermining objectivity. To build its subscriber base now and in the future, CU has a magazine and Web site for children.

In 2008, *CR* made a policy change and purchased ads on car-buying Web sites, including CarAndDriver.com and Edmunds.com, soon after the release of the April annual car and truck review. The ads encourage consumers to say "no thanks" to extended warranties on new vehicles.[cix] Others promote the *CR* car pricing service or other car-related products. The budget for these limited ads is small.

For MSN Autos Web site users who click through to ConsumerReports.org, CU offers a 30-day free trial with automatic one-year subscription renewal.

Testing and Evaluation

CU monitors the interests and needs of subscribers, readers and consumers for all of *CR* products and services. The next two sections highlight the nonprofit's approach to testing and evaluating *Consumer Reports*. The third section describes efforts specific to the *Consumer Reports: Car Buying Guides*.

Data Sources and Measures (General Approach)

Data sources include:

- An annual *CR* subscriber survey, which received almost one million responses in 2007.[cx]
- A survey in the *CR* magazine that asks readers what they read/did not read, the usefulness of different articles and what other information they want/do not want.
- Other market research, such as nationally representative surveys, provide data to prioritize future product testing.
- Informal feedback from consumers via from ConsumerReports.org blogs and forums.

CU augments its subscriber and donor database with supplemental information from data brokers in order to enhance its marketing and fundraising efforts.[cxi]

Use of Data (General Approach)

CU uses data from all sources to improve existing *CR* product lines and develop new ones.[cxii] CU uses the feedback from the reader survey in *CR* magazines to inform future content development. Data from the annual *CR* subscriber survey guide its reviews, reports and advocacy efforts. Some other examples are as follows.

- CU made four major redesigns of ConsumerReports.org in the first four years (1997-2001), primarily so users could readily find the information they wanted as the volume of online *CR* content rapidly multiplied. CU used consumer feedback to inform new layouts.
- In recent years, CU refreshed the flagship *CR* magazine by adding new content, altering layout and organization and creating an updated look.[cxiii]
- To better serve women pressed for time, CU launched a new magazine, *ShopSmart*.[cxiv]
- To enable quick, convenient access to *CR* content at the point of purchase, CU created *Consumer Reports to Go* in 2001. The service provides immediate access to *CR* ratings and recommendations without any special set up process. CU has expanded the service so users can now download up to 20 individual reports.[cxv]
- As part of its belt tightening in the early 1980s (when subscription revenue dwindled with a sluggish economy and the postage rate for nonprofit organizations increased substantially), CU:
  - Changed *CR* magazine paper from glossy to matte paper.
  - Reduced issue size from 60 to 52 pages, in part by cutting some features.
  - Downgraded from second- to third-class mail.[cxvi, cxvii]

Testing and Evaluation Efforts Specific to the *Consumer Reports: Car Buying Guides*

The annual *CR* subscriber survey, described in the prior section, collects feedback specific to cars. This survey is the source of what CU calls its annual car reliability survey and the annual car ownership survey (i.e., although these have different public names, they are not separate surveys). In addition to overall CU efforts to collect data that will improve *CR* offerings and respond to readers' preferences, CU has the following specific data sources for its line of car products and services:

- Focus groups
- Periodic Auto Pulse surveys throughout the year that capture the consumer mindset about buying cars, car-ownership issues and other topics related to cars (such as the impact of high gas prices on driving practices and other aspects of family finances).

From surveys and focus groups, CU knows readers like ratings, rankings and the *CR* top picks in various vehicle categories. Recent consumer angst about rising gas prices triggered *CR* articles on fuel-efficient cars and strategies to improve gas mileage.

CU does not directly research the actual impact of *Consumer Reports: Car Buying Guides* on the marketplace or individual readers' decision making. Sometimes CU looks at market research from CNW Marketing Research, Inc. or receives secondhand reports of manufacturers' data indicating that *CR* recommendations affect vehicle sales.

Analysts in CU's strategic planning and information services center help generate ideas for *CR* projects and stories by staying abreast of consumer, industry, market and competitor trends. These car market analyses also provide the background context for future CU car testing and *CR* articles. This process provides CU with information about:

- Types, sources and content of information consumers are receiving about cars.
- Emergence of new consumer information sources on cars.
- Developments that could how alter how consumers shop for cars.
- Competitor goals, initiatives and performance.[cxviii]

For the online car buying guide, CU's strategic planning and information services center monitors major car Web sites for their offerings and usage, obtains comparative data from Web analytic experts (such as Nielsen NetRatings) and assesses trends in other product categories for implications. The *CR* auto team receives periodic updates about their online competitors. In December 2002, this analysis helped secure senior management commitment to significantly enhance the *CR* online car buying guide.[cxix]

Impact on Consumer Behaviors

There is a direct, strong correlation between *CR* car recommendations and the cars consumers actually choose and purchase. (*CR* ratings and reviews often have a similar influence on sales of other consumer products.)[cxx] For example:

- *Automotive Industries* quoted a Daimler Chrysler vice president as saying, "'People literally walk into [dealerships] with *Consumer Reports* in their hands."[cxxi]
- Consumers kept buying Samurais at a rate of 6,200 per month even after the Center for Auto Safety asked NHTSA to recall Samurais due to rising injuries and deaths from its rollovers. Upon *CR's* announcement that it had given the Samurai a "not acceptable" rating, sales plunged to 2,200 per month. This *CR* influence on consumer purchases,

however, was tempered when Suzuki deeply discounted Samurais by about 25 percent, resulting in dealers selling 18,500 in just six weeks.[cxxii]

Across all sources (ConsumerReports.org, auto manufacturer sites, eBay Motors, Edmonds, etc.), consumer use of online car information sources prior to purchase had positive results for consumers.

- Consumers entered dealerships better informed than in the past, strengthening their potential bargaining position.[cxxiii, cxxiv]
- In the J.D. Power and Associate's 2003 New Autoshopper.com Study[SM], nearly half (49 percent) of new-vehicle buyers said the Internet influenced their make/model choice – up from 40 percent in 2002. Furthermore, 24 percent of buyers indicated that the Internet had a "big impact" on their make/model choice – a 16 percent rise from the prior year. The Internet also impacted the price consumers paid for their new vehicles among 49 percent of buyers, a 41 percent increase from 2002.[cxxv]
- Among buyers of new cars, both consumers who reported having little time to shop and those who feared the car dealer would take advantage of them were able to reduce their costs by collecting online information ahead of time about the specific car they wanted.[cxxvi]

Impact on Auto Industry and Market

- In part because of CU's advocacy efforts with consumers, industry and policy makers, standard vehicle equipment includes seat belts, anti-lock brakes and air bags.[cxxvii] Early in its history, CU played a role in shifting horns, bumpers, and trunks from being add-on options to standardized safety features on every car.[cxxviii]
- With the launch of a new NHTSA rating program on vehicle stability, agency administrator Ricardo Martinez publicly acknowledged CU, saying the nonprofit "has been a welcome partner that has focused the public's attention on rollover." NHTSA's stability tests had elements in common with those proposed by CU.[cxxix]
- Press coverage has been high when vehicles receive a "not acceptable" *CR* rating because of serious safety hazards. Famous examples are the 1995-96 Isuzu Trooper and the 1988 Suzuki Samurai.
- Suzuki Motor Corporation stopped producing the Samurai in 1995, several years after the 1988 model received a "not acceptable" *CR* rating.[cxxx]
- Trade journal *Design News* quoted an anonymous Big Three insider as saying:
    [T]he importance of Consumer Reports is recognized most strongly at the highest levels of the automotive industry…. They're the best in the business, no doubt about it.

This article described "Big Three" CEOs and top engineers visiting the CU car testing site because *CR* "has extraordinary influence over the car-buying public."[cxxxi]

Impact of Third-Party Car Ratings and Reviews

Outside of *CR*, there is evidence that other third-party sources of car ratings and reviews have influenced the automotive industry.

- After an unsuccessful entry into the U.S. market with Toyopet, Toyota turned to the fledgling J. D. Power and Associates for help. The firm helped Toyota redesign its products and manufacturing so its next cars, the Corona and then the Corolla, had a better chances of succeeding in the U.S. market because of favorable results on the J.D. Power and Associates quality survey.[cxxxii]
- Today, according to industry analyst Witzenburg writing in *Automotive Industries* in 2004, "the entire industry has gotten so good in recent years that the rankings among brands, and gaps between them that used to be meaningful, are far less so today."[cxxxiii]

The final sections provide crosscutting insights from CU as well as from outside experts.

Observations from Insiders

As quoted in a 1999 *Link Up* article, Nancy Macagno, *CR* director of news media, said, "'Our brand name is what attracts people. It's such a strong and well-respected brand that people turn to *Consumer Reports* all the time for information to make big decisions.'"[cxxxiv]

In a key informant interview, *CR* autos editor Rik Paul described the key ways CU strives to differentiate its car buying guides and services from other car information sources.

- *Content.*
    - *CR* provides ratings and rankings, with the latter providing easy-to-use lists of best to worst vehicles. *CR* readers emphasize they want this content. Other information sources avoid ratings and rankings because they do not want to offend their advertisers.
    - Long-term reliability ratings are a unique feature. Through its car ownership survey, *CR* bases used-car ratings on 10 years of data.
- *Audience.* Many Web sites and publications target car enthusiasts, who tend to be most interested in vehicle performance and sporty looks and features. *CR* focuses on the average car buyer, aiming to make them feel comfortable using *CR* car products and services.
- *Consumer trust in* CR. By not accepting outside advertising and by buying its own cars, CU can claim independence from competing interests. Also, CU is testing "the real thing" – the same vehicles consumers will find in the market.

- *Extensive car testing.* CU is unmatched in the breadth and depth of its testing. In focus groups, when consumers learn about the extensive testing, they value this advantage.

Observations from Outsiders

- It is hard to isolate the impact of the *Consumer Reports: Car Buying Guides* from CU. Both have had a major influence on the way Americans approach purchasing. CU provides objective information and has educated people to use it to get more value for their dollar.[cxxxv]

- The *Consumer Reports: Car Buying Guides* and other *CR* products are widely used because they are demand-driven. Their design and content enable consumers to quickly find the information they are seeking.[cxxxvi]

- To get its car reviews and ratings used, *CR* had to help Americans understand there are important differences among brands, whether cars or group of products. This task has become more difficult in recent years with cross-branding in the auto industry, with technology exchanges, and cars made in another country, but marketed in US as another brand.[cxxxvii]

- *Consumer Reports: Car Buying Guides*, Edmonds and other independent information sources have helped change the way people think about buying a car. In the past, Americans thought they had to personally experience a car, by test driving, to know if they wanted to buy it or not. Their decision-making process was based on subjective knowledge. Now, consumers understand that someone else can evaluate cars objectively, and by obtaining these reviews, they can narrow down their choices to a few and ultimately get better value for their money.[cxxxviii]

- CU, in general, has succeeded by focusing on reviewing and rating search goods, that is, products with attributes that consumers can evaluate with information prior to purchasing or directly experiencing. Although cars are experience goods (such that consumers must try them out in order to have complete information about all characteristics), consumers can know a lot about a car without directly experiencing it. The *Consumer Reports: Car Buying Guides* provide comprehensive information on those attributes that can be accurately and objectively reviewed, helping consumers to narrow their selection set.[cxxxix]

- The *Consumer Reports: Car Buying Guides* are a trusted resource for consumers because the content has stood the test of time.[cxl]

- Use of auto manufacturer and some third-party online sources have matched or bested *CR* because they offer consumers information and services they want.[cxli, cxlii] For example, non-*CR* Web sites provide visitors with a full range of options and pricing and the ability to customize a new car, check local inventories, get online estimates, place a bid on a car, obtain referrals, access information on dealers, and more. Dealers, too, have become more sophisticated (such as listing their inventory) to encourage consumers to test drive and

buy from them. Online search optimization also is a factor of why people are using other sources. The commercial sources are using all options available.[cxliii]

- The *CR* business model depends largely on subscription revenues, but Americans in the 1990s were accustomed to thinking of the Internet as a free source of information. Thus, CU broke ground in late 1990s by requiring subscriptions to obtain its online car and other product ratings and reviews. Growth in *CR* online subscriptions (even outnumbering *Wall Street Journal Interactive Edition* subscriptions in 1999) demonstrated that Americans would pay for content that they view as beneficial. Internet observers credited CU for its pricing scheme that offered reasonably priced options for monthly or annual subscriptions.[cxliv, cxlv]

- CU has leveraged "consumer's selective perception," the phenomenon of consumers looking for information that reinforces their beliefs. CU has used its strategic position to create a virtuous cycle. For example, consumers use *CR* when selecting a car (or another product). When consumers drive their *CR*-recommended car, they have a positive experience that they correlate with *CR*. This experience reinforces the value of *CR* in consumes' minds and motivates them continue using *CR*.[cxlvi]

Appendix A. Key Informants

The perspectives in this case report have been synthesized from the wide-ranging comments of the people interviewed, the literature and other data sources. They do not necessarily represent the views of the Center for Advancing Health.

With gratitude, the CFAH acknowledges the following individuals who participated in key informant interviews.

- Brenda Cude, PhD, Professor of Housing and Consumer Economics, Housing Research Center, College of Family and Consumer Sciences, University of Georgia
- Myung-Soo Lee, PhD, Associate Dean and Professor of Marketing, Zicklin School of Business, Baruch College, City University of New York
- Douglas Love, Associate Director of Communications, Consumer Reports
- Rik Paul, Autos Editor, Consumer Reports
- Brian T. Ratchford, PhD, Professor of Marketing, School of Management, University of Texas at Dallas
- Jane Schuchardt, PhD, National Program Leader, Economic and Community Systems, Cooperative State Research, Education, and Extension Service, USDA

Appendix B. Other History Notes

Compared to today, consumers in the Great Depression and World War II had a small set of vehicles from which to choose. Many Americans had limited awareness of sources of objective information about products and how using that information could help them maximize the value of their money.[cxlvii]

Over several decades, external developments influenced how Americans shopped for used and new cars.

- In the late 1940s, real per-capita income rose, and more Americans could afford expensive durable goods, including cars.[cxlviii]
- Since 1953, Americans attained higher levels of education *and* now perceive themselves as better educated and better informed. This perception of being informed affects how they act as consumers. (Even without more education, the change in perception is what has made a difference in consumer behavior.)[cxlix]
- The car marketplace became more complicated as foreign manufacturers entered the U.S. market. The car-buying decision became more complex because of the expanded array of options.[cl]
- The initial entry of Japanese vehicles into the U.S. marketplace in the mid-1950s was a failure, with consumers associating Japanese products, such as Toyota with its Toyopet, with shoddy quality and low safety. This raised consumer awareness about quality and safety differences among cars.[cli] Concurrently, consumers became more concerned about product safety in general.
- Foreign manufacturers began marketing safety features, which boosted consumers' consideration of safety in their decision-making process.[clii]
- In the mid and late 1970s, a transformation began in the media environment, which in time altered the economics of information. Historically, a few sources (such as three TV broadcasting companies) dominated, and consumers often relied on car manufacturers' brochures from dealers. Cable TV first expanded broadcasting channels. By the early 1990s, Internet-based channels provided quick, free access to a wide range of information and allowed consumers to post their own opinions and experiences. Market dynamics shifted because consumers could readily acquire information for their decision making that was less accessible before.[cliii]

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eBAY.COM

A Case Report for Getting Tools Used

Table of Contents

Foreword

In line with the objectives of the Getting Tools Used project, this case report focuses on eBay.com as an online decision support tool that enables individual consumers to:

- Find information on products and sellers.
- Compare offerings.
- Make decisions about whether to bid (or purchase a fixed-price listing) or not.
- Access product reviews and buying guides developed by other consumers.
- Learn how to use the eBay.com tool effectively from peers and eBay staff.

(See the Tool Description section.)

Besides its wide use, eBay.com is also of interest because it was a leader in creating the community-commerce Web 2.0 model. That is, eBay.com serves as a technology intermediary that enables users to generate both content (such as auction and retail listings as well as information) and experiences (such as trading, interaction and learning) that drive new and repeat use of the site. Some healthcare groups have been adapting this model to develop interactive online communities and tools (a.k.a. Health 2.0) to help consumers manage chronic diseases, select among treatment options, obtain support for practicing healthy behaviors, and more.

Americans often turn to eBay.com for necessities and discretionary (i.e., wanted) items, such as clothing, consumer electronics, household goods, and collectibles. The case report does not include eBay.com Motors, a source for expensive durable goods.

eBay is also a global phenomenon, but for the project purposes, the focus is on how eBay.com serves the American consumer. The report does not discuss eBay.com as a platform for business-to-business transactions or eBay's other business units such as PayPal and Skype. It has limited information about eBay.com in regards to how sellers use the site.

Terms Used in this Report

- *eBay* refers to the company
- *eBay.com* refers to the actual Web site
- *eBay marketplaces* refers to eBay's set of e-commerce sites that include eBay.com, Shopping.com, StubHub.com and others
- *eBay.com users* refers to registered users of eBay.com, including buyers and sellers

- *eBay.com visitors* refers to anyone on the eBay.com site, not just registered users
- *Feedback* refers to comments and ratings that a buyer and seller provide on each other after completing a transaction

Background

eBay.com is best known as an open-trading or auction platform that enables the market to set the price of items in consumer-to-consumer and other types of transactions. It is not an auction house (see Resources and Constraints sections).[i] Since 1999, eBay.com buyers have had the option to purchase fixed-price items as well. Fixed-price merchandise on eBay.com is a fast-growing segment, contributing a 13 percent increase in gross merchandise volume in 2007 as compared to 2006 on all eBay marketplace sites.[ii] (Gross merchandise volume is the value of all goods sold.) Auction-style listings still account for 60 percent of eBay's gross merchandise volume.[iii]

In 2007, around half of the total value of sold items on eBay.com and other eBay marketplace sites came from four product categories.

- Clothing and accessories (15 percent)
- Consumer electronics (15 percent)
- Home and garden (12 percent)
- Computers (10 percent)[iv]

When consumers consider which auction site to use, they are looking for accurate information about items to inform their shopping, security for personal information and payment, and reliability in receiving items, as advertised, after purchase. Other desired features are a positive reputation and navigation ease, including customization.[v, vi]

From a decision support tool perspective, any eBay.com visitor can check the availability of items of interest, drill down to obtain additional information on a particular item, compare a set of items and read eBay.com users' reviews, buying guides and opinions.

Owner

eBay, Inc. owns eBay.com, which operates in the U.S. and 38 other markets.

Business Model for eBay.com

The core eBay.com business model is the provision of an open-trading platform where the market, via users' online interactions, determines the value of new and second-hand items available. eBay.com is an automated platform in that eBay does not screen sellers or authenticate listings.

eBay.com seller fees are a primary revenue source. Sellers pay:

- *Insertion* fees to list items for auction or at a fixed price.
- *Final-value* fees based on the closing price.
- *Optional feature* fees, such as establishing a reserve or a starting price for an auction, adding a "buy it now" option to an auction listing, upgrading listings, or providing more than one photograph in a listing.[vii]

eBay seeks to keep fees competitive to attract sellers and encourage a high volume of listings.[viii] Although consumers must register with eBay.com to bid, purchase or list items, eBay does not charge registration or bidding fees. (Other sources of eBay.com-related revenue are external advertising and PayPal fees for processing payments on eBay.com listings.)

The eBay 2007 annual report describes a multi-faceted business growth strategy for eBay.com.

- Retain current registered users, especially top buyers and sellers
- Attract new users
- Deepen and broaden supply by increasing users' trading activity levels
- Encourage additional purchases
- Develop new revenue sources (such as adding new listing categories or providing new fee-based services to sellers)
- Expand advertising revenue[ix]

In general, eBay.com seeks to encourage an increased number of completed transactions and higher closing bids or prices.[x] As eBay gained access to capital and matured, it also pursued two other strategies.

- Acquire competitors, strategic partners (such as PayPal) and promising e-commerce ventures

- Enter new geographical markets, especially those in the early stage of e-commerce development

Historic Milestones for eBay.com

1995   Over a weekend, Pierre Omidyar develops an automated Web site to provide an inexpensive, efficient platform for consumer-to-consumer auctions. He initially calls the company Auction Web and describes its principles as: "people are basically good, everyone has something to offer, [and] an open environment brings out the best in people."xi

1997   Color computer monitors are becoming commonplace, but Auction Web displays in black and white. Besides online auctions, the Web site has sections for Omidyar's fiancée and his pet interest, the Ebola virus.xii

1998   Meg Whitman joins eBay as president and CEO. eBay becomes a publicly traded company.

1999-2001   eBay repositions eBay.com from a specialty platform for online trading of collectibles to a competitive source for mainstream consumer goods, in part by attracting brand-name retailers (such as Disney, IBM and Sears).xiii

2002   eBay acquires PayPal, a global online payment company.

2008   John Donahoe succeeds Whitman as eBay's president and CEO.

Historical Context

During the 1990s, the number of Americans with Internet access grew exponentially, whether at work, home or both. Although slow at first, consumers increasingly started purchasing goods and services via the Internet. Economic growth in the 1990s and the mid-2000s, investor enthusiasm during the technology boom, falling computer prices, technology advances and increased broadband Internet connections were some of the macro forces fueling rapid growth in e-commerce.xiv

Consumers' Decision Making on Necessities and Discretionary Goods

The discussion in this section centers on decisions consumers may make in selecting and buying necessities and discretionary items. (Although presented sequentially, the decisions may not occur in this order; some decisions may not occur at all.)

Necessity items are frequently bought, and many entail low outlays. Discretionary items have a range of purchasing frequencies and outlay costs. On average, Americans spend 20-30 minutes per day purchasing goods and services, according to the Bureau of Labor Statistics.[xv]

Decision One: Go Online or to a Traditional Venue

Consumers decide where to shop: an online retailer or a traditional venue such as a store, yard sale or auction. Each offers a different experience, so the decision entails tradeoffs. Consumers with both basic and advanced technology skills make online purchases. Consumers with less Internet experience are less likely to use the Internet to access online auctions than more experienced ones.[xvi, xvii]

Several factors influence consumers' choice of shopping online or offline.

- Perceived risk (especially online privacy and the security of personal and credit card information)
- Pricing
- Supply of items
- Customer service
- Brand recognition
- Effort and time required
- Quality of shopping experience[xviii, xix, xx, xxi, xxii]

Online shopping facilitators can include the ease and efficiency of Internet searches and improved convenience of going online.[xxiii, xxiv, xxv]

Possible barriers include negative past experiences with online shopping. In a 2007 national survey of Internet users sponsored by the Pew Internet and American Life Project, 58 percent of respondents reported prior experiences of feeling frustrated by inadequate information or being confused or overwhelmed by information they found while shopping online.[xxvi]

Decision Two: Choose e-Commerce Site

If a decision is made to go online, then the selection involves the type of marketplace and a specific site. A variety of factors can influence the choice of e-commerce site.

- Consumer trust in the online business
- Convenience
- Ease of navigation
- Search functionality (such as being able to quickly locate desired item)
- System reliability in general
- System quality (such as information, service, offerings, delivery)
- Dispute resolution if a problem occurs
- Delivery reliability
- Payment security
- Community features (such as social networking, consumer reviews)
- Pricing, including shipping and handling or other fees, if any
- Product characteristics (such as amount of differentiation, outlay, frequency of purchase)
- Consumer characteristics (such as task or experiential orientation, socio-demographics, personality and Internet experience, to name a few)[xxvii, xxviii, xxix, xxx, xxxi, xxxii, xxxiii]

Among online shoppers globally, recommendations from family, friends or other online shoppers also have a considerable influence on the site choice, according to Nielsen research. One in four online shoppers rely on personal recommendations – whether people they know or fellow online shoppers – in deciding which shopping site to use.[xxxiv] (See Current Use section for data on eBay.com and competitors.)

Notably, 60 percent of global online shoppers tend to buy mostly from one shopping site. Thus, online retailers that capture new online shoppers early and provide a positive shopping experience are often rewarded with return sales.[xxxv]   Giving customers a way to interact with a virtual community is one way that corporations foster loyalty to their shopping sites. Studies show customers who participate in virtual communities are highly loyal to the e-commerce sites providing these social experiences. Because of their strong relationships with the sponsor and the virtual community, these consumers invest more into the community and believe they receive more in return. These strong community ties increase the time, cost and effort required for consumers to switch to another virtual community and shopping site.[xxxvi, xxxvii, xxxviii]

The inherent risk involved in online auctions may deter participation in auction Web sites.[xxxix] Will the seller deliver the goods after being paid? Will the item be in the advertised condition? What happens if the item is damaged during shipping? Can it be returned if it is

unsatisfactory? Compared to traditional auctions, online formats can be perceived as riskier because buyers are dealing with unknown sellers and cannot physically inspect the listed items.[xl, xli, xlii]

Another risk characteristic of auctions – whether traditional or online – is the uncertain outcome, which can change in the last second of the listing. For consumers who prefer to not have their purchase dependent on auction activity, eBay.com users can seek out non-auction formats.

Decision Three: Finding and Selecting among Online Offerings

As the stakes rise for consumers, especially in terms of price and commitment (such as a cell phone and a two-year service contract), consumers are more likely to go online for information prior to purchase.[xliii] Yet, the Internet, including eBay.com, are just one of many information sources consumers use when researching a purchase. It is rare for a shopper to make a decision only based on Internet information.[xliv]

Some studies suggest that once online shoppers go to an e-commerce site, they tend to not comparison shop for the same item on other Web sites.[xlv] If the decision is to shop on eBay.com, consumers then consider and select among similar listings. Factors that generally influence the selection of a specific item include:

- Consumer characteristics, especially family needs, budget and time available for shopping.
- Product characteristics.[xlvi, xlvii] (See Decision Two.)

The listing format may affect the selection process. Participating in an online auction requires time and effort to monitor an auction that can last several days; this may prompt some shoppers to opt for listings with a fixed-price format or a "buy it now" option. (Sellers can add a "Buy It Now" icon to both fixed-price and auction formats. In the latter, a buyer can either bid as part of the auction or can opt to "buy it now," in which they purchase the item immediately at the seller's listed price, effectively preempting the auction.)

Decision Four: Deciding Whether to Buy or Bid on an Offering

Next, consumers decide whether to purchase by buying or bidding on an item if the shopping site is eBay.com. Research suggests persons with Internet experience and knowledge are more likely to purchase and pay for items online.[xlviii, xlix] Other studies have found e-consumers are more likely to purchase online if they:

- Are time- or price-conscious.

- View shopping online as enjoyable or compatible with their lifestyle.
- Are less risk adverse.
- Prefer brands.
- Have a social network that shops online.[l, li]

Research findings on online shopping behavior and consumer socio-demographics are mixed. In general, men with higher educational attainment and higher incomes are more likely to complete purchases online than other groups.[lii]

Perceived risk – such as being familiar with and confident in the seller – remains a factor in the decision to purchase.

- If perceived risk is high, shoppers may not bid or may keep their bids low.[liii]
- Consumers generally trust and use other consumers' ratings of merchants as one indication that the seller is reliable.[liv] Positive reputation ratings can be viewed as a surrogate guarantee of quality.[lv]
- eBay.com shoppers are more likely to trade with sellers who have positive reputations (which is based on feedback from the seller's other buyers) than sellers with negative reputations.[lvi, lvii]
- Studies comparing consumer behavior with low- and high-reputation sellers have found that consumers are more careful (such as take more time deciding and consider surcharges). They are also less willing to pay when considering a listing from a low-reputation seller.[lviii]
- Participating in a shopping site's virtual community may lower perceived risk.[lix] (See eBay.com Community section.)

A small study of eBay.com auctions (n=423) featuring business calculators suggests consumers are more willing to make a bid or to bid a higher amount in auctions with these "risk-reducing" features.

- Listing has either a photograph of the actual item or a stock photograph
- "New in Box" appears in the auction heading[lx]

Conversely, listings with risk-enhancing features – a listing that mentions "wear" or lacks a photograph – were less likely to result in a sale. Risky listings also sold at a low final price.[lxi]

Another small pricing study of eBay.com auctions of Dell LCD monitors that received bids (n=742) found a positive correlation between higher prices and:

- Starting bid.
- Auctions ending on Saturday or Sunday.
- Buyers with less bidding experience.
- Sellers with positive reputation ratings.[lxii]

Finally, a study of reserve prices in 1,630 eBay.com auction listings for antique sterling silver flatware suggests that consumers bid higher on auctions with:

- Many bidders as compared to auctions with few bidders.
- A higher opening bid, as compared to auctions with a lower opening bid.[lxiii]

Objectives for eBay.com

As a commercial enterprise, eBay seeks to provide value to its shareholders by growing revenues from its auction Web site and other business lines. Growing eBay.com revenues – primarily seller-based fees – means providing an open trading platform that attracts a sizeable network with voluminous supply and demand.[lxiv] Success depends on having not only a strong seller base that offers an appealing range of competitively priced items that consumers demand, but also strong visitation and purchasing rates that attract successful sellers.[lxv, lxvi, lxvii]

For investors, eBay states its goal for the eBay marketplace sites is "to create, maintain and expand the functionality, safety, ease-of-use and reliability of our online commerce platforms while supporting the growth and success of our community of users."[lxviii] Its eBay.com value proposition is to attract:

- Buyers by offering "selection, value, convenience and entertainment."
- Sellers by offering "access to global markets, cost effective marketing and distribution, access to large buyer base and good conversion rates."[lxix]

Audience and Use

eBay provides an online auction platform that is activated through buyers and sellers trading directly with each other. Its audience is adult Internet users, nearly all of whom (93 percent) have done some form of online shopping, whether to research a potential purchase, buy an item, trade in an auction or make travel arrangements.[lxx] The Pew Internet and American Life Project reports that on an average day in 2007, one quarter of Internet users were engaged in

some form of e-commerce activity.[lxxi] Among all Internet users, 26 percent have participated at least once in an online auction, with 3 percent actually doing so on any given day.[lxxii]

Current Use

In 2003, eBay.com had a base of 30 million buyers and sellers worldwide; among auction sites, eBay.com was capturing 80 percent of the market.[lxxiii] In 2008, across all eBay marketplaces sites, eBay reported 84.5 million active users (i.e., buyers and sellers) worldwide; however, some individuals have multiple registered user accounts on eBay.com and perhaps other eBay marketplace sites too.[lxxiv, lxxv] (eBay defines "active registered users" as those who have bid, bought or listed an item within the previous 12-month period.)

eBay does not release data on the total number eBay.com registered users in the U.S. or other geographic market. Much of eBay's U.S. market data for eBay.com is proprietary.[lxxvi] One datapoint that eBay made available is U.S. market share of gross merchandise volume. In the third quarter of 2008, eBay marketplaces had a gross merchandise volume of $14.3 billion, of which U.S. transactions were $6.6 billion (46 percent).[lxxvii]

Web statistics from Nielsen Online for "Black Friday," the traditional start of the holiday shopping season, are one indication of the scale of eBay.com's U.S. share of online shoppers. Figure 1 shows eBay.com still dominates other shopping sites, but that fewer consumers are shopping on eBay.com and may be migrating to other online retailers. Its top two online competitors, Amazon and Wal-Mart, both realized substantial growth in their unique visitors.[lxxviii] Citing external data, industry analysts have reported that the number of unique visits to eBay.com fell at least 10 percent from October 2007 to October 2008, continuing a decline that has roots in late 2006.[lxxix, lxxx, lxxxi, lxxxii]

Figure 1. Unique U.S. Visitors on "Black Friday" to Top Three Online Retailers, 2007 and 2008

Online Retailer	Unique Visitors in the U.S. (000)		Percent Change
	2007	**2008**	
eBay.com	10,837	9,871	-9%
Amazon	6,932	8,448	22%
Wal-Mart	4,509	6,029	34%

Source: Nielsen Online, NetView Custom Analysis[lxxxiii]

Additional data illustrate eBay.com's relative position in the e-commerce market.

- As rated by Alexa, a Web information company, eBay.com ranks 9th among U.S.-based Web site traffic, including traffic to non-shopping sites.[lxxxiv]   In 2008, eBay.com attracted about 2 percent of global Internet users per day, with 70 percent of these visitors from the U.S.[lxxxv]
- Each eBay.com visitor views about 15 pages per day, according to Alexa.[lxxxvi]
- With 124 million unique shoppers, eBay.com was the top online retailer in December 2007, based on the results of the Nielsen Global Online Survey. In comparison, Amazon was second highest with 100 million unique shoppers, followed by Target.com, a distant third with 37 million.[lxxxvii]

The amount of time per month spent on a shopping site can indicate repeat visits, longer duration of visit(s) or both. It also could be a surrogate measure for the value Internet users perceive they receive from a shopping site.[lxxxviii] In this context, the average eBay.com visitor in 2005 spent more than two hours per month using the site. In comparison, the second most visited e-commerce site, Amazon, held visitors an average of 20 minutes per month.[lxxxix]

Descriptions of Users

To buy or sell on eBay.com, consumers must register and be 18 years or older. Figure 2 provides the most current user demographics available from eBay about eBay.com visitors (i.e., both registered users and non-registrants). Many eBay.com visitors are in their mid-30s or older. Also, the visitor base is solidly middle class, although both low-income and higher-income consumers also come to the Web site. It appears slightly more are men.

Figure 2. Demographics of eBay.com Visitors, 2005

eBay.com Demographics	Percent of eBay.com Visitors
Age	
18 – 24 years	7%
25 – 34	17%
35 – 44	26%
45 – 54	28%
55+	22%
Annual Household Income	
$0 – 25,000	5%

eBay.com Demographics	Percent of eBay.com Visitors
$25,000 – 50,000	23%
$50,000 – 75,000	31%
$75,000 – 100,000	19%
$100,000 – 150,000	14%
$150,000+	8%
Gender	
Male	53%
Female	47%

Source: Nielsen/NetRatings, March 2005, as cited in: eBay. (n.d.). *Seller Central Report: How Buyers Use eBay.* Retrieved Sept. 23, 2008, from http://pages.ebay.com/sellercentral/buyers.pdf.

Three recent exploratory studies provide additional perspectives.

- A study of 82 university students found that consumers who make eBay.com purchases had larger families and a greater "desire to have an objectively, functionally and economically satisfying buying experience" than consumers who do not buy on eBay.com.[xc]
- Data from 753 eBay.com transactions from two sellers found rural consumers, females and people living in the Midwest, South and Southwest were more likely to buy things on eBay.com than urban consumers, males and people living in New England, the Mid-Atlantic and the West.[xci]
- Only a fifth (21 percent) of eBay.com sellers sold more than $50,000 in the prior year, suggesting most are small-scale sellers, according to an *AuctionBytes* convenience survey of its subscribers in 2006.[xcii]

eBay indicates women often buy in 11 or more eBay.com listing-categories. These shoppers reported seeking both practical and emotional benefits from eBay.com. eBay.com buyers who trade in just one to four categories tend to be men and persons who favor eBay.com because of "its ease of use and selection of unique or hard-to-find items."[xciii]

The eBay.com community has many different segments.[xciv] It appeals to people who want to make informed shopping decisions and those who want to get a good bargain. Another segment are consumers who have a niche interest or hobby.[xcv]

Descriptions of Nonusers

As indicated by eBay.com data in Figure 2, low-income households with an annual income of less than $25,000 are the least likely to use eBay.[xcvi] A 2007 survey of Internet users sponsored by the Pew Internet and American Life Project provides some insights. Specifically, compared to Internet users from households with higher incomes, low-income respondents were most likely to express concerns about providing credit card or personal information online and least likely to perceive online shopping as possibly time-saving or convenient. Pew also notes that this low-income group shops less frequently (both offline and online) than higher income groups.[xcvii]

Other consumers who do not use eBay.com may include:

- People without Internet access at home, on the job or both.
- Consumers who think they lack the time, knowledge or skills to participate in online auctions as a buyer or seller; some may not know that eBay.com has fixed-price listings.
- People who do not want the risks associated with participating in an auction.
- Consumers who perceive a high potential for fraud on eBay.com for privacy violations.
- People who are unaware of eBay.com.

Resources

Beyond its unique niche with online auctions, eBay.com had the advantage of being first to market, particularly in the consumer-to-consumer segment, which enabled it to establish early dominance in e-commerce.[xcviii, xcix] Today, eBay.com is still the top online shopping destination, helping it attract sellers and advertisers. (See Current Use section.)

eBay.com's long dominance is in part due to the groundbreaking strategy of designing a participatory e-commerce or Web 2.0 platform. Specifically, the Web site design engages voluntary users in creating value for themselves and others in the eBay.com community by:

- Generating site content, primarily listings as well as information.
- Producing trading, interactive and learning experiences that drive new and repeat use of the site.[c]
- (In contrast, the e-commerce Web 1.0 platforms of competitors were mostly a unidirectional stream with the company/sponsor providing content and value.)

For much of its history, the cost of starting to sell or auction items on eBay.com was low, helping spur a fast-growing base of successful and enthusiastic sellers. In the early years, this

seller base and their listings helped fuel eBay.com's popularity and attract new buyers and sellers.[ci]

eBay's founders understood that as consumers added content to and interacted on eBay.com, the site would provide greater value to all, creating a virtuous cycle.[cii] This underlying principle is evident in how eBay sought to grow revenue between 2000 and 2001 by repositioning eBay.com from an e-commerce site specializing in collectibles to a competitive source of mainstream consumer goods. Its dual strategy entailed attracting new audiences, especially through word-of-mouth, and expanding listing categories. In just one year, eBay.com more than doubled its total categories, going from 8,000 to 18,000, and expanded its registered users from 22 million to 42 million.[ciii, civ] On an average day, all eBay marketplace sites have a total of 112 million items listed.[cv]

As both sides (buyer and seller) of the eBay.com network sides grew, it became harder for competitors to gain a foothold.[cvi] Today, the eBay.com active user base, possibly one of the largest for an e-commerce site, is a foremost asset. The base provides both supply and demand on eBay.com.

The company also depends on users both to refer family and friends and to enhance trading activity by supporting eBay.com peers. In terms of the latter, users help each other by answering questions, posting tips and reviewing products in eBay.com community forums. Leveraging user-to-user guidance helps the company minimize customer-support expenses.[cvii]

The sense of community among eBay.com users is another critical asset. As marketing scholars Jonna Holland and Stacey Menzel Baker (2001) note:

> [A]llowing for users to communicate with each other on a company's site does not automatically foster a sense of community. What is necessary is a critical mass of users with a sense of collaboration, loyalty, and social trust.[cviii]

Other resources gave eBay.com a market advantage.

- Through the years, both national and local media have extensively covered eBay, helping increase its visibility and facilitating not only widespread acceptance of online auctions and e-commerce but also trust in the eBay brand.[cix] In a 2001 article, *The Economist* described eBay as "among the world's best known brands."[cx]
- As a household name, eBay.com was promoted through word-of-mouth or viral marketing as friends and family told each other about great bargains they got, earnings from selling items and amusing experiences.[cxi, cxii] Nielsen research indicates that in the global online

market, word-of-mouth, over other forms of referral, remains important in building market share.[cxiii]

- Many e-commerce sites offer only new products. By providing a trading platform for new and second-hand goods, eBay.com broadened its market base.
- Online shopping sites have convenience advantages over traditional retail and auctions. The e-commerce sites are open 24/7/365 and accessible from homes, offices and other settings with a computer and Internet connection.

eBay's positive reputation was essential to its success. Two indicators that many people trusted eBay.com as a reliable, safe marketplace are the rapid growth of buyers and the occurrence of repeat transactions.[cxiv, cxv] Recognizing the need to preserve users' confidence, eBay has taken steps to keep fraud low on eBay.com and to educate buyers. For example, working with federal regulators, eBay halted auctions of potentially unsafe cribs in October 2008.[cxvi] In several places on eBay.com, eBay has notices about products recalled by the Consumer Product Safety Commission. (See Barriers section for additional eBay efforts.) In a 2003 *CNET News* article, Federal Trade Commission official Howard Beales is described as praising eBay "for cooperating with authorities on fraud investigations."[cxvii]

eBay indicates it does not have a precise fraud rate but in the past has claimed it could be as low at 0.1 percent.[cxviii] Critics and competitors indicate eBay.com fraud from buyers and sellers is higher than this, particularly in some categories, but have not produced an exact rate.[cxix, cxx, cxxi, cxxii] (See Constraints, next section.)

Constraints

eBay.com use and revenues hinge on sellers offering goods that consumers want. Thus, eBay has to strive to keep both eBay.com buyers *and* sellers engaged and satisfied. This balance is difficult to achieve because a change that benefits one group can be less advantageous to the other. In terms of sellers, eBay faces tradeoffs between satisfying its powerful corporate merchants, individual professional sellers and casual sellers.[cxxiii, cxxiv] eBay.com users are known to be highly vocal when eBay makes an unpopular change; criticism appears on both eBay.com community forums and external blogs and communications forums.

To date, the company has avoided complete overhauls of eBay.com. Instead, it makes incremental changes after pre-testing potential improvements. One reason is to minimize the risk of alienating the eBay.com community.[cxxv] Another is that even minor changes to the complex eBay.com system can trigger negative, unintended consequences.[cxxvi] (See Updating and the Use of Data sections for examples of incremental changes.) The cost, according to e-

commerce analysts, is a "dated user interface" and "lackluster technology platform." Specifically, search functionality and user experience have not kept pace with competitors, contributing to eBay.com's soft business performance in recent years.[cxxvii, cxxviii]

To attract and retain sellers, eBay has strived to keep the low the time and financial costs of becoming an eBay.com seller. It has used other strategies to reduce sellers' perceived risk.

- Accessible data on completed listings gives potential sellers (and buyers) information about prior demand and final pricing for many items.
- Sellers can set a minimum starting price for the bidding.
- A reserve price allows sellers to set a hidden minimum price to protect themselves from a final price they would find unacceptable. The related risk is that the item will not sell if bidding fails to match or exceed the reserve price.
- A fixed-price listing provides sellers a guaranteed price, although they forego the opportunity of the auction process setting a higher price. With a fixed-price format, sellers assume the risk that their pricing may be too high, with the associated consequence of reduced demand.
- A "buy it now" feature on an auction or fixed-price listing lets sellers increase the odds of a purchase.
- Sellers set their shipping and handling fees, which winning bidders also must pay.
- Periodic promotions lower sellers' insertion fees for a limited time period.[cxxix]

If eBay.com were an auction house, the corporation would have considerable liability exposure and would have to comply with national auction regulations. This was one reason eBay.com was created as an automated platform that stores information and provides a service by hosting user-to-user communications; thus, eBay.com is positioned as a technology service provider instead of a firm that conducts auctions.[cxxx] Even so, eBay has faced potential and actual lawsuits concerning counterfeit designer goods and copyright infringement.[cxxxi, cxxxii]

Deceptive or illicit sellers are a major constraint for eBay.com. *Consumer Reports* warns readers that online trading of counterfeit goods may be higher than ever.[cxxxiii] In the magazine's 2007 survey of subscribers (n=2,500), among those who had purchased on eBay.com in the past year:

- Almost half reported encountering deceptions, including sellers who took their money but did not send the goods or who had inaccurate or deceptive item descriptions.
- Forty percent described eBay.com's help and customer support as fair or poor.
- Seventy percent were highly satisfied overall when buying on eBay, and about 90 percent of purchases arrived on time, were accurately described and were perceived a good deal.

