The Increasing Impact of eHealth on Consumer Behavior

But reaching the relevant patients online is difficult because most people are using search engines rather than accessing health sites directly

In this issue of *Health Care News* we are bringing you *Vital Signs Update: The eHealth Patient Paradox*, a report by the Boston Consulting Group (BCG) based on new Harris Interactive data. The data are the results of a nationwide online survey of over 14,000 adults who use the Internet to look for health-related information. We are very grateful to the Boston Consulting Group for allowing us to reproduce *Vital Signs* here:

The Boston Consulting Group's latest research takes a closer look at how the Internet is changing patients' approaches to their health care. This study reveals that ehealth is even more potent in influencing patient behavior than our initial *Vital Signs*[1] report concluded from research and analysis conducted last year. Our follow-up study, conducted in the first quarter of 2001, clearly demonstrates how the Internet is influencing patients to be more involved in diagnosing their conditions and selecting treatments.

But if the payoff from ehealth is greater than expected, so too is the challenge it poses to health care organizations. Reaching patients online is no trivial feat, given the unique way in which patients behave online. Our 2001 research reveals that nearly two-thirds of those using the Internet to explore health questions still rely primarily on general search engines and do not go to health-related Web sites initially or return to them with regularity.

On the surface, this paradox—that it is harder to reach patients online than it is to have an effect on them—represents a large problem for health care players. But it is not insurmountable. A closer look at different patient segments reveals that the most valuable patients, those most active in their care, are beginning to "stick" to health-related sites—that is, visit them directly and return to them. This trend presents organizations with opportunities for engaging and capturing patients online.

The Potential

New data show that the Internet is increasing its influence on how patients approach their health care.

As our *Vital Signs* study revealed, those who use the Internet to explore health issues report that the information they find online has an impact on how they manage their overall health and comply with prescribed treatments. The significant impact of ehealth extends further still, according to our latest proprietary analysis. New data show in greater de-tail how the Internet serves as a powerful lever for instigating patient involvement in care decisions.

In fact, our follow-up research indicates that the more patients use the Web for health, the stronger their response to the call to action issued by a health care organization. Those who use

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[1]The Boston Consulting Group released *Vital Signs*: The Impact of eHealth on Patients and Physicians in February 2001. To order a copy of the report, which examines ehealth in the United States, please contact Mari Whittaker, Health Care Practice Area Assistant, North America, at (617) 973-1275 or whittaker.mari@bcg.com. Also available is Patients, Physicians, and the Internet: Myth, Reality, and Implications (January 2001), a BCG report exploring ehealth In Europe.

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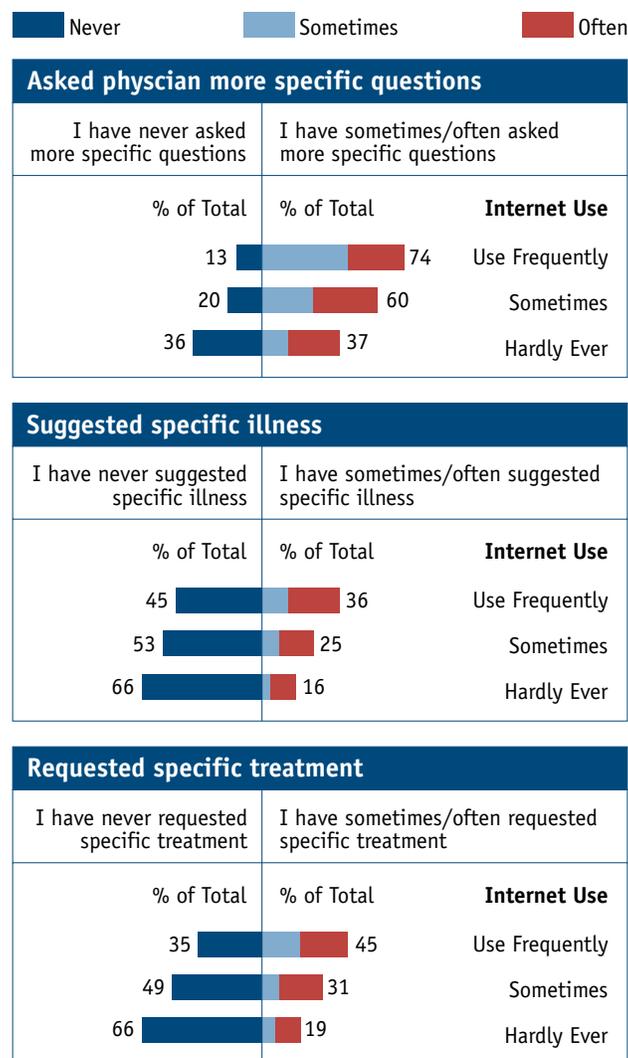*Group President, Health Care, Education & Public Policy*

the Internet frequently are about two to three times more likely than infrequent users to take action that affects their diagnosis and treatment. As we see in Exhibit 1, for example, the data that patients find online result in their asking their physicians more questions and in greater detail. But more importantly, when patients who frequently use the Internet for health consult with their doctors, they are more likely to suggest the specific illnesses that they are suffering from and to request specific treatments. About 36 percent of patients who frequently use the Web for health suggest which illness they may be suffering from as a result of information acquired online. And 45 percent request specific treatment. In comparison, among those who hardly ever venture online to find health information, we see this same active involvement from only 16 percent and 19 percent of patients, respectively.