- Nearly half of respondents characterized eBay.com as an excellent source of hard-to-find items.cxxxiv
- In a related study, secret shoppers for Consumer Reports were readily able to obtain goods on eBay.com that the Consumer Product Safety Commission had recalled for safety reasons.cxxxv
- The relative ease of becoming an eBay.com seller can attract deceptive vendors.cxxxvi Wharton information economist Eric Clemons has identified other systemic weaknesses in the eBay.com model that make the site vulnerable to fraud.
- Deceptive sellers can readily "disappear" by ending their registered-user status; they can then reappear under a different registered identity.
- The existence of fraudulent merchandise, such as in designer goods and expensive collectibles, on eBay.com heightens consumers' perceived risk and lowers their willingness to pay.
- eBay has been reluctant to halt listings of alleged counterfeit listings upon complaints.
- Buyer protection programs and services are inadequate.
- Seller feedback or reputation systems can be manipulated to buyers' disadvantage.cxxxvii

Barriers

In general, perceived risk of Internet fraud can prohibit consumers from bidding in an online auction or may reduce the amount they bid on a listing.cxxxviii, cxxxix The perceived risk can be high when bidders and sellers are anonymous, as are eBay.com users who often have a user name that is different from their actual name.cxl

To minimize risk as a participation barrier without squelching the risk aspects that make an auction fun or game-like, eBay invests in sophisticated technologies and systems to reduce the perceived risk for buyers and sellers.cxli Some of its anti-fraud systems include:

- Information technologies that flag potential abuse so it can be quickly examined and managed. Follow-up actions include warning users, removing listings, blocking users who violate eBay.com rules and working closely with law enforcement partners on potential fraud or intellectual property rights violations.
- PayPal, a payment processing system that facilitates quick and easy financial transactions in many currencies. PayPal offers automatic buyer protection coverage for many transactions.
- eBay.com feedback system that encourages buyers and sellers to rate each other after a transaction as a way of informing future traders and discouraging misuse of eBay.com.

- eBay.com policies (such as bans against gun listings) and regulatory systems that protect online privacy.

In 2007, *Consumer Reports* described eBay as having 2,000 staff who police eBay.com. With a workload of 6.4 million new listings per day and 100 million listings, the company may lack adequate resources to shut down questionable auctions.[cxlii]

(See the Consumers' Decision Making section for general barriers to online shopping and auctions. See the Facilitators section for changes in U.S. macroeconomic conditions and implications for e-commerce.)

Facilitators

The following macro conditions are some of the many external forces that may promote – or hinder – the extent to which Americans use eBay.com.

- Economic conditions can affect eBay.com use and gross merchandise volume. For example, the U.S. recession in 2008 and weakened consumer spending is affecting eBay.com sales.[cxliii] Conversely, economic growth and increased real per-capita income would be expected to boost eBay.com trading and revenues.
- Fierce competition from other companies vying for buyers and, in some cases, sellers. eBay identifies competitors in these categories.
    - Broad-based e-commerce sites such as Amazon and Buy.com
    - National retail chains with both traditional stores and Web sites, such as Wal-Mart and Target
    - Home Shopping Network
    - Specialty retailers, such as Best Buy and Overstock.com

These competitors, if successful, can siphon buyers and sales from eBay.com.[cxliv, cxlv]   Alexa reports that Onsale.com, Yahoo!, UBid.com, ToysRUs.com and Sothebys.com are other U.S.-based sites that attract people who also visit eBay.com.[cxlvi]

- Laws and regulations affecting e-commerce constantly change in the U.S. and abroad, resulting in new or improved business opportunities as well as additional restrictions and liability.
- Users' alleged or actual infringement of intellectual property rights can lead to litigation and negative publicity.
- External changes in consumer confidence can affect online shopping and transactions.
- Third-party disruptions or security breaches of eBay.com could reduce trading.[cxlvii]

Auction-Related Facilitators

eBay focused on auctions, which can appeal to many Americans because they are entertaining, lively and exciting.

- Many people like competition.
- The interactive nature of the auction, along with eBay.com's feedback system, lets buyers and sellers connect with people all over the country and the world.[cxlviii]
- The wide array of ever-changing listings from the eBay.com community can surprise and amuse.
- Collectibles can be an instant shared-interest, helping fuel the development of the initial eBay.com community.
- Auctions can be addictive, in the enthusiast sense of the word.
- The online format of the auction, in which a listing can continue for hours or several days, encourages bidders to repeatedly log into eBay.com from any computer with Internet access. Bidders can also monitor, participate in and receive alerts on auctions through mobile and wireless devices.

Tool Design

eBay continually strives to improve eBay.com and the rules and policies that promote a safe trading environment (see Testing and Evaluation section).

Tool Description

An underlying strategy across eBay.com is the deliberate effort to engage users in providing content and social interaction.[cxlix] First, the auction process is interactive by nature. Second, the eBay.com feedback system provides a default platform for buyers and sellers to communicate after the transaction and inform other users. Third, nearly all adjunct services on eBay.com have forums for users to communicate with each other, the most prominent being eBay.com community.

eBay.com Trading/Marketplace Platform

eBay.com provides an automated interface for sellers and buyers to trade through an auction, retail or combination format. It assists potential buyers in expanding or narrowing items of interest to the buyer through a set of filters regarding:

- Item characteristics (such as new or used condition, price).
- Source (such as seller's reputation, distance).
- Format (such as auctions, fixed-price, a "buy it now" feature).

Buyers also receive other information to aid the shopping decision, including shipping fees, time remaining until the item is removed and number of bids (auction only). They can check completed listings to see how much an item might be worth. The Web site allows buyers to sort the items of interest and display the items in a variety of formats.

For auctions, eBay.com provides the choice of placing bids and then monitoring the auction to decide whether to make additional bids. A buyer's bid is a binding commitment to purchase the items if they place the winning bid (i.e., there is no further buy or not-buy decision). For fixed-price, the decision entails whether to buy it or not.

An alternative shopping format – eBay(.com) stores – lets buyers browse all the items that an individual seller is offering on his or her own customized pages.

The eBay.com trading platform has some potential limitations.

- Two thirds of other Web sites are faster than eBay.com, according to Alexa.[cl] In 2008, eBay added the ability for partial page refreshing (such as to view current time remaining for a listing) without the need for the entire page to reload.[cli]
- A "best match" sorting function on eBay.com aims to help buyers find items that closely fit their search terms and are offered by sellers with highly positive reputation ratings. Users have criticized this change for slowing download times and making it more difficult to find a desired item.[clii]
- Unlike many e-commerce sites, such as Amazon, most eBay.com listings do not have consumer product reviews integrated into the content or available via click-through access. For example, to consider child safety seats reviews from eBay.com users in choosing among eBay.com listings, a buyer would need to go to a separate section of the Web site. Some items, such as digital cameras, do have a link to online reviews of the specific model; however, eBay.com does not allow buyers to sort listings by product ratings or reviews.

My eBay(.com)

"My eBay" is the section of eBay.com in which a registered user can create a customized control panel. eBay.com encourages users to customize their My eBay page – the content, presentation, color scheme and organization – because it enables users to personalize their eBay tool. Through My eBay, users can:

- Track and manage auction and shopping activity. An at-a-glance view provides a snapshot of the user's buying and selling history. A user can watch a listing even if s/he has not yet bid. The page also helps a user compare items or save a search.
- Communicate by secure messages with eBay staff, potential buyers, sellers with listings and other users.
- Leave feedback for buyers or sellers.
- Monitor eBay announcements about the site.
- Manage the user account, including PayPal linkage and general account preferences.
- Set up automatic notifications, such as notices about new listings that correspond with saved searches.
- Create lists (such as Emma's new dorm room, Andrew's wedding) with items drawn from watching, bidding and won sections of My eBay.
- Look up the meaning of an eBay icon in a special glossary.
- Learn about workshops in the region and audio town halls with eBay staff.

In January 2009, eBay will finalize a gradual transition of users to a new version of My eBay. (As of November 2008, 90 percent of eBay.com members were using the new version.[cliii]) Upgrades include new features and increased ability for users to customize information management, visual elements, lists of watched items and more.[cliv]

eBay.com Marketplace Feedback System

Buyer and seller confidence in each other is fundamental to eBay.com's viability and growth. To provide a safe, reliable marketplace, eBay embedded a buyer/seller feedback system as a quality assurance mechanism that encourages the community to self regulate.[clv] As described by eBay:

> *Feedback represents a person's permanent reputation as a buyer or seller on eBay. It is made up of comments and ratings left by other eBay members you bought and sold to. There are three types of feedback ratings: positive, neutral and negative. The sum of these feedback ratings [is] shown as a number in parentheses next to your User ID.[clvi]*

eBay.com buyers can view detailed feedback on sellers to aid their decision-making process about whether to make or accept a bid. (eBay.com sellers must accept the winning bid.) The feedback score – depicted numerically and with a set of colored stars – is an automated tally of each positive and negative rating. In early 2008, eBay made significant changes to the feedback system to address weaknesses.[clvii] eBay community forums and external blogs have criticized the recent changes as creating new challenges.

eBay.com Rules and Policies

Users must register with eBay to place a bid or list an item for auction. Completing the registration process requires accepting the eBay.com user agreement, which covers compliance with its rules and policies (and all laws governing transactions). The rules and policies seek to "promote a safe trading environment," although registrants may not study the details.[clviii]

eBay reports enforcing eBay.com rules and policies. Violation sanctions can include account suspension, among others. As needed, eBay coordinates with law enforcement.

eBay.com Community

The eBay.com community is an integral part of the eBay.com marketplace. Community participation can begin with buyer/seller feedback. Registered users can also directly interact with each other in chat rooms, users groups, bulletin boards, customer support (i.e., Answer Center) and other forums to:

- Obtain advice from other eBay.com users.
- Discuss topics with other users and eBay staff on shared interests.
- Receive updates.
- Learn and be entertained.

Users can communicate directly with eBay staff and other users through blogs, discussion groups and direct messages. Users can also suggest new community forums.

Because the eBay.com community has extensive channels and content (such as more than 700 discussion groups), the site allows users to create a customized "eBay My World" page. Users select their preferred page layout, color scheme and content from eBay.com community features. My World is focused externally on communicating with other eBay users and providing each user with a public "face." My World suggests users create their own blogs, product reviews, buying guides and guest books.

The annual eBay Live! gathering brings together eBay staff and community to educate and inspire. Offerings include social events, education and training sessions, town hall style meetings with eBay executives, an exposition and book-signings with eBay experts.[clix] In 2006, the gathering in Las Vegas attracted 15,000 registrants.[clx] The eBay.com community can also attend other regional events, some of which eBay sponsors.

It appears that community aspects have both functional and social benefits.

- Foster social norms of acting honestly and responsibly. The virtual community, including the buyer/seller feedback system promotes self-regulation. Other eBay.com norms include treating others in the community with respect.
- Promote a sense of belonging or other emotional ties, including online friendships and brand loyalty, that help make the eBay.com experience fun and meaningful. Such positive associations, in turn, may generate repeat or expand users' trading.
- Increase time spent on eBay.com, deepening user engagement.
- Learn informally about how to use the site to their advantage or receive assistance from peers in solving a problem. As they learn, members become more active; they may also become less guarded and more willing to bid or buy.[clxi, clxii, clxiii, clxiv, clxv, clxvi]

Adjunct Services

To support buyers and sellers, eBay.com has a wide range of features and services. Figure 3 highlights some of eBay's many adjunct services that may help eBay.com maintain its user base as well as promote additional trading activity.

Figure 3. Selected eBay.com Adjunct Supports

Adjunct Supports for eBay.com	Key Features
Customer Support	• Use automated assistance such as community help boards • Obtain personal assistance from eBay staff through live online help or e-mail; telephone is available in some instances
eBay Learning and eBay University	• Learn how to use eBay.com through videos, tutorials and more • Find a class or training session nearby
eBay Security and Resolution Center	• Report a problem • Learn strategies to avoid or resolve problems
eBay.com Help	• Find answers to questions • Use a troubleshooting guide on almost any issue
eBay.com Toolbar	• Monitor auctions even when users are not on eBay.com
PayPal[1]	• Enable buyers to pay sellers in an easy, convenient, fast and secure way • Protect buyers if their transactions are with sellers who have highly positive feedback ratings
Reviews and Guides	• Read reviews in which eBay.com users describe and provide opinions on goods such as a specific camera model or a new book • Obtain guides, in which eBay.com users discuss various topics, such as how to do something; some are buying guides for a product category. (Non-registered users can access both reviews and guides.)

Updating

Content on eBay.com is constantly changing. Sellers add listings, auctions progress or end, and buyers and sellers rate each other. Members answer other users' questions, and eBay uploads multi-media to communicate with its audiences (such as registered users, non-registered visitors, investors, journalists and more).

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[1] PayPal is a separate business unit for eBay, but in the eBay.com marketplace, it provides a specific function that supports buyers and sellers.

In terms of the platform itself, the company tactic has been to incrementally change eBay.com. For example, the eBay.com community has gained new communications forums such as blogs, and as mobile phones became more common, eBay provided new auction notification services.[clxvii]

In 2007, eBay did a comprehensive, formal review of eBay.com to identify ways to enhance the user experience, especially for buyers. The review addressed safety, trust, pricing, speed, reliability and convenience.[clxviii] Subsequent changes include:

- Streamlining the shopping experience for buyers to make it fast, easy and reliable.
- Adjusting seller fees and incentives to expand supply.
- Altering the feedback system between buyers and sellers.
- Refining the eBay.com homepage.
- Improving search functions so users can quickly find what they want.
- Expanding customer support.
- Tailoring the user experience by category (so that shopping for a blender on eBay.com is different than shopping for tickets).[clxix]
- Updating the site's merchandise categories – and the underlying database – based on trends in trading activity as well as input from eBay.com community and field experts.[clxx]

eBay also alters user rules and policies, which change seller and buyer experiences on eBay.com. A few examples include:

- Recent changes in the eBay.com feedback system such that sellers cannot leave negative feedback about buyers.
- Creation of "buy it now."
- Restructuring seller fees.
- Policies promoting use of PayPal as the payment intermediary between buyers and sellers.
- (See also Use of Data section.)

Marketing, Promotion and Dissemination

Growing the eBay.com community and leveraging it to expand trading – both supply and demand – continue to be a strategic elements of the marketing plan.clxxi

Positioning

eBay has sought to position eBay.com in consumers' minds as the go-to shopping site for practically anything under the sun – a bar of soap, a new cell phone, a movie DVD or an antique lunchbox for their collection. In addition to an amazing array of offerings, eBay's positioning emphasizes bargains, fun and a unique, better way to shop. Sample messages include:

- eBay.com as "the place to find great deals on practically anything."[clxxii]
- "The World's Online Marketplace" where "anyone [can] trade practically anything almost anywhere in the world."[clxxiii]
- E-mails to users, saying "Whoa! Zero bids!" on popular electronics auctions without any bids.
- "The power of all of us" as a tagline.
- Television commercials with actors singing modified versions of classic well-known songs:
    - "Through auctions or without delay, you can do it eBay" (to the tune of "I'll Do It My Way"), promoting the buy-it-now option.
    - "eBay is so very easy, put a few bucks down and your cash goes far" (to the tune of "Do You Know the Way to San Jose").
- "Millions of people do eBay."

(See also Promotion for other campaign messages.)

Pricing

Registering as an eBay.com user is free. Buyers can bid on listed items without paying any direct fees to eBay. Items may be available at the:

- Market price, which is set by the auction; winning bidders usually pay shipping fees.
- Price set by the seller plus the seller's shipping fee, if any.

Placement

eBay.com offers 24/7/365 online access to shopping and trading, customer support and eBay.com community. To drive traffic to eBay.com, the company has strategic advertising partnerships, particularly with click-through advertising on Web sites with high visitation rates. It also uses search-engine optimization techniques to attract shoppers who use a search engine in their information-seeking process.

Also, eBay Live Auctions lets online bidders connect with a traditional auction.

Promotion

Since its start and into the present, the company has promoted eBay.com through Internet marketing but mostly by relying on word-of-mouth.[clxxiv] Other communication channels used by eBay include, but are not limited to:

- Sponsored advertising on search engines.
- Portal advertising on mobile and wireless handheld devices.
- E-mail campaigns.
- Linkages through strategic partnerships and paid advertising on other Web sites.[clxxv] (Currently, more than 16,000 other Web sites link to eBay.com.[clxxvi]) eBay is working to grow eBay.com visibility among teens and young adults by entering deals with Bebo, Facebook and MySpace, sites that are popular with younger adults.
- Targeted print advertising for eBay.com, which started in 2000 or 2001 to attract a broad base of consumers to eBay.[clxxvii]
- eBay.com television campaigns such as "Do it eBay" (2002) and "The Power of All of Us" (2004).[clxxviii, clxxix] Advertising campaigns on national network and cable television helped eBay.com regain its position as the top e-commerce site.[clxxx]

Internally, eBay has several channels to communicate directly with the eBay.com community. (See also the Tool Design section for a description of the eBay.com community.)

- eBay(.com) radio is a syndicated program available on live Internet feed, in archived podcasts and traditional radio broadcasts. Hosted by eBay's own folksy celebrity, Jim Griffith, the talk show features expert guests, news direct from eBay and calls from listeners.[clxxxi] Users can also subscribe to the eBay.com radio newsletter. The radio sells advertising spots and promotes fee-based eBay.com services.
- eBay town hall is a live online community forum during which eBay.com users can ask questions related to eBay.com and receive answers from eBay's leadership team.[clxxxii]

- E-mails from eBay to registered users suggest current listings and remind them they can find "serious deals on eBay.com."

Some recent promotions include the following.

- To incentivize new listings, eBay sometimes reduces insertion fees for a limited time.[clxxxiii] In August 2008, eBay announced a set of seller fee changes intended to increase listings by reducing insertion fees with offsetting changes to final-value fees.[clxxxiv]
- eBay's recognized "top buyers" receive special coupon initiatives.[clxxxv]
- In the 2008 holiday season, eBay.com:
    - Offered coupons to buyers, perhaps because market research indicated a 30 percent increase in e-commerce site traffic related to coupon promotions.[clxxxvi]
    - Created a gift finder tool that enabled users to shop by gender and age, with results displayed as small pictures of listing themes (such as jewelry, sporting goods, music). Shoppers could select multiple themes and drill down into additional listings.
    - Added a green "deals" button on every eBay.com page (including help pages) with ads for popular items under headings of inside deals, daily deal, free shipping and best offer.

Testing and Evaluation

To stay competitive, eBay relies on many data sources to inform changes intended to improve eBay.com, with the ultimate goal of increasing revenues.

Data Sources and Measures

eBay managers monitor a variety of operating metrics for eBay.com. The below measures track eBay.com marketplace growth, which ultimately affects revenues.

- Registered and active users
- Listings
- Trading activity
- Gross merchandise volume

eBay also tracks business profitability with these metrics.

- Net revenues and sources (such as seller fees, PayPal fees, advertising revenue)

- Operating margins
- Earnings per share
- Cash flows
- Non-cash metrics

Web analytics provide insights on speed, navigation, visits, time spent on eBay.com and in which sections, and more. eBay's analysts review all of the above data sets, including their many subsets, for growth and other trends. Net ratings from Nielsen or other sources enable eBay to compare performance against competitors.

In October 2008, eBay fielded an online survey of users asking about level of trust in sellers, concerns about the security of personal information, ease of finding and buying items and feelings about using seller reputation system. It also queried about types of activities on eBay.com and what other e-commerce sites have been used.

Additional qualitative data come through regular interaction between eBay staff and eBay.com users – through blogs, discussion forums, audio town halls, radio call-in programs and more.

Examples:

- Certain eBay.com sections (such as the help section) solicit two types of optional visitor responses. A yes/no question asks, "Was this page helpful?" An open-ended question asks, "How can we improve this page?"
- Users post comments in eBay.com community forums, during eBay town halls and through the buyer/seller feedback system.
- Announcements of pending changes invite readers to comment.
- eBay.com visitors can go to the Sneak Peak page to learn about upcoming changes, try out betas and provide comments or ideas.[clxxxvii]

This tradition of seeking ideas and guidance from the eBay.com community, treating them in some ways as owners, extends back to eBay's earliest days.[clxxxviii, clxxxix] Pilots help eBay to identify needed improvements or compare how alternatives affect trading performance.

As described by eBay's senior manager of community, Mary Lou Song, in a 2001 interview for *Internet World*:

> *...everything we do goes through a community filter. What you see now is the result of a coordinated effort between the company and the user community. It is a process we follow*

every day. If there is a problem that we need to fix, we go through it together, creating these feedback loops that people can participate in before we ever hard-code anything in.[cxc]

Use of Data

eBay uses eBay.com community and buyer/seller feedback data, along with other information such as competitor monitoring, with a goal of maintaining eBay.com as a leading e-commerce site that meets buyers' expectations and attracts successful sellers.

After making a change to the site or trading structure, eBay tracks the impact. For example, after noticing abusive practices in the feedback system, eBay made significant changes in May 2008. In July, eBay made two refinements based on close monitoring of buyer and seller use of the modified feedback system.[cxci] If possible, eBay works quickly to fix unintended snafus, as when a software bug created problems with a new way to sort listings.[cxcii] (See also the Updating section.)

Prior to making a major change, such as is scheduled for January 2009 when the new "My eBay" section will replace the current version, an eBay team will create a beta version, test it internally, ask eBay.com users to test the beta and solicit other user input and suggestions. The team will fix problems and make adjustments before transforming that part of eBay.com. The team also communicates with the eBay.com community so users:

- Are aware of the upcoming modification.
- Have guidance available to aid their adjustment to the new environment.cxciii

Impact on Consumer Behaviors

eBay.com helped e-commerce gain footing by engaging consumers in trying online retail and having positive experiences when they did. The converse may have occurred: when Americans had positive experiencing buying from other e-commerce sites, they may have perceived less risk in trying eBay.com.[cxciv]

In this context – that eBay has contributed to and benefited from changes in Americans' online shopping habits, the following are some select data on the growth of e-commerce.

- In 1998, about 9 million Americans had bought something on the Internet; of these Internet buyers, 35 percent had made a purchase through an online auction, according to Forrester Research data.[cxcv]

- The Pew Internet and American Life Project reports that the number of Americans who have ever bought anything online has more than doubled since 2000, from 22 percent in June 2000 to 49 percent in September 2007. Among Americans with Internet access, 66 percent have made an online purchase.[cxcvi]

- Nearly all U.S. Internet users (94 percent) shop online, and global Internet shopping increased 40 percent between 2005 and 2007, according to a late 2007 Nielsen Global Online Survey. Globally, more than half of Internet users have made at least one purchase online in the past month.[cxcvii]

- The Internet greatly reduced the time and cost to research purchases. Today, consumers want better information about the products they buy.[cxcviii] According to Pew data, Internet use for product-related research is rising. Some 60 percent of all Americans report using the Internet for product-related research in September 2007, up from 35 percent who had done this in June 2000.[cxcix]

According to Clemons, eBay.com's primary effect on consumer behavior is users' practice of discounting bids because of low trust that the listing is accurate, the item is authentic and the seller is reliable. Over time, lowered expectations and willingness-to-pay have driven away honest sellers who can get better prices on other e-commerce sites. eBay.com now has less reputable sellers who offer banned, stolen or other fraudulent goods. This phenomenon is characteristic of Gresham's Law that "bad money drives out good."[cc]

Prior sections of this report have provided overviews of research on consumer behavior on eBay.com, such as in the Decision Four and the Constraints sections.

Impact on e-Commerce

For many years, eBay dominated and set the standard for e-commerce. To put its rise into context, marketing scholar Gregory Black (2007) describes eBay as growing faster in terms of revenue than Microsoft, Dell and Wal-Mart.[cci]

In 2003, *Business Week*'s Silicon Valley bureau chief, Robert Hof, wrote that eBay "is not just a wildly successful startup. It has invented a whole new business world." He quotes W. Brian Arthur, a Santa Fe Institute economist, as claiming eBay is "opening up a whole new medium of exchange."[ccii] (See also Impact on Consumer Behaviors.)

The final sections provide crosscutting insights from eBay's former CEO as well as from outside experts.

Observations by Insiders

In a 2001 interview with *Business Week*, Whitman talked about the foundations of eBay's success: "It was a business model and a concept uniquely suited to the Web and took advantage of the characteristics of the Web. The second thing is that it really is the first community commerce model."[cciii]

Observations by Outsiders

- As described by Tim O'Reilly (2005), an online media sage:

  ...eBay's product is the collective activity of all its users; like the web itself, eBay grows organically in response to user activity, and the company's role is as an enabler of content in which that user activity can happen. What's more, eBay's competitive advantage comes almost entirely from the critical mass of buyers and sellers, which makes any new entrant offering similar services significantly less attractive.[cciv]

- Information systems and psychology experts Steven Walczak, Dawn Gregg and Joy Berrenberg (2006) examined factors affecting sellers' choice of online auction platforms. They note that "As a first mover, eBay has gained an advantage in name recognition and continues to pursue this advantage through advertising, capitalizing on the reputation factors of online auction channel selection."[ccv]

- In their framework for customer engagement in building loyalty to a site brand, Holland and Baker (2001) report that "[I]n the new age of interactive communication, producers and customers are co-creating the e-business brand."[ccvi] They also describe eBay.com as succeeding because of its online community, which aided the development of trust and fostered customer loyalty to eBay.com.

  Companies must understand the usage orientations and other individual factors that motivate customers to join these groups, and determine the types of benefits they will obtain. Websites that understand the customer's online experience will be best equipped to provide customers with what they need to make participation valuable, and thus increase site loyalty.[ccvii]

- Attorney Bob Rietjens, writing in the journal *Information & Communications Technology Law* (2006), commented on the strengths and limits of eBay.com's feedback system:

  Establishing sufficient trust is essential for e-Commerce to live up to its potential. eBay's reputation system has proven effective in establishing trust among its members. The question is whether the established trust is justified.... it is important to realise that reputation systems alone will never ban all fraud.... However, in combination with other safety features, advanced reputation systems may be an important step towards a safer trading environment.[ccviii]

Appendix A.

Key Informants

The perspectives in this case study have been synthesized from the wide-ranging comments of the people interviewed, the literature and other data sources. They do not necessarily represent the views of the Center for Advancing Health.

With gratitude, CFAH acknowledges the following individuals who participated in key informant interviews.

- Eric K. Clemons, PhD, Professor of Operations and Information Management, Wharton School, University of Pennsylvania.
- Utpal (Paul) M. Dholakia, PhD, Associate Professor of Management, Jesse H. Jones Graduate School of Management, Rice University.
- John B. Horrigan, PhD, Associate Director of Research, Pew Internet & American Life Project.
- Greg Kusch, eBay Powerseller and eBay-certified trainer
- eBay provided very limited responses to inquiries for information and perspectives to inform this case study.

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NUTRITION FACTS PANELS

A Case Report for Getting Tools Used

Table of Contents

Background

The Nutrition Facts Panel (NFP) – the box titled "Nutrition Facts" on packaged foods – is the focus of this case study. Across the U.S., NFPs appear on most food processed products found in grocery stores, as required under the federal Nutrition Labeling and Education Act of 1990 (NLEA).

NFPs are the cornerstone of what is called "nutrition labeling." Other nutrition labeling components are health claims and nutrient content claims, both of which are based on criteria tied to NFP nutrient declarations.

NFPs do *not* include the ingredient listing, producer and distributor information, expiration dates or UPC codes. Food labeling (using such FDA-defined terms as "high fiber," "low sodium" or "light") and health claims about a nutrient-disease relationship (such as fat and cancer) are not part of a NFP.

Widespread placement contributes to the majority of American adults (about 60 percent) using NFPs at least occasionally to inform their decisions about food purchases and consumption. Thus, NFPs are a consumer information tool with national scope and scale.

Sponsor

NLEA strengthened the legal authority of the Food and Drug Administration (FDA), U.S. Department of Health and Human Services (HHS), to regulate nutrition labeling for all FDA-regulated processed, packaged foods.[i] FDA is primarily a regulatory agency.

The Food Safety and Inspection Service (FSIS), U.S. Department of Agriculture (USDA) is responsible for parallel labeling regulations for meat and poultry.

Business Model for NFPs

The 1990 NLEA explicitly authorized and instructed FDA to establish a regulatory system that requires food manufacturers to develop and print NFPs on most processed food products. FDA also has authority to enforce the regulations. Each year, Congress appropriates funding to FDA for nutrition labeling oversight. FDA *and* other federal agencies also receive some funding to monitor and research consumer label use, update dietary guidelines, and educate consumers and industry.

Historic Milestones for NFP

1974   Federal agencies begin encouraging voluntary nutrition labeling as a way to
              address nutrient deficiencies; labels became mandatory for products with
              added nutrients or with nutrient claims.[ii, iii]

1984   FDA adds sodium as a mandatory labeling element; potassium becomes a
              voluntary element.

1988   The Center for Science in the Public Interest convenes an advocacy coalition of
              health and consumer groups to push for food labeling reform.[iv]

1990   In July FDA proposes a mandatory nutrition labeling system based on existing
              authorities. In November the first President Bush signed the NLEA into law.
              Congress incorporated much of the FDA's proposed regulations in crafting the
              legislation. (See Resources section)

1993   New (revised) federal regulations require nearly all processed foods to have
              nutrition labeling in accordance with new federal standards. Companies had
              until mid-1994 to comply.[v]

2003   FDA adds trans fatty acids as a mandatory NFP listing.

Additional background about forces leading up to the NLEA enactment is in Appendix B.
Highlights include growing public awareness and knowledge about the role of diet and specific
nutrients in their health, expansion of health claims on food products and changes in consumer
demand, advocacy by health and consumer groups, and a rise in state efforts to keep food
manufacturers from making inappropriate claims.

Consumers' Decision Making on Food Products

Food is a basic necessity. On a weekly basis, if not more frequently, Americans make decisions
in selecting and buying many different food products. Most foods are also experience goods in
which fully assessing quality requires consumption.

Although the per item cost is often relatively modest, a few dollars or even less, groceries
average about 7 percent of U.S. household annual aggregate expenditures, which is just slightly
more than is spent on food away from home (6 percent).[vi] Consumer decision making about
food purchases has evolved since the 1970s because of growing awareness of the connections
between nutrition, diet and health.[vii, viii]

When consumers shop for food, they make a set of decisions often in just a few seconds.[ix] The context is often a supermarket; other shopping venues include convenience and discount stores, farmers markets and online grocery sites, among others. Food selection, especially non-routine items, may entail decisions like these.

- Decide to look for a food item or consider one when passing by a display
- Scan shelf and decide which, if any, items to pick up
- Decide whether to put an item in the cart or to first look at price, nutrition or other labeling information (such as photography, ingredient list, preparation instructions)
- Decide what parts, if any, to read on the NFP or other label information
- Decide whether to consider price, NFP information or other labeling information in their selection decision
- Decide whether to buy that item, compare it to another product or not buy it at all

Nutritional value is only one factor in the complex decision-making that occurs with choosing food. Four factors typically influence consumers' decisions about which food products to buy: price, taste, convenience and nutritional value.[x, xi, xii, xiii] In the International Food Information Council Foundation's 2008 national survey, 54 percent of respondents said taste has a "great impact" on their food and beverage purchasing, followed by 41 percent describing price as having a great impact, healthfulness with 29 percent, and 27 percent with convenience.[xiv] The interplay of these factors varies by food item. (For example, taste may drive a candy bar purchase, without consideration of nutritional content.)

Among these four factors, consumers are dependent on external sources to inform them about nutritional quality. The International Food Information Council Foundation's research suggests consumers use a wide variety of information to assess nutritional value or healthfulness. Information on the NFP, when considered, is often just a small part of the information that consumers process. They also consider other information on the label and make health-related inferences about packaging and placement.[xv]

Additional factors influencing food selection can include:
- Past food and market experiences that inform shopping decisions. For example, NFP use may be minimal for routine purchases.
- Brand preference.
- Context, such as the aromas a consumer smells while shopping and amount of time since the prior meal.
- External information sources, such as advertising, nutrition labeling, guidance from health professionals, health organization publications and Web sites, government education programs and general coverage of food, health and diet topics in mainstream media.[xvi, xvii, xviii, xix, xx, xxi]

Consumers' personal characteristics influence information search and consideration. Nutrition knowledge is also an influence on food choice and consumption.[xxii] Gender, education and health-related concerns are established factors in label use (see Audience and Use section).

Federal Objectives for the Nutrition Facts Panel

The 1993 nutrition labeling regulations, in the words of David Kessler, M.D., then-FDA Commissioner, sought to "help millions of Americans make more informed, healthier food choices."[xxiii] With a uniform presentation, NFPs would make it quick and easy for consumers to effectively consider nutrition content in their food purchasing. A secondary federal objective was to leverage market forces so manufacturers would "improve the nutritional quality of their products," according to then-FSIS administrator H. Russell Cross.[xxiv]

Consumer advocates and the broader public health community heralded the prospect of nutrition labeling requirements. Excitement levels were high because consumers would finally have readily available information to help them make healthy food choices. (Prior to the nutrition labeling mandate, information about calories and fat, for example, were scarce.)[xxv]

The vision was for nutrition labeling, consumer education and industry changes to reduce the prevalence of chronic disease and allergic reactions to foods.[xxvi]

Audience and Use

Adult consumers are the intended audience for NFPs, with adolescents as a secondary audience. Taylor and Wilkening (2008) describe FDA as focusing labeling requirements on "information needed by the *general* population to follow *general* dietary recommendations," which was in keeping with NLEA.[xxvii] Inside the agency, the focus was slightly more targeted.[xxviii] Ed Scarbrough, then-acting director of FDA's Office of Nutrition and Food Sciences was quoted in *Dairy Foods* (1990) as saying:

> *There are three groups of consumers. We have information seekers, a group that represents 15 percent to 20 percent of the buying public and one that is growing. Then we have the people who couldn't care less, about 10 percent to 15 percent. Finally, we have the group in the middle, people who are interested in the label but who are somewhat confused. We are targeted toward that group.[xxix]*

Because the NFP is free and printed on most processed, packaged foods, consumers of all incomes can access NFPs. The primary cost to consumers, assuming they have literacy and some numeracy skills, is their time to find and read NFPs and apply that information to their food choice.[xxx]

Current Use

Americans are familiar with NFPs, which appear on virtually all FDA-regulated food products.[xxxi, xxxii, xxxiii, xxxiv] Further, most American adults use NFPs when shopping occasionally or a more frequent basis.[xxxv, xxxvi]

In the decade since NFPs appeared on all FDA-regulated food, overall NFP use has tapered off slightly, but significantly, by 3 percent, according to a USDA Economic Research Service analysis using national surveillance datasets. Specifically, although the vast majority of Americans use NFPs, consumers who always/often and sometimes use NFPs declined from 65 percent in 1995-96 to 62 percent in 2005-06. About one in four Americans (27 percent) report they never use NFPs, a rise of 5 percentage points from the baseline survey.[xxxvii] This 10-year analysis indicates use of NFP serving-size data declined by 9 percent. Consumers today also reported less use of calories, fat, cholesterol and sodium compared to a decade ago. Use of NFP information on fiber increased slightly by 2 percent.[xxxviii]

In FDA's 2002 Health and Diet Survey, 51 percent of American adults said they had changed a decision to buy or use a food product after reading the nutrition label (broadly defined) in the prior two weeks. Slightly more, 59 percent, indicted they often used "food product labels" in the store or at home primarily for checking calories, salt, vitamin or fat levels. Uses that were less common, but still reported by 44 percent of more of respondents, were for these purposes.

- Get a general idea of nutritional content in the product
- Look for an ingredient that s/he or a family member should avoid
- Compare different food items with each other
- Decide which brand of a particular food item to buy[xxxix]

These findings mirror other survey research.

- In a 2002 national FDA panel, 69 percent of respondents said they used food labels often or sometimes the first time they bought a food product.[xl]
- In a 2004 national survey of adults who buy their households' food, 53 percent of respondents said they consistently used NFP information.[xli]

- In a *New York Times* study in 2004, consumers said they read NFPs to glean information on one or two elements, especially fat, calories and sugar content.[xlii]
- In a cross-sectional regional survey of African Americans, 78 percent said they used nutrition labels at least sometimes when buying packaged foods.[xliii]
- In the 2008 International Food Information Council's national survey, respondents specified calories, total fat, sugars and sodium as the top elements they use on NFPs.[xliv]

Experimental studies indicate consumers often can effectively use NFP information to perform these types of tasks.

- Compare nutrient levels of two items
- Select a correct answer about how eating a product relates to dietary guidance
- Check certain types of health and nutrient content claims[xlv, xlvi, xlvii, xlviii, xlix]

Misinterpretation or other errors tend to occur in more complex NFP-related tasks. The following are some study highlights identifying tasks in which consumers have problems with comprehending and effectively using nutrition label information.[l]

- Interpreting and applying serving size and percent daily value are common sources of error (see Tool Design).[li, lii, liii] For example, a study of 200 primary care patients discovered that patients in all education levels had problems interpreting food labels and applying the information. Patients with lower literacy and numeracy skills were more likely to select incorrect responses. Some patients also misinterpreted the NFP footnote (available on some products by manufacturer choice; see description in Tool Design section).[liv] Other studies have found correlations between lower education levels and increased likelihood of incorrect label use.[lv, lvi]
- In FDA focus groups, many consumers had a poor understanding of the percent daily value term or misinterpreted its meaning; these consumers tended to not use percent daily value when selecting food.[lvii] A separate small FDA study found only 29 percent of participants chose the correct definition for percent daily value for fat.[lviii] In spite of these limitations, it appeared consumers could use percent daily value to assess products for having relatively low or high amounts of a given nutrient.[lix, lx]
- Consumers reported confusion and limited use of percent daily value in nonrandomized ethnographic interviews for the International Food Information Council Foundation.[lxi]
- A pair of experimental studies with adults who have diabetes or a heart condition found many misinterpreted the meaning of the NFP information on trans fat. because they did not understand that 4 grams of trans fat is high.[lxii] According to lead researcher and author Elizabeth Howlett (2008), even "nutritionally motivated consumers lacking appropriate prior knowledge make inappropriate product judgments."[lxiii]

Descriptions of Users

Groups with a relatively high use rate for nutrition labels are older people, women and people with more education, special dietary needs, or health and nutrition concerns. Studies have produced irregular findings on the influence of age, income, employment and household size and type.[lxiv, lxv, lxvi, lxvii, lxviii, lxix]

Across demographic groups, research suggests other characteristics influence label use.

- *Nutrition Knowledge.* A couple of studies, including one with Latinas, suggest low-knowledge consumers are less likely to use nutrition labels than people with higher levels.[lxx, lxxi, lxxii] In contrast, a regional survey of grocery shoppers by Nayga et al (1998) found nutrition knowledge had no significant effect on label use.[lxxiii] Nutrition knowledge affects consumers' ability to correctly use NFP information.[lxxiv, lxxv]
- *Motivation to search for and process nutrition information.* Consumers who perceive the information as being useful are more likely than others to use nutrition labels.[lxxvi] In a small laboratory study, high-motivation shoppers used NFP information, while low-motivation consumers depended on brand and nutrition claims.[lxxvii] Other studies have found label users tend to be consumers that consider nutrition important.[lxxviii, lxxix]
- *Numeracy skills and ability to apply nutrition information when choosing foods.* Studies have found many consumers are unable to perform tasks using math skills to apply NFP information.[lxxx, lxxxi, lxxxii, lxxxiii]
- *Length of grocery shopping visit.* As shopping time increases, label use also tends to rise.[lxxxiv, lxxxv]

Descriptions of Nonusers

Consumers who do not use regularly NFPs are people who have low literacy or numeracy skills, limited English skills or little interest in health and nutrition. Compared to people with higher incomes, lower income Americans have lower nutritional literacy levels.[lxxxvi]

The recent Economic Research Service analysis indicates NFP use is disproportionately low for young adults (20-29 years), people with no postsecondary education and predominantly Spanish-speaking consumers. Further, current young adults use nutrition label information 10 percent less than young adults in the mid-1990s. Both young adults and recent immigrants had limited or no exposure to the public awareness campaigns occurring when NFPs became mandatory.[lxxxvii]

Potential factors in declining young adult use may include:

- The cohort's tendency to frequently eat out or rely on convenience foods at home more than young adults did in the past.
- Preference for online and mobile sources of nutrition information. Web sites like CalorieKing.com offer a comprehensive set of tools that help users manage weight. The tools enable users to obtain information on foods eaten outside the home, look up calorie information for a product based on the FDA serving size or the container size, and track diet and exercise.
- Other label information, such as organic claims and origin, capturing their attention.
- The influence of their social networks that have a pattern of low NFP use. Studies suggest correlations between social networks and obesity and tobacco use in adults.[lxxxviii, lxxxix]

Resources

In developing and implementing a nutrition labeling system, FDA had clear statutory authority and varying levels of funding and of leadership support from federal policy makers.

Nutrition Labeling Requirements

NLEA renewed FDA's regulatory authorities over food labeling by:

- Mandating that all processed foods regulated by FDA have nutrition labeling.
- Permitting truthful health and nutrition content claims on product labels subject to FDA requirements.

These authorities enable FDA to periodically adjust the NFP as new research and information warrant as long as the changes fit with detailed NLEA parameters.

The first President Bush directed USDA, though not subject to NLEA, to voluntarily issue parallel regulations for meat and poultry under its existing authorities. He wanted consistency for food manufacturers and consumers regardless of agency jurisdiction. The FDA/USDA coordination expanded the range of food products on which consumers could expect to find nutrition information. The two federal departments worked out many design issues through discussions, but did need the president to resolve an impasse over whether to base daily values on a 2,000-calorie diet (FDA/HHS) or the amount of the recommended nutrient and let consumers calculate their own actual daily caloric intake (USDA). The president personally mediated a departmental compromise on what is now the NFP footnote (see Tool Design).[xc, xci]

To enable FDA to develop the new nutrition labeling regulatory system, Congress appropriated some additional staffing and budgetary resources to FDA. Even with this supplement, the agency had to draw on laboratory and regional staff in order to meet the short timeline in NLEA. More than 200 full-time equivalent employees contributed to the nutrition labeling regulations. Contractors helped organize public comments and another firm, Greenfield Belser Ltd., assisted with graphic design.[xcii] In addition, Kessler provided considerable internal and external leadership.

Fiscal and staffing resources for the FDA Office of Nutritional Products, Labeling and Dietary Supplements declined between 1997 and 2007, according to a Government Accountability Office report in 2008.[1] The FDA Office of Nutritional Products, Labeling and Dietary Supplements in 2007 had an $8.2 million budget and 65 full-time equivalent staff, down from a peak of $10 million and 88 full-time equivalents.[xciii] During this time, the office's workload grew with new programmatic and regulatory responsibilities.[xciv] In 2007, the section responsible for food labeling had a $1.3 million budget and 10.5 full-time equivalent staff.[xcv] Based on its resource analysis, the Government Accountability Office concluded that FDA's fiscal, budget, science base and information management infrastructure for food safety and food labeling is inadequate. It suggested that with additional statutory authorities (such as requiring companies to pay a re-inspection fee), FDA could strengthen food oversight.[xcvi]

FDA has a small amount of funding (much less than $500,000 per year) for ongoing consumer research on NFP use. These funds primarily enable the agency to monitor nutrition labeling use, but are insufficient to conduct extensive consumer research or to widely explore NFP alternatives.[xcvii]

Nutrition Labeling Education

NLEA also directed the Secretary of Health and Human Services to educate consumers about nutrition labels. However, Congress appropriated only a small amount of initial funding, which many considered inadequate.[xcviii, xcix] Two former FDA officials, Taylor and Wilkening (2008), indicate that "virtually nonexistent funding" stymied the reach of consumer education programs.[c]

Under Kessler's leadership, FDA publicized the rulemaking process with the intent of simultaneously educating the public about the forthcoming new labels through earned media coverage. Consumers started becoming familiar with the overall NFP visual and learned they could expect to see it on most grocery store items and would be able to use the NFP

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[1] The Office of Nutritional Products, Labeling and Dietary Supplements is responsible for developing policy and regulations, including scientific evaluations, for dietary supplements, nutrition labeling and food standards. It does not conduct inspections or enforcement activities.

information to aid shopping.[ci] Also, coverage of health, diet and nutrition issues in the mainstream media helped get Americans ready to use the NFP (see Appendix B).

In subsequent years, Congress did not renew the labeling-education funding. FDA continues to leverage its relationships with other federal and state agencies to incorporate labeling into nutrition education programs. The agency also encourages labeling education in industry, public health and disease management education initiatives.[cii, ciii] (Congress has increased spending on Food Stamp Nutrition Education, one of several federal programs in which labeling education as a component.[civ])

Oversight and Enforcement

Because of the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, domestic and foreign facilities that manufacture, process, pack or hold food for U.S. consumption must register with the FDA. Companies that plan to import food must file a "prior notice" with FDA.

FDA has the authority to conduct food labeling inspections and testing and to undertake enforcement actions for false or misleading labeling. The main deterrent is the threat of criminal prosecution with related potential penalties of fines, imprisonment or both. Seizures, injunctions and import refusal are additional enforcement actions.[cv, cvi]

The FDA Office of Regulatory Affairs is responsible for inspections and enforcement of food safety and labeling requirements. Commonly used oversight tools are requests for voluntary recalls; "untitled letters," which are informal notices that the company needs to correct its labeling; and warning letters of potential enforcement actions if violations continue.[cvii] In 1994 and 1996, Kessler had FDA officials test a randomized sample of 300 food products for nutrition labeling compliance and accuracy. The samples indicated about 90 percent of nutrients had accurate listings.[cviii, cix]

Manufacturers have wide discretion in how they determine the nutrition labeling information (such as whether to do it in-house or outsource it to a laboratory). Their "reporting" is the nutrition labeling information that they print on food packaging.[cx]

Most food companies have been careful to comply with nutrition labeling requirements. They have paid for expensive assay tests. To minimize nutrient variation, which naturally occurs, companies have standardized recipes, and some have also taken steps to homogenize ingredient sources. Their motivation? First, companies want consumers to trust the information on their packaging and to avoid negative publicity that could accompany FDA

enforcement actions. They also are wary that competitors could bring noncompliant labeling to FDA's attention.[cxi]

FDA inspectors focus first on food safety and secondarily on food labeling compliance. The agency currently only tests a targeted set of foods for nutrition labeling accuracy; the targets are product lines and companies that have a history of noncompliance.[cxii] Between 2000 and 2006, FDA tested 1,651 food samples, of which 24 percent had nutrition labeling violations; common problems were failure to meet health or nutrient content claim standards or noncompliance with nutrition information format and content requirements. In its 2008 report, the Government Accountability Office characterized the testing of products for accuracy and compliance as "limited." It also suggests not all violations received follow-up attention.[cxiii]

The Government Accountability Office described FDA expenditures for food oversight (both safety and labeling compliance) as falling short of the growing number of food companies, addition of new food products and changes in public consumption. The Center for Science in the Public Interest reports that FDA had only four people assigned to identify and stop deceptive food labeling in 2006. Both sources indicate that as the number of full-time equivalent staff declined, a similar decrease occurred in FDA food-labeling enforcement actions.[cxiv, cxv]

Other Resources

Prior history was another resource used to design the NFP. Based on the pre-NLAA experience with voluntary labeling, FDA recognized several problems and attempted to resolve them in the new mandatory system. These lessons included:

- Consumer confusion and misunderstanding about nutrient measures. (For example, some consumers interpreted a food with 250 milligrams sodium per serving as having more than another food with 2 grams per serving.) In contrast, consumers made fewer errors with some listings in the voluntary labels that presented nutritional content as percentages of U.S. recommended daily allowances.[cxvi, cxvii]
- Inconsistent serving sizes hampered product comparisons and made it easier for companies to mislead consumers.[cxviii]

Constraints

Revamping the nation's nutrition labeling system was a complex, laborious task (for example, FDA published more than 4,000 pages in the *Federal Register*). Over a six-year period, which began before enactment of the NLEA, FDA made thousands of difficult decisions that:

- Grounded labeling regulations in available scientific evidence and consensus reports. (For example, FDA had to set a quantitative amount of each nutrient for the daily value that corresponds with the diverse nutritional needs of Americans ages four and older. With minimal precedent, the agency also had to establish serving sizes for products in 139 categories.)
- Complied with the detailed NLEA and other federal policy, including the Dietary Supplement Act of 1992 in which Congress temporarily barred FDA from issuing new recommended-daily-allowances regulations.
- Were mindful of the burden on industry, yet tried to anticipate how companies might manipulate the new system in ways that would confuse or mislead consumers.
- Carefully connected decisions to develop an integrated labeling system.
- Considered consumers' needs, abilities, preferences and behaviors.[cxix, cxx, cxxi]

Burkey Belser, the graphic designer of the NFP, described many challenges that made the design process quite difficult.

- A significant portion of Americans have low literacy levels, English as a second language or visual impairments.
- Some companies use label papers that could blur small print.
- The tested symbols and pie charts were inadequate because consumers had different interpretations of symbols (a rising vs. a setting sun), visual acuity and geometry skills to understand pie charts.
- Spatial limits of a few square inches.[cxxii, cxxiii]

Federal Policy Constraints

In recent years, FDA leaders have been focused on food safety and also have faced pressure to address problems with the agency's oversight of pharmaceuticals. Nutrition labeling and consumer use appear to be less of a priority.[cxxiv]

FDA decisions had to comply with many NLEA requirements. For example, the law identified which nutrients to list in the NFP. It also established the goal of providing the public with information about a product in the context of total daily diet, thereby sidestepping alternative foci of therapeutic labeling or labeling to support individual dietary recommendations. It also

set a very tight deadline for FDA development of the regulations, which if not met, would establish FDA's initial 1991 proposal as the final rule.[cxxv, cxxvi, cxxvii]

NLEA generally maintained FDA's jurisdiction over processed foods. Several food categories are not subject to nutrition labeling requirements: foods sold for immediate consumption or prepared on site as ready-to-eat, alcoholic beverages, therapeutic foods and foods that have no or trace nutrient contents, such as coffee or spices. Although USDA has jurisdiction for meat and poultry, FDA has a voluntary program for fish and best-selling meat cuts.[cxxviii] Fresh produce is also exempt from the mandate but encouraged to participate in FDA's voluntary labeling program.[cxxix, cxxx]

NLEA did not change oversight of food advertising, which the Federal Trade Commission controls. Thus, FDA is unable to regulate nutrition information in food advertising, a key source of information for consumers.[cxxxi]

Because NLEA was prescriptive about the new labeling requirements, FDA has had limited discretion in the ways it can update or even redesign the nutrition-labeling approach and system. Any major revision in the mandatory disclosure of nutrition content would likely require an act of Congress. This may be one factor in why there have been few changes to the NFP.[cxxxii]

FDA and USDA had to adhere to federal rulemaking procedures in developing and finalizing the labeling regulations; further, the regulations had to be very detailed (such as providing chemical definitions of nutrients). The agency received 40,000 written comments.[cxxxiii, cxxxiv]

Constraints Requiring Tradeoffs

In the design phase, FDA made many tradeoffs for what became a complex nutrition labeling system. Belser recalls that "The FDA indicated to me that their first goal was manufacturer/consumer acceptance; their second goal, policing."[cxxxv] Additional tradeoffs included attempts to balance:

- The amount of information on the NFP with:
- Consumer willingness and ability to consider a large information set.
- Space constraints on many food labels.
- The agency attempted to address these tradeoffs by keeping NFP information elements to only the essential.[cxxxvi]
- Giving consumers a uniform NFP visual design and yet reasonably accommodating manufacturers who have a wide assortment of products and packaging types. As a result, the agency developed alternate NFP formats for foods with small packaging, food labels

with minimal space, variety-pack foods and products that require additional preparation, such as dry cake mixes.[cxxxvii]

In the implementation phase, FDA reports a primary challenge is balancing its limited resources for direct investigative activities (for food safety and labeling compliance) against the time and effort required to collect, effectively manage and routinely analyze investigative and compliance data. The Government Accountability Office has recommended several initiatives to strengthen FDA's information systems, which it describes as essential to making risk-based decisions, including resource allocation.[cxxxviii]

Barriers

Possible explanations for the small decline in NFP use between 1995-96 and 2005-06 (see Audience and Use section), as identified by USDA analysts and others, may include:

- Nutrition information in NFP is difficult to correctly use even for adults with literacy and numeracy skills; thus, consumers are less likely to use NFP information when they perceive the time and effort costs to use it are less than the potential benefits of use.
- Consumers now have more sources of nutrition information, including Internet-based sources.
- The growing volume of information about diet and health may overwhelm and frustrate Americans, especially if the messages appear conflicting. They may be unsure of how to assess the relative reliability or importance of different messages.
- Advocacy groups and the mainstream media can influence what labeling information, such as country of origin, consumers seek and consider.[cxxxix, cxl, cxli, cxlii, cxliii]

Since the early 1990s, Americans have been eating more foods outside the home. Without regulatory authority over restaurant foods, FDA has had to persuade industry leaders to voluntarily develop point-of-sale information about nutrient content.[cxliv]

Historic Barriers

Developing the new labeling requirements would have been a significant challenge to any organization. FDA estimated nutrition labeling compliance would cost the food industry $1.4 to $2.3 billion in the first 20 years. To soften the economic impact, FDA delayed the compliance date by nearly 15 months.[cxlv]

An equal or greater challenge for federal agencies was educating consumers how to find and use the new label.[cxlvi] Nutrition label use depended on consumer confidence that the

information is factual or reliable. FDA officials and others also believed consumers needed some basic guidance to get started using the nutrition label information. The agency knew developing the nutrition label was just the beginning: public education and active FDA enforcement could not be shortchanged.[cxlvii, cxlviii, cxlix]

The science base of nutrition and health sciences is always evolving. FDA sometimes faced a lack of scientific consensus. This occurred with the definition of "complex carbohydrates," which are not part of NFP, and also with standardized serving sizes, which FDA had to create.[cl]

Facilitators

Formative data and expert opinion suggest consumers perceive NFP information to be accurate and trustworthy. Consumers also may view the NFP requirement as curbing manufacturers from making inappropriate claims. The NFP visual design looks official, as if it could be from the government. Consumers are much more likely to be skeptical of health and nutrient content claims because they do not realize FDA regulates the claims.[cli, clii]

Media coverage and food advertising can influence general NFP use as well as use of specific nutrient listings. The Economic Research Service analysis found more Americans were using fiber content information and using this information more frequently than 10 years ago, even as attention to most other nutrients declined. The authors suggested press coverage of "low-carb" diets and the health benefits of fiber and whole grains may have contributed to these gains.[cliii]

Appendix B discusses the historical context leading up to NLEA, including the publication of the National Research Council's *Diet and Health: Implications for Reducing Chronic Disease Risk* (1989). In developing this report, the National Research Council's committee assessed the scientific evidence and built consensus among stakeholder groups on dietary guidelines for protecting health and preventing chronic disease. These guidelines served as the basis for which nutrients would be listed on the proposed mandatory label. The consensus enabled FDA to concentrate on visual design and format instead of also conducting the laborious task of vetting listings.[cliv, clv]

Tool Design

NFPs, along with other nutrition labeling requirements and regulations, seek to encourage informed food choices that contribute to a healthy diet, according to FDA.[clvi] The following NLEA and agency objectives shaped the NFP design.

- Provide the public with easy to read and understandable information from which they could readily use to infer a food's significance in a total daily diet
- Create a consistent visual presentation would help consumers both quickly locate NFPs and easily use the information in it (recognizing that sizable populations have visual impairments or low literacy levels)
- Enable nutrient declarations to be readily comparable
- Provide the information at the point of purchase[clvii, clviii]

Prior to finalizing the NFP design, FDA tested different presentation options from Belser: bar and pie charts, numeric and percentage listings, tabular formats, and adjectival descriptors such as high and low.[clix, clx] Focus groups revealed consumers had concerns about using and interpreting pie charts, bar graphs, and adjectival descriptor formats. They preferred formats that contained both actual nutrient content listings and a way to assess that content in relation to dietary recommendations (such as either as a percentage of an overall diet or the numeric value of the recommended intake for a given nutrient).[clxi]

FDA ultimately based the final design choice on "consumers' abilities to use and comprehend, rather than on stated consumer preference," according to Scarbrough (1995).[clxii]

Tool Description

NFP is a standardized format for presenting comparable nutrition information that consumers can quickly find, read and use. Beyond the NLEA mandatory set of nutrient listings, FDA considered two criteria in deciding which listings would be mandatory vs. voluntary.

- Public health significance of various nutrients and food substances, based on major scientific consensus reports.
- Consumers' information needs so they could follow national dietary recommendations.[clxiii]

Visual Design

NFPs are a distinct visual on food packages. Graphic and content uniformity, along with a boxed border, help consumers to quickly find nutrition information. Figure 1 provides the common tabular format. A linear NFP format, not shown, is available for packaging with certain constraints.

The agency informed its approach by reviewing research on legibility – including the needs of persons with visual impairments and considerations for older consumers. The resulting design regulations specify mixed-case lettering, lines between nutrient labels and daily values, minimal punctuation and bolding of some information elements as visual cues of importance.

The agency also tapped research regarding reading comprehension and literacy and had Belser, a graphic designer and communications expert, create the visual design.[clxiv, clxv] A few format variations are available to use on foods in small packaging or other packaging constraints.[clxvi]

Figure 1. Nutrition Facts Panel for Illustration

In 1997 FDA officials received the Presidential Design Achievement Award for the modern nutrition facts panel, besting 400 other entries in a competitive process for exemplary design achievements.[clxvii]

Information Elements ("Nutritional Declarations")

Federal regulations govern the presentation order of mandatory and voluntary nutrient declarations in a tabular format. Manufacturers cannot put in any other content into the NFP.[clxviii]

- "Nutrition Facts" title
- Serving size, in both grams and household volume measures (such as cups, ounces), and number of servings per container
- Amount of calories and calories from fat per serving (voluntary: calories from saturated fat)
- Percent of daily value and number of milligrams or grams of:
- Total fat, along with saturated fat and trans fat (voluntary: calories from polyunsaturated fat, monounsaturated fat)
- Cholesterol
- Sodium
- (Voluntary: potassium)
- Total carbohydrate, along with dietary fiber and sugars (voluntary: soluble fiber, insoluble fiber)
- (Voluntary: sugar alcohol)
- (Voluntary: other carbohydrate)
- Protein
- Vitamins A and C, calcium and iron as a percent of daily value (voluntary: percent of Vitamin A present as beta-carotene)
- (Voluntary: other essential vitamins and minerals)
- This statement: "Percent Daily Values are based on a 2,000 calorie diet."
-
- Depending on packaging and label size, NFPs have a full or partial footnote.
-
- This statement: "Your daily values may be higher or lower depending on your calorie needs."
- A list of suggested recommended daily values of some nutrients, such as total fat, for both a 2,000- and a 2,500-calorie diet. (This listing is the same regardless of the food item).
- Provision of the number of calories per gram of fat, carbohydrate and protein.

NFP declarations are in two groupings. One is nutrients that most people should limit (such as trans fat and sodium). The other group has nutrients of which they need to consume sufficient amounts (such as protein and calcium). The black-and white panel lacks corresponding headings or another design feature (such as a different font) to imply the groups. The colored version of NFP uses yellow shading for nutrients to limit and green shading for positive nutrients.

Strategies to Reduce Consumer Confusion or Misinterpretation

FDA took steps in the NFP design and labeling regulations to reduce the likelihood that NFP information could confuse, mislead or be misinterpreted.[clxix, clxx]

- To facilitate comparisons of foods, industry must calculate and present nutrient declarations based on FDA's standardized serving sizes.
- Nutrient reference values – expressed as "percent daily values" – help NFP readers consider how a specific food fits with a total daily diet. Percentages help keep users from misinterpreting weight amounts. (For example, 140 milligrams of sodium could appear excessive by itself, but its daily value of 6 percent helps provide context from a daily diet.)
- For simplification, NFP uses "Daily Value," a term that brings together two dietary standards – Daily Reference Values and Reference Daily Intakes.
- Foods for young children have special labeling rules because children's dietary needs for fats, fiber, protein and other nutrients are different from adults.
- Industry can only include approved elements in NFPs because FDA was concerned that unlimited information elements could make consumers vulnerable to being misled.[clxxi, clxxii, clxxiii, clxxiv, clxxv]

FDA created definitional linkages between NFP declarations and health and nutrient content claims. As described by agriculture economist Brian Roe and FDA officials Alan Levy and Brenda Derby (1999): "Health claims on the front label both highlight and augment information available from the Nutrition Facts panel."[clxxvi]

Nonetheless, Belser has noted that the design "assumes all consumers understand percentages and daily values, what their usual calorie intake is and should be, and how to convert the information on the label to their needs."[clxxvii]

Updating

In recent years, with some pressure from external groups, FDA has sought input on potential changes to NFP and nutrition labeling.
- It conducted focus groups in 2003 on food label use, nutrition information preferences for foods at restaurants, and messaging for promoting label use.
- The FDA Obesity Working Group recommended several strategies to foster greater use of nutrition labels. Based on these recommendations, FDA invited public comments on two proposals: changing the display of calories per serving so it is more prominent and adding a percent daily value for total calories.
- In a separate effort, FDA held a public hearing to explore front-panel symbols or traffic-light coloring to highlight nutrition values.[clxxviii, clxxix, clxxx]

Marketing, Promotion and Dissemination

Positioning, Placement and Pricing

Consumers can view NFPs at the point-of-purchase, that is, when considering which item among a group to buy. Most manufacturers print NFPs on the back or side of packaging, which requires picking up the potential selection to access it. In contrast, health and nutrition content claims tend to appear on the front panel.

As a print tool, NFP requires consumers to visually inspect each package to locate the panel and search a relatively long list of nutrients to find the information they want. Consumers can use NFP information to help decide whether or not to buy an item or to compare it against another item.

The amount of time needed to use NFPs depends on how many labeling elements interest to the consumer and whether the nutrient declarations contain the information s/he needs or if NFP information must be converted for application. Lower literacy and numeracy skill levels can increase the amount of time needed to read and interpret NFP information.

ConAgra, and perhaps other food manufacturers, enable consumers to access NFP images on its Web site. Visitors can find specific products by name or photograph, then click on "nutrition information" to view a fixed NFP graphic for a specific item. ConAgra also has a product finder tool on its Web site that lets visitors search for products by a variety of nutritional criteria (such as low fat). The product finder does not let visitors sort items by nutrient content or generate head-to-head comparisons of NFP declarations.[clxxxi]

Consumer Awareness and Labeling Education Programs

As stipulated by NLEA, FDA planned a multi-year consumer awareness and education campaign, but it had scarce financial resources for outreach (see prior section, Nutrition Labeling and Education). The agency also had limited consumer education experience.[clxxxii] These resource gaps meant FDA, with USDA, had to create a campaign that relied on a host of partners to reach the diverse American population. The agencies engaged an extensive array of stakeholders, including consumer and industry groups, in developing and implementing a nationwide campaign, called "The New Food Label – Check It Out!"

The campaign goals were to not only heighten awareness but also to develop Americans' ability to effectively use the new NFP and other labeling components. The campaign also sought to promote healthful food choices that followed the Dietary Guidelines for Americans.[clxxxiii, clxxxiv] Some of the consumer messages were:

- "You can believe the claims on the package."
- "You can more easily compare products because serving sizes will be more comparable for similar food products."
- "By using the percent Daily Value, you can quickly determine if a product is high or low in a nutrient."
- "By consulting Daily Values, you can determine how much (or how little) of the major nutrients you should eat on a daily basis."[clxxxv]

To reach as many Americans as possible, FDA engaged government agencies, community-based organizations, food companies and trade groups as partners. Even with FDA coordination, the campaign still had a piecemeal nature but did support targeted outreach to older adults, racial and ethnic minorities, children and youth, low-literacy populations, and consumers with special dietary needs.[clxxxvi, clxxxvii]

FDA and USDA developed print and video informational products for widespread use with consumers. The campaign logo, various handouts and public service announcements were also available in the public domain via the Internet or the campaign's clearinghouse. A set of print and video materials helped inform stakeholder organizations and groups working with consumers. These partner-focused materials also provided campaign messages and suggested educational activities.[clxxxviii]

The campaign convened national conferences to secure stakeholder buy-in and keep them informed. It encouraged joint nutrition education projects by connecting potential partners and created a clearinghouse for food labeling education materials and programs. FDA and USDA officials presented at consumer, health and industry gatherings. The campaign partnership with KIDSNET, a private group, sought to reach children through the media. Some food industry groups encouraged customers to use NFPs.[clxxxix, cxc]

The campaign's many partners, albeit through disperse efforts, did inform many Americans about the new nutrition label. According to FDA, during the initial six months of the campaign, three million pamphlets, including some in Spanish and large print, were distributed.[cxci, cxcii]

FDA's current Web site has information and educational tools about NFPs, such as:[cxciii]
- Make Your Calories Count interactive learning tool (launched in 2006).[cxciv]
- Spot the Block campaign for youth ages 9-13 years, with parents as a secondary audience (launched in 2007). The goal is to encourage NFP use when they select foods. In addition to the Spot the Block Web site, the campaign has the Cartoon Network as a partner to advance the brand and deliver messages via its television and online interactive media channels. Video, online and print media feature popular Cartoon Network characters.

Examples of messages include "For the real facts on nutrition, go to spottheblock.com" and "Getting the most nutrition from the calories you eat will help you with healthy weight management."[cxcv]

- Downloadable consumer information brochures, including a few in Spanish, on the FDA Web site. Topics include the new trans fat NFP listing, use of NFPs with an emphasis on calories and serving size, calcium intake and information on saturated fat and cholesterol on NFPs.
- Food labeling education video (circa 1996).
- High school toolkit for food labeling education (circa 1994).

To publicize the nutrition labels in mainstream media, FDA had a multi-media public relations initiative with public service announcements for television, radio and print.

FDA has also worked with federal agency partners to integrate label education into other consumer information Web sites and programs. (Labeling education programs, for example, seek to help consumers use NFP information, including percent daily value, to compare products and or to gauge the relative significance of product in their total daily diet.[cxcvi]) One example is the Powerful Bones, Powerful Girls Web site for adolescent girls. It has a page on using NFPs to identify calcium values and apply that information to meet their need for 130 percent daily value.[cxcvii] Nutrition labeling education is also part of federal nutrition education and services targeting lower income families, such as the Expanded Food and Nutrition Education Program, Food Stamp Nutrition Education Program and WIC Nutrition Services.

To encourage the development and testing of grassroots models, FDA currently offers some grant funding to organizations with food safety, food defense or nutrition education projects.[cxcviii]

Testing and Evaluation

FDA has a history of working with other federal agencies and private organizations to track consumers' awareness of, use of nutrition labeling, and potential effects on consumption.[cxcix] Through the National Nutrition Monitoring and Related Research Program, federal agencies have coordinated efforts to track food and nutrient consumption.

Data Sources and Measures

To obtain baseline data on consumers' use of food labels, FDA, USDA and the HHS Office of the Assistant Secretary conducted a national telephone survey.[cc] Currently, FDA obtains data

from a variety of sources to monitor nutrition labeling practices, use of nutrition labeling by consumers, and marketplace trends.

- The FDA's periodic Food Label and Package Survey to track manufacturers' labeling practices every three years
- Periodic FDA national surveys to gather information about consumer knowledge and attitudes about dietary guidance, food selection and diet (titles of this survey have changed)
- Market data and trend analyses from government, nonprofit and commercial sources
- Public-health surveillance data (such as the National Health and Nutrition Examination Survey by the Centers for Disease Control and Prevention)
- Use of the federal rulemaking process to obtain comments on proposed changes
- Internal and external scientific consensus statements about diet, nutrition and health, such as those by FDA's Obesity Working Group, the 2005 Dietary Guidelines Advisory Committee, and the National Academy of Sciences

FDA also conducts its own consumer research when resources permit. For example, it recently had funding for focus groups and an Internet-panel experiment on front-package symbols.[cci]

Primary measures are consumer use of NFP and other nutrition labeling elements, including frequency of use when shopping, use when buying products for first time and use in selecting foods to eat. Some studies and surveys ask consumers about specific NFP elements that they consider in their decision making. Some data sources track trends in NFP use. As possible, NFP use is examined for different population groupings (such as health status, income, education levels, age, race/ethnicity).

Other data (from various sources, mostly outside FDA) pertain to:
- Impact of label use on purchasing decisions, often using survey instruments asking consumers to recall past decisions and NFP influence on food consumption.
- Consumer comprehension and understanding of NFPs.
- Consumer decision making on and behavior with buying and consuming food.
- Market penetration of NFPs as well as health and nutrient content claims.
- Comparisons of how consumers use NFPs in relationship to other information that the manufacturer includes on the food label.
- Research on diet, health, nutrition and more.
- Processed and packaged food industry trends.
- Food consumption.

Use of Data

The food industry is dynamic, and U.S. consumption patterns are continually evolving. To keep pace, FDA officials monitor trends and, as needed, draft new regulations for comment, revision and finalization. For example, the popularity of "single-serving" packaging has grown in recent years. These are any packaged foods with less than 200 percent of the FDA single-serving definition. Because consumers quickly scanning the NFP may not notice that the declarations are for a portion of the package, FDA has solicited comments on the benefits of updating serving-size regulations.[ccii] (See the Barriers and the Potential Future Changes sections for other examples.)

FDA uses the results of its Food Label and Package Survey and other studies to inform policy and regulatory decisions.[cciii]

Pre-Regulation Format Testing

In 1991, FDA sponsored two experimental studies to examine consumers' ability to effectively use a couple of alternatives labeling formats. The findings affirmed FDA's plans to express nutrient declarations as a percentage of a reference value. The agency also drew on published research. FDA conducted consumer research to develop effective messages for the public information campaign.[cciv, ccv]

Impact on Consumer Behaviors

NFP and related labeling requirements aim to provide Americans with a reliable, standardized set of information about nutrient content, in relation to their daily diet, to aid their food decisions.[ccvi] Taylor and Wilkening, retired FDA officials (2008), describe nutrition labeling as an "essential link between the motivation to make dietary changes and the ability to do so."[ccvii]

By supporting the overhaul of labeling, NLEA had the *prima facie* effects of:

- Increasing the number of products that had an NFP (by making the system mandatory).[ccviii] In 1997, FDA estimated that NFPs appeared on more than 300 billion food product containers.[ccix]
- Expanding the range of nutrition information on each food product.[ccx]
- Improving the potential usefulness of information in nutrition labeling.[ccxi]
- Enabling consumers to directly compare products for nutrition content.[ccxii]
- Providing consumers with some assurance – and a way to directly assess on their own through the NFP declarations – that health and nutrition content claims on a product are justifiable.[ccxiii]

In 1995, about half of Americans indicated that reading the food label had changed their food-buying decision. A baseline study in 1990, when nutrition labeling was voluntary for many foods, found one third of consumers reported this impact.[ccxiv]

In a study with 1,400 adults who buy half or more of their households' food, researchers found these consumers tended to rely on health or nutrition content claims for informing their buying decisions. The presence of claims truncated their search for additional product information, including NFPs, on package sides or back panel. Roe, Levy and Derby (2008) interpret these findings as consumers' preference for composite information (i.e., a piece of information comprising multiple data points), the availability of which is associated with reduced information search. They also note that claims appear on the front where consumers can readily see them.[ccxv] A separate study found summary information assisted consumer comprehension about nutrition content when study participants had only one brand. When participants had multiple brands for comparison, the summary information had less of an impact or no effect.[ccxvi]

A few studies suggest consumers tend to pay more attention to negative (often unhealthful) attributes than to positive (often healthful) attributes.[ccxvii, ccxviii] In various surveys, consumers indicated they changed a decision to buy a particular item because of information in nutrition labels; this influence tended to occur when consumers wanted to minimize negative nutrients.[ccxix] Label use can affect purchasing behaviors when the information in the label alters how consumers perceive product value, according to a literature review by agricultural economist Andreas Drichoutis et al (2006).[ccxx]

Some studies of food purchases pre- and post-NFP mandate suggest rising consumer awareness of the differential value of nutrients in their diets.[ccxxi] Drichoutis et al (2006) found empirical studies have demonstrated that "provision and use of information can significantly change dietary patterns." Positive effects included increased intake of better quality of foods or reduced consumption of lower quality foods.[ccxxii]

Variyam (2005) explores, but does not reach a conclusion about, whether the governmental nutrition labeling mandate could widen health disparities: "Economic theory suggests that those who use an input most heavily also benefit the most from a reduction in the price of that input."[ccxxiii] Data from a variety of studies indicate persons with postsecondary education or with health and nutrition concerns have higher rates of NFP use than other consumer groups (see Descriptions of Users section). Others suggest that if the NFP design is effective in minimizing information search and processing costs, such as by a presentation that can be

used without math, it would not necessarily exacerbate disparities and could help lessen them.[ccxxiv]

The ability to improve diet requires access to useful information and some basic skills to make choices that promote health and reduce disease risk.[ccxxv] A small set of studies has connected NFP use with improved dietary quality, but some studies have produced different results.

- The Obesity Working Group's literature summary noted there is some evidence that consumers and family-clinic patients who use food labels are more likely to eat a low-fat diet than nonusers.[ccxxvi]
- A multivariate analysis of two national datasets found consumers who use food labels, regardless of income, have better dietary quality than non-users; however, label use appeared to have a stronger benefit for higher-income Americans than those with lower incomes.[ccxxvii]
- A case-control study with Latinas with and without diabetes found label users tended to eat fruits and vegetables frequently and consume salty snacks and sweets less frequently than nonusers. [ccxxviii] A study with African Americans also found label use correlated with fruit and vegetable consumption and lower fat intakes.[ccxxix]
- Available evidence indicates few consumers use NFP information to help manage weight.[ccxxx, ccxxxi]
- In a regional study, patients who had lower fat intake and ate more fruits, vegetables and fiber were more likely to use nutrition labeling information when buying food than other patients.[ccxxxii]
- Using federal national food, diet and health knowledge surveillance data from 1994-1996, the Economic Research Service found a positive statistical correlation between label use and increased fiber and iron intake. Label use did not appear to mediate fat or cholesterol consumption.[ccxxxiii]

In its evidence review on food marketing to children, an Institute of Medicine panel determined that "there is little evidence that the information on food labels, at least as currently structured, has a significant impact overall on eating or food purchasing behaviors."[ccxxxiv] Information is just one part of engaging people in improving their diets; guidance and motivation to make healthy food choices are also necessary.[ccxxxv]

Impact on Food Industry

Reflecting on the NFP design process, Belser noted:

Sophisticated manufacturers that value consumers have adopted the [NFP] guidelines wholeheartedly. Others just may not understand the value consistency lends to ease of reading, comprehension and consumer acceptance.[ccxxxvi]

Some evidence exists that nutritional quality of food improved somewhat after NLEA, but study results were inconsistent. Also, the influence of NLEA, as compared to market and media influences, is unknown.[ccxxxvii, ccxxxviii]

The addition of trans fat declarations demonstrates how NFP components can affect industry. Prior to the mandate, many products contained trans fat, and manufacturers did not promote the absence of trans fat in products without it. Consumer awareness was low of the risks associated with trans fat. After the NFP required listings included trans fat, nearly 5,500 "no trans fat" product introductions occurred in 33 months.[ccxxxix]

In recent years, an emerging trend is for food manufacturers to select some NFP data to present on the front panel, along with any health or nutrition content claims. For example, Kellogg created a set of "nutrition at-a-glance" tabs on the upper right of cereal boxes. The tabs display both amount and percent daily value per serving for select nutrients: calories, total fat, sodium, sugars, iron and protein. A different approach is General Mills with its Curves Whole Honey Crunch cereal, which has the visible claim of "28g[rams] whole grain per serving" in the middle of the front label. In a smaller font at the bottom is a note that each serving has 5 grams (20 percent daily value) of dietary fiber.

Grocery chains have also created their own health-oriented labeling, such as Safeway's new Eating Right brand with bright circles on the front labels to highlight attributes such as "low fat" and "high in protein." The Center for Science in the Public Interest notes these practices may be helpful to consumers, but also have the potential to "be deceptive, and, because they have differing criteria, taken together, they may end up being more confusing that helpful to consumers."[ccxl]

In the Institute of Medicine's 2006 report, *Food Marketing to Children and Youth: Threat or Opportunity,* the scientific panel concluded that:

The consistency, accuracy, and effectiveness of the proprietary logos or icons introduced by several food companies as positive steps to communicate the nutritional qualities of some of their branded products to consumers have not been evaluated. Without an empirically validated industrywide rating system and approach, efforts to use such graphic portrayals on food labels may fall short of their potential as guides to better food and beverage choices by children, youth, and their parents.[ccxli]

Front-panel space is highly valuable real estate. Companies would not be giving health and nutrition information prominent placement on front panels if consumers were not using it to guide their food choices. This evolving practice might indicate food industry could be receptive to considering a major change in nutrition labeling requirements.[ccxlii]

The final sections provide crosscutting insights from former and current FDA officials as well as from outside experts.

Observations by Insiders

- Visual consistency and extensive placement makes NFP a highly recognized image. FDA adapted the NFP visual design for use as the standardized "Drug Facts" panel that drug manufacturers must include on many over-the-counter medications.[ccxliii] Similar panels have appeared as appliance energy facts and in vision tests in optometrists' offices.[ccxliv]
- According to Belser, four graphic design elements were essential to NFP success.
  - "By defining the point size, we defined a sizable chunk of real estate on each product package – considerably more than had been used before. It's visible to the naked eye!
  - "By giving the label a boldfaced title, we ensured scanning readers would know how to recognize the label immediately.
  - "By putting a one point rule around the label, we defined its territory, making certain manufacturers could not encroach on public property and disguise your nutrition information as something else.
  - "By using bold rules to separate sets of information, we ultimately gave the reader an easy roadmap through the label."ccxlv
- Taylor and Wilkening (2008) focus on the benefits stemming from the design decision of what came to be percent daily values (see Tool Design section; also the Audience and Use section summarizes study findings on consumer ability to understand and use percent daily value):

  [A] consistent system of percentages makes it possible for virtually all of the nutrients on the label to be declared in equivalent units and therefore to be readily comparable. A list of nutrients declared in equivalent units has the unique property that the list of values is self-anchoring; that is, values in the list can serve as references for one other. A low value on the list is likely to be a "true" low value within the context of the diet, a high value on the list is likely to be a "true" high value.[ccxlvi]
- Levy (1998), a senior FDA expert on nutrition labeling and consumer communications, describes the NFP as a "good tool for making product selections and confirming (i.e.,

reminding people of) popular nutrition beliefs." The NFP, according to Levy, is an "inadequate tool for helping people to plan diets, and it is unlikely to contribute itself to a better or more critical understanding of nutrition principles." He specifically notes "consumer inability to use math … present[s] a significant barrier to following dietary recommendations based on quantitative tasks."[ccxlvii]

- The rarity of changes to the NFP design, contents and structure may contribute to public perception that nutrient declarations are reliable and accurate.[ccxlviii]

- Commenting on the need for a public education campaign in 1993, Scarbrough, then-director of the Office of Food Labeling in FDA, observed: "The food label of the future will have more information and be more complicated. Its usefulness will be diminished unless consumers are taught what to do with the information."[ccxlix]

- Taylor and Wilkening (2008) note nutrition labeling by itself is unlikely to produce significant improvements in Americans' diets. They call for an organized infrastructure that brings together dietary guidance, consumer education and ongoing, robust research.[ccl]

- In contrast, few nutrition labeling education resources may be needed. The NFP provides information in a way that minimizes the need for consumers to do their own computations, as it was designed to do. The NFP was not designed nor intended to be an educational tool to develop consumers' knowledge about a healthy diet.[ccli]

- Taylor and Wilkening (2008) argue effective enforcement is crucial:

  Unless consumers can be assured that the statements are truthful and monitored appropriately, confidence in label statements, and in turn their use by consumers, is impacted negatively.[cclii]

Observations by Outsiders

- Laura Sims, former administrator of the USDA Human Nutrition Information Service, calls attention to the contributions of Kessler, whom she describes as the "most supportive actor" in policy circles:

  Kessler was vocal, active, and supportive throughout the rule-making procedure, and undeniably enthusiastic about the results in his press conferences and publicity tours, a real "champion" of the food labeling reform efforts.[ccliii]

- Economic Research Service analysts Golan, Kuchler and Krissof (2007) and others note that prior to mandatory labeling, consumers had little information about calories, fats or sodium levels in processed foods. Consumer advocates, public health, and even some manufacturers heralded the new nutrition disclosure requirements as a significant, exciting advancement.[ccliv, cclv]

- The uniform presentation that appears on most packaged foods and the thoughtful ordering of information help consumers identify and use the NFPs. The uniform design facilitates FDA oversight and aids manufacturer compliance with the mandate.[cclvi]

- Providing information or a new tool does not assure use. As characterized by Todd and Variyam (2008) in the Economic Research Service report on declining nutrition label use:

    Increasing access to and quality of information, however, can only go so far in achieving improvements in diet quality and public health. Achieving long-term changes also requires that consumers are motivated to use the information.[cclvii]

- Golan et al (2007) summarize their recent research findings:

    Mandatory food labeling is usually more successful at filling information gaps than at addressing externalities such as environmental or health spillovers associated with food production and consumption.[cclviii]

- FDA added trans fat as a mandatory NFP declaration, but had little funding to devote to educating consumers. This education gap contributed to at-risk consumers having problems with correctly interpreting trans fat levels in terms of their daily diet. Howlett et al (2008) note "maximizing the effectiveness of incremental additions to the panel depends on a coordinated attempt at educating consumers about the dangers and levels of a high-trans fat diet."[cclix]

- The current NFP design may be fundamentally flawed, according to some experts who note that consumers do not understand percent daily value and have trouble with percentages and applying the FDA serving size with the packaging and consumption habits. NFP is not a consumer-centric information tool.[cclx]

- Increasing resources for nutrition labeling education would not necessarily increase NFP use or healthful food choices because the tool design is ineffective, in part because the NLEA parameters are inflexible. Even changing the NFP-related regulations would take a lot of effort.[cclxi]

Appendix A. Key Informants

The perspectives in this case study have been synthesized from the wide-ranging comments of the people interviewed, the literature and other data sources. They do not necessarily represent the views of the Center for Advancing Health.

With gratitude, CFAH acknowledges the following individuals who participated in key informant interviews.

- Sue Borra, RD, President, International Food Information Council Foundation
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- Alan S. Levy, PhD, Chief, Consumer Studies Branch, Center for Food Safety and Applied Nutrition, U.S. Food and Drug Administration
- Christine Lewis-Taylor, PhD, RD, Scholar, Institute of Medicine, National Academies of Science, and former director of the Office of Nutritional Products, Labeling and Dietary Supplements, U. S. Food and Drug Administration
- Barbara Moore, PhD, President and CEO, ShapeUp America!
- Jessica Todd, Economic Research Service, U.S. Dept. of Agriculture
- Jayachandran Variyam, PhD, Chief of the Diet, Safety, and Health Economics Branch, Economic Research Service, U.S. Dept. of Agriculture
- Virginia L. Wilkening, MS, RD, formerly deputy director of the Office of Nutritional Products, Labeling and Dietary Supplements, U. S. Food and Drug Administration

Appendix B. Other History Notes

Between 1974 and 1990, the following forces helped marshal support for policy changes, which led, in time, to the NLEA.

- Longitudinal epidemiological and clinical research produced a growing evidence base connecting diet, disease and health. (Some of these studies began in the mid-20th century after health professionals observed correlations between cardiovascular and other chronic disease trends that seemed to parallel changes in the national diet before, during and after World War II.)[cclxii]

- Publicized findings on the connection between diet and health contribute to Americans' growing understanding about nutrition, diet, and chronic diseases.[cclxiii, cclxiv]

- The food industry began to use health and nutrition content claims on food labels, and Americans started buying more foods that they perceived as healthful.[cclxv, cclxvi]

- Some pre-NLEA food labels and packaging made questionable claims. Public confidence in the food labeling system eroded. Consumers complained to elected officials and consumer agencies. Some food manufacturers and consumer groups urged governmental actions to curb misleading labeling. State attorneys general started suing food manufacturers, and state lawmakers began pushing for their own food labeling requirements.[cclxvii, cclxviii, cclxix, cclxx]

- In the late 1980s, the Surgeon General and the National Research Council issued separate reports that summarized strong evidence that diet affects chronic disease risk; the latter also issued specific dietary guidance. Both reports helped highlight the mismatch between the current voluntary label structure and dietary recommendations.[cclxxi]

- The Center for Science in the Public Interest engages more than 20 health and consumer groups in an advocacy coalition to press for food labeling reform. The coalition played an instrumental role in shaping and building support for the NLEA. During the subsequent rulemaking process, the coalition continued to apply pressure on FDA.[cclxxii]

- In 1989, with pressure from the public health community and consumer groups, FDA began a proposed rulemaking process to align nutrition labeling with the new dietary guidelines and reduce unjustifiable health and nutrition content claims.[cclxxiii, cclxxiv]

- Although many in the food industry initially opposed a mandate to disclose nutrient content, this position softened as state attorneys general began suing food companies for making inappropriate claims. State policy makers also explored regulatory options. By 1990, industry was ready to drop its prior opposition to a federal mandate that would:

- Preempt state regulation of nutrition labeling (thus enabling manufacturers to comply with one consistent set of requirements).