These findings hold promise for all health care organizations that benefit from influencing patient behavior, such as pharmaceutical companies promoting new therapies and managed care players promoting patient compliance with disease-management initiatives. For example,

EXHIBIT 1

The Internet Strengthens the Call to Action

Based on health-related information that you have gotten from the Internet, how often have you done the following in the past 12 months?

Legend: ■ Never ■ Sometimes ■ Often

Asked physcian more specific questions

I have never asked more specific questions	I have sometimes/often asked more specific questions	
% of Total	% of Total	**Internet Use**
13	74	Use Frequently
20	60	Sometimes
36	37	Hardly Ever

Suggested specific illness

I have never suggested specific illness	I have sometimes/often suggested specific illness	
% of Total	% of Total	**Internet Use**
45	36	Use Frequently
53	25	Sometimes
66	16	Hardly Ever

Requested specific treatment

I have never requested specific treatment	I have sometimes/often requested specific treatment	
% of Total	% of Total	**Internet Use**
35	45	Use Frequently
49	31	Sometimes
66	19	Hardly Ever

Sources: Harris Interactive and BCG analysis.

Notes: Results for 14,278 respondents using the Internet for health-related information; weighted to reflect the demographics of the entire online patient population. Of the respondents, 18% use the Internet frequently for health-related information, 54% use it sometimes, and 28% hardly ever. Base excludes 1,537 respondents who never use the Internet for health.

Reported percentages do not add up to 100% for each category of Internet usage because the categories exclude respondents who reported that they infrequently ask more specific questions, suggest specific illnesses, or request specific treatments.

drug companies could more effectively drive sales of a new therapy if, as our latest data suggest, they could harness the power of ehealth to induce patients to propose diagnoses and request applicable products by name or category.
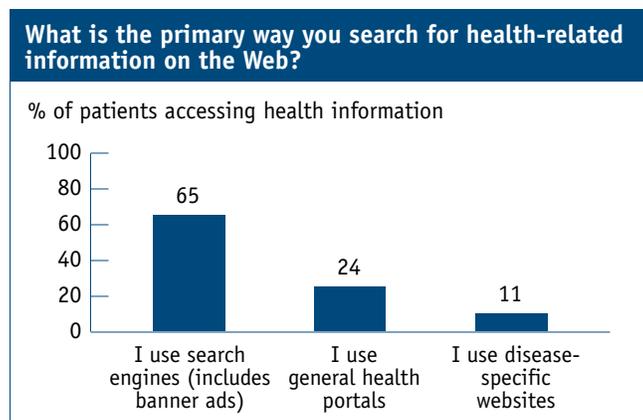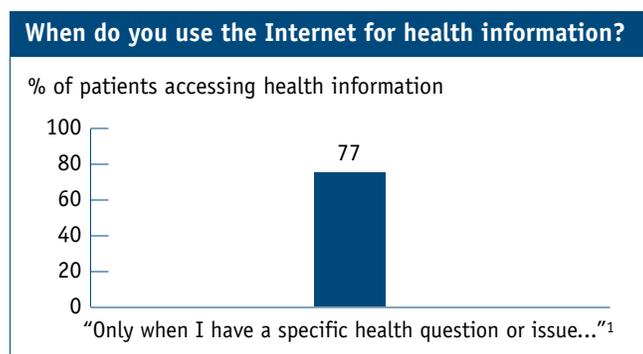
The Paradox

But harnessing the power of the Internet will be daunting, since reaching patients online is difficult.

Motivated by the demonstrated impact of online information, health care organizations may be tempted to mimic the online traffic-building strategies of successful consumer sites on the Internet. But our latest findings suggest that strategies borrowed from consumer sites will fail to capture patients, since usage patterns in ehealth bear little re-semblance to those in ecommerce. (See Exhibit 2.)

EXHIBIT 2

Patients' Internet Behavior Makes Them Difficult to Reach Online

When do you use the Internet for health information?

% of patients accessing health information

"Only when I have a specific health question or issue..."[1]

What is the primary way you search for health-related information on the Web?

% of patients accessing health information

Sources: Harris Interactive and BCG analysis.