- Enable them to make health and nutrient content claims that met FDA standards.[cclxxv]

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U.S. News & World Report:
AMERICA'S BEST COLLEGES

A Case Report for Getting Tools Used

Table of Contents

Background

America's Best Colleges is the annual college rankings published in *U.S. News & World Report* using data from more than 1,400 accredited four-year undergraduate colleges and universities. This case study includes the following print and electronic editions of the 2009 undergraduate rankings and consumer guides that help students and parents compare higher education options:

- September 1, 2008, newsstand issue of *U.S. News & World Report*
- *Ultimate College Guide*, a wide-ranging guidebook with more than 1,700 pages of rankings, profiles and guidance
- *America's Best Colleges 2009*, the USNews.com free college portal at http://colleges.usnews.rankingsandreviews.com/college
- Premium online edition of *America's Best Colleges 2009*, a subscription service (log-in access provided at the same URL as the free portal)
- *America's Best Colleges* comprehensive package with the premium online edition and the *Ultimate College Guide*, which together enable access to the full set of content and tools

Companion rankings of higher education institutions include 12,000 graduate degree programs at 1,200 schools. However, this case study focuses only on the undergraduate rankings (and related tools), which many high school students and parents take into account as they make decisions about "purchasing" a college education.

America's Best Colleges has:

- National scale, with the inclusion of most undergraduate, four-year institutions
- National scope, with more than 15 million page views on the day that U.S. News released its 2009 rankings on its Web site.

Sponsor

U.S. News Media Group (U.S. News) is the publisher of *U.S. News & World Report* and *America's Best Colleges*. The company niche is "service journalism and news." By "service journalism," U.S. News means providing consumers with valuable information they can act on.[i]

U.S. News has built an "America's Best" brand for its popular rankings. In addition to undergraduate colleges, the privately held company also ranks the nation's "best" hospitals, health plans, cars and places to retire. U.S. News editor Brian Kelly describes the America's

Best franchise as powerful journalism that is "hard-data driven" to give consumers useful facts as well as products that enable them to look at the details themselves.[ii]

Business Model for *America's Best Colleges*

U.S. News aims to increase sales and advertising revenue from year to year on the *America's Best Colleges* print and electronic products by being an authoritative source of information that students and parents read to inform their choice of college.

To obtain content for its information products and comparative tools, U.S. News aggregates data from external sources, conducts an analysis using its proprietary ranking methodology and produces annual college rankings. It repackages the data into rankings tables and lists, individual college and university profiles, other lists and an interactive online database. The latter enables users to access detailed information about a single institution, compare schools or perform a customized search.

Advertising in the newsstand print edition and the USNews.com college portal generates significant revenue. U.S. News can charge premium rates for the newsstand issue, so with 82 pages in the 2006 issue, the company secured significant advertising revenues.[iii] To further boost advertising proceeds, U.S. News publishes the college rankings in regional newsstand editions. Updating the *America's Best Colleges* products each year helps assure future U.S. News sales and advertising revenue.

These activities aim to preserve and grow the U.S. News market share of the lucrative college-prep industry. (In 1998, *Time* magazine estimated consumers would buy $400 million (about $537 million today) in college-prep materials.[iv, v]) According to Jeffrey Selingo, the editor of the *Chronicle of Higher Education*:

> *The annual 'America's Best Colleges' issue of U.S. News & World Report has long been referred to as the magazine's swimsuit issue. Last year, the magazine's college issue was among 17 perennial "moneymakers," according to a list compiled by min: Media Industry Newsletter, and only one other of the magazine's issues ("America's Best Hospitals") made that perennials list.[vi]*

Started as a one-time experiment, *America's Best Colleges* has evolved into a signature product for U.S. News and is foundational in the company's overall brand strategy. Publicity related to *America's Best Colleges* helps keep *U.S. News & World Report* as a household name in a market dominated by its rival newsweeklies, *Time* and *Newsweek*.[vii]

Historic Milestones for *America's Best Colleges*

1983	Hoping to "garner attention and sell magazines," as described by Alvin Sanoff (2007), U.S. News first publishes its groundbreaking college rankings based on a survey of college presidents.viii (Sanoff was managing editor of the U.S. News college rankings from 1992-1998.)
1987	U.S. News releases the first annual newsstand issue of *America's Best Colleges* and a new separate guidebook.
1993	U.S. News feeds content to CompuServe Information Services.
1995	*U.S. News & World Report* newsstand content (in general, which would include the annual college rankings issue) becomes directly available online at USNews.com.
1997	USNews.com debuts the online *America's Best Colleges*, with additional content than the guidebook, along with sorting functions.
2008	U.S. News updates USNews.com, including the college rankings portal.

Consumers' Decision Making on Colleges

Many Americans put considerable time and effort into selecting a college or university, whether for themselves or with a child. They do so because a college education:

- Is an experience good in which the actual value or quality cannot be fully known until the individual enrolls and progresses through an academic program. For some, the value may not be known until s/he graduates with a degree and begins a career. Even with many sources of information, including campus visits, most people find it difficult to prospectively evaluate one college, let alone compare multiple schools.
- Is an expensive purchase, including the opportunity cost of reduced employment earnings while the student is obtaining the college degree. The desired return-on-investment is higher earnings, increased career mobility and an improved quality of life than would be possible without a four-year degree.[ix, x] Recent College Board data indicate that tuition, fees, and room and board for a four-year degree will top $55,000 for in-state students at a public institution and $130,000 at a private school.[xi] Although financial aid such as grants and scholarships may reduce the actual outlay, the average student leaves college with about $20,000 in loans.[xii]

The college choice process is a new experience for many traditional students (i.e., high school graduates in their late teens or early twenties). Most Americans make only one or a few college decisions during their lifetime.

The selection process facing prospective college students today is different from what their parents experienced. Today's students and families:

- Begin the college choice process earlier in the high school years, because compared to the mid-1970s:
- The decision is increasingly complex.
- A plethora of information exists.
- Competition for admission to prominent institutions is intense.
- Early-admission and early-decision options are widely available and used.
- Feel substantial pressure to choose and be accepted by the "right" college.
- Seek out the best value for their education dollar and consider college quality or academic reputation as an important factor.
- Use more information sources in their decision making.
- Apply to more colleges.[xiii, xiv, xv, xvi, xvii]

College-Choice Process for Traditional Students

After making a preliminary decision to attend college, a typical college-choice process for traditional students has four phases.

Initial exploration: college-bound students, often in the junior year or earlier, explore their options and identify factors important to their choice.

Consideration-set: students, towards the end of the junior year, narrow their options to a smaller number of appealing schools to which they might apply or enroll if accepted.

Application: students further reduce the number of colleges in their consideration set and submit applications as seniors.

Enrollment: students compare offers and enroll in a school.[xviii, xix, xx]

Traditional students commonly use these information sources in the college-choice process. (Listed in no particular order.)

- In-person campus visits and virtual tours
- Marketing promotions from colleges, including their Web sites
- College ranking guides
- Input from parents, friends, teachers, guidance counselors and others
- Multi-media DVDs, Web sites and teleconferences (varied sources)[xxi]

National survey data on entering college freshmen indicate increased use of online information.[xxii] In focus groups, high school students reported using search engines for general inquiries, consumer Web sites for background on different institutions, and colleges' Web sites for institution-specific information.[xxiii]

For African-American students, studies have found that inadequate access to information, particularly about college costs and financing at different colleges, is a significant barrier to pursuing higher education.[xxiv, xxv] Many low-income students first need background knowledge about college, such as differences among types of higher education institutions and aspects to consider when choosing a school. Rankings focused on academic reputation tend to less useful to this group.[xxvi]

College-Choice Factors for Traditional Students

Traditional students tend to consider a complex mix of factors when choosing a college. These factors can be grouped into four areas.

Academic quality, such as objective data on and subjective perceptions of academic reputation, quality of academic program in the chosen field and student-faculty interaction

Practical, such as proximity to home, college cost, financial aid and job and graduate-school placement rates

Social, such as input and encouragement from parents, siblings, friends, teachers, guidance counselors, college admissions officials and mentors

Environmental, such as campus life outside the classroom, student body composition, social atmosphere and campus facilities and services[xxvii, xxviii, xxix, xxx, xxxi]

Within the above factors, college rankings can be one of several information sources about academic reputation. *America's Best Colleges* and other sources of college profiles often present multiple indicators of academic reputation.[xxxii]

Students' individual characteristics – such as their academic abilities, gender, religion, academic and personal interests, career goals and more – may affect how students weigh various factors.[xxxiii] For example, high-achieving students are more likely than lower achieving students to report academic quality to be an "important" factor, but also to describe many other factors as equally or more important.[xxxiv, xxxv. xxxvi] In terms of race and ethnicity:

- An empirical study of Asian-Pacific American respondents in a 1997 national survey of college freshmen revealed ethnic subpopulations varied widely in their college-choice process, factors and ultimate enrollment decisions. Socioeconomic status had differential effects, but there was no clear pattern within or across subpopulations.[xxxvii]
- For African Americans, faith communities may influence college choice. A small qualitative study of African Americans in 20 California high schools found churches helped them get information about choosing a college and raising awareness about historically Black colleges and universities. Some churches offered scholarships.[xxxviii]
- Many Hispanic and African Americans prefer to go to a school close to home, according to a National Postsecondary Education Coalition report. Caregiving responsibilities for a sibling or a family member with a disability could be one factor.

Navigating the complex process of selecting, applying to and enrolling in college can be particularly challenging for first-generation and low-income groups.

> *First-generation* students (i.e., those who are the first in their families to go to college) tend to have fewer college-educated role models and have less starting knowledge of about colleges and selection.[xxxix] Proximity to family; influences from parents, role models, guidance counselors and teachers; and financial assistance have a major influence on choice.[xl, xli] Also, some first-generation students, especially those with less academic preparation, initially decide to not pursue college; after a few years of work, they may reconsider that choice.[xlii]

> *Low-income* students are more sensitive to college costs and financial aid in their decision about college. They may have a small consideration set.[xliii] A Lumina Foundation for Education report suggests low-income parents, particularly those who never attended college, may have inadequate "ability, time and insight to provide guidance on the college-choice process."[xliv]

Nontraditional Students: A Different College-Choice Process

The college choice process for nontraditional students (such as persons age 24 or older) is different. Based on a literature review and focus groups, the National Postsecondary Education Cooperative found that nontraditional students have a condensed college-choice process. Often they "decide to attend or return to college and decide on a particular college at the same time."[xlv] They base the decision primarily on convenience, including scheduling and class location; costs of attending; and the availability of their chosen course of study. Because many nontraditional students have work and family responsibilities, other influences may include employment, support from spouse and family considerations.[xlvi, xlvii, xlviii]

U.S. News Objectives for its College Rankings and Consumer Guides

U.S. News is a journalistic enterprise. In the 1980s, its editors considered the initial college rankings as a potential opportunity to boost *U.S. News & World Report* subscription and newsstand sales, increase its market share among newsweeklies and attract advertising.[xlix]

Today, U.S. News describes its objective for *America's Best Colleges* as to "provide a comparative measure of the quality of the academic program at each institution" as part of its "News You Can Use®" mission of providing readers with useful, relevant information.[l, li]

Audience and Use

The chief audience for the U.S. News college rankings and consumer guides are college-bound students and their families. Specific segments include "parents and students looking for the right school"[lii] and readers in middle- and upper-income households who are attractive to potential advertisers. Guidance counselors and other people who assist students in choosing and applying for college are a secondary audience. The higher education sector is an additional audience.

Current Use

Education Week describes *America's Best Colleges* as "probably the best-known" of the college-ratings guides.[liii] It has national visibility.

- Most people access *America's Best Colleges* rankings online rather than in print. On the August release day for *America's Best Colleges* 2009, USNews.com had 15 million page

views of its college portal.[liv] Compared August 2007, USNews.com page views rose 50 percent and unique visitors doubled in August 2008.[lv]

- About 1.8 million people have a weekly subscription to *U.S. News & World Report*, which includes the annual college rankings (see Figure 1). This subscription base has been steady for the past five years.[lvi]
- Colleges and universities with high national or regional U.S. News rankings publicize their standing in regional media and in marketing materials for students, alumni and donors. In 2003, *The Atlantic Online* reported *America's Best Colleges* has a reach of 11 million people and is the most widely read of all college guides and rankings.[lvii]

Other data suggest the splash from *America's Best Colleges* is limited. In 2007, U.S. News indicated the college newsstand issue only tops sales of the average issue by 5,000-10,000.[lviii] (In the first half of 2008, the company had more than 32,000 in total single-copy sales.[lix]) About 50,000 people buy premium online subscriptions to *America's Best Colleges*, or less than 1 percent of USNews.com visitors.[lx]

As depicted in Figure 1, the audience of *U.S. News & World Reports* and USNews.com tends to be middle-aged, upper income adults (median age is 49 years, median household income is $64,000). The current audience profile also indicates 30 percent have professional or managerial job titles, and three quarters of *U.S. News & World Reports* have used the Internet in the prior month.[lxi]

Figure 1. U.S. News & World Report's Audience Profile, 2008

Demographics	Percent Composition
Age	
18-49 years	53%
25-49	43%
25-54	53%
55+	22%
Annual Household Income	
$75,000+	41%
$100,000 +	28%
$150,000+	13%
Gender	

Male	59%
Female	41%

Source: MRI Doublebase 2007, as reported in *Audience Profile.* (2008). Retrieved Nov. 24, 2008, from U.S. News Web site at http://mediakit.usnews.com/audience/profile.php.

Descriptions of Users

Student and family characteristics affect use of college rankings. The Lumina research review indicates higher socio-economic groups carefully consider college rankings as a way of identifying top institutions.[lxii]

National surveys indicate that college rankings (source unspecified) are not a primary influence on college choice, but that some student groups pay attention to rankings. In the Higher Education Research Institute's survey of entering college freshmen:

- In 2006, 16 percent described college rankings as "very important" in why they chose their particular school. In the 1995 survey, only 10 percent described rankings in national magazines as "very important."[lxiii]
- Rankings tended to be more important to and used by students who are from higher income families.[lxiv, lxv]
- Relative to other student groups, college rankings were important to high-achieving students and students who cared about academic reputation, sought advice from adults in making their decision and had college-educated parents.[lxvi]

A national survey in 2006 of high-achieving seniors obtained similar results.

- In deciding where to apply, 34 percent reported that college rankings (source unspecified) played a role, but to a lesser degree than 13 other information sources.
- Students who decided to enroll at an out-of-state college were more likely to have considered *U.S. News & World Reports* rankings in their college application decision than their peers who chose an in-state college.
- In the enrollment decision, 55 percent rated high *U.S. News & World Report* rankings as being important. At least 10 other factors had a more prominent role.[lxvii]
-

A longitudinal study of high-ability students entering Colgate University found the U.S. News ranking, along with net college cost, influenced enrollment decision.[lxviii]

In an Education Sector forum in 2006, Kelly interpreted these types of survey results as an indication that students use the rankings responsibly. Rankings are just one of many factors in the college choice process, and students often consider other factors to be more important.[lxix]

It is unknown whether students and parents are aware of the controversy about U.S. News's ranking methodology (see Constraints section). If they have some awareness, they may still view the rankings and scoring as a useful indicator of school prestige.[lxx]

Descriptions of Non-Users

In general, both young people who self-select to not pursue higher education and also adults who lack a high school degree or equivalent do not use college rankings, guidebooks and associated tools from any source. Low-income populations are disproportionately less likely to attend college than students from families with higher incomes. For example, half of low-income high school seniors do not pursue postsecondary education right after high school graduation; in contrast, 80 percent of high-income students do.[lxxi]

Nontraditional and first-generation students are less likely to rely on or use college rankings from any source.

- Among nontraditional college freshmen (25 years and older) in the 1995 Higher Education Research Institute's survey, only 14 percent said rankings were somewhat or very important in their decision making.[lxxii]
- Nontraditional students often apply to only one institution, which is chosen on the basis of cost and convenience. School prestige may factor into the decision if two institutions are similar in terms of cost and convenience.[lxxiii]
- First-generation students tend to not use college rankings. They tend to prefer colleges where other people from their hometown attend; their enrollment decision tends to focus on which school offers the most financial assistance.[lxxiv]

In general, *U.S. News & World Report* is not a leading information source for lower income Americans. This group may be more likely to read *Woman's World* or *National Enquirer*. Advertising in *U.S. News & World Report's* college rankings issue suggests, as do U.S. News's data in Figure 1, that the primary audience is higher income audiences. Further, U.S. News guidance about the college choice process, which economically disadvantaged students may need most, is a less prominent feature of its *America's Best Colleges* products.[lxxv, lxxvi]

Resources

In 1992, U.S. News's college rankings were more prominent than *Money*'s Best College Buys, according to David Webster (1992), a higher education scholar. Webster identified the following four advantages that contributed to the success of *America's Best Colleges*. Supporting data accompanies the first of Webster's points.

First, by 1991 U.S. News had published seven rankings, while *Money* had published two.[lxxvii] Other scholars and professionals agree that first-mover advantage helped U.S. News sustain its leading position among college rankings. Prior to 1983, most college guidebooks focused on school profiles and application tips.[lxxviii] U.S. News was the first mass-media company to not only create a single overall rating score for colleges but also to publish college rankings for academic reputation, which U.S. News described as academic quality.[lxxix] The first competitor, *Money*, only entered in 1990 when that magazine began publishing its own rankings.[lxxx] Additional competitors moved in afterwards as recognition spread that students and parents were paying more attention to academic quality and potential outcomes because the cost of a college education had risen so much.[lxxxi, lxxxii]

Second, U.S. News had almost 2 million subscribers in the early 1990s, while *Money* sold only 300,000 guidebooks.[lxxxiii]

Third, U.S. News made its college rankings a prominent feature, while *Money*'s rankings in its college guidebook could be easily overlooked.[lxxxiv]

Fourth, U.S. News published its methodology and welcomed opportunities to discuss rankings with college officials and other media, while *Money* did not disclose its methodology and provided limited access to its editors.[lxxxv]

Other resources that U.S. News has employed include the following.

- The U.S. News position as trusted source of news and information. This position contributed to people perceiving *America's Best Colleges* as credible information.
- The development and control of its college ranking methodologies, which enables U.S. News to foster its position as journalistic institution that is an impartial and credible authority.[lxxxvi,lxxxvii, lxxxviii, lxxxix]
- Regular changes to the U.S. News methodology. This practice stirs up the rankings, encourages broad media coverage and protects market share.[xc, xci] Modifying its methodology in response to feedback from higher education helps U.S. News maintain working relationships with schools and tell students that the new methodology provides

improved information for their use.[xcii] The trade-off with making incremental adjustments is that the rankings ought not be used for longitudinal comparisons.[xciii]

When *America's Best Colleges* started, the primary input was its survey of college officials asking them to rate peer institutions; the survey was conducted with minimal staff resources. Over the years, U.S. News added new data points, created a more complex methodology and began using the Internet to facilitate data collection and verification. The company also expanded the product line, such as creating a college portal on USNews.com. One constant has been that U.S. News updates the rankings, college profiles, and guidance only once a year.

Producing the college rankings and consumer guides today requires more staffing resources than in the past. Even so, U.S. News has no full-time dedicated staff for *America's Best Colleges*. During peak periods:

- Two analysts, four data collection specialists and a computer programmer develop the college rankings.
- Two or three employees focus on the design of the *America's Best Colleges* portal.
- Three staff members attend to web publishing.
- Many regular editorial staff and freelancers prepare content for publication.
- Public relations staff and an outside contractor spend a couple of weeks publicizing each year's new results.[xciv]

Constraints

The U.S. News ranking model depends on widespread voluntary participation from college administrators.[xcv] In 2006, 58 percent of institutions submitted reputational ratings; in 2007, only 51 percent completed it.[xcvi] About 70 schools currently refuse to rate peers.[xcvii] For non-reputational data, U.S. News has multiple sources that it can tap if schools will not directly provide their information. (See also Tool Data section.)

Another major constraint is the need to maintain public perception that *America's Best Colleges* is a reliable source of information, especially when many higher education scholars and college officials have criticized the U.S. News ranking methodology.[xcviii]

The primary areas of criticism are:

- *Validity*: questionable correlations between academic quality and the variables. Some experts decry the use of subjective information, especially "reputation" as rated by

administrators at peer institutions. Also, ranking position is based on the overall score, even if there are no statistically significant differences.

- *Reliability*: the quality of data used for ranking is uncertain, with allegations that some college officials provide inaccurate data because they are under pressure to improve their own schools' ranking positions or they are inadequately informed about their peer institutions to rate them.

- *Oversimplification*: the practice of producing an overall score disregards the need for most students to consider a wide range of factors in making a choice.

- *Arbitrariness*: the methods have been viewed as arbitrary given the lack of empirical support for weighting. Changes in the assigned weights add to doubts about the subjectivity of the weighting. Regular methodological modifications alter the rankings from year to year, creating shifts in rankings, even in the absence of actual change in academic quality.[xcix, c, ci, cii, ciii, civ]

(Notably, the higher education community has raised similar or even more serious criticisms about other sources of college rankings.[cv])

U.S. News has responded to this criticism. For example, the company:

- Revised its methodology in 1988 to incorporate "objective" variables and include additional administrators in rating peers. As recalled by Sanoff (2007), higher education leaders at that time were portraying the rankings as a "beauty contest." The magazine editors altered the methodology to preserve brand credibility and bolster the future of what was becoming a successful enterprise.[cvi] (See also Lessons Learned section for another change in response to sector pressure.)

- Altered data collection so as to better verify institution-provided data against other sources in 1995 in response to a *Wall Street Journal* article reporting how colleges manipulated their submissions. The editors made the changes to protect the credibility of the rankings.[cvii] (See also Tool Data section.)

Barriers

In promoting *America's Best Colleges*, U.S. News has encountered, and continues to face, three primary barriers.

- The availability of data on which to base ratings and rankings. At the 2006 Education Sector forum, panelists acknowledged the lack of a standardized, coherent system of data on academic learning outcomes. They characterized as "inputs" the public data that is

available on all undergraduate institutions: rates on applications, enrollment and selectivity; applicants' test scores and grades; faculty and financial resources.[cviii]

- Competition for the attention of students, families, teachers, and guidance counselors is intense. The college-prep industry continues to grow.
- A sizeable share of college enrollment growth is from nontraditional college-bound groups – such as adults 24 years or older, persons wanting to attend part-time, independents without parental financial assistance and students with dependent children. Nontraditional students are less likely to consider rankings in college choice.[cix, cx]

Facilitators

Prior to 1983, students and parents who wanted to consider the quality of the academic learning experience and potential outcomes had limited standardized data that was readily available for most colleges and universities. The *America's Best Colleges* helped fill this gap. As the U.S. News college rankings and guides evolved, they provided comparative information about school resources, faculty, academic reputation, graduation rates, class size and more – all possible indicators of the potential value of the education offered.[cxi, cxii]

Each year, *America's Best Colleges* attracts a lot of attention (see Audience and Use section). Many media impressions about U.S. News occur as colleges and universities publicize or react to changes in their rankings from year to year (see Publicity section).[cxiii] Criticism, although negative in nature, may perpetuate awareness of *America's Best Colleges.*

The use of U.S. News rankings in college and university marketing materials not only provides additional visibility, but also may appear as an indirect endorsement of the ranking outcomes. This external validation reinforces students' and parents' perceptions that *America's Best Colleges* offers reliable, helpful information.[cxiv]

Historic Facilitators

U.S. News first released its college rankings in 1983, a time in U.S. history when:

- Most Americans deemed postsecondary education or training as essential to economic mobility and labor market success. Many parents had attended college and aspired the same for their children. Increasingly, students and families associated attending a prestigious college with a desirable lifestyle and with economic and career mobility.
- The college-choice process was more complex than in the past. Students and families had more college options than ever, encountered more sophisticated marketing from schools and were more aware of what the Lumina report calls the "admissions game." As a result,

students and families invested unprecedented levels of time, money and effort in their decision-making process.

- Acting like consumers, students chose colleges by obtaining and using information from college guidebooks, campus visits and college prospectuses. Influential factors included academic programming and reputation, costs and financial aid, and campus characteristics, especially proximity to home, social atmosphere and enrollment size.
- Parents tended to set early parameters about cost and distance.
- The Higher Education Act of 1965 and ensuing reauthorizations, federal affirmative action policies and other federal higher education services substantially expanded low-income and minority students' access to college education. These policies created federal student financial aid, banned discriminatory practices, increased funding for historically black colleges and universities, and created programs that helped disadvantaged students pursue college.
- As a funding condition for institutions and their students, federal and state governments began requiring that colleges develop accountability systems in the late 1970s and 1980s. These systems provided data that could be used for ranking.[cxv, cxvi]

In subsequent years, external facilitators for the use of college rankings included:

- Continued growth in secondary and postsecondary student populations.[cxvii]
- Expansion of college options with the advent of e-universities offering online degrees.[cxviii]
- Heightened competition for admission to selective schools.[cxix, cxx]
- Cutbacks in guidance counseling resources in high schools.[cxxi, cxxii]

Public Policy Facilitators

As noted in the prior section, federal policy changes in the mid- and late 1990s increased access to college education and ushered in standardized data about higher education institutions. Changes in public policy continue to shape college choice factors and process. For example, ballot initiatives and court decisions have affected affirmative action policies at colleges. A small qualitative study of African Americans in Southern California identified renewed interest among students and parents in historically Black colleges and universities after the California university system ended affirmative action.[cxxiii]

Tool Design

America's Best Colleges started in 1983 when a small set of college rankings appeared in *U.S News & World Report*. Initially, the editors approached it as an interesting idea to try. After the

first three editions generated considerable newsstand sales and public attention, the company decided to make the college rankings an annual feature.[cxxiv]

In ensuing years, content expanded as U.S. News added institutions, comprehensive tables, actual scores, new datapoints, college profiles, guidance about selecting and applying to a college, information about financing higher education, online search and comparison tools, multimedia, consumer-generated contents and more. Today, college rankings and individual school profiles remain core content, but U.S. News promotes *America's Best Colleges* as a tool that helps students (and parents) with useful information and suggestions for this stage of life. At the Education Sector forum, Kelly described the rankings as a "good first step" in making a responsible college choice.[cxxv]

Because the college-prep industry continues to grow and is profitable, other groups – such as *The Princeton Review*, U.S. College Search, *Money* magazine and StudentsReview.com[cxxvi] – have developed and promoted their own rankings and consumer guides.

Tool Data

Each year U.S. News collects data from colleges and universities through a statistical questionnaire. U.S. News poses the questions using standardized formats and definitions established by external organizations, including the U.S. Department of Education. U.S. News analysts review submissions for potential errors and notable changes in data from the prior year. Participating schools then receive a data report noting potential problems. They can either amend the data or sign off on it; without this action, U.S. News will not publish or use the data for rankings. After U.S. News updates its database, schools receive a data verification report for a college official to officially validate. As an additional step to attain data integrity, U.S. News cross-checks submitted data with those from established sources, such as the National Center for Education Statistics. The final step is to review preliminary rankings results to flag schools that have a markedly different rank compared to the prior year. Analysts then take steps to identify or rule out potential data errors.[cxxvii]

Ranking Methodology

U.S. News rates colleges and universities by creating a composite weighted score drawing on two types of data.

- "Academic quality" indicators include the acceptance rate for applications; enrollees' standardized test scores and class rank; student retention; faculty resources (including compensation, terminal degrees); student/faculty ratio; institutional expenditures on

student education; and alumni giving rates. For national universities and liberal arts colleges, another indicator is graduation rates.

- Subjective measures are college administrators' assessments of academic quality at peer institutions.

Most schools have 15 indicators, to which U.S. News assigns a specific weight to each based on the editors' "judgment about how much a measure matters."[cxxviii] Each year, it pretests methodological changes to learn if the revisions will upend ranking outcomes. Too much change in rankings would generate doubts about reliability.[cxxix]

Using the resulting ratings, U.S. News ranks schools in each institutional mission category (such as national universities, liberal arts colleges) from "best" to "worst." Additional rankings are developed for geographic regions, popular undergraduate degrees and specialty categories.[cxxx] Ranking exclusions include specialized higher education institutions, micro-colleges, schools primarily serving nontraditional students and private, and for-profit universities.[cxxxi]

The company alters its methodology every year with substantive, cosmetic, or both types of changes.[cxxxii] Three advisory committees – college admissions deans, high school counselors and institutional researchers – provide a formal mechanism to obtain stakeholder input and get feedback on potential changes. Editors also meet regularly with college administrators and attend higher education conferences with the aim of having the methodology reflect current standards of practice for admissions and enrollment.[cxxxiii, cxxxiv] (See also Resources, Constraints, and Use of Data sections.)

Tool Description

Figure 2 provides an overview of the features of each electronic and print version of *America's Best Colleges*. The *America's Best Colleges* products provide two information sets. The best-known set is rankings tables of colleges and universities.

- Core rankings tables are "Best National Universities" and "Best Liberal Arts Colleges." Besides the overall school score, on which the rankings are based, these tables offer the peer assessment score, average freshman retention rate, graduation rates, faculty resources rank, percentage of classes by size, student/faculty ratio, percentage of full-time faculty, SAT/ACT scores of entering class, percentage of enrolling freshmen who were in the top 10 of their high school class, acceptance rate, financial resources rank, alumni giving rank and average alumni giving rate.

-
- Core rankings lists are "Top 50 Public National Universities," "Top Universities for Master's," "Top Baccalaureate Colleges" and "Up-and-Coming Schools." These lists only include the names of the institutions in ranking order. As portrayed in Figure 2:
    - o *Core-Plus* (in the free college portal) include the core rankings, as described above, plus some additional rankings lists, such as "Best Undergraduate Business Programs," and rankings of undergraduate business specialties.
    - o *Supplemental* rankings (in the *Ultimate College Guide*) provide rankings tables on schools by selectivity, higher acceptance rates for early-decision or early-action applications, best-value schools, cheapest public schools, schools offering the most need-based financial assistance, and more.

The second information set is college profiles for more than 1,800 institutions.

- *Partial* profiles provide top-line information, including the composite score, rank and tier (based on rank).
- *Expanded* profiles (*Ultimate College Guide*) provide an overview textbox with location, URL, public or private status, enrollment and key statistics, such as U.S. News ranking, tuition and room and board, average student debt, selectivity category and student/faculty ratio. Detailed information, in summary format, provides an overview of the undergraduate student body, admissions facts and figures, academic programs and faculty, costs and financial aid, campus life, student services, and college facilities. One section provides information about transfer and international students.
- *Full* profiles (in the subscription portal) let visitors access the widest array of information about each school.

Figure 2. *America's Best Colleges* Features by Product Type

Tool Feature	*Electronic* Products		*Print* Products	
	Free College Portal	Subscription College Portal	Newsstand Magazine	Ultimate College Guide
College Rankings	Core-plus	Full set	Core	Supplemen-tal set
School Comparisons	Interactive with some content	Interactive with expanded content	Static lists and tables by rankings	Static lists and tables by rankings
College Profiles	Partial	Full	Partial (9	Expanded

Tool Feature	Electronic Products		Print Products	
	Free College Portal	Subscription College Portal	Newsstand Magazine	Ultimate College Guide
			schools only)	
Personalized Search	Partial	Expanded		
Guidance: College Admissions	4	4		4
Guidance: College Financing	4	4		4
User-Generated Content	4	4		
Multimedia Content	4	4		
Index of Schools by Major Fields of Study				4
Advertising	4		4	4

[a]Only the premium online edition profiles have complete data.

The free-access USNews.com college portal offers:

- 100,000 pages of content on higher education in general, specific schools and rankings, all aspects of getting into and paying for college, standardized college admissions test dates, glossaries and study abroad opportunities.[cxxxv]
- Interactive selection guides so users can customize their search by location, major or graduate program, financial aid and costs, academics, campus, sports and activities.
- Blogs on developments throughout the education sector, news reports from campus newspapers, college financing and college rankings.
- A student center, described as a "one-click stop for forums to discuss college options, videos about campus life, an interactive calendar of test deadlines and college fairs, and more."[cxxxvi]
- Open discussion forums for consumers, professionals and organizations to interact.

In the premium online edition, subscribers can access these additional features.

- Expanded profiles with in-depth information on more than 1,800 colleges and universities
- Additional search options to obtain results personalized with the subscribers' interests; however, subscribers cannot customize the composite score weighting
- Comparative search functions that produce tables enabling subscribers to compare schools that they select on up to 14 points (including location, tuition costs, enrollment, peer assessment score, acceptance rate and more)

(For a contrast to *America's Best Colleges*, see Appendix B for a brief overview of Princeton Review's college ratings, rankings and consumer guide.)

Updating

Nearly all of the *America's Best Colleges* content, both print and online, is updated once a year to accompany the release of the current year's rankings. U.S. News frequently adds supplementary content on its college portal, such as sector news on its higher education blog.

In 2008, U.S. News upgraded and transformed the USNews.com Web site to attract new viewers and extend the time they spend on the Web site, which online advertisers want.[cxxxvii] This redesign extended to the college portal and other America's Best rankings to create some consistency within the brand and facilitate updating and maintenance by U.S. News's information technology team. From a user perspective, the redesign sought to provide users with a multi-layered and searchable content, expanded sorting capabilities, additional content, new interactive features and improved information accessibility.[cxxxviii] The redesign did augment search functionality for the college portal. A reported trade-off was diminished sorting interactivity.

Marketing, Promotion and Dissemination

Positioning and Branding

U.S. News has a layered approach to branding.

- U.S. News & World Report is "the leader in delivering reliable information that our audience can act on, whether it's voting for a president or selecting a healthcare plan."[cxxxix]
- America's Best offers authoritative information that "provide[s] readers with a wealth of relevant information that they can access and use daily, supporting many of life's most important decisions."[cxl]
- *America's Best Colleges* is the authority on and pre-eminent source of college information.[cxli]

Pricing

Figure 3 displays the pricing structure for the various *America's Best Colleges* products. Accessing the full set of U.S. News college rankings, profiles and associated tools requires buying both the print guide and premium online edition. Students can access much of the U.S. News college content for free in guidance counseling offices and libraries. They might also look through print editions at grocery stores and bookstores.

Figure 3. Pricing for *America's Best Colleges* 2009

Product	Price
USNews.com – college portal with basic content and functionality	Free
Newsstand issue of *U.S. News & World Report* with coverage of the new college rankings (included in an annual subscription, which costs $20 for print and $15 for digital edition only)	$4.99
Print edition	$9.95
Premium online edition	$14.95
Print edition + premium online service	$19.95

Placement

- The newsstand issue is available at grocery and book stores, pharmacies and other retailers
- The guidebook is available at traditional bookstores or by ordering from USNews.com and other e-commerce sites
- The electronic version is at USNews.com

In addition to the main channels above, U.S. News:

- Links with influential education websites.
- Partners with YouTube for the "Why My School Rocks!" college video contest in which college students can produce videos about their school. This YouTube page has a sponsored link to the USNews.com college portal.[cxlii]
- Has Gradzilla and Undergradzilla, Facebook applications with *America's Best Colleges* content and search features, plus student ratings.

Promotion

U.S. News releases the annual rankings and updated consumer guides in late August or September, when high school students' mindsets can shift from summer fun to serious planning for college.[cxliii] To keep the guidebook on the newsstand for a year, U.S. News titles

the edition with the upcoming year and refreshes the cover after six months without any content changes.[cxliv]

U.S. News purchases few, if any, print, direct mail, or television advertising for *America's Best Colleges* because the rankings receive a lot of publicity in the mass media and in college and university communications (see Current Use and Facilitators sections).[cxlv] U.S. News facilitates this process by providing colleges and universities with its press release announcing new rankings. Schools may use the press release in communicating with local or regional media.

The company uses search optimization strategies to attract Web site visitors. The goal is to have the U.S. News college portal appear in the top results of popular search engines.[cxlvi] (Note that U.S. News does not pay for sponsored links on Google.)

Messages

U.S. News promotes its journalistic products as "News You Can Use.®"[cxlvii] Messages about *America's Best Colleges*, particularly the complete online and print package, include the following.

- "[T]imely, relevant, and useful information about the college selection process"[cxlviii]
- A "fundamental resource for those families facing one of the most challenging financial decisions"[cxlix]
- The "most comprehensive look at how more than 1,400 accredited four-year schools compare on a set of 15 widely accepted indicators of excellence"[cl]

A less visible message to users is that the college rankings are "one tool, among many, that you should use to make the right college choice. The other factors to weigh include information from the school, campus visits, and the U.S. News college rankings."[cli]

Testing and Evaluation

U.S. News is a journalistic enterprise with a mass-circulation consumer magazine and Web site. It does little or no market research on *America's Best Colleges* to learn, for example, who is aware of its college rankings, who is using college rankings and consumer guides, how they are using the information and tools, and what the influence might be. Rather, the company is interested in indicators that directly affect the bottom line, such as:

- Sales of its *America's Best Colleges* print editions

- Advertising revenue generated by *America's Best Colleges*
- Publicity generated with the release of each year's *America's Best Colleges* ranking
- Page views of and unique visitors to the *America's Best Colleges* online portal
- America's Best College product sales and subscriptions
- Competitor performance

It also monitors participation by colleges and universities in the annual collection of data.

Data Sources

Sources of qualitative and quantitative data are as follows.

- Reader feedback through e-mails, telephone calls and letters to the editor
- Web analytics for the college portal
- Media coverage of the rankings, both quantity and nature
- Use of U.S. News rankings in college marketing
- Competitors' online portals and products
- Higher education conferences
- Media inquiries
- Commentary or studies on college rankings

Use of Data

To respond to feedback from users and the higher education sector – and to remain a leading resource in the college choice decision, U.S. News continually adjusts its methodology, print and online offerings and marketing strategy. For example, U.S. News:

- Restarted ranking undergraduate business and engineering programs in 1999 after a two-year hiatus based on what it described as "popular demand" from "so many families [who] have called to inquire about great programs."[clii]
- Added new categories, such as an "Up-and-Coming Schools" list of institutions that have improved their ranking or have notable innovations.[cliii]

Impact on Consumer Behaviors

Comparing multiple colleges is inherently difficult. As uncertainty increases on *any* purchasing decision, consumers are more likely to use ratings to inform their decision; they also tend to perceive reputation as a quality guarantee. Thus, college rankings may reduce perceived risk,

increase emotional confidence in college choice or confirm early opinions a student or parent may have about a school.[cliv, clv]

Data show that college rankings are an additional information source that a sizable minority of traditional students considers in decision making. Among high-ability students and higher socioeconomic groups, the rankings appear to have considerable influence on application and enrollment decisions. Other college-bound students pay little or no heed to the rankings.[clvi, clvii]

One indicator of influence and use of college rankings is that when an individual institution's U.S. News college ranking noticeably improves, they tend to receive more applications, attract applicants with better qualifications, or both. The converse can occur when a school's ranking drops.[clviii, clix, clx, clxi]

Broadly speaking, colleges and universities have responded to the U.S. News rankings by altering their marketing, admissions and enrollment practices and policies. Thus, college rankings have contributed to the evolution of the college-choice process, particularly for traditional students.[clxii] (See Facilitators section.)

America's Best Colleges is more than college rankings, but most external research has focused on this highly visible aspect. U.S. News does not conduct market research on student or parent use of its college rankings, profiles or guidance. Because U.S. News displays not just overall score and rank, but also the data used to develop the rating, it may broaden student and parent awareness of the types of information available for choosing a college.[clxiii]

Impact on Higher Education

The college business model is directly linked to student enrollment, which generates between 30 and 90 percent of revenues.[clxiv] Some of the most commonly mentioned impacts concerning college rankings from U.S. News and other sources are as follows.

- Both college presidents and boards of trustees have used rankings as a quantifiable performance indicator to benchmark the school's "success."[clxv]
- To boost their ranking, schools have developed assertive marketing to attract high-achievers, changed admissions and pricing policies and developed multifaceted financial aid packages.[clxvi, clxvii]
- Use of favorable college rankings in marketing to prospective students and their families, alumni and other potential donors, and prospective faculty.[clxviii]

- A longitudinal study by the American Association for Higher Education suggests colleges and universities enrich financial aid when their college ranking falls.[clxix]
- An empirical study found that institutions that received a lowered ranking had a higher acceptance rate for applications, a lower matriculation rate and a lower average SAT score of its entering freshmen than in the prior year.[clxx]
- Higher education researchers describe these institutional practices – along with consumer use of rankings – as having the secondary effect of reducing college access and choice for students who are not academic achievers and come from families with lower incomes. Consequences include increased stratification of student academic achievement in higher education institutions and large increases in tuition costs.[clxxi, clxxii, clxxiii]

The impact of college rankings, by U.S. News and others, on academic quality is unknown. The Institute for Higher Education Policy (2007) notes that:

> *The competition sparked by rankings methodologies also has both strengths and weaknesses. Some will argue that competition indirectly improves overall quality in the higher education market. Others may argue that the same competitive forces skew institutional policies in ways that might cause college or university personnel to work against their own missions.*[clxxiv]

The effect of college rankings is multi-directional. Just as rankings have affected how colleges and students behave, U.S. News has adjusted *America's Best Colleges* to maintain market position, respond to criticism and keep pace with national discourse on higher education.[clxxv]

The final sections provide crosscutting insights from former and current U.S. News officials as well as from outside experts.

Observations by Insiders

- Sanoff (2007) attributes much of the success of *America's Best Colleges* rankings to good timing: "They came along as the consumer movement in America was reaching full flower. A generation of parents who were college-educated brought both pragmatism and status-seeking to the college search process…. They wanted value for their money."[clxxvi]
- Kelly, as featured by *USA Today* (2007), says student and parents value college rankings because they want comparability. *America's Best Colleges* enables them to compare and contrast standardized information for an extensive set of schools.[clxxvii]
- After many years of external criticism of the practice of ranking schools based on scores rounded to the nearest tenth of a point, the editors in 1998 altered the presentation by using whole numbers. This enabled more ties in the rankings, which the editors had kept

to a minimum with its prior practice. As described by Sanoff (2007), "[W]hatever might have been lost by no longer ranking schools down to one-tenth of a point was more than offset by the credibility and goodwill generated by making the widely desired change."[clxxviii]

- U.S. News can do its part, but colleges and universities can still find ways to manipulate the data that they provide for the profiles and rankings. Sanoff (2007) interprets these types of unethical actions as "say[ing] a great deal about the perceived stakes."[clxxix]

- Kelly, at the 2006 Education Sector forum, stated the company looks at college rankings from a:

  > ... consumer-driven standpoint. How can we get some information out there that's helpful? Would we like to publish more information that's more helpful? Absolutely. We've looked very closely at the NSSE [National Survey of Student Engagement]. We've published more NSSE data than anybody else – when we can get it out of the schools. I think it's about 15 or 20 percent of the schools have been willing to share that data.[clxxx]

- In a *Higher Education in Europe* commentary, Robert Morse (2008), U.S. News director of data research, posits that "it is the reactions of the colleges themselves that have turned the *America's Best Colleges* rankings into a powerful juggernaut." He also claims:

  > The annual publication of the US News Best Colleges rankings has been a key factor in creating a competitive environment in higher education that did not exist to the degree it does today. Schools clearly care about where they rank and many are taking steps to improve their rankings. [clxxxi]

- Although U.S. News does not deny its rankings and consumer guides has had an influence higher education policy and practice, Kelly at the Education Sector forum emphasizes that the U.S. News approach is journalistic. The primary job, then, is ferreting out information that will be helpful to the *U.S. News* audience. He describes a "crying demand on the part of students and parents" for standardized data so they can make rational choices about buying a college education.[clxxxii]

Observations by Outsiders

About Students' College Choice Process

- The first "*America's Best Colleges*" rankings, as portrayed by the Lumina report (2004), "usher[ed] in what now appears to have become a national obsession with college rankings."[clxxxiii]

- The Lumina report concludes that across all socio-economic groups, public policy changes and the evolution of college recruitment and enrollment policies together "significantly altered the [traditional] student college-choice process" and "raised the perceived stakes for all involved."[clxxxiv]

- Based on its 40-year review of college freshmen survey data, UCLA higher education researchers John Pryor, Sylvia Hurtado et al (2007) describe students and their families as "becoming 'savvier' about the best educational value in making their final college choice."[clxxxv]

- On a similar note, journalist Nicholas Confessore in *The Atlantic Online* (2003) writes "U.S. News has helped to demystify the admissions process and to create a common vocabulary for parents, applicants, college counselors, and universities themselves."[clxxxvi]

- Patricia McDonough, a UCLA higher education researcher specializing in college choice concludes, based on her and others' research, that "academic reputation is a powerful influence on students, more powerful than the advice of professionals advisors or the influence of families."[clxxxvii]

- Writing in the *New England Journal of Higher Education* (2008), Lloyd Thacker, executive director of the Education Conservancy, which promotes a boycott of the U.S. News rankings, notes, "scant evidence has been offered that rankings have improved decisionmaking by students or by colleges, or contributed to education." He asserts that rankings have contributed to "more dropouts, because students are often lured to colleges with misinformation and front-loaded financial aid packages."[clxxxviii]

About *America's Best Colleges*

- The timing of each year's release, near the start of the school year, contributes to extensive publicity and awareness. This is the time that many high school seniors and parents start choosing a college in earnest.[clxxxix]

- Much of U.S. News's success pertains to being first to market. If another reputable organization had provided college rankings before U.S. News did, then that organization could have had the success that U.S. News has enjoyed.[cxc]

- Director of the Cornell Higher Education Research Institute, Robert Ehrenberg (2005) has called *America's Best Colleges* the "'gold standard' of the college-ranking business." He calls attention to three facilitators:

  USNWR's rapid rise to the top derives from its rankings appearance of scientific objectivity (institutions are rated along various dimensions, with explicit weights being assigned to each dimension), along with the fact that USNWR then ranks the top 50 institutions in each category (for example national universities and liberal arts colleges). Each year immediately before and after the USNWR college rankings issue hits the newsstand, stories about the USNWR rankings appear in virtually every major newspaper in the United States.[cxci]

- Putting the criticism of the U.S. News rankings in perspective, *The Chronicle of Higher Education's* senior reporter Hoover (2007), wrote:

  U.S. News rankings are Coke in a world without Pepsi. That is unlikely to change. One reason is that many presidents and admissions deans continue to support the survey, or at least

> *tolerate it. Despite the passionate rebukes for rankings from some presidents, plenty of others believe academe has far bigger problems that the top-50 lists.*[cxcii]

- U.S. News has been responsive to concerns raised by the higher education community because they have to maintain enough goodwill among college officials to obtain the data used for the rankings.

- In a 1988 comment published in *The Chronicle of Higher Education*, Breneman, then-president of Kalamazoo College, commented on the success of the U.S. News rankings during a dinner with the editors to advocate for changes, "But let's face it. Americans love lists."[cxciii]

Appendix A.
Key Informants

The perspectives in this case study have been synthesized from the wide-ranging comments of the people interviewed, the literature and other data sources. They do not necessarily represent the views of the Center for Advancing Health.

With gratitude, CFAH acknowledges the following individuals who participated in key informant interviews.

- Don Hossler, PhD, Professor of Educational Leadership & Policy Studies (Also, Vice Chancellor for Enrollment Services and Professor of Education Leadership & Policy Studies), Indiana University-Bloomington
- Robert Morse, Director of Data Research, U.S. News & World Report
- MaryBeth Walpole, PhD, Assistant Professor, Rowan University

Appendix B.
About Princeton Review

Princeton Review publishes alternate college ratings, rankings and consumer guides as *The Best 368 Colleges*. As portrayed by author Robert Franek, "In our opinion, each school in this book is first-rate academically…. We believe college applicants need to know far more about schools than an academic ranking to identify which colleges may be best for them. It's all about the fit."[cxciv]

The rankings are largely based on Princeton Review's annual survey of 120,000 students at 368 top colleges. The 80-question survey asks students to rate their schools on dozens of topics and report on their campus experiences. For example, the survey collects impressions of their schools' academics, administration, campus life, campus amenities and aesthetics, student body, social and political scene, sports and location. Using the student survey results, the company produces 62 college-rankings lists of the top 20 schools in a given category.

Using institution-provided data, Princeton Review also creates weighted rating scores from 60 to 99. The scores are academics, admissions selectivity, financial aid, fire safety, quality of life, and green (i.e., environmentally friendly).

The online portal (http://www.princetonreview.com/colleges-majors.aspx?uidbadge=%07) offers a "Best Fit College Search."

Endnotes

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[xviii] A three-stage framework for college choice is commonly used by researchers. As developed by Hossler and Gallagher (1987), the stages are predisposition towards attending college, search for information and choice of school in which to enroll. (Hossler, D, Gallagher, K. S. (1987). Studying college choice: a three-phase model and the implications for policy makers. *College and University, 2*, 207-221.) Both Kinzie (2004) and National Postsecondary Education Cooperative (2007) infer an expanded model.

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Case Study Commentary

Margaret Holmes-Rovner, PhD

I.   Analyst's Perspective

I am a sociologist and health services researcher. My research focuses on patient and physician decision making and communication. My early studies of physician decision making undertook both normative and descriptive studies focused on competing treatments for specific conditions and dilemmas like whether or not to take hormones in the menopause. The normative studies were decision analytic studies to determine the optimal solution for a variety of diseases. Since health professionals appeared to make suboptimal decisions in real time, my colleagues and I conducted descriptive studies to find their reasons for doing so. This interest in understanding how and why real people make the decisions they do, and how we collectively may serve ourselves better, continues to drive my interests in decision support tools.

Our early descriptive studies looked at physician decision making. Data came from structured clinical scenarios that used conjoint analysis to analyze decision patterns, as well as from qualitative studies reviewing actual decisions made using chart-stimulated recall techniques. We have been interested in cognitive and emotional explanations for both decision making and effective conversations about improving decisions—within their social and political context.

More recently, I have focused on patient decision making and on patients' traditional and expanding roles in decision making about their healthcare. My interest in developing, evaluating, and expanding use of decision support tools is aimed at moving the healthcare system toward optimal use of resources to maximize healthcare outcomes while respecting patients' and providers' values and expertise. I have worked on developing print and multimedia tools to show the effects, and side effects, of specific medical treatments patients and providers may be considering. Importantly, these tools include the option of continuing with the status quo. My interest in examining information tools from non-health sectors is to apply insights obtained there to the problem of getting healthcare decision support tools used in a complex social, political, and regulatory environment.

II.   Case Studies

U.S. News & World Report: America's Best Colleges

Objectives: U.S. News ranks colleges to raise the profile of the U.S. News publications and sell magazines.

Audience: The direct audience for *"America's Best Colleges"* is the people who purchase college educations (parents of college students, acting on behalf of the students). U.S. News is a publisher, and their audience is the people who buy or might buy their print and electronic publications.

Resources and Constraints: In 1983, the College Guide was based simply on a survey of college presidents, asked to rank their peer institutions. It required no great outlay of resources. Over the 25 years of its development, the college guide has developed methods of ranking colleges based on more objective data. However, the source of the data has always been the colleges themselves, augmented by publically available data. Various methods to ensure the quality of the self-report data are employed, and appear to be largely successful. Since the data are self-report, and some colleges boycott the data collection, there will always be gaps in their coverage. U.S. News equates reputation with academic quality, though recent additions of freshman retention rate, SAT score, high school class rank, acceptance rate, and average alumni giving rate are attributes that suggest academic quality, which will always be elusive.

Barriers and Facilitators: It appears that being the first in the field has been an important asset. U.S .News has become the college rating system to beat. As with all rating systems, credibility and trust are the basis for consumer use. U.S. News's attention to updating their method appears to be their main strategy to maintain the credibility of their annual rating. This approach undercuts reliability, and does not change the fact that this continues to be a reputation-based ranking. However, they continue to lead the field, in part because colleges use the rankings to market themselves. Thus, U.S. News will likely continue to enjoy media attention they do not have to purchase. A natural limit to widespread use of the college guide lies in the nature of the largely middle-class audience of families of high school seniors.

Design/Redesign and Reasons for Redesign: Better publically available data have allowed the rankings to become more data driven. They continue to rely primarily on their single ranking. Additional tables rank the colleges' performance on the other attributes.

Electronic products are more in-depth, and appear to have been added to exploit the availability of the Internet.

Promotion and Dissemination: The college guide is inexpensive, allowing it to be a tiny purchase in the range of college expenses. It costs less than a college logo sweatshirt.

Impact: While the college guide was never meant to be a reform tool, it has provided increased transparency about aspects of college quality. The unintended impact of colleges enhancing their images to match the college guide criteria may have created expenses for higher education.

Consumer Reports (CR): Car Buying Guide

Objectives: The CR Car Buying Guide is published by Consumers Union (CU). CU is a consumer advocacy organization that aims to be an expert, independent, nonprofit organization whose mission is to work for a fair, just, and safe marketplace for all consumers and to empower consumers to make purchases that are data driven regarding safety and value. Consumers Union employs lobbyists, grassroots organizers, and outreach specialists to work with 600,000 online activists to change legislation and the marketplace in favor of the consumer interest.

Audience: Consumers and producers of both goods and services.

Resources and Constraints: CU has $200 million in revenue. However, the organization has been growing since 1933, and there were many lean years. In order to make their ratings hold up, it has been critical that they were able to defend themselves against lawsuits when their car ratings were negative. Size and infrastructure have supported their mission, and the steadfast attention to the mission has kept them focused and determined. Revenue comes from report sales (92 percent) and individual contributions (7 percent).

Barriers and Facilitators: The credibility of CU is greatly enhanced by their consistent eschewing of support from any producer of goods they rate. While this has cost them money, it has maintained their credibility.

Design/Redesign and Reasons for Redesign: While the CR car guide remains independent in method and free of commercial influence, it could still become irrelevant to consumers. The CU move to address audiences of users (like parents of teenagers) and newly

important car attributes (miles per gallon) is important. Critical is adaptation to the Internet. Here, they appear to be making their traditional print format interactive.

Promotion and Dissemination: CU's credibility rests on the organization's unbiased research. They appear to have disseminated this message successfully. They really have no competition with the rigorous testing methods they practice.

Testing, Evaluation: The strict attention to independence and rigor in testing cars by engineering criteria has been quite powerful. It is probably not an exaggeration to say that this has helped to convert cars from experience goods to search goods. Consumers can, and do, pick out cars by their attributes using the CU data and then search out the model with the cosmetic attributes and price they desire. This lets people search anywhere for their preferred car.

Impact: The car guide, in aiming to allow consumers to protect themselves, appears to have influenced manufacturers' attention to safety and frequency of repair of the cars they produce. The reform impact has been substantial according to most observers.

eBay

Objectives: Provide a platform for buyers and sellers to meet each other in cyberspace and buy and sell. Since the company is now publically traded, it must provide profits to shareholders.

Audience: General adult public; hobbyists and collectors among people who use the Internet.

Resources and Constraints: eBay, since it owns no goods itself, was able to start up with little capital. Its income is from fees and advertising, and PayPal fees. Since revenue is largely from fees, the system rests on having a large volume of exchanges. It appears to be growing, though market data are proprietary.

Barriers and Facilitators: Credibility and trust are key. Buyers and sellers must be confident that each will hold up the transactions. Fraud is, therefore, a serious concern. There appears to be controversy about fraud levels, but the main facilitator has been the measures taken to assure that sellers deliver and buyers pay. The problem appears to be within acceptable limits, and eBay is able to compensate people for transactions that are not satisfactorily completed.

Design/Redesign and Reasons for Redesign: The original plan to provide a platform has been supplemented by development of the community of users. Information tools appear to be important, suggesting that, as in other tools, the ability to supply information about experience goods is a key to success.

Promotion and Dissemination: Largely word of mouth, depending on the "virtuous cycle" of satisfactory exchanges. Since most users appear to be bargain hunters, the downturn in the economy may not hurt eBay.

Testing, Evaluation: The evaluation component of eBay is critical to its credibility and people's confidence in it. Buyers and sellers are invited to rate each transaction, using a 5-point scale. One key to this process is that eBay prompts people to respond, meaning that they attempt to avoid the bias that usually occurs in such rating systems. Rather than a small number of very happy, or very disappointed consumers, eBay attempts to keep their evaluation reflective of their population of users.

Impact:: eBay is credited with helping to invent Web 2.0, using a platform (of buyers and sellers) to create online communities. Whether or not this is a commercial success, its potentially revolutionary power to engage consumers in rating goods and services has reform potential. The information tools help to keep this from being a collective sharing of ignorance.

Nutrition Facts Panel (NFP)

Objectives: The Nutrition Facts Panel (NFP or The Block) is the quintessential information tool. It is different from the other tools in the case studies in that it is not designed to rate a food as "best" or "best buy" or "least fattening."

The NFP was designed to assist adult consumers (and secondarily adolescents) in making wise food choices (following dietary guidelines), and it is fair to evaluate the impact on its objectives of shaping consumer eating habits, and ultimately to improve health and reduce chronic disease burden. Designing an information tool rather than a decision tool is an important strategy to consider in terms of the key variables for success of the decision tools. It contains important strengths as well as limitations.

The Food and Drug Administration (FDA) had as a major intent for the NFP the desire to counter inappropriate health claims that were being made for foods by manufacturers. The need for this reform was one perceived by the experts in Food Safety and Human Nutrition, and advocates, such as those in the Center for Science in the Public Interest (CSPI).

Consumers were happy with the food they were eating, a situation that shares some characteristics with healthcare. The audience for the NFP is the general public. The challenge was to present complex information simply and uniformly, in a field in which there were no labels in 1993 and no agreement on exactly what were the most important attributes to communicate to the public. I should tell you that this case is probably the most controversial among our group of commentators. I think it is both brilliant in design and amazing in the degree of agreement reached quickly within the federal government, and the degree of compliance achieved in the food industry.

Audience: Food shoppers and their families; indirectly, food manufacturers.

Resources and Constraints: The federal mandate to produce uniform labeling across all processed foods required a potentially large budget. In addition to requiring that all food producers do the analysis required, and print labels on their containers, the FDA had to educate the public to use the tools.

Barriers and Facilitators: Leadership was key. Secretary Kessler built an authoritative information base from the ground up, created the broad political consensus, and then remained a tireless and effective champion of the process. Not just Secretary Kessler, but the first President Bush himself personally mediated an impasse at one point when scientists in two federal agencies were struggling with the basis for the daily values to report on the labels. The current public perception that the information is accurate and trustworthy rests on reality and is reinforced by the public education campaign that followed implementation. Getting industry to comply was an astonishingly successful task. It cost them money and it exposed formerly "hidden" high fat, high calorie, high sodium elements foods that tasted good and sold well.

This could not have been done without regulatory authority, and the promise of uniformity of implementation. This was vital to the success both with manufacturers and with consumers, and with health professionals and consumer advocates. Informed choice always depends on the ability of the decision maker to compare the competing options using the same parameters. All manufactured food has to comply for this tool to work. The ability to require compliance created a large resource contribution from industry, a large resource contribution from personnel in the federal agencies, and a relatively modest new appropriation. This was a large public/private virtual partnership created by clarity of purpose, and simplicity of design of the NFP itself.

There is no competition for a different NFP. Competition within industry could be built on the information tool created that encouraged healthy eating, if that is the hallmark a manufacturer wanted to claim. That opportunity moved parts of industry in the direction hoped for by the creators of the NFP. For example, the recent addition of "trans" fats to the NFP virtually eliminated trans fats in manufactured foods. Standardization of the information tool exposed, or made transparent, the variability in the food in the packages. No one mandated what products manufacturers could sell. Variability continues to be appropriately great. This lack of regulation of what could be created, allowed creativity and innovation to thrive within the industry being regulated.

Tool design and functionality is an area of some controversy. The NFP has received design awards. It incorporates plain language. It is not as pretty as some would like, and the upgrades to the graphics have been few. The main area of functional concern is that some of the interpretations of numerical information are difficult for people who have lower literacy and numeracy skills. However, almost everyone can compare the amounts of nutrients in two cans of soup. They can also give a correct answer about how the amount of calories, fat, and carbohydrates relate to diet guidelines. They can also use the information to check rudimentary health claims. One key to success may be what is effectively a two-tiered information base: 1) The basic information is understandable across most of the adult US population. 2) More sophisticated judgments based on "% daily values" are usable only by a few. Research in risk communication and numeracy may ultimately offer some improvements in this area.

Placement of the NFP on the food labels, so that it is universally available at the time a food purchase is made, is a key to its frequency of use. Consistency of format and content is another key. People can learn to use the tool, either through their own initiative, through the mass media campaigns, through health educators, or other venues. Once they get it, they can count on it not to change drastically.

Design/Redesign has not been done often. That is the flip side of the regulatory basis for the tool. Apparently some changes are working their way through Congress, but they compete with the other challenges FDA is now facing.

Promotion and Dissemination: The education campaign was key to the success of the NFP reflected in over 60% of consumers saying they have looked at the tool. The education campaign has not been well supported in recent years, and the potential of Web 2.0 platforms to create experiences and online communities has not been well developed. That potential is an opportunity awaiting the next generation of innovators. It is an open question whether the

perception of need will have to be created among the Web savvy who might pay attention to nutrition, or whether an educational campaign and a new set of tools can drive that process.

In addition to the public education campaign, a key to dissemination is the universality of the NFP. Any consumer who wants to check a calorie count or sodium content can count on doing so. This makes it possible for health educators and others to rely on the tool when teaching.

Testing, Evaluation: Research on interpretation of the NFP shows that consumers can interpret the main elements of calories, fat, sodium, etc, and use the labels to make some evidence-based choices. However, since no explanation is included, people who lack background knowledge need education to make judgments about decisions about types of fats, and other tasks.

Impact: The twin objectives of informing consumers and curbing manufacturers' health claims seem to have been met in a brief time window. However, for consumers, the NFP is not a decision tool. It is an information tool. The tool itself does not, in and of itself, help people make decisions. Research on interpretation of the NFP shows that consumers can interpret the main elements of calories, fat, sodium, etc, and use the labels to make some evidence-based choices. However, since no explanation is included, people who lack background knowledge need education to make judgments about decisions about types of fats, and other tasks.

III.   Cross Case Analysis

Each of the tools selected is presently a prominent, and generally a widely accepted tool. One consistent finding is that each tool was the first to enter the arena in its area, and each has maintained its prominence and credibility. Examination of cases that began early and failed might show whether this is coincidence or a common element.

What was rated by the tool, and what was provided by the tool? Two of the tools rated goods (cars, foods), and two rated services (college educations, sellers/buyers). The tools themselves are all information tools, and some grade the quality of the good or service. All provided information in one place, not previously available to consumers about the good or the service. When provided with previously unavailable, reliable and generalizable information, consumers have new control over what could formerly only be known by experience. This is probably most true of cars. The attributes of these goods could be uniformly reported and reliably found in cars no matter where they were bought. Thus, having the tool makes choice meaningful in an entirely new way. It is potentially transformative.

The tools varied in the extent to which they were uniformly applied across the fields they rated. The only one that was universal was the NFP, and it probably had the most reform potential, but not guaranteed impact. The NFP was designed to shape consumer food choice. It likely has shaped food selection. It could not, by itself, however, affect the amount of food consumed. That is, type of food chosen could not, itself, change risk factors for chronic disease. Reform potential is somewhat related to the issue of universality, but not entirely. It is likely that CR Annual Car Buying Guide had the biggest reform impact, because it affected manufacturers' behavior, which was shaped by a few high-profile instances of impact on consumer behavior. Sales of cars rated as unsafe fell dramatically. While deep price discounts disposed of cars, manufacturers apparently did not want to expose themselves to the risk of being branded unsafe.

Did the tool production and maintenance require a large and expensive infrastructure either to produce or maintain? Was this infrastructure related to the level of reform that followed? CR car guide and the NFP were clearly more expensive to start and maintain than either the U.S. News college guide or eBay. They also have had the most impact on consumer behavior, and the greatest reform potential. In both cases, this appears to be related to their independence from the good or service being rated, and their intention to produce reform.

Did the tool itself shape consumer behavior? Yes, in the cases of NFP and eBay. This appears to be due to the innovative nature of the tool itself. To use the tool, one has to do something unaccustomed. In the case of NFP, look at the label, put two goods side by side to choose between them, or develop an informal decision rule. For example, "I do not buy a canned vegetable with greater than 350 mg sodium." In the case of eBay, the creation of interactive communities of people, based on the search process, and the buying and selling process, stimulated not only eBay users to interact differently, but demonstrated the power of online communities.

IV.   Commentary on application to healthcare

What do these four cases suggest about getting information and rating tools used effectively in healthcare? In all four cases, the basic information function that the tool serves comes from its ability to demystify, to go beneath a mysterious process, and supply reliable information that can guide a consumer to control the quality of the service received. This function is highly relevant to the two kinds of healthcare rating tools that are best developed: 1) public reporting of ratings of doctors and hospitals, and 2) patient decision aids based on comparative effectiveness ratings of treatment and prevention.

In all four case studies, the price to consumers for the services is small. While the cost of developing the service may be high, the price for using it is low. This is likely important in healthcare, where there is no public perception that rating tools are needed. People like their own doctors, and they assume that most treatments and preventive screenings are necessary and valuable. The reform that lurks behind decision support tools and ratings of doctors and hospitals is the assumption that too many resources are being used. Consumers and patients, on the contrary, are getting along fine without any of these tools. The case for healthcare reform is simply that healthcare costs too much and does not produce optimal health. Two of the tools, CR car guide, and NFP food labels, have consumer protection and informed consumer choice as their mission.

What previously hidden information is provided by healthcare decision support tools? The new information is that not all healthcare contributes equally to the public's health, or the potential for a cure of an ill person. The new information would be designed to counter the public assumption that all healthcare is good quality, that more is necessarily better, and all interventions and preventive measures are necessary. This would require providing standard information that challenges public assumptions in the way the NFP food facts and the CU car guide has done. This reform may be accomplished in two ways:

- Target the consumer, and produce tools with universal access (the NFP example)
- Target the products, and go public with the gaps.

The public campaign to reduce errors has attempted to make a case similar to that of CU. The re-engineering of healthcare to improve quality is based on exposing the errors. However, choosing high-quality health plans, and choosing treatments that have the best chance of improving health and minimizing side effects appears to require a set of tools with universal access. What strategies do the cases suggest might be employed to produce such a set of tools? They include at least the following:

- Government could design the tool and require compliance (like NFP).
- Government could produce the tools with contracts and grants, as AHRQ is doing with patient decision aids.
- Government could produce rankings based on existing data supplemented by institutional responses (like U.S. News). Rankings would be much more controversial than the present ratings of hospitals by risk-adjusted mortality rates, as in the state of Pennsylvania.
- Information industries could produce rating tools and compete with each other for credibility.

- Government can set standards for acceptable tools and encourage business to produce them.
- Industry can independently produce tools and let consumers use them if they will.

Comparative Effectiveness Reviews (CERs) have reform potential and are aimed at providing a metric by which to choose the most effective interventions. They are somewhat different from the cost-effectiveness analyses required in some countries to establish a threshold for healthcare system payment for a particular intervention. CERs compare viable alternatives for treatment of specific conditions. A major constraint for this movement is the potential number of CERs required to accomplish reform and their accessibility. The present movement to perform CERs focuses on both the analysis, and on producing patient decision aids that communicate the results to patients (and providers). While the present activity in the field is growing, both through private vendors, and through government agencies, the field is presently still in its infancy. What lessons can be learned from the present case studies? One is that the cost of the infrastructure is potentially very large. Some of the cost could be borne by industry, as was done with the information in the NFP Panel requiring new drugs and devices to provide CERs, in addition to the present investigational new drug (IND) application presently required. In addition to the financial burden this would add to the device and drug development process, the necessity to provide comparisons, rather than elements -- such as the nutrients in foods described in the NFP Panel -- makes direct production of CERs by producers unwieldy. CERs could be used in determining reimbursement by payers. This would require independent review, and would likely have to be done by a government or not-for-profit entity(s). It will undoubtedly be expensive to reach the level of comprehensiveness required. It also runs the risk of a backlash from consumers, unless it is cast within the patient choice framework. This approach is part of the patient decision aid approach. What do the case studies suggest would improve this process?

What would a CER and decision aid NFP for consumers look like?

It would be simple in design, contain only a few essential elements, and communicate well visually and graphically, with a limited number of positives and of negatives. To provide a basis for co-production by the private and public sectors, it would have to communicate essential elements that are reportable by the producer, something equivalent to nutrients. This expansion of the duty to explain risks and benefits during informed consent could be improved by attention to literacy and to reducing the amount of information on a label, an area of active investigation. What might minimal standard elements for a CER template look like? To alert patients/consumers that the treatment or preventive intervention is one in which different interventions have similar outcomes, treatment decision aids should be reserved for "patient

choice problems," those in which cure rates are similar, but side effects vary. A simple "Fact Panel" could become a predictable document to assist health professionals in an informed consent discussion. It might look like this:

Treatment Choice Facts Panel for Condition X

	Treatment 1	Treatment 2	Treatment 3
Possible Benefits			
Average life extension over watchful waiting			
Relief of symptoms			
Possibility of cure			
Possible Harms			
Side effect 1			
Side effect 2			
Side effect 3			
Possible costs			
Out of pocket payment may be required (yes or no)			

This simple-looking Fact Panel contains important information that is rarely available to clinicians and patients when they are considering treatment choices. Particularly the first item, "average life extension over watchful waiting," is discoverable, but rarely part of the thinking of clinical researchers or clinicians. The failure to compare the outcomes of treatment to what would happen with no intervention leads to exaggerated claims about cures. This is most dramatic with screening. Thousands of women each year thank their lucky stars that they were "cured" of breast cancer discovered early, when the vast majority of the cures were false positive results of the mammography. Most patients and most clinicians are not eager to think about uncertainty, average mortality, or the chance that doing something may or may not lead to a cure or a longer life. They may, however, become more comfortable with these concepts if considering the relative payoffs of interventions becomes a routine and predictable part of clinical care. The Treatment Choice Facts Panel above might serve to make decision-making encounters easier for providers and patients/families. Making the information more explicit may suggest that the success or failure of an intervention is no one's fault, but is part of life.

The infrastructure to create such a goal may take a few pointers from the Nutrition Facts Panel. The initial investment must be substantial, and an educational campaign is essential. In addition, it likely requires a joint undertaking of manufacturers and government, with a strong partnership with healthcare professional organizations. These organizations can be especially helpful in participating in and leading the educational campaign and lending credibility to the undertaking. The public needs to know they have doctors and nurses as their partners in shared decision-making. Training to accomplish shared decision making using facts in the Treatment Choice Panel would become a core part of clinical training.

What would a Healthcare Buyers Guide look like?

Rating systems for doctors, hospitals, and health plans exist, but do not appear to be widely used. Government, not-for-profit, and for-profit organizations are undertaking such efforts. What does the past success of the Consumers Union car Buyers Guide suggest will be important?

While doctors, nurses and health plans are not widgets that come off assembly lines, there are some strategic suggestions to be found in the CU car buying guide experience. One of the intended or unintended consequences of the CU approach to rating cars is that a major impact was on manufacturers, through the media and assumed consumer pressure. It should be noted that CU does not always rate every available make and model. Their impact is felt across the industry through a few high-level cases. It may be that carefully evaluating a few big-ticket interventions may produce ripples across the field. This could especially be true if procedures that are elective and cannot show a clear benefit, or exhibit high levels of regional variation are chosen. Choosing these types of procedures can create media attention and serve as an additional education effort. Clinicians do not want to be seen as doing unnecessary and invasive procedures that do not work. The decreasing rates of screening and biopsy for prostate cancer suggest that similar attention to other diseases may be effective. While there will be push back from health professionals, the incremental attention to such cases over the last several decades may have created fertile ground. These may provide consumers with examples that can greatly shift the paradigm and demonstrate that all healthcare may not improve health equally.

Two of the tools, eBay, and U.S. News, have increased sales as their mission, rather than reform of an industry that affects the health and safety of the nation. It may be helpful to look at these two sets of tools to better understand how participation in tool use can be encouraged within a lean business model. Cues to effective marketing can build on these success stories,

while the actual production of decision tools would require an undertaking on the order those represented by the CU and NFP cases.

What would an eBay for finding providers look like?

Services that rate doctors are already becoming available on the Internet. However, they differ from eBay, in that they do not have a closed system to rate, as we find in eBay buyers and sellers. Perusal of many physician rating Web sites suggests that to date, they appear to have few patients rating the physicians and are expensive to join. Unless such a system could gain universal participation, it seems likely that it may remain small and have modest impact on the quality or cost of health-care. If providers felt they gained by participating in a rating system, and if the cost to consumers were low, such a service might gain a foothold. Clearly disease-specific communities of patients exist. However, these do not presently rest on information that has reform potential, and are not aimed at reform.

What would a Nation's Best Healthcare Organizations look like?

A first lesson learned from the criticisms of U.S. News is that the data must be sufficient, reliable and independently verifiable. Furthermore making numerical rankings, using statistically non-significant differences is a bad idea. One could, however, release a "Nation's Best Health Plans" list on the basis of data presently available. Healthcare Effectiveness Data and Information Set (HEDIS) ratings would not accomplish reductions in healthcare utilization, since they generally promote doing more, not doing less. The criteria for an effective patient-centered medical home (PCMH), on the other hand, promise reduction in healthcare costs together with improvement in coordination of care. Publication of the criteria for being on a list of Best Health Plans should emphasize quality and value, and may affect provider organizations' behavior. Present use of provider ratings suggests that people consult them only to check for "bad apples," not proactive shopping for providers. While people who are happy with their providers would likely not change, two other purposes might be accomplished. People who are selecting providers and plans de novo might use the ratings. More importantly, the providers themselves might change their behavior to meet the explicitly stated criteria.

Lessons learned from the U.S. News case study include exploiting gains in free publicity. Such an approach may decrease the cost of educational campaigns that must accompany release of the data on which patient choice tools are based. This is most likely if the reporting on health plans and providers across the nation is kept up to date. One can imagine a two- or three-tier system that would support the *drama* requirements of news reporting. The problem of

cosmetic playing to the criteria is likely to be substantial. This already happens with hospitals that compete on the hotel aspects of their services.

In summary, Consumer Choice Tools hold reform potential in healthcare. They must have consumer protection at their core and must be driven by a mission to provide critical information at the time of decision making. They must be inexpensive for people to use. A universal access model, like the NFP, would be extremely helpful, but will require a large investment, perhaps over an extended period of time.

Publication of a book of cases of Comparative Effectiveness ratings in lay language and with good graphics, is an intriguing idea. It might take the form of an Annual Effectiveness Comparison for treatment and screening choices for very expensive, but marginally more effective intervention choices for commonly used procedures or treatments. This book, sitting in libraries and on the book shelves of 15 percent of healthcare consumers, and 80 percent of providers, might greatly increase the growing influence of such tools found on governmental and non-governmental Web sites. Both need to have simple formats for easy accessibility, bolstered by a public information campaign.

Case Study Commentary

David E. Kanouse, PhD

I. INTRODUCTION

I approach these case studies as a social psychologist who has grappled for decades with the problem of how to provide information that will help stakeholders in the health field to make better decisions. Social psychologists have varying approaches to the study of decision making. I did my graduate studies at Yale University in the late 1960s, a time when the study of attitude formation and change was still central in the field of social psychology (especially at Yale), but the dominant paradigm for studying attitude change was shifting.

Research in the 1950s and early 1960s had examined the effects of communication on persuasion, using a "source-communication-audience" framework to examine how a host of variables (for example, the credibility of a message source) affected the extent to which messages influenced the attitudes of a target audience. Not coincidentally, that framework bears some similarity to the one used for these case studies.

One touchingly naïve assumption made by researchers at the time was that studying attitude change was a kind of shortcut to studying behavior change, since attitudes were propensities that typically explained behavior. During the mid- to late 1960s, however, research based on cognitive dissonance theory offered numerous examples of people engaging in behaviors that conflicted with their attitudes. A considerable body of research accumulated showing that people's behavior, including their choices, often reflects situational factors, and can often be discordant with their beliefs and preferences. More generally, social psychological research gradually led to abandonment of the view implicit in the communication research paradigm that changing people's beliefs (e.g., by providing them with information) is a straightforward and effective way to change their behavior.

My experience with applied research began in the late 1970s, when with support from the Food and Drug Administration, I conducted research on consumers' responses to prototype patient package inserts (PPIs) for commonly prescribed drugs. This research showed that PPIs provided as leaflets were widely read and led to increased knowledge about the drugs but had no effect on drug-taking behavior or patients' experience of side effects.

During the 1980s, I led an evaluation of the National Institutes of Health Consensus Development Program, which synthesizes biomedical research findings, examines their implications for practice, and disseminates the findings to a broad audience, including practicing physicians and the public. Our evaluation showed that consensus conference findings, even when widely disseminated, often failed to have any effect on medical practice. Although there are undoubtedly several reasons for this, one of the most important is that consensus statements were prepared with little or no information about the factors influencing the clinical practices they were supposed to inform.

Since 1995, I have been a member of the Consumer Assessment of Healthcare Providers and Systems (CAHPS) consortium, and have focused primarily on developing and testing effective ways to report information on healthcare quality to consumers and other stakeholders. These examinations of national campaigns to disseminate information intended to inform decision making have reinforced my view that achieving widespread use requires approaches that focus on meeting the real and perceived decision needs of users.

II. INDIVIDUAL CASE STUDY OBSERVATIONS

A. Case Report: *America's Best Colleges*

Deciding which college to choose is not easy; it is a major decision by almost any criterion. College students must live with the quality-of-life consequences of their choice for four years or longer, and the effect of their choice on subsequent career trajectories is often perceived as profound. The amount of money involved can be staggering, sometimes exceeding the amount people spend on a home. Understandably, people fear the consequences of making a bad decision. The college selection decision is also complex, with many factors to consider. While a great deal of information is available, it is by no means clear how it should be weighed and synthesized. Finally, most people who face this decision have little or no experience with similar choices.

These characteristics of the college selection decision make it a quintessential candidate for a decision aid. The case study of the annual college rankings published by *U.S. News & World Report* demonstrates that the publisher, U.S. News Media Group (U.S. News), seized a market opportunity and exploited it.

Timing seems to have been an important factor in the success of the college rankings. They were first released in 1983, a time when Americans increasingly viewed the college decision as important and were spending considerably more time and effort to obtain information than had been the case in the past. Release of the U.S. News rankings may have accelerated this trend by heightening awareness of the competitive environment for colleges.

One major advantage for U.S. News was that as a news publisher, the information it provided would tend to be seen by consumers as objective. Even the rankings, which are accompanied by an explanation of methodology that gives the appearance of scientific objectivity, have a built-in credibility that derives from the news service mission of the organization. Moreover, the rankings are in one significant respect self-validating. Even those consumers who might harbor doubts as to how useful the rankings are in selecting the college that is best for them are likely to see the rankings as useful proxies for how others will view the quality and prestige of the schools they are considering.

U.S. News has a successful marketing approach that makes its products widely available to the general public on newsstands, in bookstores, and online while also targeting specific venues where college-bound students will encounter them, such as libraries and guidance counselors' offices. Marketing efforts are aided by the seasonality of the college admission process. Pricing is low enough to attract widespread use by consumers who intend to use the rankings and profiles as only one information source among many.

Although U.S. News has competition, it has maintained significantly greater visibility than its competitors. This seems to be largely attributable to two factors: (1) first-mover advantage, which provided a period of several years for U.S. News to become established, and (2) the fact that U.S. News has more effectively promoted its annual rankings than its leading competitor, *Money* magazine.

One pitfall that U.S. News has successfully avoided is the potential for consumers to see older rankings as "good enough" because of the stability of educational excellence from year to year. Each year, a new cohort of college-bound families arrives on the scene looking for the latest information and rankings. U.S. News has also maintained interest in the latest rankings each year by changing its methodology, which stirs up the rankings so they are not the same from year to year.

B.   Case Report: *Consumer Reports: Car Buying Guide*

Car purchasing offers another example of a big-ticket decision that people face only occasionally but perceive to be both difficult and risky. Since many consumers are willing to devote considerable time to gathering and evaluating information before making a purchase, they are, not surprisingly, open to using decision aids that assist them in making a choice.

Consumers Union (CU) offers a case study in building a trusted brand through meticulous attention to establishing a reputation for expertise and integrity. CU maintains its reputation for integrity by making all of its product purchases on the open market, by refusing advertising and corporate donations, and by operating as a nonprofit with a subscription-based business model. Its expertise in evaluating products must be established and maintained separately for each product class, although there are many synergies across products. CU has a clear preference for use of methods that involve instrumentation and measurement rather than subjective judgment whenever possible. In addition, CU takes pains to describe how it tests and evaluates products in a way that consumers can understand—and that will make sense to them.

CU's reputation for dedication solely to consumer interests was established decades ago and remains strong. *Consumer Reports* (CR) is one of the top 10 magazines in the United States, with an estimated readership of 16 million. An estimated 8.5 million people subscribe to one or more of its product lines. Remarkably, CU has been one of the few information services aimed at the general public that has been able to implement a subscription-based business model on the Internet, despite consumers' general reluctance to pay for information in a medium they regard as rightfully providing information free of charge.

One of the most striking aspects of the Consumer Reports Car Buying Guide case report is the extent to which CU's general approach is built around educating consumers about how to think about purchase decisions and what is important to consider, rather than simply providing information for consumers to process using their existing purchase contemplation paradigms. This becomes apparent when one examines advice CU provides on relatively new products, features, or services that become widely available. It is also clear when one examines the apparent long-term effects of CR on the way consumers go about making purchase decisions. As noted in the case report, car purchase decisions were once made largely on an experiential

basis. CR has had a profound and enduring influence on decision-making processes by educating consumers that many of the attributes that should be considered in car purchase decisions can be evaluated non-experientially and that objective assessments of these attributes can be used to narrow the range of options considered.

C.   Case Report: Nutrition Facts Panels

The Nutrition Facts Panels (NFP) case report presents a striking contrast to the two case reports discussed above. Rather than addressing a major, high-stakes purchase that consumers face only occasionally, this decision tool focuses on frequent, routine, small-ticket purchases. For that reason, it is not surprising that the primary impetus for providing NFPs came from government rather than from consumer demand. The direct and indirect potential benefits of improved nutrition labeling on consumer health outcomes are more readily apparent when considered from a public health perspective than from an individual consumer perspective. Nevertheless, consumer advocates, who were able to view the benefits from a public health perspective, provided enthusiastic support.

The scope and duration of effort required to develop and implement a nutrition labeling program is extraordinary. For example, although the scientific base for determining quantitative amounts of nutritional value needed on a daily basis and standard serving sizes was quite sketchy, these quantities had to be established for products in 139 categories in a way that was evidence-based, acceptable to manufacturers, and arrived at through adherence to the dictates of a complex federal rule-making process.

To be useful to consumers making purchase decisions, NFPs had to be designed for use on product labels so that they would be available at the point of purchase. Yet the amount of space available on labels is often severely constrained, limiting the amount of information that can be presented and virtually eliminating any possibility of accompanying explanation. Moreover, variations in product packaging made it necessary to create a variety of alternative formats, limiting the extent to which standardized formatting could be used to make it easier for consumers to understand the information.

NFPs provided consumers with relevant information that had not been previously available to them but did so in a way that posed many challenges for consumer understanding, acceptance, and use. Ideally, difficult design decisions would be made

based on a substantial amount of empirical testing of alternative formats on consumers. While some consumer testing was done, the amount fell far short of the ideal on account of budget and time constraints. Similarly, while the FDA has monitored the extent of consumer use of the labels over time (largely through surveys), it has conducted very little evaluation aimed at examining how consumers actually use the information or research aimed at quality improvement.

Because NFPs presented concepts, labels, and measures that were novel for many consumers, and displayed this information in formats that were new to everyone, there was an obvious need for a national educational campaign accompanying their rollout, to establish awareness and understanding of the new labels and promote their effective use. Unfortunately, the resources available for this campaign were severely constrained. In these circumstances, the FDA wisely adopted the strategy of enlisting as partners in outreach efforts various organizational stakeholders, including other government agencies, community-based organizations, health professional associations, food companies, and trade groups. This campaign appears to have been successful in promoting widespread awareness of the new labels; its success in promoting consumer understanding and effective use is less clear.

NFPs are designed to provide consumers with relevant information about nutritional content at the point of purchase. They do not educate consumers about what to do with the information, nor do they supply any motivation to use it. Consequently, the extent to which consumers use NFPs, and do so effectively, is likely to depend heavily on the larger informational environment that supplies, or fails to supply, these critical missing elements. For example, a media campaign to promote use of NFPs might well expand use beyond current levels. In the absence of such facilitating factors, disparities in label use by education, nutrition knowledge, and numeracy skills are to be expected—and are found.