Notes: Results for 14,278 respondents using the Internet for health-related information; weighted to reflect the demographics of the entire online patient population.

[1] For example, "When I feel sick or I am worried about a family member or a friend."

First, unlike consumers seeking other information online, patients don't explore health topics on the Web at their leisure or for entertainment. In fact, the vast majority—77 percent—use the Internet for health issues only when they have specific questions. That translates into fewer opportunities to "hook" patients online.

Second, the same Internet users who might visit an auto site to find information about cars or might visit and return to Amazon to purchase books don't typically turn to health sites directly when searching for health information. To answer their health queries on the Web, 65 percent of

patients usually start with general search engines such as Yahoo, AskJeeves, and AltaVista. Only 24 percent make health portals such as WebMD and InteliHealth their first stop; a mere 11 percent start with disease-specific Web sites such as Oncology.com or MSWatch. And even those who favor specific health-related sites report that they initially found them through general search engines.

It is difficult to predict exactly where patients who start with general search engines will end up when they log on for answers to health questions. For that reason, organizations will struggle to reach them online with disease-specific information.

Harnessing the Potential

Our most recent data suggest, however, that the most valuable patients—those most active in their care, who also tend to be afflicted with more severe conditions—are beginning to "stick" to sites, particularly disease-specific sites. This trend should enable health care organizations to reach these patients more consistently via ehealth channels.

Our research shows that because different segments of patients use ehealth differently and for different reasons, some patients are easier to find—and therefore easier to influence—online.

To further examine patient differences, we turned to the four segments of patients defined in our *Vital Signs* report. In the report, we segmented patients on the basis of the severity of their condition and their attitude toward physicians; our follow-up analysis uses these same segments, but updates their size:

- **Accepting** (8 percent of patients)—These patients rely entirely on doctors for health information and decisions.

- **Informed** (55 percent)—These patients also rely on doctors to make health decisions but typically go online to learn more about a doctor's diagnosis or prescribed treatment without, in their view, wasting the doctor's time with questions.

- **Involved** (28 percent)—These patients view themselves as partners with their physicians in making care decisions. Before and after visits, they seek information online to discuss with their doctor; but they still rely on their clinician to make the ultimate decisions regarding their care.

- **In control** (9 percent)—These patients feel best suited to determine their care. They use online information to diagnose their conditions before visits, to determine which treatments they want, and to persuade their doctors to treat them accordingly.

Although their overall size is relatively small, the more active involved and in-control segments account for a significant portion of health care expenditures. These patients tend to suffer from the most severe conditions and thus are likely to be the heaviest consumers of health care. As *Vital Signs* illustrated, they are also more likely to be women, with their frequent role as family caregiver causing them to take responsibility for the diagnoses and treatment of their children, spouses, and parents.
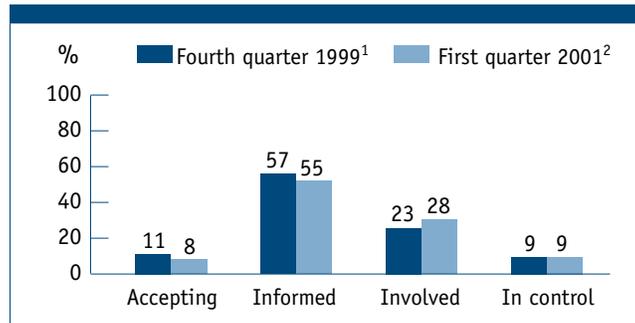
Organizations should use these segments when developing strategies for targeting, reaching, and influencing patients online. They should also consider two important behaviors of these groups.

First, BCG research finds that patients have already begun to migrate toward more active segments over the past year. In combination, declines in the accepting and informed segments and growth of the involved segment suggest that greater patient access to online information is

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leading to greater patient involvement. (See Exhibit 3.) Ultimately, if these shifts continue, the more active patients could well become the largest portion of the health care market.

EXHIBIT 3

Patients' Are Beginning to Migrate to More Active Segments

%	Fourth quarter 1999[1]	First quarter 2001[2]
Accepting	11	8
Informed	57	55
Involved	23	28
In control	9	9

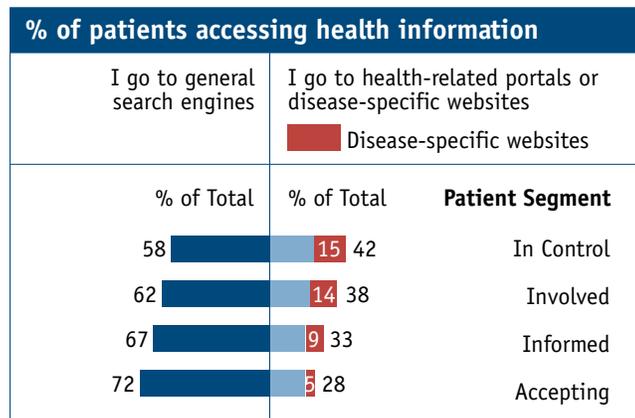**Sources:** Harris Interactive and BCG analysis.