D.   Case Report: eBay

In contrast to other decision aids addressed by these case reports, eBay provides decision support to consumers in the larger context of a Web site that supports community commerce. Consumers typically visit eBay.com to shop, although they can also use the site to obtain information about product availability, features, and prices in anticipation of possible future transactions.

The fact that eBay's decision support is embedded in the same environment in which consumers engage in transactions provides a greater timeliness and relevance to the information than is the case for most decision aids. The informational environment is rich, multi-layered, and interactive. eBay has devoted considerable attention to making user experience as satisfying as possible and has continuously sought and acted upon user feedback. One measure of their success is the fact that in 2005, visitors to eBay spent six times as much time on the Web site each month as did visitors to their nearest competitor, Amazon.com. One reason for this may be the high level of interest created by the online auction format, which provides visitors with reason to log in to the Web site repeatedly when following an auction. eBay also creates a highly engaging experience for consumers by providing extensive opportunities for users to customize their "My eBay" page to provide the content, organization, and presentation they want.

A key reason for eBay's success is that it provides consumers with a virtual community to which they often develop strong ties. Buyers and sellers trade directly with each other, which makes the experience a social one. Some consumers who use eBay have a niche interest or hobby around which they develop ties with users sharing their specialized interests. However, a sense of community has also developed in the larger group of users, who have a sense of collaboration and mutual trust. The social dimension of the eBay shopping experience provides for a highly satisfying experience and helps build brand loyalty.

Establishing and maintaining users' trust and a positive reputation in the larger community have been critical to eBay's success. Trust has been achieved first, through the development of an automated platform that provides safeguards against abuse. Second, eBay has taken additional steps, such as halting auctions of potentially unsafe products and cooperating with federal regulators, to guard against specific threats. A high level of repeat business provides evidence that unsatisfactory experiences occur at low rates, though exactly how low is unclear.

The success of eBay owes a great deal to an extraordinary business model that takes advantage of the characteristics of the Web to link buyer and seller communities, creating a virtuous circle in which increasing demand leads to increasing supply, and vice versa. eBay has established market dominance, providing a wide moat that protects it from competitors.

III. CROSS-CASE ANALYSIS

In this section, I briefly discuss important themes that emerge across cases or that differentiate them. This analysis is selective in two ways: first, it emphasizes the determinants of success rather than of failure, and second, it emphasizes the role of facilitating factors over barriers and limitations. Each of the four cases represents an example of a decision aid that can be considered a success in that it has received widespread use over a period of time. Although the case reports include information that qualifies some of the successes, my focus is on the lessons that can be learned from what went right rather than from what went wrong or might have gone better, though there are lessons to be learned there as well.

The grid below identifies key variables in our conceptual framework that appear to have been important determinants of successful development, dissemination, and adoption of decision tools across the four cases. The first natural question to ask is whether any common denominators emerge from all four case studies that seem to be essential ingredients to success. Given the diversity in the cases, it is not surprising that many of the ingredients differ, but I believe there are at least four they share in common.

Variable Category	U.S. News College Guide	CR Car Guide	Nutrition Fact Panel	eBay.com
Audience factors				
Motivation to seek and use information	High stakes, complex decision	High stakes, complex decision	Low stakes for most consumers	Varies
Understands terms	Mixed	Education given priority	Mixed	User-generated content
Difficulty of choice without tool	Very difficult	Difficult	Easy to moderate	Varies
Sponsor factors				
Resources	Credibility as news org	Credibility as nonprofit	Credibility as a federal agency	Established trust
Authoritative information	College accountability	Developed own methods	Built from ground up	User-generated content
Tool fits with business model	Key product	Key product	Mandated under NLEA	Key part of service
Tool Design				
Formats	Multiple	CR display formats	Standardized	Varies
Easy to use	Moderate	Moderate	Numeracy required	Easy to navigate

Convenience	Must seek out	Must seek out	Point of purchase	Integrated in platform
Customization	Online tool is customized	Online tool is customized	None	Customization encouraged
Promotion and Dissemination				
Positioning relative to choice	Remote	Varies	Point of purchase	Point of online purchase
Promotion	Branding	Branding	Partnerships	Branding
Pricing	Free to $19.95	$3.99 issue to $45 sub	Free	Free
Testing and Evaluation				
Consumer testing and feedback	None; monitors sales	Extensive	Limited	Extensive
Ongoing improvement	Updated annually	Frequent tweaking	Very little	Extensive

First, in all four cases, the credibility of the information provided by the decision aid seems to play an important role in explaining the extent of adoption and use. Because credibility can be achieved in different ways, its importance is apparent only when one considers two rows in the table listed under "Resources and Constraints." In two cases, *America's Best Colleges* and *Consumer Reports Buying Guide,* the sponsoring organizations were able to draw on institutional credibility as a news organization and as a nonprofit organization devoted to informing consumers, respectively. The information they provided was likely to be received by consumers with a presumption that it was objective and could be relied upon. Of course, it is important to note that institutional credibility is not an infinite account from which an organization can draw in perpetuity; it must be actively maintained by the organization. CR, for example, takes pains to explain the methods it uses in evaluating products and the steps it takes to remain free of outside influence.

In the case of eBay, the credibility of the information provided on the Web site derives from the features of the platform that enable trust to be established between buyers and sellers. The feedback system provides incentives for sellers to be scrupulously accurate in describing the products they offer and terms of delivery. Offerings of similar items by other sellers provide a means for buyers to comparison shop for information about products as well as products themselves.

In the case of NFPs, credibility depended on whether the labeling effort could draw on a base of authoritative information and standardized, objective methods for evaluating nutritional

content and value. At first, such a base was not sufficiently developed to support a credible labeling program. An extensive amount of development was required that took several years to complete. If labeling had somehow been implemented without this massive effort, it would not have garnered the necessary acceptance from food manufacturers and other stakeholders.

A second common factor in all four case studies is that the decision aid is intimately connected with the sponsoring organization's business model. The *CR Car Buying Guide* is emblematic of the kind of service CU provides and is one of its best-known products. Similarly, *America's Best Colleges* is the flagship product that helps define U.S. News's *America's Best* brand and its business model of service journalism. For eBay, the decision support tools built into the Web site are critical in facilitating connections between buyers and sellers and enabling informed transactions to occur between them. The business model for NFPs is the mandate provided by the federal Nutrition Labeling and Education Act of 1990, which strengthened the FDA's existing legal authority to regulate nutrition labeling for all processed, packaged foods that are subject to FDA regulation. The fact that these decision aids are central to their sponsoring organization's business models may be a key contributor to their success, since it provides strong organizational incentives to focus on them and make substantial and enduring investments to ensure their continuing success.

The third common factor, related to the second, is effective promotion through branding. *America's Best Colleges* and the CR Car Buying Guide provide the clearest examples, since consumer awareness of these tools is primarily a result of successful branding efforts. eBay has also developed a formidable brand, though it is associated with online commerce and auctions rather than with decision tools per se. In the case of NFPs, branding efforts focused on awareness of the tool itself (e.g., the "Spot the Block" message).

A fourth common factor is that all the decision tools are either free to the consumer (NFPs and information on eBay.) or have a price structure that provides broad access. U.S. News provides basic content and functionality on its college portal free of charge, and the annual issue of *U.S. News & World Report* is priced at just $4.99, although consumers who want the premium package can spend $19.95. CR prices its annual auto issue at just $3.99. Consumers can purchase the *CR New Car Buying Kit* for $36.00 for 3 months and obtain a combined print and electronic subscription to CR for $45.00 for one year. It is striking that a consumer could access all four decision tools in their most basic form for a total outlay of $3.99. These case studies provide no examples of decision aids priced at higher levels, but because one of the desired characteristics used to select cases for study was that the tools be accessible to low-income consumers, it is difficult to draw any conclusions about the importance of pricing. However, two of the four cases (eBay and NFPs) provide information at the point of purchase

as part of the product description, and it seems unlikely that consumers would be willing to pay separately for information in that context, even if the information were quite detailed.

Other factors listed in Figure 1 appear to be important in one or more of the cases but not in all of them. For example, college choice and car purchase decisions are both characterized by high levels of complexity and consequentiality, which should motivate consumers to seek information that will help them make good decisions. In contrast, except for those who have severe allergies or are trying to manage their weight, food purchase decisions seem unlikely to engender the same levels of anxiety and motivation to seek out information. Considered severally, these case studies demonstrate that decision aids can be successful both for anxiety-producing high-ticket decisions and for less anxiety-producing everyday purchase decisions, but the approaches required for successful marketing in these circumstances are likely to be quite different.

These cases provide numerous examples of strengths that are present in some of the cases but largely absent in others without that absence constituting a fatal flaw. For example, severe space constraints limit the amount of information that can be presented on food packages, which precludes the presentation of information that might motivate or educate consumers in the important and uses of NFPs. Although this constraint undoubtedly limits the extent to which consumers effectively use NFPs, it does not preclude such use altogether. This case demonstrates that it is possible to present limited information that at least some consumers will be motivated and able to use, and suggests that such use can be amplified by educational campaigns to promote awareness, motivate consumers to use the information, and explain appropriate use, since that information cannot be delivered at the point of purchase.

IV.   IMPLICATIONS OF CASE STUDY FINDINGS FOR DECISION SUPPORT TOOLS IN HEALTH CARE

Perhaps the clearest and most compelling conclusion suggested by these four case studies is that successful decision aids must present credible information that consumers find useful in deciding which product to buy (or in evaluating a single product). In each case, sponsors devoted considerable effort and/or drew on organizational resources to establish and reinforce consumer perceptions that the information provided was factual and unbiased. While these case reports do not include any cases where this was not successfully done, previous research indicates that trust in decision aids is by no means a given. Unless there is adequate reason to trust a decision aid, the natural tendency is not to do so.

Happily, the case studies also provide numerous examples of ways in which sponsoring organizations have successfully built credibility and trust. Methods used by sponsors in these case studies include (1) careful attention to use of objective methodology, (2) transparency in explaining how valuations are arrived at, (3) visible efforts to protect against commercial influence, and (4) establishment of strong incentives that encourage accuracy in describing products. These methods seem to generalize readily to the healthcare field. In any field, the most effective techniques will likely depend on the nature of threats to credibility and the organizational strengths and capabilities for dealing with them.

The case studies also suggest the importance of branding as a particularly successful strategy in the promotion of decision aids. This finding is closely connected to the importance of trust, since branding is largely an effort to establish and maintain trust with stakeholders. It appears to be feasible to accomplish much of this through marketing and promotion, but results suggest that a basis for trust must be there—the measurement methods must capture important product characteristics, the tool must do what consumers would like it to do, and the risk of fraud actually must be low.

In each of the four cases, the decision aid or product of which it was a part was not only successfully branded on a national level but also became a market leader. This raises the question of whether success is possible on a smaller scale, in regional or niche markets, and whether winners must dominate. Given the size of the market for decision aids in the health field, it is difficult to imagine multiple competitors succeeding with equivalent products, as in the credit rating market.

These case studies illustrate tools that have been developed to support widely disparate types of decisions. Only two of the cases involve high-stakes decisions where consumers' fear of making a costly mistake is sufficient to lead them to seek out decision tools on their own. It is probably no coincidence that the other two decision tools are implemented at the point of purchase to consumers whose primary motivation is to make a purchase, and who may be disinclined to look for information that is not readily at hand. The NFP case presents an interesting example in which the impetus for providing the decision tool comes from government and larger stakeholders rather than from individual consumers. The government sponsorship model may be appropriate for certain applications in health where disseminating information on a wide scale has demonstrable valuable from a public health perspective, but the benefit to any individual consumer is marginal or too uncertain to motivate information seeking. However, the health field also presents decisions that involve high stakes, especially regarding treatments.

In each of these case studies, the decision tool is closely tied to the business plan of the sponsoring organization, so that the organization has a large stake in establishing and maintaining its success. Although causality may run in both directions (a successful product is an asset that a good business plan will exploit), it is reasonable to suppose that a decision tool that is central to an organization's business plan is more likely to achieve both success and longevity, especially if success depends on the sustained application of substantial organizational resources. Organizations that do not have a serious commitment to the success of the decision tool are likely at some point to find other ways to use their resources. Moreover, the commitment has to be rational, based on a good business case. This finding suggests the importance of both organizational commitment and a viable business plan in contributing to the success of a decision tool.

Three of the four case studies might be described as following a "mass communication" model in which a decision tool is marketed on a national scale for a relatively well-defined purpose (such as helping to inform a car purchase), with at most a few options for consumers to choose from. In contrast, eBay's Web site offers a wider range of user options, richer content, greater interactivity, and, of course, information about a vastly wider array of products. Perhaps most important, it provides social experiences and enables users to communicate with others who share their interests. eBay and certain other Web 2.0 applications encourage the development of user communities, which have considerable potential to meet needs for decision support in healthcare.

Online patient networks that link patients who share a chronic disease in a community that shares information and facilitates access to essential education and resources for disease self-management provide a good example of how this might work in healthcare, where such trends are already well underway. Among the many attractive features of this kind of model are that it engages patients actively in their healthcare and enables them to add value to their own and other patients' management strategies rather than depending passively on the often meager attention they receive from a strained healthcare system.

Case Study Commentary

Stephen T. Parente, PhD

I.   Introduction

Finding value of from health IT is a long-standing research interest of mine and a lens that I use. The valuation of health IT has only recently gained prominence as a key issue to policy makers and business leaders. However, there is a paucity of empirical studies to support the assertion that this form of investment yields positive returns. My interest in health IT and economics was stirred in 2004 when I was appointed to a panel of health economists working with the Department of Health and Human Services Office of Health Information Technology. This panel was brought together to provide expert opinion on the studies completed to date on Health IT and the research agenda that needs to be created to move ahead. Unfortunately, I've seen little serious engagement after this within the health economics community other that the RAND study of 2005.

Another lens is my interest in the integration of insurance payment data and clinical data. The current disconnect results in a very time-intensive and expensive healthcare system where the data for measuring high performance resides in different organizational silos that cannot be easily accessed. The diversity and confidential nature of the data, and the processes needed to link the information into a usable format, introduce a complexity not well understood by researchers outside of the healthcare field. Since I have started focusing on this topic in 2005, I continue to be saddened by the 'lack of friends' who see the issue as I do, but cannot or will not execute a public policy or commercial venture to serious address the opportunity.

Another lens that I use is taking lessons from other industries and applying them to health – much as this project has proceeded. My interest is pragmatic and political. The pragmatic view sees an array of technologies that could be applied to healthcare, but which are not, due to the complexity of the field – in part – but more because of the monopoly rights the major players of the system want to exert.   I view the lack of share data by payers and providers as a monopoly problem, where ownership of patient data by the other party is a bargaining tool – a human shield of sorts – for the other side to position. Thus emerges the political lens as well in the sense of using public policy to address the market failure of unshared information at the patient or point-of-care level. Data at this level are necessary for market research and development of the 'pay for performance' metrics that would ideally enable consumer shopping in a high-quality, transparent healthcare system.

II.   Observations

A. U.S. News & World Report: America's Best Colleges

Audience (Planning): The creators and managers of this tool understand their audience, in part because it is a magazine with a substantial circulation and marketing database zip code to identify demographics. The magazine understands that this audience can process the information and either use it actively or as a referral for friends and family. Top three key factors in play:

- Cognitive ability for processing information and learning style
- Awareness of reasons to attend to choice
- Context(s) in which audience would typically make a choice

Resources & Constraints (Planning): The resources are largely determined by advertising revenue and subscription services. It is a very clear model. The information collection is owned by the magazine and is proprietary. Top three key factors in play:

- Time and schedule
- Availability of authoritative information to integrate into the tool
- Conflicts of interest with sponsor or information source(s)

Barrier and Facilitators (Planning): There are few barriers in this market other than willingness to pay for higher education. Given the current economic crisis, there may be much more interest in value schools then before. It would take huge drop in the economy for this tool, which is really about human capital investment, to be impacted.

Objectives (Planning): The objectives are clear and the target audience is apparent. The goal of the tool is to increase circulation and build credibility as an independent source. Top three key factors in play:

- Dimensions of choice seek to have audience use the tool to inform
- Desired outcome for market penetration
- Prioritization (i.e., trade-offs)

Tool Design (Design): It is an easy tool to use. The design is pretty intuitive and it allows for power users to try more advanced compare functions. Top three key factors in play:

- Relevance of information for audience
- Presentation of information in terms audience understands
- Ease for target audience in navigating or using tool accurately

<u>Promotion & Dissemination (Design):</u> Distribution is through print media and the Web. It has become its own brand and had the advantage of being a simple listing tool with basic selection criteria. Top three factors in play:

- Positioning of tool relative to choice
- Simple promotion
- Simple pricing

<u>Testing & Evaluation (Design):</u> Sales response, controlling for other market factors, gives a pretty good indication of tool effectiveness. Additional engagement from the colleges themselves is a feedback loop as well.

B. Nutrition Facts Panel

The top factors where the tool maker/user has a comparative advantage or niche for each category are listed:

<u>Audience (Planning)</u>
- Psychographics (e.g., social class, lifestyle, behavior, opinions, values, motivators)
- Cognitive ability for processing information and learning style
- Awareness of having a choice
- Audience goals for choice
- Context(s) in which audience would typically make a choice

<u>Resources & Constraints (Planning)</u>
- Political considerations
- Organizational capabilities
- Conflicts of interest with sponsor or information source(s)

<u>Barrier and Facilitators (Planning)</u>
- Audience comprehension of content of tool
- Convenience (time and cost) for audience
- Barriers to audience use (.e.g., literacy levels, habits, technology access, pricing, sponsor credibility)

Objectives (Planning)

- Dimensions of choice seek to have audience use the tool to inform
- Desired outcomes from audience using the tool to make choice

Tool Design (Design)

- Relevance of information for audience
- Ease for target audience in navigating or using tool accurately

Promotion & Dissemination (Design)

- Pricing – It's free and an unfunded mandate

Testing & Evaluation (Design)

- None that is good or obvious other than ecological inference.

C. *Consumer Reports: Car Buying Guide*

The top factors where the tool maker/user has a comparative advantage or niche for each category are listed:

Audience (Planning)

- Psychographics (e.g., social class, lifestyle, behavior, opinions, values, motivators)
- Cognitive ability for processing information and learning style
- Awareness of having a choice
- Audience goals for choice
- Context(s) in which audience would typically make a choice

Resources & Constraints (Planning)

- Resources of sponsor (e.g., financial, technical skills, brand/reputation, partners)
- Time and schedule
- Availability of authoritative information to integrate into the tool
- Sponsor goals and expectations
- Conflicts of interest with sponsor or information source(s)

Barrier and Facilitators (Planning)

- Prevailing norms for target audience
- Audience comprehension of content of tool
- Convenience (time and cost) for audience

Objectives (Planning)

- Dimensions of choice seek to have audience use tool to inform

- Desired outcomes from audience using the tool to make choice
- Prioritization (i.e., trade-offs)

Tool Design (Design)

- Format(s)
- Relevance of information for audience
- Presentation of information in terms audience understands

Promotion & Dissemination (Design)

- Positioning of tool relative to choice
- Pricing (e.g., list price, discounts, terms)

Testing & Evaluation (Design)

- Resources for periodic evaluations to measure success and learn from experience for future modifications

D. eBay

The top factors for each category are listed:

Audience (Planning)

- Cognitive ability for processing information and learning style
- Awareness of having a choice
- Awareness of reasons to attend to choice
- Audience goals for choice
- Context(s) in which audience would typically make a choice

Resources & Constraints (Planning)

- Time and schedule
- Availability of authoritative information to integrate into the tool

Barrier and Facilitators (Planning)

- Physical environment for choice
- Audience comprehension of content of tool
- Convenience (time and cost) for audience

Objectives (Planning)

- Target audience (user, perhaps provider)
- Desired outcome for market penetration

- Prioritization (i.e., trade-offs)

Tool Design (Design)

- Relevance of information for audience
- Features (ex. customization, displays that support decision making)
- Optional services

Promotion & Dissemination (Design)

- Positioning of tool relative to choice
- Placement of tool relative to choice
- Pricing (e.g., list price, discounts, terms)

Testing & Evaluation (Design)

- Deliberate feedback loop from users and non-users to tool sponsor and partners, including designers, for ongoing monitoring and improvement
- Resources for periodic evaluations to measure success and learn from experience for future modifications.

III. Cross-case analysis

Looking across the four groups there are some common factors that emerge. The factors, summarized in the table below, offer a set of attributes of success and sometime concern, such conflict of interest.

Table 1. Common Features across Cases.

Audience (Planning):	Score	Colleges	FDA	CR	eBay
Cognitive ability for processing information and learning style	4	1	1	1	1
Context(s) in which audience would typically make a choice	4	1	1	1	1
Awareness of having a choice	3		1	1	1
Audience goals for choice	3		1	1	1
Awareness of reasons to attend to choice	2	1			1
Psychographics (ex. social class, lifestyle, behavior, opinions, values, motivators)	2		1	1	
Resources & Constraints (Planning):					
Time and schedule	3	1		1	1
Availability of authoritative information to integrate into the tool	3	1		1	1
Conflicts of interest with sponsor or information source(s)	3	1	1	1	
Political considerations	1		1		
Organizational capabilities	1		1		
Resources of Sponsor	1			1	
Sponsor goals and expectations	1			1	
Barrier and Facilitators (Planning):					
Audience comprehension of content of tool	3		1	1	1
Convenience (time and cost) for audience	3		1	1	1
Barriers to audience use (ex. literacy levels, habits, technology access)	1		1		
Prevailing norms for target audience	1			1	
Physical environment for choice	1				1
Objectives (Planning):					
Dimensions of choice seek to have audience use tool to inform	3	1	1	1	
Prioritization (ex. trade-offs)	3	1		1	1
Desired outcome for market penetration	2	1			1
Desired outcomes from audience using the tool to make choice	2		1	1	
Target audience (user, perhaps provider)	1				1
Tool Design (Design):					
Relevance of information for audience	4	1	1	1	1
Presentation of information in terms audience understands	2	1		1	
Ease for target audience in navigating or using tool accurately	2	1	1		
Format(s)	1			1	
Features (ex. customization, displays that support decisionmaking)	1				1
Optional services	1				1
Promotion & Dissemination (Design):					
Pricing (ex. list price, discounts, terms)	4	1	1	1	1
Positioning of tool relative to choice	3	1		1	1
Simple promotion	1	1			
Placement of tool relative to choice	1				1
Testing & Evaluation (Design):					
Resources for periodic evaluations to measure success and learn from experience	2			1	1
Deliberate feedback loop from users and non-users	1				1

In terms of overall types of variables, the Audience and Tool Design groups have some of the highest cross-case persistence. For Audience, tools that know the cognitive ability of the user and context by which the audience member makes a choice appears of great value. For Tool Design, relevance is the key attribute.

Other factors that are also important are pricing and positioning, as well as understanding your audience. It is surprising that there a set of stand-out tools. Certainly, some of this is assessor specific, but the patterns are more clear than expected and actually are informative for the next section of the commentary.

IV.   Commentary on application of your analysis to healthcare:

From my discussion of the individual cases and cross-case analysis, there are several lessons that can be learned for applying this work to health-care. In order of importance, I think these ideas are relevance to the user, cognitive ability, pricing and understanding your audience. Each will be discussed and the followed by ideas that could be actionable for future health-care tool use.

Health-care is different from health, which is different than health insurance. And yet, we approach the relevance of the information by one of those three areas. This has direct bearing on why relevance matters so much. Generally, we seek health-care on an as-needed basis. Rarely is health-care considered something to look forward to. Often it is reactive and perhaps sought with the shame that our bodies have somehow failed us. Health in the mind of a consumer is constant resonate factor along with having some innate sense of security around our being. Health insurance is something that is generally viewed as an asset by the risk averse and those with high demand for health-care.

So the first real issue is, what is a tool's relevance with respect to the interaction of these three disparate parts of the personal health-care supply chain? Electronic tools such as those we examined are representative of a technology perspective not discussed – the supply chain. Management studies of supply-chain management identify information technology as the glue that holds the supply chain, whether it is manufacturing or service oriented, together. Thus, the Internet has that power as well for the consumer with respect to 'health' tools. Currently, a wellness Internet tool tries to draw together one to three of these elements. They certainly address health, with a health risk assessment – but not in the way by which a consumer constantly knows what their health is by reading their own body signals. Furthermore, due to this lack of relevance for real-time health monitoring, the health risk assessment form feels like either a health insurance application or that annoying part of the doctor- visit experience where you fill out a clip- board of items that you assumed your doctor already knew about you.

Thus to make relevance really work for a health-care tool, it needs to be quite consumer-centric, non-threatening and a trusted resource. Finally, it needs to pre-populated with data and preferences that already describe you. Unfortunately, this is a danger as well because we are likely hardwired to process all of these elements – and suddenly a complex algorithm of 'us' explains our choices. Also, what if the suggestions considered are either too personal or not quite relevant enough? Here of course is where design comes into play. Who could imagine a tool for a Medicare senior pre-populated with all of their prior claims history since they joined the program? At first blush, it may seem bewildering to many that 'the system' was recording all of this. Thus fear has been triggered. The problem is that fear is correlated with relevance

and so expectations must be clearly set that the tool is relevant and obviously helpful, but designed exclusively for your personal and confidential use.   That is not an easy task either because the funder, as in many of our case studies, is conflicted. With the exception of the FDA, all of the cases have a direct or indirect profit incentive from their Web site.

Cognitive ability is key as well. What appeals to me about displaying claims data on a personal record is the thrill of the pattern recognition (on my part) that it looks like medical records data. Other consumers may not be as enthralled or may not understand what they are looking at. The nearest functional equivalence is personal banking and check books. There is an even an Instrumental Activities of Daily Living test for such a thing. That skill or the ability to complete that skill will be required for PHRs and EHRs to be useful and valuable.

Pricing a healthcare tool will be critical as well. Generally, the best way to value these technologies is by determining the opportunity cost of not having. The problem is that seeking healthcare is generally so reactive, that the 'coulda, shoulda, woulda' effect of not knowing your foregone alternatives, let alone your choices until you generally are in the midst of crisis, limits how you can price on opportunity costs. That is why standard gamble methods are used to complete willingness-to- pay analysis, but most are not playing out all combinations of choices until confronted by them. The only way you can price tool use, is to put the cost of lack of planning in as an explicit cost of the system in its financing as 'cost of ignorance fund' that is set aside to be re-distributed as you make informed choices or engage on topics, like end- of-life care, that could have enormous downstream cost savings. This is in effect what a 'carbon tax' does.

In general, expecting a consumer to pay for using a tool about a topic they are in denial about it (e.g., health insurance), have shame or fear about using (e.g., healthcare) or where there are minimal short-term or immediate consequences (e.g., health behaviors) is unrealistic. The most likely users are probably those who are very risk averse and/or are well-to-do with strong preferences for risk aversion.

So what can be done that makes sense? The fear and apprehension of a relevant tool, like an EHR, must be put to bed quickly.   One way to do so is for the federal government to actively promote a tool use (see following prescription). It would need to be something that is relevant and be perceived to become so common and so useful – like the food labels – that it becomes and game changer will being considered boring after wide-spread use.   Such a 'paid for' tool eliminates the concern about pricing. However, it could enable an opportunity for a set of multi-purposed goals that could be formally evaluated using an opportunity-cost perspective.

The following proposal attempts to demonstrate how trying to build a tool that is designed to be relevant, priced right and cognitively comprehensible (in my opinion) could work. Also note, it is a Trojan horse tool as well. The information technology is prominent, but in a back-office kind of way. The reason to get over the apprehension is the benefit- worth- the-time cost of using the tool.

Pharmaceutical Economic Stimulus as Health Reform

This proposal will be approached as part of a domestic 'war on the uninsured' policy and will borrow from the dual-use opportunities deployed by the Roosevelt Administration in 1941 to transform a consumer economy to a war economy. The proposal is guided by three principles. First, for the economic stimulus to work, money needs to be spent by consumers as quickly as possible. Second, inventing new programs for spending the money will not be as effective as using existing firms to facilitate rapid stimulus. Third, opportunities to achieve multiple public policy goals that create multiplier effects through a program have great merit.

These principles guide the development of the following 'health restoration and maintenance' proposal. In this proposal, any consumer would get a debit card issued by the dozen or so national retail pharmacy chains to purchase needed pharmaceuticals for their health as well as primary care visits at the retail clinics associated with these pharmacies. The cards would come preloaded with $500 and made available by cashiers at the stores. To receive a card, a person must supply their driver's license for a card swipe to record identification. The cards can be 'topped' up based on financial need up to $3,000. Financial need would be determined by cross-referencing IRS data with the card user on a Web site at the card users' discretion. The cards could only be used at the qualifying pharmacies and only for non-controlled pharmaceuticals to prevent an oxycodone-fueled stimulus.

This proposal addresses the first principle by directly channeling money to consumers to help counter many ill effects of the economic downturn, including a rise in the uninsured or underinsured as employers face bankruptcy or need to scale back insurance benefits to survive.

If enacted, this policy effectively turns Target, Walgreens and Wal-Mart into the World War II industrial policy dual use analog of Ford Motor company building bombers and GM building tanks. However, whereas it took nearly a year for Ford to re-tool to make a bomber, the retail pharmacies could likely respond within months if not weeks. This satisfies the second principle of using some of the best infrastructure already built to deliver the stimulus, not starting with a time-draining set of new business practices.

Finally, the third principle of achieving multiple goals from one program would also be addressed. For example, every chronic illness has a significant pharmacologic treatment component and this policy would help an uninsured or underinsured asthmatic adult continue to maintain his or her health, if not enhance it. In addition to providing needed care and stimulating the economy, a third long-term value of this policy would, for the first time ever, allow policy makers to know who the uninsured really are in terms of their illness burdens and potential cost for insurance coverage. Furthermore, the debit cards themselves might be a first step in identifying a means to arrange future insurance contracts using a hybrid approach of individual private insurance mandates programs implemented by the Netherlands and Switzerland. Indeed, the Association of Health Insurance Plans recently stated they would support a national health insurance reform program to provide coverage to all Americans as long as an individual mandate is in place. In the Netherlands, a private insurer receives an additional subsidy for taking care of a sicker patient, if they provide pharmaceutical consumption patterns as one of the key data elements. As part of this stimulus proposal, this type of approach would jump-start the data collection required for a future comprehensive health reform proposal as well as alleviating the current economic crisis.

This concludes my attempt at tool commentary. I think we have a long way to go and am personally very skeptical short of heavy government play. It is too complex and dynamic an industry for piecemeal solutions.

Case Study Commentary

Dale Shaller, MPA

I.   INTRODUCTION

The perspective I bring to this analysis derives from more than two decades of research and practice aimed at providing comparative healthcare quality and performance information to consumers and other audiences. Having advised as well as directly managed some of the earliest initiatives to collect and publicly report quality information on health plans, hospitals, and medical practices, I have observed some small measure of progress in our ability to tailor reporting tools to specific audiences based on careful design and testing, but I remain frustrated by our overall inability to engage consumers in the use of these reporting products and tools.

My general assumptions related to decision support are that the best way to get tools used is to: 1) clearly understand the nature of the decision and the need for support; 2) carefully design a tool that meets the needs of users at the right time and place and at the right cost (including level of cognitive and emotional effort required); and 3) establish the promotion and distribution channels needed to effectively deliver the tool to the intended users, with appropriate training and support. An additional assumption is that a tool designed for a specific need may actually serve additional intended purposes or result in unintended consequences. Finally, I believe that larger market or environmental forces surrounding tool development and promotion may influence use in unexpected ways.

Given our mixed experience with healthcare quality reporting and decision support tools, I have long wanted to look to other sectors for examples or lessons that might guide our efforts. Through various study panels and applied projects, I have suggested that tool developers may not be the best at promotion and that we should perhaps turn to experts in marketing and advertising to help us better "sell" the products we create. But an equally important issue is whether the products we have created are the right ones to meet the information and decision needs of the audiences we strive to serve.

Our greatest success thus far with public reporting of quality information lies in its influence on changing the behavior of the suppliers, i.e. doctors and hospitals, not the consumers. Is that enough? Should we settle for this? Or should we keep trying to "get it right" for the consumer? I am humbled by the scope of the challenge, yet encouraged by our collective determination to keep trying.

II.   INDIVIDUAL CASE STUDY OBSERVATIONS

The following observations are guided largely but not exclusively by the framework of principles and variables developed by Kanouse and others for informing a successful healthcare quality reporting effort.

A.   *U.S. News & World Report: America's Best Colleges*

Variables Promoting Adoption

- *Targeting a clear audience need:* Central to the initial adoption of the *America's Best Colleges* guide was the identification of a clear and compelling need for information to guide a major, complex decision. Given the cost and future career implications of selecting a college, parents and students (especially those in higher socio-economic groups) are a ready, eager market for reputable information that can help them navigate the decision process.

- *First to market with a strong brand:* U.S. News had a "first mover advantage" and a strong reputation as a trusted, authoritative source of information and "news you can use."

- *Large existing subscriber base:* U.S. News had almost 2 million subscribers when it went to market with its America's Best brands.

- *Strategic timing of product release:* The *America's Best Colleges* guide is released in late August just when students start seriously thinking about this decision.

- *Leveraged marketing:* The guide enjoys enhanced visibility through "free advertising" provided through media coverage at the time of release.

- *Weak competitors:* Alternative sources of information for this decision (e.g., *Money* guide) were not as successful in reaching the target audience.

- *Successful business model:* Continued adoption and use of this tool over time are supported by a for-profit business model that relies on subscriptions fueled by a predictable annual need. U.S. News has an established niche that

becomes self-reinforcing as colleges themselves legitimize the rankings by taking them seriously in marketing to prospective students. The college business model, which relies predominantly on student enrollment, reinforces the value of the college guide rankings, thus perpetuating a virtuous cycle.

- *Transparency in rating methods:* Although subject to some criticism, the ranking methods used by U.S. News are open to inspection (unlike some competitors) and colleges have an opportunity to provide feedback, thereby reinforcing credibility and acceptance.

Observations on Tool Functionality

- The online and print versions of *America's Best Colleges* provide multiple indicators of "academic quality," all lined up together for easy comparison and "one-stop" shopping.

- The content of the guide provides a balance of objective measures as well as reputation measures, and in addition to college profiles, offers supplemental information on the application process and how to pay for college.

- The navigation of the online tool is simple and user-friendly, and allows side-by-side comparisons of several colleges at a time.

B. *Consumer Reports: Care Buying Guide*

Variables Promoting Adoption

- *Complexity and perceived risk of decision:* Similar to the choice of college, buying a car is a big-ticket item that creates a lot of anxiety and perceived need for gathering as much information as possible before facing the dreaded "showdown" with the car dealership. As noted in the case study, "the CR car buying guides and other CR products are widely used because they are demand-driven."

- *The tool fits the need:* Even though shoppers differ in the attributes they care most about (e.g., safety, price, reliability, performance), many of the factors that consumers consider most important to car purchase lend themselves to guides. The average time of 7 hours spent online to research a car purchase is

staggering compared with the average of 15 minutes that people spend reviewing their health benefit plan options during open enrollment.

- *Devoted target audience segment:* The annual CR car guide has a devoted, self-selected target audience that is highly motivated and interested in this type of decision support. CR has the largest online subscriber population of any consumer information web site, and it continues to grow. It is noteworthy that the focus of the CR car guide is on the *average* car buyer within this targeted audience segment, not the specialized car enthusiast.

- *Impeccable branding:* The CR brand and reputation as an impartial, objective, unbiased, trusted information source are core assets comprising a key variable influencing use of the car guide.

- *Multiple synergistic promotion strategies:* CR employs a combination of marketing and placement approaches that are diverse and leveraged, including partnerships with other online distributors, the Cooperative Extension Service, multiple sales outlets, earned media coverage, and word of mouth marketing; even its successful lawsuits are leveraged to promote the brand.

- *Independent testing and evaluation:* CR is famous for its product testing, refusal to accept outside advertising, and extensive use of feedback from subscribers to inform new product development and features. These attributes further reinforce user loyalty.

- *Successful business model:* Relying predominantly on subscription and sales revenues, CR was able to introduce "reasonably priced" online subscription fees at a time when Internet content was viewed as largely free. This model works over time because of the stable and growing base of users, even though the CR car guide is not the most used tool for car shoppers (only 33 percent of new car shoppers use the CR guide).

Observations on Tool Functionality

- The multiple sorting and ranking functions of the online tools allow consumers to review information and make comparisons according to their individual priorities.

- The additional tool content is useful and relevant, offering consumer comments (in keeping with the growing trend of online information sources), forums with experts to answer specific questions, and allowing users to differentiate between major and minor problems.

- The online tool is easy to navigate and use. In spite of the vast content, it is easy to sort and select the models, features, and comparisons that matter to you.

C.   Nutrition Facts Panel

Variables Promoting Adoption

- *Government mandate on food suppliers:* Unlike the tools described in the other case studies, the NFP is unique in the federal legislation and regulations that require the food industry to place NFPs on most processed food products. This mandate clearly has been a key force driving the widespread placement of the food label and has strongly contributed to large scale use of the label by over 60 percent of adult Americans.

- *Growing popular demand for nutrition information:* Food consumption is a daily necessity, but prudent decision making about food purchases is not. Of the major factors in food selection – price, taste, convenience, and nutritional value – consumers must rely on external sources to inform them about nutritional quality. Growing public awareness and knowledge about the role of diet and nutrition, consumer demand for more healthy foods, and skepticism about suppliers' food claims all have led to increasing use of the NFP.

- *Government as a trusted brand and source of information:* Research has shown that consumers perceive the federal NFP to be accurate and trustworthy.   The credibility of the NFP was enhanced by the personal leadership and "champion" role of David Kessler, who contributed to the brand strength of the FDA.

- *Public financing "business" model:* The original scientific base and ongoing updates for the food labels; oversight, monitoring, and research related to food industry compliance and consumer use; and public education are all funded through public appropriations. Although funding levels have been called

inadequate, especially in relation to consumer education and marketing campaigns (although information on exact funding for promotion was not available for the case study), public financing at least assures a minimal ongoing level of tool support.

- *No financial barriers to consumer use:* Given the public finance model, and because the NFP is required, the burden of compliance rests with the industry, thus allowing consumers to have free access to the good. Consumers may face other barriers, however, related to the complexity of the label itself.

Observations on Tool Functionality

- The standardized, consistent design of the NFP contributes to its familiarity and ease of use. However, the downside of a "one size fits all" approach is that it never does, and therefore the ability to customize to audience segments needing more – or less – information, is lost.

- The conversion of nutritional content to "percent daily value" facilitates comprehension and minimizes misinterpretation of weight amounts.

D.   eBay.com

Variables Promoting Adoption

- *First to market with a hot new brand:* In contrast to U.S. News and CR, both of which had established brands, eBay successfully launched a new brand that hit the market at a strategic moment when e-commerce was on the rise and no other consumer-to-consumer auction trading platform existed for mainstream goods.

- *Accommodation of diverse audience of users:* In contrast again to the U.S. News and CR tools, which focus on a specific target audience, eBay appeals to and supports the needs of a diverse array of users, from deal seekers to those with niche hobby interests.

- *Participatory Web 2.0 model of e-commerce:* eBay offers users with the requisite technical skills the opportunity to create content and engage in

interactive trading and learning experiences not previously offered through traditional "1.0" platforms that are unidirectional from supplier to user. Creating online social communities promotes and perpetuates use, particularly through word-of-mouth, viral marketing strategies.

- *Business model that is free to buyers:* Since eBay derives revenue largely from seller fees, there are few barriers to use; eBay registration is free to buyers and available 24/7/365 (all the time).

Observations on Tool Functionality

- This tool is less about comparison and ranking of options than it is about facilitation of choices related to specific transactions between buyers and sellers. However, substantial information is provided to enable buyers to evaluate a purchase and the reputation of sellers.

- The option to trade through auction, retail, or a combination format provides flexibility to users. The "best match" sorting function facilitates buyer searches for items that correspond to the attributes they are seeking.

- The language used is inviting, and makes it clear that coming on eBay can be more than a transaction if you want it to be, but it doesn't have to be. The many additional features on the eBay community site, such as chat rooms, user groups, customer support, and other forums, offers the opportunity for a meaningful online community for those inclined to participate.

III.   CROSS-CASE ANALYSIS

In looking across the four case studies, it appears that there are two major categories of variables contributing to the adoption and success of these tools: 1) variables that are demand-driven, and 2) variables that are supply-driven. A third category of variables relates to environmental or market forces that affect both users and suppliers of tools.

The following matrix summarizes the key variables in the first two categories that appear to be most influential across the four case studies.

VARIABLE CATEGORY	U.S. News College Guide	CR Car Guide	Nutrition Facts Panel	eBay.com
DEMAND-DRIVEN VARIABLES	RELATIVE INFLUENCE			
Audience has a clear and compelling need: complex, high stakes decision	Strong	Strong	Moderate	Moderate
Audience perceives differences in possible choices and alternatives	Strong	Strong	Strong	Strong
Audience is motivated to seek information and decision support	Moderate	Strong	Moderate	Strong
Audience possesses the requisite skills to effectively use the tool	Strong	Strong	Moderate	Strong
SUPPLY-DRIVEN VARIABLES	RELATIVE INFLUENCE			
Strong brand and trusted reputation	Strong	Strong	Strong	Strong
Aggressive, leveraged marketing	Strong	Strong	Moderate	Strong
Strategic timing to market	Strong	Strong	Strong	Medium
Sustainable business model	Strong	Strong	Strong	Strong
Ability to customize tool to user preferences	Strong	Strong	Low	Strong
Transparency of ratings or comparison methods	Strong	Strong	Moderate	Strong
Minimal cost barriers to use	Moderate	Moderate	Strong	Strong
Absence of strong competitors	Strong	Moderate	Strong	Moderate

As noted in the case studies, tools tend to be used when they are demand-driven. It is clear that a compelling decision requiring credible, accessible information is a major factor affecting the use of these tools. When such a need is combined with the perception of differences in alternative choices, demand for the tool increases. A target audience or community of users, predisposed to seek information and decision support and possessing the requisite skills to use the tool, creates a powerful constellation of factors helping to drive adoption and contribute to sustained use.

It is noteworthy that the list of variables that are supply-driven is longer than the list of demand-driven variables. Perhaps this suggests that there may be more opportunities to

influence what tool suppliers do to reach their audience than influencing audience demand itself. To some extent, a clear and compelling need either exists or it doesn't. However, it is also true that suppliers may find ways to create or motivate demand where it had been previously weak or non-existent. Indeed, skillful advertisers of consumer goods clearly have succeeded in selling products and services by using the power of emotion and other messages to capture and retain market share.

The role of branding and marketing as key supply-driven variables is paramount to successful tool adoption in these case studies. The only exception to this rule appears to be the FDA's efforts to promote use of the NFP, which were recognized by developers as key to use but whose budget to accomplish it was thought to be inadequate. While the government mandate of the food label assured widespread dissemination, it has not assured widespread use. Still, even without large scale promotion, the ubiquitous placement of the NFP on food products everywhere has no doubt contributed to awareness and use.

In all cases, a viable business model has proven essential for ongoing impact and engagement. The nature of the business model across these tools varies from for-profit (U.S. News and eBay) to nonprofit (Consumer Reports) to government funding (NFP). It may matter less what the model is than the fact that it fits the tool and provides sufficient continuity to sustain a loyal base of customers or users. External market forces outside the control of either suppliers or users, such as an economic downturn, may undermine the performance of business models requiring the tool to be purchased. The ability to reduce cost barriers to users clearly provides an advantage in such circumstances.

Finally, the design and functionality of the tool itself are key variables affecting use. When the tool clearly fits the need, and provides customizable features to address specific preferences and priorities of users (such as in the case of the CR car guide and eBay), a satisfied and loyal community of users can be created. In the case of eBay, the participatory design of the tool that enables users to co-produce content and interact with one another in social networks, demonstrates an entirely new level of functionality that may become a model for future suppliers in the Web 2.0 environment. In contrast, the static and fixed nature of the NFP, while ubiquitous, provides little opportunity for users to adapt the tool to their specific needs.

IV.   APPLICATION OF CASE ANALYSIS TO HEALTHCARE TOOLS

My observations and analysis of the four case studies suggest several possible directions for the future development and dissemination of decision support tools for patients and consumers of healthcare.   The lessons and implications of these case studies should apply not

only to comparative performance reporting for enabling consumer choice of plans and providers, but to other decision support related to choice of treatments and the use of personal health records and other tools designed to help people manage their health and healthcare.

Tool Design and Functionality

In my introduction to this commentary, I posed the issue of whether our limited success with healthcare tools is due to a failure of "getting the tools right" or "getting the tools we have to the right market." These case studies have convinced me that the challenge is really both and therefore requires us to "get the right tools to the right market." Getting the tool itself right really does demand that tool makers understand the need they are trying to meet and to design accordingly. When the tool truly fits the need, as in the case of the CR car guide, uptake is swift and a loyal user base is established. Extensive customer input and ongoing feedback are also critical to success.

These case studies demonstrate that the design of tools must do more than just present ratings. The college and car guides and eBay.com illustrate the importance of incorporating adjunct information and advice, expert forums, and the opportunity to engage the user in providing comments for the benefit of other users. When ratings are presented, they are integrated across multiple dimensions and grouped together for easy side-by-side comparisons. It is a "one-stop shopping" approach that minimizes the effort required of the user by bringing all of the relevant information together in one place.

The ability to customize the tool to support a specific purchase also suggests that production of static "one size fits all" tools (such as general report cards on facilities and provider groups) will never meet the specific needs of patients with particular conditions, such as diabetes or asthma. The lesson here seems to suggest the need for specialized niche tools customized for defined audience segments, whether for choice of provider or treatment. I believe we have made some progress in this direction with, for example, decision aids developed for specific conditions and some innovative performance reporting sites such as the "D5" developed by Minnesota Community Measurement to address the needs of people with diabetes.

One of the most exciting ideas to emerge from the eBay experience is the potential of creating an entirely new model of delivering decision support through participatory Web 2.0 platforms. While not for everyone, the ability to link patients to patients

(through sites such as PatientsLikeMe.com) and patients to providers in a new transaction model of exchange (through sites such as Carol.com) could foster wider acceptance and use of healthcare engagement tools. The success of these new platforms in healthcare will depend on a whole new generation of users who are tech savvy and plugged into social networking as a way of life.

Marketing and Promotion

In order to get the right tools to the right market, we must finally get serious about adopting the marketing and promotion strategies successfully used in these case studies and shown to work in other sectors. Although brands cannot be built overnight, tool developers need to recognize the importance of establishing credibility and trust, and creating a product identity that consumers can relate to. Using multiple strategies to leverage marketing and promotion through advertising, news media, word of mouth, viral marketing, and placement at the point of need are all approaches that need to be applied to healthcare tools.

Unlike the tools in these case studies, which address consumer needs that are clear and compelling to users, getting tools used for healthcare engagement may require public education to help create a level of awareness that simply doesn't currently exist. This is not about creating need, but creating awareness and motivation to act on important healthcare and health management issues that may otherwise go unaddressed. In addition to education, specific training may be required for certain audience segments to use the tools. Although not a prominent feature in the four case studies, even coffee makers come with 1-800 toll free help numbers to help consumers with questions. Particularly for vulnerable populations, advocates and other intermediaries may be needed to facilitate and support adoption of decision aids and comparative reports. Such education, training, and support may need to precede marketing of the tools themselves if we want widespread adoption to occur. Building such education and training into school curriculums would help to create a new generation of consumers not only plugged in digitally but clued in to the new rules of engagement.

Business Model

All four case studies underscore the need for a sustainable business model that fits the nature of the tool. I am intrigued by the potential role of government mandates to help assure a reliable supply of tools through at least some level of public financing. The

current opportunity created by the economic crisis and resulting stimulus initiative suggests the possibility of building needed infrastructure for personal health records and other forms of e-health tools, as well as funding for intermediaries to provide in-person support for tool use. However, it will be critical to assure that such public financing is not fleeting but rather creates a base that can be become self-sustaining.

Although government intervention and funding can help stimulate supply, mandates cannot effectively compel use. People use food labels not simply because they are there and free but because there is a perceived need to know something about nutritional value. My hope, and belief, is that the same cultural forces leading to increased awareness and concern about nutrition will combine with improved tool design, marketing, and education to enhance the use of healthcare decision support tools.

Case Study Commentary

Shoshanna Sofaer, DrPH

I.   INTRODUCTION

I have been working to develop and evaluate health related decision support tools for the public for about 25 years. My work began with a quasi-experiment to assess a new approach to helping people with Medicare choose among health care coverage options. Four aspects of this first applied study bear examination. First, the dissemination channel was small-group workshops, facilitated by graduate students, and held at dozens of local aging services agencies throughout Los Angeles. We hardly ever think about this approach to providing decision support any more, though perhaps we should. Second, we proactively marketed the workshops, through in person presentations at the same agencies where they were to be offered, as well as others. We got into these settings because we were trusted by the agencies as being both free of conflict of interest and knowledgeable.

Third, our new approach worked. Our experimental group got informational materials based on a method we developed called the Illness Episode Approach. This approach took the complexities of variations in health insurance coverage for people with Medicare and "hid" them by generating a bottom line figure for people – the out-of-pocket costs they would face for a given common illness episode under Medicare alone, or half a dozen other forms of Medicare coverage. Our comparison group got a set of materials available at that time to area seniors that used a more typical chart of variations in premiums, deductibles, co-payments or co-insurance, limitations, etc. Both groups showed significant increases in knowledge; but the experimental group also ended up making changes in coverage that saved them a lot of money.

Finally, no one paid much attention, until quite a bit later. The Health Care Financing Administration (predecessor to the Centers for Medicare & Medicaid Services or CMS) funded the study but did nothing with the results. At that time, the late 1980's, "beneficiary education" was virtually non-existent in the agency. The approach was used in a modified form in early issues of Consumers' Checkbook. More recently, a similar approach has been used, both by CMS and edicare Part D plans to help people estimate their pharmaceutical costs based on current prescriptions, and identify automatically through a computer decision support tool the plan(s) that would result in the lowest out of pocket costs for prescription drugs. These tools have been used extensively by people on Medicare and those who help

them make decisions; unfortunately, sometimes the results you get on the CMS tool are different than those you get using the insurance plan tools.

So. We try something to simplify complex health care decisions for people, it works, and not much happens in terms of adoption of the tool in question. Thus, for me, the question of "getting tools used" has always been compelling. If anything, my subsequent experiences in providing tools to help consumers compare health plans and providers has been even more frustrating. Many designers and researchers have worked hard to figure out what methods work best to make the complexities of healthcare quality more accessible and relevant to our audience. The results of our research are ignored because of bureaucratic and interest-group resistance, especially from those being rated. The reports that have been produced to date are really great in some cases and depressingly awful in others. In virtually all cases, however, they are not getting used by the intended audience – consumers, patients, caregivers, the public. They can still have an impact on providers, primarily because providers don't like looking bad even if the ratings don't affect their market share

At the same time, the American public has gotten familiar with using "ratings" of various kinds to help them make decisions. What can we learn from these experiences about what it might take for decision support tools of various kinds to get used (we presume for good) in healthcare? Here's my preliminary answer based on review of the four incredibly detailed and carefully constructed case studies that this project has generated.

II.   INSIGHTS FROM INDIVIDUAL CASE STUDIES

A.   *Consumer Reports: Car Buying Guide*

There are numerous lessons to be drawn from the *Consumer Reports* (CR) experience. Furthermore, they have already moved into ratings of healthcare and plan to go further in that area in the future, having created a "Health Ratings Center" and funded it well over the next few years. An important contextual factor for this case, however, is that the organization Consumers Union and its magazine have been around for over 75 years. This provides a foundation that many other potential sponsors of decision support tools would find difficult to match.

Looking at our analytic framework, the most significant factor supporting CR's success is the fit between the nature of CR's objectives and the brand it has created. When this is combined with an understanding of its audience and the expertise behind the ratings themselves, i.e., the tool design, we have a pretty powerful combination.

CR has two primary objectives: (1) they want people to buy safer, more reliable automobiles that provide high value at the point of purchase and beyond; (2) they want to sell magazine and Web site subscriptions since that is their major source of revenue. We would need to have more details to discover if these objectives are ever in conflict, but on the surface they do not appear to be. It is not clear to this reviewer whether the "mission" objective and "business model" objective of some health-specific decision tools are typically this well aligned. For example, many quality reporting tools depend on data from the providers themselves; this makes it difficult for report sponsors to call the shots regarding how those data will be scored, displayed, framed, and marketed.

In achieving its objectives, CR's most important resource is the CR brand and the automatic trust that it brings. The public believes that ratings are totally objective, expert, and independent. An important lesson here is that CR is emphatically NOT taking into consideration the viewpoint of all stakeholders in the automobile market. They are focused entirely on the consumer. It is rare indeed that decision tools generated in healthcare have this level of brand identity, independence, and freedom from pressures from multiple stakeholders with diverse viewpoints. CR also has the resources to support, through their subscriptions and some donations, a complex facility for actually testing cars themselves, as well as an experienced and skilled editorial staff. This balance of technical ability and ability to effectively communicate with the audience is, again, seldom found in healthcare, although that may be changing.

CR as a basic magazine has a large audience which is not representative of the U.S. population as a whole. Their audience tends to be better educated, somewhat more affluent, and until recently has been skewed to the middle-aged rather than the young. CR has had a long time to learn about its audience. It is constantly working to learn more about how the audience is changing, what they perceive they want and need, how they react to changes that are made, etc. They use this information to help shape the content of their products.

However, they also try to influence what their audience wants by focusing on certain issues that they, consistent with their broad "consumer protection" mission, believe have to be taken into consideration. Examples of this include automobile safety and gas mileage. This tends to further shape the audience to those who think those are critical issues, but it does not appear to lose audience share, since they continue to consider other aspects of the car buying decision (such as cost, reliability, handling,

etc.). A key feature of this audience is that it includes a lot of people who are actually considering the purchase of a car, which can happen at any time. The audience knows that the CR ratings are available year-round, in addition to having "new news" with a special issue each year.

With respect to tool design, what is critical is that CR does not depend on data from others for its auto ratings (with the exception of crash test data). They generate their own criteria/measures, they do their own testing and surveying to gather data, and they have generated their own approach to scoring, ranking and rating options. They work hard to justify their approach, but auto manufacturers and dealers cannot pressure them to do it their way. Indeed, when automakers have objected to their ratings, this actually seems to generate media attention, helping promote the ratings.

Other lessons to be learned from the CR auto rating tool's design reinforce what we have learned in health care: (1) rank ordering ratings is a good thing; (2) people like recommendations from these independent experts as well as information they can use to come to their own judgments; and (3) you can use the decision point as a teachable moment to point out, in editorial content, things people need to pay more attention to and myths they need to get over.

B.   eBay

The most significant variable that has led to the phenomenal success of eBay (in spite of recent declines in use), is that it uses Web 2.0, an approach to tool design that depends on active participation of the audience in creating the environment in which people can make decisions. This means the audience is inherently central to the whole enterprise, and eBay's challenge is to continue to evolve in response to audience preferences and the competition.

Another key variable is that the objectives of eBay as a business enterprise are not just to "educate" or even "persuade" as is often the case in healthcare, but rather to generate purchases. People don't really use eBay to make decisions; they make decisions, i.e., buy things, as they use eBay. Now this is a "buyer's" perspective, and another challenge for eBay is to balance the needs of buyers and sellers, since both kinds of parties are needed to make this work. This sounds very utilitarian but in fact, another key factor to the success of eBay is that it works as entertainment. It needs to work as entertainment, especially be more entertaining that the competition (other Web sites, or actually hitting the streets to go shopping). It also needs to provide the

economic benefit of bargains. Buying something brand new in the box with the tags for $100 when it retailed for $1000 is truly addictive.

The design of the tool emphasizes efficient and flexible searching for items to compare and purchase. Navigation is key to the effectiveness of this tool. The tool is not perfect by any means. Searching can be incredibly cumbersome, especially, oddly, if you really know what you are looking for and the search terms you use just don't seem to be working. It is, however, good enough, although as competition for the "space" it occupies increases, it will have to become a lot better. Another feature of the design that seems to work is that you can not only shop and buy things on eBay; you can quickly and easily pay for them using PayPal, their affiliate, which also ships many items.

Two highly related variables leading to the success of eBay are that (1) as the pioneer, it has huge brand recognition; and (2) it has created mechanisms to overcome what could have been a complete deal-breaker for the site, i.e., the ability to generate trust in the overall process by helping users identify buyers and sellers who are trustworthy. Again, here, they have not done a perfect job. There are still plenty of knockoffs and poor merchandise on the site, but they have done a "good enough" job to generate billions of purchases. Note that eBay does not say a buyer or seller is trustworthy, other buyers and sellers say so (or do not).

On a personal note, I happen to be an avid eBayer (on the buying side only for now), and it is quite remarkable how one's relationship to the site can become so individualized. I search for specific brands, go first to specific sellers with whom I have done a lot of business, and feel no compunction taking advantage of the ability to ask highly specific questions. I get what I need on the site, and presume that others with *very different needs than mine* can do so as well. Can we build that kind of flexibility, reach, and personalization into health-related tools?

C.   FDA Nutrition Fact Labels

This is the only case that focuses on a tool developed by a government entity in response to a legislative mandate. This appears to represent both a significant resource and some degree of constraint. On the one hand, the federal Food and Drug Administration has the power to require manufacturers of specified food products to conduct testing to determine the nutritional content of the items they sell and to place

information about that content on every single food package, in a single prescribed manner/design.

On the other hand, placing this activity in a government agency appears to have constrained the promotion of the label over time, the evaluation of its impact, and the creation of ancillary educational programs that might help a broader audience to actually understand the tool and how to use it.

In part, this appears to be a function of limited financial resources, but it may also be because the nutritional label, I would expect, has to compete for attention within the agency against much higher-visibility activities such as approval of new pharmaceutical products and medical devices.

It appears that the label has become an ubiquitous part of the food shopping experience   that is familiar to many and used by some. The extent to which it changes consumer behavior, and whose behavior it changes, is unknown. The effort reminds one of the many mandated "transparency" initiatives that result in the publication of a comparative quality and/or cost report that is never evaluated to see if it makes a difference to anyone, perhaps because no one cares.

D.   *U.S. News & World Report: America's Best Colleges*

Like the *Consumer Reports* auto ratings, the *U.S. News* College Ratings are embedded in a magazine which has been around for a long time, and focus on an infrequently made but high-price and high-stakes decision. Also like CR, the U.S. News ratings are intended to sell magazines and drive visitors to its Web site. However, because it is a traditional outlet, it makes its money by selling advertising, and the readership is key only as it affects the rates they can charge and the number of advertisers; thus its objective is different. All this still means that U.S. News needs to be highly attuned to its audience and to the decision context in which its audience operates.

On the other hand, they don't really care who the audience is, as long as they use the tool and either pay for it or generate other revenue by using it. It has no mission to improve either the quality or value of college and graduate school. Ironically, it has a huge impact on colleges and universities, one which may be truly perverse at times, as when an institution trying to get into the "top 25" of any category turns itself inside out to get there, using strategies that have little to do with the education they provide or even their costs. This appears to be an artifact of the inclusion in the measures of a lot

of "reputational" information from other colleges and universities[1]. The degree to which other institutions actually know anything about those they are rating, or would be likely to report it accurately, is debatable.

While its early entry status means that it has a resource a good deal of brand recognition, trust does not seem to be as essential to it. It merrily changes its methodology on a regular basis, something healthcare raters are often terrified to do. Oddly, these changes lead, just as do the controversies over CR's auto ratings, to media coverage and thus promotion of the ratings. U.S. News & World Report interacts with those it rates, and has responded to their complaints. This may be because the institutions are essential to the collection of much of its data.

Note that the magazine does not pretend to be the primary source of information for people making a decision. Rather, the tool is designed to help people narrow their choices, check out choices they have already narrowed down to or even made, and find in one place a lot of information some of which might be of interest to them. Finally, U.S. News puts enormous energy into promoting the college ratings and expanding the methods by which they are disseminated. They view this as a cost of doing business and essential to their strategy (selling magazines and getting people to the Web site) rather than a luxury item.

III.   CROSS-CASE ANALYSIS

Analyzing across the cases leads to the identification of several key variables, some of which are not a part of our conceptual framework. One of these appears to be related, as well, to our criteria for selecting tools to examine. That variable is the national scope of each of these efforts. Both *Consumer Reports* and *U.S. News & World Report* ratings present information on products and institutions, respectively, across the country. Note that the number of such entities appears not to be a barrier to presenting data on almost everyone.

The FDA label exists across the country and covers all American, and some foreign, products and manufacturers within the legislative mandate. eBay is a national enterprise – it displays items from sellers across the country (indeed around the world) to buyers similarly dispersed.

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[1] A disclosure here: I am a faculty member in a College and a School that is rated by U.S. News. My School, in particular, is currently rated *solely* on the basis of reputational data, since there isn't any other standard data.

The market for automobiles is a national market. While many colleges appeal primarily to a local or regional pool of potential students, others reach out to students from across the country. The market for many of the products on eBay is also national or international in scope. Some products may have a narrower appeal (shearling-lined gloves might not be a hot item in South Florida) but most have a broad appeal. Food is ubiquitous; while there are regional manufacturing operations, and while comparisons and purchases are mostly made at the local level, you can find Campbell's soup almost anywhere.

In contrast, healthcare is local. While someone with a rare or very serious disease may consider going across the country for medical care, people typically stick close to home. While there are some healthcare decision tools that are national in scope (the CMS "Compare" sites come to mind immediately), most comparative quality reports are quite localized. We will discuss the implications of this in our final section.

Second, all of these tools have a strong brand identity, whether they have been around for a long time or just a decade or two. Except for the FDA, they all have competition, but they have a substantial share of their market. Brand identity does not appear magically or overnight. It requires considerable sophistication in both designing a tool with an audience, decision context and function clearly in mind, and considering it completely normal to spend considerable resources on promotion, dissemination, testing, and evaluation. The exception, the FDA, is a government agency, and government agencies do not seem to be comfortable with the idea of marketing themselves or being terribly transparent about how well they are actually doing (in spite of numerous recent efforts to require federal agencies to self-evaluate).

Another shared characteristic of the three non-governmental sites is that they do not seem to worry a lot about exactly who their audience is, as long as they have one that is large enough and has enough financial resources to help them meet their objectives. Thus, in spite of its avowedly social mission, CR does not seem to worry a lot about not reaching "vulnerable populations;" U.S. News & World Report similarly is not working hard to reach young people just back from Iraq and Afghanistan and heading to college, or people coming back to school in their 30's or 40's. Even the FDA seems not to care that a high proportion of the population simply cannot do a lot of the math required by its label, even in terms of figuring out how many "servings" can be found in a package of eight Oreo cookies.

Reviewing these cases made me rethink the issue of trust. We take it as given, and truly believe, that a decision support tool in healthcare will not be used unless it is trusted. In my own research, I have learned that trust seems to depend on two factors: belief that the people presenting the ratings have the necessary technical expertise to get them right and belief that

they are independent, i.e., do not have a conflict of interest. It appears that for all these tools, users trust the sponsor enough to use the tool; but that the depth of trust and its basis varies.

Consumer Reports' success is largely build on trust. They are independent, they are expert, and they are clearly in the consumers' corner and no one else's. That is their brand, that is their mission. I venture to say that their audience would not consider anyone else more trustworthy when it comes to automobiles. The fact that they are trustworthy is actually reinforced when they get attacked by manufacturers.

The FDA labels seem to take trust for granted. Frankly, if I thought about it at all, I presumed that the FDA came up with the information on the labels for each product, but of course, that's not true. The manufacturers do. Yet we just trust the label because it is an FDA label (because it is a government agency? because it is the FDA in particular and we trust them to approve pharmaceuticals?). Is the trust justified? Does the FDA check on what the manufacturers are saying often enough and rigorously enough? Does anyone care about that as they stand in the supermarket aisles comparing the calorie count of two different cans of chicken broth?

eBay works very hard to create a safe environment for buyers and sellers. It would not succeed if people were too wary to sell things and buy them. The "feedback" mechanism is a central part of this and it has been changing lately, with some disgruntlement from sellers. Yet even eBay refuses to take total responsibility for the trustworthiness of its participants. If someone sells a Gucci knock-off and someone else buys it, eBay does nothing. If the listing does not say "authentic" and the buyer doesn't ask about authenticity and get a positive answer, then they are likely not to get much help even from the "dispute resolution center." After all, some people *want* to buy Gucci knock-offs, as long as they are well-priced, reasonably well-made Gucci knock-offs.

Similarly, U.S. News & World Report would like to be trusted, but they probably don't need total trust from readers, who usually expect to use other sources of information in making the decision. The notion that some but not complete trust may be adequate for getting tools used is, frankly, surprising.

## IV.	IMPLICATIONS FOR HEALTHCARE

Should healthcare decision tools be national in scope?

Currently, healthcare decision tools are developed and disseminated primarily for local audiences. Typical sponsors are state agencies, purchaser coalitions, multi-stakeholder groups, and the like. This decentralized structure has disadvantages that are highlighted by the cases. These include:

- No sponsor seems to have enough resources to do adequate audience research; design, and formatively test an evidence-based report; promote it effectively (which requires not a one-time push but ongoing efforts); evaluate it and adapt it in response to evaluations and changing audience needs; and create a strong brand identity.

- At the same time, each one of these sponsors is struggling to get it right, and often re-inventing wheels, some of which turn out to be square.

Are there advantages to decentralization, or perhaps better put, are there serious disadvantages to centralization? The major disadvantage to centralization is that we have to put all, or almost all, our eggs in one basket. Designing appropriate guidance and governance for such a single central sponsor would be difficult. The experience of the FDA in terms of their inability to focus resources on the food label as it competes with many other agency priorities is of concern. Of even greater concern is the experience of watching the one centralized reporting effort we have, that of CMS, be constrained by internal and external politics, including the conflicting goals of different, and powerful, stakeholders. This leads to a second question.

Should healthcare decision tools be produced only by entities who have a clear commitment to the consumer/patient/public and to no other stakeholder?

Three of the four sponsors in these cases appear to be freer of pressures from those rated than are current sponsors of healthcare decision tools. There is variation on this across the cases. Consumer Reports is very independent; the FDA appears to have operated with considerable independence; U.S. News & World Report does adjust its scoring and ranking methods in response to pressure from college and universities, but the method is still controlled by them; and I suspect that they would not give in to pressures to change the ratings in ways that would lead to fewer sales. eBay is by its very nature created by participants, but even there the "rules of the game" such as they are, are set by eBay, although they are open to a lot of feedback from members. Outsiders, such as luxury goods manufacturers LVMH, have had little luck in getting them to act as police in their interest.

This freedom allows the sponsors to focus on their audience in all aspects of their operation. This in turn, it can be argued, makes it far more likely that they will reach and keep their audience if (and this is a genuinely significant if) they are able to come up with a meaningful product/service. In healthcare, pressure from other stakeholders makes it difficult for sponsors to even identify their audience clearly, let alone meet their needs without worrying about what others will think. A whole series of evidence-based recommendations are regularly resisted and ignored because of pressure, typically from the providers being rated. Examples include rank ordering providers by performance from best to worst in displays, rather than using alphabetical order, and pointing out significant gaps in performance to encourage people to look at the report. .

A caveat is needed here. The sponsor needs to have expertise that is far beyond that of the typical audience member. This is, after all, about knowledge transfer and there has to be a knowledge base. CR's automobile ratings are based on the existence of a complex and sophisticated facility and staff to actually test automobiles and survey automobile buyers about their experiences. The FDA label required extensive technical expertise. One might wish there were more technical expertise available at U.S. News & World Report, but over the years they have learned (and the field has also become far more focused on performance measurement and transparency). Thus, I am not suggesting that Angie's List or Zagat is the answer for healthcare ratings, for example, although it will be interesting to see what happens as they expand into physician ratings.

We may want to consider, however, whether an independent entity, whose board is made up exclusively of people committed to the interests of healthcare consumers and patients, and whose staff includes a wide range of experts in measurement, report design, marketing, and evaluation, is not what we really need in healthcare.

Perhaps such an entity can also revisit the issue of what the actual *product* is that consumers and patients, or more likely specific subgroups of consumers and patients, would really find useful. Many believe that our current ratings do not, at least yet, speak to the currently felt needs of consumers and patients, who tend to believe that their providers are wonderful even if other people's providers are not, and that although health plans are distrusted, they are all the same so which one you choose makes no difference. In contrast, people do *not* believe all automobiles are alike, or that all colleges are alike, that all cookies have the same number of calories, or even that different sellers on eBay will give you about the same price and service when you buy a pair of "Sex in the City" shoes.

The other question that remains is – what's the business model here? Is this a public utility that gets funded by a small percent of healthcare revenues? Should it have core funding from government but be required to generate revenues from users as well, perhaps in the manner of public TV and radio? This leads to our third concern – the level of resources available for these efforts.

Can we get serious about getting tools used?

To date, our approach to the work of designing and distributing decision supports in healthcare has been a highly marginalized activity which is not only woefully underfunded, but which no one expects would ever be other than woefully underfunded. We have to ask the question – why bother to waste our time and energy on an unreachable goal?

In each of the cases, sponsors expected that they would have to use resources to learn about their audience, select an appropriate audience segment, design and test a sophisticated and useful tool with their needs in mind, promote the tool intensively with a clear goal of getting it used, evaluate their work regularly, and make changes in response to both evaluations and changes in the context and the audience. It is likely that getting tools used in a meaningful way is going to require us to recognize that this will not be done on the cheap.

Lessons Learned:

Key Variables of Success from the
Getting Tools Used Case Studies

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As part of the Getting Tools Used (GTU) research, the project's expert panelists analyzed four case studies of paper or electronic aids ("tools" or "decision aids") that help consumers shop for non-healthcare products. The panelists independently analyzed each individual case study, then the cases as a group, drawing on their particular expertise in the development and promotion of healthcare decision aids.

This document presents three levels of analysis of the case studies. The panelists' observations and conclusions for the case studies about "active ingredients," that is, variables greatly influencing consumers' initial adoption and ongoing use of the popular decision aids are represented in the main body of this report. Panelists' exact language is used when suitable, based on the written commentaries and on the panelists' presentations at the March 2009 GTU meeting with national leaders in healthcare and experts in healthcare decision aids. Appendix A summarizes the key variables for success identified by the panelists for each case study tool. Each decision aid and sponsor in the case studies had its own particular strengths, but the case study tools also had a number of influential variables in common. Figure 1 organizes these common variables based on the panelists' analyses.

The panelists were Margaret Holmes-Rovner, PhD, Professor of Health Services Research in the Department of Medicine, Michigan State University; David Kanouse, PhD, Senior Behavioral Scientist at RAND Corporation; Stephen Parente, PhD, MPH, Academic Director, Medical Industry Leadership Institute, Associate Professor School of Finance at the Carlson School of Management, University of Minnesota; Dale Shaller, Shaller Consulting; and Shoshanna Sofaer, PhD: Professor of Health Care Policy, Baruch College, CUNY.

Getting the Right Tool to the Right Audience at the Right Time

Successful decision aids are consumer-centric, which means their content and functions are closely matched and align with the needs and interests of the target audience. Opportunistic timing also matters. In the case studies, each of the tool sponsors benefited from favorable

market conditions that helped produce a growing number of people who discovered a need for assistance with decision making. When a tool truly fits the need, as in the case of the *Consumer* Reports: Car Buying Guides, uptake is swift and evolves into a loyal user base.

Decision Aids Tailored to Consumers Interests and Needs

Ratings, purchasing guides, and other decision aids become consumer-centric when the tool sponsor understands its target audience and then designs the aid to fulfill that audience's need for information and decision support. Characteristics of the audience that are important to know are cognitive abilities, interests, values, goals, and context for making a decision, and barriers that could affect tool use. This knowledge about a target audience enables the design of tools that people will find useful and relevant to their needs. Crafting decision aids so that they meet the target audiences interests and needs requires considerable sophistication, especially to attain the flexibility, reach, and deep personalization that have been powerful drivers of ongoing use of tools such as eBay.[1] In selecting cases for study, the project team sought to include a couple of decision aids that are familiar to and used by low socio-economic status groups. (Appendix B).

Additional characteristics of successful decision aids include:

- Clarity of purpose focused on serving consumers, coupled with single-minded pursuit of that purpose.
- A basis or reason for the audience to trust that the information in the decision aid is credible (i.e., factual and unbiased).
- Content that is relevant and easily comprehensible to the target audience.
- Formats and functions that are easy for the target audience to use.
- Features that give users the ability to customize their experience, which helps build a satisfied and loyal community of users.
- Development of online community and participatory platforms that highly engage users (sometimes called "Web 2.0"), setting in motion a virtuous cycle.

Potential decision aid users must have an adequate reason to trust the tool or the information it contains. The case study tool sponsors used a variety of strategies for creating a basis for trust. Strategies included careful use of objective methods, systems that reduced fraud,

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[1] The Getting Tools Used project studied eBay.com as an online decision support tool that enables buyers to comparison shop and make informed decisions about products and sellers.

maintaining institutional independence, transparency with rating methods, rigorous testing, buyer/seller feedback systems, and government oversight.

With regard to content, Americans tend to like and use rank-ordered ratings, recommendations from independent experts, and information they can use to develop their own opinion about a product or service.

Target Audience

Target audiences are more likely to use a decision aid when they have a clear, compelling need for external information or support in making a choice. Such audiences understand that alternative choices have important differences, are motivated to seek information and decision support, and possess sufficient ability (such as knowledge, skills) to accurately use the tool.

To succeed, a decision aid must present credible information that consumers find useful in deciding which product or service to buy. The key is to design the tool and market it to reflect the specific type of decision (such as the stakes, frequency of purchase).

Sponsorship

Sponsorship also affects adoption, use, and referral of decision aids. The case study tools attracted users, in part, because the sponsoring organizations had strong brand identities and consumers perceived them as trusted sources of information. For example, students and their families began using *America's Best Colleges* in part because U.S. News has institutional credibility as a news organization.

Institutional credibility is not an infinite account from which organizations can draw in perpetuity; it must be actively maintained by the organization. Each case demonstrates a different approach to building trust among users. *Consumer Reports* sustains consumer trust through its organizational independence and clear commitment to the consumer and to no other stakeholder; US News and World Report draws on public trust engendered by its reputation as an objective news source, while the transparency of mutual buyer and seller ratings of eBay and the level playing field provided by the regulatory authority of the government for the Nutrition Facts Panel contribute to their authenticity.

Consumer trust is also contingent on sponsor expertise that is far beyond what a typical audience member has. Decision support, after all, constitutes knowledge transfer, and the sponsor must have a basis on which to claim expertise. For example:

- *Consumer Reports* rates cars based on its specialists' rigorous testing in a sophisticated facility and by conducting a large survey of car buyers about their experiences.
- The Food and Drug Administration (FDA) needed a small army of technical experts who applied a complex base of scientific knowledge to the development of the nutrition facts panel.

Viable Business Model

Odds for success improve when the sponsor is first to market with decision support, achieves a prominent market position or share of the audience, and has a viable business model for the decision aid (i.e., a way to generate revenue that supports ongoing production of and investment in the tool). Features of viable business models (for both commercial and nonprofit sponsors) include:

- A large audience, with users who have some financial resources.
- Elements that assure ongoing impact and engagement so the tool sustains a loyal base of customers.
- Ways to generate resources, perhaps at a substantial level to support start-up, maintenance, promotion and updating. (Tool sponsors that aim to be independent from the producers of the good or service being rated may need revenues that can support for expertise, perhaps specialized facilities and equipment, too.)
- The ability to generate publicity with a few high-profile cases that may influence industry practices or motivate consumers to seek information.
- The knack for identifying, adapting, or shaping opportunities presented by changes in the external environment and market.

All four cases also demonstrate the power of the relationship between the decision aid and the sponsoring organization's overall business model. While a successful product is an asset that a good business plan will exploit, the sponsors of the case study tools viewed the decision aid as being vital to overall business performance. (Two instances are *America's Best Colleges*, which advances the *U.S. News* business model of service journalism, and the decision-support features in eBay, which facilitate informed transactions between buyers and sellers and yield seller-based fees on closed listings.) Because of this relationship, each sponsor has a vested interest in making substantial and enduring investments in the tool. The organizational commitment to decision aid success is evident in the substantial resources each invested.

With regard to the FDA's nutrition fact panel, the federal mandate for use as well as the clear requirements for specific elements, provides both the impetus and the oversight needed for ongoing adoption. In this case, regulatory requirements for transparency of specific sentinel

elements provides an alternative to the revenue model posed by the other three cases in our study.

Marketing

Marketing, promotion, and dissemination are paramount to widespread use of decision aids. In the case studies, branding was a powerful force in building consumer awareness of and use of tools. The sponsors also used branding to help establish and maintain consumer trust.

Tools that are popular with consumers require considerable resources for market research so developers can make decisions based on extensive customer input and be guided by ongoing feedback. Testing and evaluation not only help assure the decision aid will fit the audience's needs, but also that messaging and promotion strategies will compel use.

Except for eBay, the case studies followed a "mass communication" model in which sponsors marketed their decision aid on a national scale. Their experiences indicate that:

- Positioning is effective when it reflects the target audience's choice and is well defined.
- Promotions help create and motivate demand. Effective promotion requires not a onetime push but ongoing efforts. In the case studies, media attention increases awareness, legitimizes the information or source, and promotes use of the decision aid. Public education campaigns, including earned media strategies, can develop potential users' background knowledge needed to use a decision aid.
- Making tools free or minimizing pricing provides broad access.
- Strategic placement assures users can attain decision support at a convenient and relevant stage in their decision-making process. Both FDA and eBay placed their decision aids at the point of purchase. This placement recognizes their audiences' primary interest is making a purchase and so they are disinclined to seek information unless it is readily at hand.

Although successful tools focus on consumer's needs and interests, sponsors can develop and promote decision aids in ways that shape how audiences approach the decision process and what they consider in their selection. Opportunities include marketing, consumer outreach and education, and tool design and content. eBay used a Web 2.0 design to develop online social communities that encourage fair trading, inform users' choices, improve tool functionality and content, and stimulate future use.

Conclusion

The success of decision support tools outside of health care derives from focus on decisions that consumers clearly identify as important but outside their immediate expertise. The information in the tools examined is deemed useful to them and is presented using language and formats that are appealing and approachable – in all cases, based on extensive testing and modification over time. The information displayed in the tools is judged by consumers as objective and trustworthy because it was gathered and analyzed by institutions that have worked consistently (and successfully) over time to build that trust. The sponsorship by these four institutions is sustained by four very different business models that have in common the commitment to supporting market research, marketing and dissemination of the tool over time.

Appendix A. Summary of Key Variables

This appendix summarizes the variables identified by the panelists for each case study tool as appearing essential to widespread audience use. Each decision aid and sponsor in the case studies had its own particular strengths, but the case study tools also had a number of influential variables in common. Figure 1 (see page 15) shows which variables appear to be the most potent, based on the panelists' commentaries.

Consumer Reports: Car Buying Guides

The panelists identified the following key variables as contributing to the widespread use of *Consumer Reports: Car Buying Guides*: sponsor's expertise, audience needs and consumer-centric tool design. A particular strength achieved by Consumers Union is tight correspondence (i.e., a "good fit") among four aspects of developing an effective decision aid.

- Focus on a high-stakes decision for which many consumers want information and support
- Organizational capacity to produce independent, expert ratings and reviews and to understand its audience
- Tool design that is audience-responsive
- A revenue-generating mechanism (i.e., a "business model") that supports ongoing production of and investment in the decision aid

Consumers Union has built a strong, positive brand for its *Consumer Reports* publications, which consumers view as a highly trustworthy source of information. This trust is related to the organization's marked independence from interests that could conflict with consumers' interests. Further, trust relates to the organization's ability to produce credible ratings based on extensive testing by experts in sophisticated facilities.

In regards to the audience, the panelists noted that car buyers are clearly motivated to seek information because a vehicle is a big-ticket, high-stakes decision. This audience subscribes to *Consumer Reports* because the car buying guides meet their need for reliable information and support. Consumers Union carefully augments information preferred by its audience with editorial content that educates users about other important considerations. It uses data from testing and evaluation to improve the decision aid. The price is right, too. People can obtain partial *Consumer Reports* car ratings and reviews for free or the complete guide at a low price.

Influential Variables in *Consumer Reports: Car Buying Guides*

<u>Audience Characteristics</u>

- Has a clear need for external information and decision support

<u>Sponsor Characteristics</u>

- Strong, positive brand identity
- Independence from interests that could conflict with consumers' interests
- Trusted source of information
- Large, existing subscriber base
- Ability to generate data needed for tool content, including rigorous testing
- Possession of large, expensive infrastructure (such as specialists, testing facilities)
- Substantial market share or market penetration

<u>Tool Characteristics</u>

- Tool design and functions are audience-responsive
- Credibility of tool content
- Use of testing and evaluation data to improve or update tool
- Free or minimal pricing structures

eBay

eBay's consumer-centric design and functionality are foremost among the many eBay strengths, according to the panelists. They noted that eBay integrates decision support into the transaction environment at the time when users want information and assistance to make a buying decision. The tool also offers rich content relevant to users, great interactivity, and, of course, information about a vast array of listings and sellers. The Web site's features provide users with extensive flexibility and customization. The participatory design of eBay enables users to co-produce content and interact with one another in social networks, to which they often develop strong ties. Participation – in the form of buyers and sellers rating each other – is a primary way that eBay establishes and maintains users' trust. Thus, eBay provides a highly engaging experience that builds brand loyalty, repeat use, and word-of-mouth referrals.

As in the *Consumer Reports* case study, the panelists found that a key factor in eBay's success is the tight fit between the decision aid, the audience, and the business model. Specifically, the participatory design of eBay generates not only repeat use from highly satisfied customers but also revenue for the company in the form of seller fees. This revenue stream enables eBay to be free to buyers and comparison shoppers.

In addition to eBay developing a profitable business model, panelists called attention to the important advantage eBay gained by being among the first e-commerce companies to figure out a way to attract and keep buyers. Such a "first-mover" or "early-entry" advantage, along with successful branding, helped eBay set in motion a self-reinforcing cycle of attracting new users while retaining existing members. In a relatively short amount of time, eBay gained a substantial share of the e-commerce market.

Influential Variables in eBay

Sponsor Characteristics
* First-mover or early-entry advantage
* Strong, positive brand identity
* Viable business model
* Ability to generate data needed for tool content (through the eBay user community)
* Substantial market share or market penetration

Tool Characteristics
* Tool design and functions are audience-responsive
* Participatory community design that engages users in tool development, creating experiences and online communities (Web 2.0 platforms)
* Features facilitate choices
* Features generating credibility or trust (such as buyer/seller feedback system)
* Features for user customization or flexible use
* Redesigns so tool stays current, audience-responsive
* Ancillary information, tools, or other support available
* Entertainment, bargains, or other benefits compel initial and repeat use or referrals
* Free or minimal pricing structures

Nutrition Facts Panels

Extensive access through universal, free dissemination; placement at the point of purchase; and uniform format and content are three key variables contributing to widespread use of nutrition facts panels, according to panelists. These characteristics arise from:
* Federal policy that requires private industry to produce and print a nutrition facts panel on the labels of most processed foods.
* A high rate of industry compliance with the mandate.

Tight correspondence between the nutrition facts panel and its audience is another factor behind widespread use. FDA designed the nutrition facts panel based on scientific evidence, and it organized an initial public education campaign. These efforts helped consumers develop the perception that nutrition facts panels had accurate and trustworthy information that they needed when considering the nutritional values of a food. Further, FDA used consumer testing to inform decisions about the panel design, which helped assure that basic information in the nutrition facts panel is understandable to most adults.

Influential Variables in Nutrition Facts Panels

<u>Sponsor Characteristics</u>
- Strong, positive brand identity
- Viable business model
- Ability to generate data needed for tool content (through food producers)
- Regulatory authority of the Food and Drug Administration
- Substantial market share or market penetration

<u>Tool Characteristics</u>
- Consistent graphic presentation
- Universal or widespread placement
- Free pricing

Panelists noted that inadequate resources have constrained ongoing consumer education and promotion of the decision aid. Even the initial campaign heavily depended on private organizations because Congress appropriated only minimal funding. In most years, food safety, pharmaceutical oversight, and other highly visible FDA responsibilities appear to have drawn resources and leaders' attention away from nutrition labeling.

U.S. News & World Report: America's Best Colleges

Two variables that support continued adoption and use of the *America's Best Colleges* is the *U.S. News & World Report's* strong brand and extensive publicity about its college ratings and rankings. First, *U.S. News* has a reputation as a trusted, authoritative source of information. It fosters credibility not only by being transparent with its methods but also by adding objective indicators of academic quality so ratings are not based solely on subjective peer assessments. Second, media coverage of the annual college rankings heightens visibility. Colleges themselves legitimize the rankings by using them in marketing to prospective students and alumni.

U.S. News was the first to produce college ratings for consumers, tapping into an eager market wanting assistance with the complex, high-stakes decision of choosing a college. The company also had a large subscriber base with sufficient know-how to use college ratings. These factors helped the company garner a substantial share of the college decision-aid market. *America's Best Colleges* has sustained its competitive edge by targeting the informational needs of college-bound students and their families just as they are getting serious about the college selection process. *U.S. News* can keep the college ratings and rankings price low because it charges premium rates for advertising in the popular annual newsstand issue.

Influential Variables in *America's Best Colleges*

Audience Characteristics
- Audience's clear need for information

Sponsor Characteristics
- Strong, positive brand identity
- Trusted source of information
- Viable business model
- First-mover or early-entry advantage
- Access to or ability to generate data needed for tool content
- Substantial market share or market penetration

Tool Characteristics
- Credibility of tool content
- Strategic timing
- Free or minimal pricing structures
- Extensive earned-media coverage or publicity
- Colleges' public reactions to ratings (publicity, marketing communications)

Environmental and Market Influences (All Case Studies)

The panelists identified some environmental and market influences that contribute to widespread adoption and use of all of the case study tools. Influences that helped make it possible to produce one or more of the decision aids include technological progress, advances in scientific knowledge, and industry accountability systems that produced new public data. In

some of the cases, tool use also may relate to weak competition, media influences on consumer knowledge and awareness, and periods of economic growth.

Crosscutting Variables in Multiple Case Studies

Cross-case analyses by the panelists indicate that these decision aids have in common several active ingredients (i.e., key variables influencing the initial adoption and ongoing wide use of decision aids featured in the GTU case studies). In Figure 1, variables that appear to be active ingredients in each case study have a checkmark (✔). A variable received a checkmark if three or more panelists identified the variable as having more influence than other variables in contributing to wide adoption and use of the tool by the public. *The absence of a checkmark only means most panelists did not flag this variable as being particularly potent, even if it was present.*

As shown in Figure 1, three of the four case studies – *Consumer Reports: Car Buying Guides*, eBay and nutrition facts panel – illustrate a good fit between the decision aid and audience, brand, sponsor expertise, or business model. In particular, each sponsor found ways to deliberately position itself, its decision aid or both as credible and reliable. The case studies of *Consumer Reports: Car Buying Guide* and eBay demonstrate the importance of developing consumer-centric tools as a way of achieving widespread use. Sponsor characteristics also matter, especially a strong and positive brand identity, development of a viable business model for the decision aid, and marketing and strategic timing that enable the sponsor to attain substantial market share.

Following Figure 1 is a supplemental list of variables as identified by two panelists as active ingredients. Additional information about the variables in Figure 1 or the supplemental list is available elsewhere in this document and in the panelists' commentaries.

Appendix B.

Decision Aids and Consumers with Socio-economic Disadvantages

Among the four cases, the Food and Drug Administration directly considered ways to make the nutrition facts panel accessible to populations with underdeveloped literacy and numeracy skills. The resulting tool has a two-tiered information base.

- Basic information on the panel is understandable across most of the adult U.S. population that reads English. For example, almost everyone can compare the amounts of nutrients in two cans or correctly answer calories per serving.
- More sophisticated judgments based on percent daily values are usable only by a few who have sufficient background knowledge.

Although the nutrition facts panel appears without an explanation, people can learn to use the tool. Once they have the know-how, they can count on the nutrition facts panel not to change drastically.

The larger informational environment typically fails to supply nutrition labeling education. Without a sustained public education campaign to close this gap, disparities in label use by education, nutrition knowledge, and numeracy skills are to be expected—and are found. Educational campaigns can amplify use by increasing awareness, motivating consumers to use the information, and explaining appropriate use. Ultimately, research in risk communication and numeracy may offer some improvements.

It is unclear the extent to which eBay considers accessibility for vulnerable populations in its Web site design. The company's overall plan for growing profitability does reflect intent to draw a broad base of users. Currently, about a quarter of eBay visitors have annual household incomes of $25,000 to $50,000.

U.S. News and *Consumer Reports* appear to have limited concern about reaching socio-economically disadvantaged groups. Instead, the primary focus is connecting with an audience that is large enough and has enough financial resources to sustain their business models. It is possible that persons with lower incomes and no post-secondary education may learn about their ratings and recommendations from secondhand sources, such as the news media or co-workers.

Figure 1. Active Ingredients in the Case Study Decision Aids

Active Ingredients	Consumer Reports: Car Buying Guides	eBay	Nutrition Facts Panels	US News America's Best Colleges
CROSSCUTTING				
Positive self-reinforcing cycle that attracts new users and prompts repeat use or referrals		✓		
Good fit between tool and audience, brand, sponsor expertise, or business model	✓	✓	✓	
AUDIENCE CHARACTERISTICS				
Clear need for external information, decision support, or both	✓			✓
SPONSOR ADVANTAGES				
Strong, positive brand identity	✓	✓	✓	✓
Independence from interests that could be in conflict with consumers' interests	✓			
Trusted information source	✓			✓
Large, existing subscriber base	✓			
Viable business model		✓	✓	✓
First-mover or early-entry advantage		✓		✓
Access to or ability to generate data needed for tool content	✓	✓	✓	✓
Possession of large, expensive infrastructure	✓			
Regulatory authority			✓	
Substantial market share or market penetration	✓	✓	✓	✓

Active Ingredients	Consumer Reports: Car Buying Guides	eBay	Nutrition Facts Panels	US News America's Best Colleges
TOOL DESIGN & FUNCTIONALITY				
Content is credible to audience	✓			✓
Design and functions are audience-responsive	✓	✓		
Design engages users in tool development, creating experiences and online communities (Web 2.0 platforms)		✓		
Graphic presentation is consistent			✓	
Features facilitate choices		✓		
Features generate credibility or trust		✓		
Features enable user customization or flexible use		✓		
Redesigns keep tool current, audience-responsive or both		✓		
Ancillary information, tools or other support available		✓		
Entertainment, bargains or other benefit compel initial and repeat use or referrals		✓		
MARKETING, PROMOTION & DISSEMINATION				
Timing is strategic				✓
Placement is universal or widespread			✓	
Pricing (free or minimal) for consumers promotes use	✓	✓	✓	✓
Extensive earned-media coverage or publicity				✓
Producers publicly react to ratings (such as in marketing, lawsuits, public relations)				✓
TESTING & EVALUATION				
Testing, evaluation improve or update tool	✓			

Additional Active Ingredients

Two panelists identified the following variables as active ingredients in the case studies. (Figure 1 presents variables that three or more panelists agreed were potent.)

Audience Characteristics
- Awareness that alternatives have differences
- Motivation to seek information, decision support, or both
- Ability to effectively use a decision support tool or information provided

Objectives
- Clear, narrow objectives for tool
- Consumer-focused objectives for tool
- Reform intent for tool (such as shaping consumer behavior or decisions)

Sponsor Advantages
- Understanding of existing or target audience and their decision context
- Focus on organizational mission
- Effective champion in high-level leadership position

Tool Design & Functionality
- Focus is narrow, well-defined
- Methods are transparent
- Methods are controlled by sponsor
- Comprehensive, offering one-stop shopping
- Content increases consumer access to information about quality
- Content is comprehensible to audience
- Content is relevant to audience
- Design minimizes barriers to use
- Graphic presentation is streamlined or simple
- Ease of use (such as navigation, search)
- Features support easy, direct comparisons
- Use of decision point as a "teachable moment"

Marketing, Promotion & Dissemination
- Placement is at point-of-purchase or point-of-decision
- Communications are effective with consumers
- Promotion is vigorous, multi-faceted

- Promotion occurs via users' referrals (word-of-mouth)
- Promotion includes public or consumer education
- Promotion utilizes partnerships
- Positioning is responsive to users or their decision-making process

Testing & Evaluation

- Feedback loop with audience or an audience-related data source
- Investment in testing and evaluation

Advancing Healthcare Decision Aids:

Implications from the Getting Tools Used Research

Advancing Healthcare Decision Aids:
Implications from the Getting Tools Used Research

The Getting Tools Used (GTU) research provides clear insights about ways to improve paper or electronic aids (i.e., "tools" or "decision aids") that support people in making informed choices about healthcare providers, health plans and treatments. This document first summarizes insights from the project's expert panelists about the implications of this research for healthcare decision aids. The summary uses panelists' exact language when suitable, drawing on their written commentaries (available from the Center for Advancing Health) and on the panelists' presentations at the March 26, 2009, GTU meeting with national leaders in healthcare and experts in healthcare decision aids. The panelists were Margaret Holmes-Rovner, PhD, Professor of Health Services Research in the Department of Medicine, Michigan State University; David Kanouse, PhD, Senior Behavioral Scientist at RAND Corporation; Stephen Parente, PhD, MPH, Academic Director, Medical Industry Leadership Institute, Associate Professor School of Finance at the Carlson School of Management, University of Minnesota; Dale Shaller, Shaller Consulting; and Shoshanna Sofaer, PhD: Professor of Health Care Policy, Baruch College, CUNY.

The second part of this document presents highlights from the open discussion between the panelists and participants during the March 26th GTU meeting. Appendices provide the agenda and participant roster.

Unsatisfactory Uptake of Healthcare Decision Aids

Advances in medicine, technology, and healthcare services have increased the length and quality of life for many Americans and hold great promise for future gains.   But in order to realize the full benefit of the healthcare available to them, individuals – sick or well – must participate actively and competently in their care, making well-informed, judicious choices and following through on the behavioral demands those choices entail.

In recent years, some healthcare stakeholders have embraced the strategy that the public's knowledge about its healthcare options could be improved by producing "report cards" or "decision support tools." Such tools summarize and systematically array information about the risks and qualities of key healthcare choices individuals make about health plans, hospitals, and providers, allowing users to weigh trade-offs and compare options.   While it is difficult to imagine how such complex information might be more clearly communicated to individuals, the American public has yet to show much interest in using such tools.[i] Some organizations have indicated that healthcare quality reporting has had significant influence on changing

providers' behaviors. [ii] But there remains a paucity of evidence that such reports or report cards impact consumers' behaviors.[iii] All in all, the work of designing and distributing healthcare decision aids has been a marginalized activity that has been considerably underfunded given the magnitude of healthcare cost and quality concerns.

However, the GTU case studies demonstrate that many Americans clearly have the ability and motivation to use tools that help them make informed choices, as demonstrated by the case studies. On average, they spend seven hours researching a car purchase, but currently just devote minimal time in selecting healthcare providers, health plans, and treatments.

The public's lack of perceived need for healthcare decision aids is also a major obstacle to expanding uptake. Many Americans think they are getting along fine without any of these tools. They are not convinced that there is much variation in quality of their providers and many distrust the judgments of experts and the government to evaluate effectiveness accurately.[iv]

Implications of GTU Research for Healthcare Decision Aids

(The expert panelists' commentaries are the basis for this section.)

The case studies highlight strategies that sponsors, developers, and promoters of healthcare decision aids can employ to improve use of their tools. The most important implication is that for healthcare decision aids to be successful they must be consumer-centric and provide users with information and support tailored to their needs and preferences at a salient point in their decision-making process.

Other essential elements for achieving widespread use of healthcare decision aids include:

- A basis for credibility and trust in the information, decision aid, sponsor, or a combination of these.
- A viable business model, that is, (1) a revenue-generating mechanism that supports ongoing production of and investment in the decision aid or (2) the existence of an industry-wide ongoing, regulatory requirement for public access to specific and uniform elements (e.g. the FDA nutrition facts panels)
- A ready audience that has the know-how and motivation to use a decision aid or efforts that prepare a target audience for using the decision aid.
- Effective branding.
- The provision of information or support that is otherwise unavailable or hidden to consumers.

- Strategic timing.

(For additional background on these elements, see the companion report, *Lessons Learned: Key Variables of Success from the Getting Tools Used Case Studies*)

Other strengths of the case study tools that developers and sponsors could apply to healthcare ratings, patient decision aids, and purchasing guides are:

- Decision aid features that integrate ratings across multiple dimensions and group them for easy side-by-side comparisons.
- "One-stop shopping" approaches that offer adjunct information and advice, expert forums, and consumer reviews. These extras create an added value that users can quickly access.
- Vigorous multi-faceted marketing campaigns that not only establish a brand as credible and trustworthy, but also create an identity for the decision aid that is relevant to consumers. Facets can include advertising, news coverage, prompting word-of-mouth referrals, viral marketing techniques that create a "buzz" via social networks, placement of decision aids at the point of need, and low or free pricing.
- A means of attaining a lot of free publicity, such as through periodic release of ratings (or rankings that group providers into quality tiers).
- Consistent templates that are brief, communicate well visually and graphically, contain only high-priority attributes, and support product comparison.

In terms of successful tool design, the eBay case study presents a contemporary model of delivering decision support: online participatory platforms (sometimes called "Web 2.0") that enable users to exchange information, interact, and join virtual communities. The eBay Web site offers a wide range of user options, rich content, great interactivity, and information about a vast array of products. Significantly, eBay provides social experiences and enables users to communicate with and assist others, including providing "buyers" with opportunities to publicly rate "sellers".

In healthcare, online participatory platforms are already being used to help people manage their chronic diseases. Similarly, healthcare decision aids can use the online participatory platform model to engage consumers in making informed decisions about their care and in developing and delivering essential information, education, and resources. Existing online health-related communities – both patient-to-patient networks (such as PatientsLikeMe.com) and patient-to-provider exchanges (such as Carol.com) – could facilitate wider acceptance and use of healthcare decision aids. The initial feasibility of these types of online participatory

platforms depends on connecting with people who are savvy technology users and their social networks.

Tackling Relevance, Readiness, Independence, and Geographic Scale

Application of the case study findings to healthcare decision aids must also take into account some of the ways healthcare differs from the sectors targeted by the case study tools.

- *Relevance:* Healthcare is different from health, which is different from health insurance. This suggests that a comprehensive decision aid, perhaps a one-stop shop, would encounter many problems in trying to meet the diverse needs and preferences of its users.

- *Readiness:* Consumer engagement in healthcare decisions is low. Unlike the tools in these case studies, which address consumer needs that are clear and compelling to users, achieving widespread use of healthcare decision aids may require ongoing public education to stimulate demand.

- *Independence:* Health and healthcare decisions are made in a complex social, political, and regulatory environment. Healthcare decision aid sponsors appear to face more stakeholder pressures than tool sponsors in the case studies. Specifically, healthcare quality reports, one type of tool, often depend on obtaining data from providers. This reliance makes it difficult for report sponsors to call the shots regarding how the data will be scored, displayed, framed, and marketed.

- *Geographic Scale:* Healthcare is local. In contrast, all four case studies provide information or decision support on goods and services with national markets.

Relevance

Getting the tool right means making it highly relevant to the target audience.

Consumer decisions about healthcare, health, and health insurance are not analogous. As a result, tool sponsors and developers need to pinpoint the need they are trying to meet and design accordingly. For instance, supporting healthcare decisions means recognizing that consumers often postpone obtaining care until it is needed, and then they are making decisions in a reactive or crisis mode, perhaps feeling anxious or ashamed .

Additionally, some Americans may approach decisions regarding health insurance as they would protecting other assets, such as homes, finances, or property, and be more motivated by

avoiding risks than obtaining the most effective care. Again, this is a matter of providing information that can be customized to user concerns and preferences, something that few current healthcare decision aids can provide.

Above all, adoption and use of decision aids concerning healthcare will occur if tools come from sources that target audiences trust and if the tool is viewed as nonthreatening. Such a decision aid would assure people that it is for their personal and confidential use, letting them adopt the tool without fear or shame. The technology employed would be sensitive to users' cognitive abilities so it would be easy to use the tool accurately. Marketing and wide dissemination, over time, would make using the decision aid so commonplace that it becomes routine.

Readiness

Marketing must go hand in hand with designing the right healthcare decision support. It may be that the "right market" is not yet ripe. Healthcare tool marketing must first counter the common public perception that all healthcare is good quality, more healthcare is better, and all treatment and preventive services are necessary. This is not about creating need, but awareness and motivation to act on important healthcare and health management issues that may otherwise go unaddressed.

Building awareness of the stakes involved in making informed healthcare decisions may need to precede marketing of the actual tools. Consumer education to prepare a target audience for using a decision aid is one approach. The nutrition facts panel case study demonstrated that just by making information available, some consumers will be motivated and able to use it. However, to achieve broadbased uptake, educational campaigns can play a role in promoting awareness, motivating consumers, and explaining appropriate use.

Another approach is to attain a critical mass of users who understand the benefits of making informed healthcare decisions. This critical mass might produce a shift in the approach of the general public from passive patient to active healthcare consumer. This dynamic may have occurred with the nutrition facts panel because it was a consumer-responsive tool with universal access that was available as the public became more aware of the role of nutrition in chronic disease (i.e. diabetes, obesity, etc) and variances in product ingredients. Such an approach may be appropriate for healthcare decision aids where disseminating information could through sheer volume influence the appearance of a new social norm even if the individual-level benefit is too marginal or uncertain to motivate information seeking.

Further, some audience segments, such as low-literacy populations, may require specific education and training to use healthcare ratings, decision aids, or purchasing guides. Personalized tool support, such as toll-free help lines or in-person assistance from trusted intermediary groups [such as community health representatives, family resource centers, culturally aligned disease advocacy groups, librarians, etc.), could help prompt adoption and use of decision aids among vulnerable populations. Integrating this education and training into school curricula would help develop a new generation of consumers who are clued in to the new rules of engagement.

Independence

Independence frees sponsors to apply their full technical expertise in informing and supporting a consumer's decision, as exemplified by *Consumer Reports: Car Buying Guides.* Information created by outside experts can also provide a basis for a consumer to trust and use a decision aid. Reflecting consumers' growing preference for information and support from peers, two online networks – *Angie's List* and *Zagat* – now aggregate consumers' ratings of physicians, but it is too early to know if this newer model will attract more users than comparative quality reports from "expert" organizations.

In healthcare, pressure from other stakeholders makes it difficult for decision aid sponsors to focus on a single audience, let alone deliberately develop consumer-centric tools, because of actual or possible stakeholder reactions. Resistance from providers being rated and other stakeholders has resulted in quality reports that exclude a whole series of evidence-based measures. This experience suggests a need for an independent entity with a board constituted exclusively of people committed to the interests of healthcare consumers and patients and with a staff that has a wide range of experts in measurement, report design, marketing, and evaluation. What remains unclear is: what would be the business model? A public utility funded by a small percent of healthcare revenues? An entity with core government funding and a mandate to generate user revenues, as in the public television and radio models?

Public policy can help assure a reliable supply of decision support through some level of public financing or government mandate on the private sector. This model has limits, though, because while government intervention and funding can help stimulate supply, mandates cannot effectively compel use. People use food labels not simply because they are available and free, but because they perceive a need to know something about nutritional value. The American Recovery and Reinvestment Act of 2009 suggests growing policy support for developing the infrastructure for personal health records (PHR) and other forms of online healthcare applications. This support needs to be extended to funding intermediaries to market and to providing an array of "help"options for people trying to utilize PHRs.

Local and Decentralized vs. National and Centralized Tools

In contrast to the national organizations and decision aids featured in the case studies, most comparative quality reports focus on local providers. Typical sponsors of quality reports are state agencies, purchaser coalitions, multi-stakeholder groups, and the like. This decentralized structure has disadvantages that the case studies highlight.

First, no sponsor of comparative quality reports seems to have adequate resources to have effectual:

- Audience research, design and formative testing of evidence-based quality reports.
- Development of a strong brand identity and multi-faceted, ongoing promotion.
- Tool evaluations and refinement, in which reports are improved using evaluation results and changing audience needs.

Second, each one of the report sponsors is struggling to get it right. The result is unnecessary duplication of effort and, in some cases, resource and expertise constraints that lead to ineffective designs or inadequate promotion. Also, because the market for comparative quality reports is regional, the base may be too small for multiple competitors to succeed with equivalent products (in contrast, the nationwide market for cars has the mass to support car buying guides from *Consumers Reports*, *Kelley Blue Book* and *Edmunds*).

Centralization could overcome some of the decentralization disadvantages, but centralization of comparative quality reports is not a silver bullet. Governance of a single central sponsor would be controversial; in addition, such an entity would encounter difficulties in designing appropriate guidance for diverse regional markets. Sustaining a sufficient level of resources for healthcare quality reports over time is not guaranteed, as demonstrated in the nutrition facts panel case study. Competing agency priorities as well as internal and external politics – including the conflicting goals of different and powerful stakeholders – have constrained the Food and Drug Administration's ability to improve nutrition labeling.

Sufficient Resources

In each of the case studies, the sponsors expected to invest resources in all aspects of decision aid development and promotion.

- Learning about their audiences
- Selecting appropriate audience segments

- Designing and testing a sophisticated and useful decision aid with their audiences' needs in mind
- Promoting the tool intensively with a clear goal of getting it used
- Evaluating their work regularly
- Updating the decision aid to keep it current

The sponsors of the case studies have a strong incentive to make these investments because the success of their decision aids is integral to their organizations' viability.

In the case of nutrition facts panels, FDA had to mount a massive effort to support a credible labeling program. It took several years to assemble a sufficient base of authoritative information and standardized, objective methods for evaluating nutritional content and value. If labeling had been implemented without this upfront investment, it would not have garnered the necessary acceptance from food manufacturers and other stakeholders.

Expanding consumer use of comparative quality reports, patient decision aids and other supports that help people make informed healthcare decisions will require sponsors to recognize that getting the right tools to the right market cannot be done on the cheap. Securing a sufficient resource commitment is most likely if a rational, good business case exists. It is critical that financing for healthcare decisions aids not be fleeting but rather becomes a base that can be become self-sustaining.

Advancing Healthcare Decision Aids

(Panelist and participant discussions at the March 2009 Getting Tools Used meeting are the basis for this section.)

Who is the best target audience for healthcare decision aids? For what purpose?

The Getting Tools Used research compels developers and promoters of healthcare decision aids to re-examine these two fundamental questions. Historically, the healthcare tool developers and promoters have sought to serve two distinct audiences: healthcare consumers and healthcare producers (i.e., health plans, healthcare providers, or others being rated or reviewed). The purpose has been to improve the clinical quality of care by shaping demand and supply. However, few Americans use currently available healthcare information and aids developed by healthcare quality specialists. One reason is that serving dual audiences with one tool has yielded decision aids that are not consumer-centric. Also, today's decision aids use indicators of healthcare quality that do not highly resonate with consumers.

Developing consumer-centric decision aids likely requires:

- A focus on a single audience, whether consumers or producers. (For simplicity, the next bullets assume "consumers" are the desired target audience.)
- Information and support that is highly salient to consumers' needs and preferences and is placed at a strategic point in their decision making.
- A sustainable business model tied to meeting tool-users' needs.
- Independence from healthcare producers by ending efforts to seek stakeholder consensus on quality indicators.
- Additional data so tools provide the types of information and support that consumers want.

Insights Gleaned from the Research

The Center's research shows consumers use decision aids when people have:

- A clear need for support with a buying decision.
- A tool that fits their needs.
- Trust in the information in the decision aid and the information provider.

Widespread use is related to a viable business model in which adoption of a decision aid directly contributes to a sponsor's bottom line. This connection focuses both for-profit sponsors and independent, nonprofit sponsors on providing decision aids matched to consumers' needs. Government support can be beneficial by removing obstacles, requiring tool production or providing financing.

Critiques of Current Healthcare Decision Aids

Many healthcare decision aids are not consumer-centric; content is not responsive to consumers' interests and placement is out of sync with natural decision points.

- Existing decisions aids provide information that is too generalized. Rather, people want to learn how an individual doctor does with patients who have similar conditions and easily compare that doctor with others.
- Because many of the creators of existing decision aids sought stakeholder consensus in their development, distribution or both, healthcare producers have greatly influenced data sources and methodology, tool content, and presentation.
- Financial incentives for using tools are a powerful, but underutilized motivator.
- Dissimilar quality ratings from different sources confuse people and erode trust.
- Efforts to promote existing decision aids have been constrained by low resources and sometimes by sponsors' rules.

Often, regional organizations develop healthcare decision aids for their local markets, partly because that is the context in which consumers make healthcare-related decisions. This decentralized model has some disadvantages. Developers of decision aids sometimes lack the standing to obtain data they want from healthcare producers. Also, inefficiencies occur when each region develops and promotes its own tools. The potential benefits of a national or centralized effort to develop healthcare decision aids merit consideration. Advantages could include better data for tool content and the development of an effective, standardized design, messaging, and branding for decision aids.

Healthcare-Specific Constraints

- Few decision aids have found a sustainable business model or effective brand.
- Consumers who do not have a real choice about their healthcare do not need a tool.
- Consumers view and talk about "quality" differently than healthcare insiders. People aspire to a positive experience of healthcare, especially a good fit with their doctor. They avoid thinking about healthcare as a marketplace, especially when sick or feeling vulnerable.

- Key constraints include reliance on obtaining data from healthcare producers, limited ability to modify dataset contents, and the perceived "need" to mollify producers.

More Information Needed!

The Getting Tools Used research merits further analysis to develop implications for specific types of decision aids, such as quality reports and ratings, patient decision aids for selecting treatments, and e-health platforms helping people manage their health. More generally, the field needs market research that will:

- Support audience segmentation, identifying groups who would be early adopters.
- Improve tool developers' understanding of priority audience segments' needs and preferences.
- Indicate the investment needed to prepare new audiences for using decision aids.
- Explore if people need a wholly different type of decision aid than available now.
- Figure out effective branding, messaging, placement, and dissemination strategies to achieve widespread adoption.

Moving Forward from Here

In addition to changes outlined in prior sections, developers and promoters of healthcare decision aids should:

- Construct decision aids to support people making decisions on issues that potential users say they want help with, not issues that tool developers or healthcare producers and payers think people should care about. Secondary content (such as supplemental articles, search features, or special rankings) can still educate consumers about quality of care issues.
- Deliberately generate consumer trust in the decision aid so that its name becomes synonymous with trusted information.
- Use social media to generate "free" data and content from users, deepen people's engagement in their healthcare or the tool, and stimulate viral marketing.
- Generate and package the type of granular data that consumers want.
- Build decision aids so users can customize it or receive personalized support.
- Promote decision aids with messages reflecting people's actual healthcare concerns.

Given weak demand for healthcare decision aids and the prospect of limited growth in tool subsidies, developers and promoters of decision aids should set priorities among groups who

already are motivated and have sufficient know-how to use a decision aid. This would create initial successes on which to build.

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. If indeed, consumers' choices are meaningful, i.e., that they affect the type, cost and quality of their care and the outcomes it produces, it is imperative that the public comes to value objective information about health care choices that matter to them presented to them in formats that allow them to consider the risks, benefits and other trade-offs by sponsors they trust. The research described here provides guidance to fulfilling that imperative.

Appendix A:

March 26th Meeting Agenda

"Getting Tools Used" March 26, 2009 Agenda

Supported by California HealthCare Foundation
Center for Advancing Health
Foundation for Informed Medical Decision Making

8:30 – 9:00	Continental breakfast	Jessie Gruman
9:00 – 9:30	Welcome; Introductions	Denis J. Prager
	Overview of Meeting Agenda	
9:30 – 9:40	**GTU Overview**	Molly French
	• Macro Environment	
	• Research Plan/Conceptual Framework	
9:40 – 9:45	Key Variables for Success	Dorothy Jeffress
9:45 – 10:45	**Identifying Key Variables for Success**	Denis J. Prager, moderator
	• Margaret Holmes-Rovner: Nutrition Fact Panel	
	• Stephen Parente: eBay	
	• Dale Shaller: *U.S. News & World Report: America's Best Colleges*. Includes discussion from attendees following each case study	
	(20 minutes including discussion per case)	
10:45 – 11:00	Break	
11:00 – 12:00	Continuation of **Identifying Key Variables for Success**	
	• Shoshanna Sofaer: *Consumer Reports: Car Buying Guide*, (20 minutes including discussion per case study)	
	• Cross-case study analysis: David Kanouse	
	(40 minutes including discussion)	
12:00 – 12:30	Lunch	
12:30 – 2:30	**Lessons Learned: Implications for Healthcare Decision Support Tools**	
	Five 5-minute presentations: GTU team, moderated by Denis J. Prager	
	Followed by discussion and input from attendees	
2:30 – 3:00	**Wrap-up and Next Steps**	D. Prager and J. Gruman

Appendix B:

Roster of March 26, 2009 GTU meeting Participants

Laura Aiuppa
Director, Special Projects
National Committee for Quality Assurance

Chuck Alston
Senior Vice President
Manning, Selvage and Lee

Sharon Arnold
Vice President, Academy Health; Director,
HCFO
Academy Health/HCFO

Katherine Browne
Deputy Director, Chief Operating Officer
Center for Health Care Quality, GWU
Dept. of Health Policy

Rebecca Burkholder
Vice President of Health Policy
National Consumers League

Carol Cronin
Executive Director
Informed Patient Institute

Jan De La Mare
Program Specialist
Center for Delivery, Organization, and
Markets , AHRQ

Joyce Dubow
Senior Advisor
AARP

Michael Everhart
External Relations & Development
Coordinator
Center for Advancing Health

Michelle Ferrari
AF4Q Project Manager
MN Community Measurement

Molly French
President and Principal Consultant
Potomac Health Consulting

Elizabeth Goldstein
Director
Division of Consumer Assessment of
Healthcare, Centers for Medicare and
Medicaid Services

Kafi Grigsby
Director of Communications
Center for Advancing Health

Jessie Gruman
President
Center for Advancing Health

Judy Hirsh
Health Care Marketer
Proctor and Gamble (CVE)

Margaret Holmes-Rovner
Professor
Michigan State University

Dorothy Jeffress
Executive Director
Center for Advancing Health

Maulik Joshi
Senior Vice President for Research (AHA);
President , Health Research and
Educational Trust
American Hospital Association/Health
Research and Educational Trust

David Kanouse
Senior Behavioral Scientist
RAND Corporation

Melinda Karp
Director of Programs
Massachusetts Health Quality Partners

Susan Mende
Senior Program Officer
Robert Wood Johnson Foundation

Jenny Minott
Associate
Academy Health/HCFO

Brandon Moore
IT and Communications Manager
Center for Advancing Health

Marian Mulkey
Senior Program Officer
California HealthCare Foundation

Lyn Paget
Director of Communications
Foundation for Informed Medical Decision
Making

Stephen Parente
Associate Professor; Academic Director,
Medical Industry Leadership Institute
University of Minnesota

Eva Powell
Director of Health Information Technology
National Partnership for Women and
Families

Denis J. Prager
Consultant
Strategic Consulting Services

Lise Rybowski
President
The Severyn Group

Dale Shaller
Principal Consultant
Shaller Consulting

Gregg Shibatta
Associate Director
Center for Health Improvement

Anna-Lisa Silvestre
Vice President of Online Services
Kaiser Permanente

Shoshanna Sofaer
Professor
Baruch College, City University of New
York

David Torresen
Vice President, Finance and Operations
Center for Advancing Health

Ted Von Glahn
Director of Performance Information and
Consumer Engagement
Pacific Business Group on Health

Nancy Wilson
Senior Advisor
AHRQ

Endnotes

[i] Kaiser Family Foundation (2008). 2008 Update on Consumers' Views of Patient Safety and Quality Information. Retrieved from http://www.kff.org/kaiserpolls/posr101508pkg.cfm

[ii] For example see: NCQA (2008). 2008 State of Health Care Quality Report. Retrieved from http://www.ncqa.org/Portals/0/Newsroom/SOHC/SOHC_08.pdf

[iii] The RAND Corporation (2005). Marshall M, Shekelle P.G., Brook R.H., & Leatherman S. Dying to Know: Public Release of Information about Quality of Health Care. Retrieved from http://www.rand.org/pubs/monograph_reports/2005/MR1255.pdf

[iv] *The Public and the Health Care Delivery System* (April 2009). NPR/Kaiser Family Foundation/Harvard School of Public Health. Retrieved from http://www.kff.org/kaiserpolls/upload/7887.pdf

Getting Tools Used Research Team Bios

Molly French

Molly is president of Potomac Health Consulting, which specializes in helping prominent national nonprofits understand and communicate health, health care, and social policy issues to decision makers. Prior to establishing her consulting business in 2004, Molly directed policy research at Partnership for Prevention. She led numerous initiatives to build the case for public and business investments to prevent disease and injury and promote health. Her state policy experience stems from tenures as director of medical affairs for the California Physician Groups' Council, director of the California Telehealth & Telemedicine Center, and program manager for the California Primary Care Association.

Molly earned her MS in community and regional planning at The University of Texas at Austin; a certificate in management from the University of California, Davis; and a BA in international relations from Drake University. She currently serves as vice chair on the   Community Chaplaincy, Inc., board of directors.

Jessie Gruman, PhD

Jessie Gruman is the founder and president of the Center for Advancing Health, an independent, nonpartisan, Washington-based policy institute funded by the Annenberg Foundation, the W.K. Kellogg Foundation and other foundations and individuals.

Since it was established in 1992, CFAH has worked to ensure that we are all prepared to live a healthy life and make good choices about our health and health care. Increasing the quality and years of healthy life and eliminating health disparities is only possible if people have the knowledge, confidence and skills to make informed decisions and interact productively with health care providers.

Dr. Gruman has worked on this same set of concerns in the private sector (AT&T), the public sector (National Institutes of Health) and the voluntary health sector (American Cancer Society). She holds a BA from Vassar College and a PhD in Social Psychology from Columbia University. She is a Professorial Lecturer in the School of Public Health and Health Services at

The George Washington University and serves on the boards of trustees of the Center for Medical Technology Policy, the Advisory Panel on Medicare Education of the U.S. Department of Health and Human Services and the Public Health Institute.

Dr. Gruman was honored by Research!America for her leadership in advocacy for health research and received honorary doctorates from Brown University, Carnegie Mellon University, Georgetown University, New York University, Northeastern University, Salve Regina University, and Tulane University and the Presidential Medal of The George Washington University. She is a member of the Society for Behavioral Medicine, the Association for Psychological Science and the Council on Foreign Relations.

Dr. Gruman is the author of The Experience of the American Patient: Risk, Trust and Choice (Health Behavior Media, 2009); Behavior Matters (Health Behavior Media, 2008) and AfterShock: What to Do When the Doctor Gives You – or Someone You Love – a Devastating Diagnosis (Walker Publishing, 2007), as well as scientific papers and opinion essays and articles published in the national media.

For further biographical information, see Who's Who in America (60th Edition).

Margaret Holmes-Rovner, PhD

Research Interests

Decision support systems (computerized and paper), decision analysis, cost effectiveness analysis, translating research for low literacy populations, electronic medical record.

Biographical information

Margaret Holmes-Rovner is Professor of Health Services Research in the Department of Medicine, at Michigan State University. Her research focuses on descriptive and prescriptive studies of patient and physician decision-making. Dr. Holmes-Rovner has developed decision aids and decision aid evaluation measures, participated in systematic reviews of decision aids, and conducted field studies of interactive video-based shared decision-making tools in hospital systems in Michigan. Other on-going research is in health literacy, chronic disease management, and use of the electronic medical record to enhance patient participation in health care. She has served as President of the Society for Medical Decision Making, and a member, and later, Chair, of the Health Care Technology and Decision Sciences Study Section of the Agency for Healthcare Research and Quality, and Chair of the Centers for Disease Control Special Emphasis Panel on Patient Participation in Screening. She is also a founding member of the Shared Decision Making Forum-2000, funded by the Nuffield Trust to increase

collaboration between North America and the United Kingdom (UK) in development, evaluation and implementation of shared decision-making.

Dorothy Jeffress, MBA, MSW, MA

Dorothy Jeffress, CFAH executive director, joined CFAH in March 2008. Prior positions include vice president, Center for Information Therapy, 2005-2008, where she assisted with the IxAction Alliance membership program, the annual Ix Conference and finance/administration for the IxCenter; and as the assistant vice president of Value Based Purchasing for the National Business Coalition on Health (NBCH) from 2003 to 2005, where she directed the eValue8 Request for Information (RFI) program. She also worked with NCQA from 1999 to 2002 where she was the director of constituent relations and a senior health care analyst in HEDIS performance measure development. In addition, she has worked for the Massachusetts Department of Public Health as the director of a CDC/state-funded women's health promotion and chronic disease prevention program. She has managed a TPA for self-funded employee benefit programs and also been a benefit manager for a mid-sized employer. Dorothy has an MBA from Clemson University and an MSW in clinical social work and an MA in theology from Boston College.

David E. Kanouse, PhD

David E. Kanouse is a social psychologist with many years experience conducting research on the design and dissemination of informational materials to inform decisions by actors in the health field, including consumers, physicians, and others. For the past 13 years, he has led the RAND CAHPS reports in the design, testing and evaluation of reports on health care quality. For three years, he has also led the RAND reporting team for the Medicare Design and Statistical Analysis project. In previous research, he led an evaluation of the NIH Consensus Development Program and an FDA sponsored evaluation of the behavioral effects of patient package inserts.
David has a PhD in Psychology from Yale University.

Stephen T. Parente, PhD, MPH, MS

Stephen T. Parente is the Director of the Medical Industry Leadership Institute and an Associate Professor in the Finance Department at the Carlson School of Management, University of Minnesota where he specializes in health economics, health information technology, outcomes research, and managed care. He has extensive experience directing empirical analyses utilizing primary and secondary data bases and is acknowledged as a

national expert on using administrative databases, particularly private insurance, Medicare and employer benefit data, for health policy research. He has served has a consultant to several of the largest organizations in health care delivery including: UnitedHealth Group, Blue Cross Blue Shield, the Center for Medicare and Medicaid Services, the American Association of Health Plans, Pfizer, Janssen Pharmaceutical, Johns Hopkins Hospital, and various state governments as well as biotechnology firms. Dr. Parente is the principal investigator for an evaluation of consumer directed health plans using claims data from large employers. He is also examining the productivity and cost impact of information technology investments in hospitals and has recently concluded several studies on topics including: innovations from health savings accounts and medical banking technologies; the return on investment of disease management programs; identifying patterns of controlled substance misuse within managed care plans as a patient safety tool, and the impact of elderly consumer health benefit knowledge of medical care demand and cost.

Dr. Parente teaches graduate level courses in health information technology, the health economics, and medical technology evaluation. He actively collaborates on health policy research with other faculty at the University of Minnesota and he holds an appointment as adjunct faculty member at Johns Hopkins University. Prior to joining the University of Minnesota faculty, Dr. Parente gained a broad range of private and public sector health finance and policy experience by serving as a Legislative Fellow in the office of Senator John D. Rockefeller IV (D-WV) during the Bush and Clinton Administrations' health reform initiatives, and designing provider and health plan profiles of service utilization, financial performance and quality of care for public and private insurers. He is a health policy advisor for the McCain 2008 Presidential Campaign. He has a doctorate from Johns Hopkins University, and both a Masters of Science in public policy analysis and a Masters of Public Health from the University of Rochester.

Denis J. Prager, PhD

Denis J. Prager is president of Strategic Consulting Services, a private consulting practice established in 1994 to help a wide range of organizations think, plan, and act more strategically.

From 1983 to 1994, Dr. Prager was with the John D. and Catherine T. MacArthur Foundation, first as Deputy Director, then Director of the Foundation's Health Program. There, he was responsible for the development, implementation, and oversight of programs of collaborative research in mental health and human development, and in tropical diseases.

Immediately prior to joining the MacArthur Foundation, Dr. Prager served as a visiting fellow at the National Academy of Sciences, establishing a new, ongoing forum focused on understanding and advancing the intersecting interests of government, university, and industry in the support and conduct of academic research and training.

From 1978 to 1983, Dr. Prager was senior staff member, then Associate Director, of the White House Office of Science and Technology Policy, responsible for the formulation and implementation of national science and technology policies in the areas of health, agricultural, and environmental sciences.

Dr. Prager began his career in 1960 as a research scientist at the National Institutes of Health (NIH), working on the development of biomedical instrumentation. From 1965-1968, he was a U.S. Public Health Service Fellow at Stanford University where he conducted research on the dynamics of the immune system. In 1969 he returned to NIH, where he was named chief of the Contraceptive Development Branch in the National Institute of Child Health and Human Development, directing a program of contract research in reproductive biology and fertility control. From there he moved to the Battelle Memorial Institute, where he was the Director of the Battelle Population Research Center, then associate director of the Battelle Seminars and Studies Program and corporate research fellow. He returned to NIH in 1976, as Senior Scientist in the Office of the Director of the National Heart, Lung, and Blood Institute.

Dr. Prager received his bachelor's degree in electrical engineering from the University of Cincinnati and his Ph.D. in physiology from Stanford University.

Dale Shaller

Dale Shaller is Principal of Shaller Consulting, a health policy analysis and management consulting practice based in Stillwater, Minnesota. He has over 25 years of experience in the design, implementation, and evaluation of health care quality measurement and reporting programs.

Mr. Shaller has directed the National CAHPS ® Benchmarking Database funded by the Agency for Healthcare Research and Quality since its inception in 1998. He was a member of the Harvard Medical School's CAHPS II research team, and is currently serving as the Reports Team leader for the Yale CAHPS III research and development initiative. He has managed numerous projects aimed at measuring and improving patient-centered care, including a series of case studies on high-performing patient-centered primary care practices and hospitals.

Mr. Shaller has worked with over 50 public and private health coalitions to support their value-based purchasing efforts. As the founding Executive Director of the Minnesota Health Data Institute, he led the development of the nation's first statewide effort to measure and report standardized health plan performance information. Mr. Shaller co-facilitated the federal Work Group on Consumer Health Information charged with developing information and tools for groups wanting to communicate health care quality information directly to consumers, including the TalkingQuality.gov web site. He also served as senior consultant to the Cleveland Health Quality Choice Program, the nation's first voluntary effort among employers, hospitals, and physicians to create a community-wide hospital quality measurement system.

Before establishing his consulting practice in 1989, Mr. Shaller was with the Center for Policy Studies in Minneapolis for seven years, and became its president in 1988. He received his B.A. from Kalamazoo College and holds a Master's degree in public affairs from the Humphrey Institute of Public Affairs at the University of Minnesota.

Shoshanna Sofaer, DrPH

Shoshanna Sofaer is the Robert P. Luciano Professor of Health Care Policy at the School of Public Affairs, Baruch College. She previously held academic positions at George Washington University Medical Center and the UCLA School of Public Health. She completed her MPH and DrPH degrees at the UC Berkeley School of Public Health. Dr. Sofaer conducts research and publishes on topics including: the development of quality measures that resonate with consumers and patients; the design and dissemination of public reports on comparative health care quality; ways to improve the effectiveness of health care professionals in caring for older people; and the development of state and local partnerships to pursue community health and health care improvement objectives. She also conducts evaluations of both individual health care programs and clusters of programs. Dr. Sofaer is nationally known for her expertise in qualitative and mixed methods research and consults and trains widely on these issues.

Acknowledgements