[1] Harris Interactive 1999 10,000 Patient Survey; weighted to reflect the demographics of the entire online patient population.

[2] Harris Interactive 2001 10,000 Patient Survey; weighted to reflect the demographics of the entire online patient population.

Second, these valuable patients who take a more active role in their care are beginning to stick to sites. These patients are more likely than patients in other segments to visit health sites—and disease-specific sites in particular. (See Exhibit 4.) Only 28 percent of the patients in the accepting segment visit health-related portals and Web sites, compared with 42 percent of the in-control group. With roughly the same percentage (23 percent to 27 percent) of each segment visiting health care portals, the differences in behavior are fueled by visits to disease-specific sites. This suggests that disease-specific sites are an attractive pull for return visits among the most active and valuable segments in health care.

EXHIBIT 4

Health Sites Are Gaining Ground, With Disease-Specific Sites Fueling the Shift

% of patients accessing health information		
I go to general search engines	I go to health-related portals or disease-specific websites	
	Disease-specific websites	
% of Total	% of Total	Patient Segment
58	15 42	In Control
62	14 38	Involved
67	9 33	Informed
72	5 28	Accepting

Sources: Harris Interactive and BCG analysis.

Note: Results for 13,909 respondents who use the Internet for health-related information and indicated their search method; weighted to reflect the demographics of the entire online patient population.

If, as the data suggest, patients continue to become more active and therefore more likely to visit disease- specific sites, a shift to deep, narrow health sites can be expected. Consequently, understanding the disease- and segment-specific offerings that attract and retain patients will be an essential element of building a future presence online. For the time being, however, search engines remain the most dominant vehicle for reaching patients online.

Resolving the Paradox: Implications for Tomorrow

Clearly, our new data highlight the critical importance of the Internet for any health care organization seeking to advance its business model by influencing patient behavior. Thus pharmaceutical companies, managed care organizations, and hospitals must consider how to integrate ehealth into their marketing mix, tailoring their online strategies to the patients they seek to reach. To meet these goals, organizations must take three fundamental steps:

1. **Consider ehealth within the context of overall business strategy.** Successful ehealth offerings are but one element in an overall business strategy. Therefore, even before organizations begin considering their approach to ehealth, they should clearly articulate the real-world patient behaviors that they seek to influence—through both online and offline efforts. For example, a pharmaceutical company launching a new drug should decide which patient behaviors are the most powerful levers for boosting its overall product strategy. Is the company seeking to build awareness about a disease or health care problem? Does it wish to encourage patients to consult with physicians? Does it perhaps seek to instigate patients to request a switch from their established therapy? Or are all three equally important?

   Also, organizations must thoroughly understand the obstacles that prevent them from influencing these behaviors. For example, a managed care player seeking to achieve patient compliance must understand the root cause that prevents patients from complying. Is treatment too costly, too difficult to administer, or associated with side effects? These types of questions must be answered before an ehealth strategy can be developed.

2. **Identify the target patient segments and build a Web strategy that melds with their specific needs and behaviors.** As we found in both our earlier and follow-up research, even though all patient segments spend around the same amount of time online each week (about 14 hours), use of the Web for health-related issues varies dramatically across segments. Our 2001 research updates these findings to show that the more active patient segments use the Web more frequently for health than the less active segments. Whereas 38 percent of in-control patients and 23 percent of involved patients frequently use the Web for health, only 11 percent of the informed and 3 percent of the accepting segments use it that way. As a consequence, organizations should deploy far fewer ehealth resources to reach patients in the accepting and informed segments than to reach those in the involved and in-control groups.

   Our data also show that the mix of less and more active patients varies substantially by condition, but that some generalizations still can be made. For example, less active segments tend to have less severe ailments such as hearing impairments and skin conditions. In contrast, more active patients tend toward more serious illnesses. For example, those suffering from the debilitating musculoskeletal pain of the complex chronic condition fibromyalgia or from life-threatening cancer display more involved and in-control behaviors, and may therefore be best reached on-line and require greater ehealth investments.

   Still, organizations should also recognize that all patients with the same condition will not fall into the same segment. While patients with severe allergies, for example, may be more likely to be active in their care, those with mild, more treatable symptoms may be more accepting of a physician's prescribed regimen. Organizations must also recognize that segments are dynamic and that many patients will, over time, move to the next, more active segment. Therefore, understanding how to target patient populations over time will prove an essential competency in developing a successful strategy for mobilizing patients.
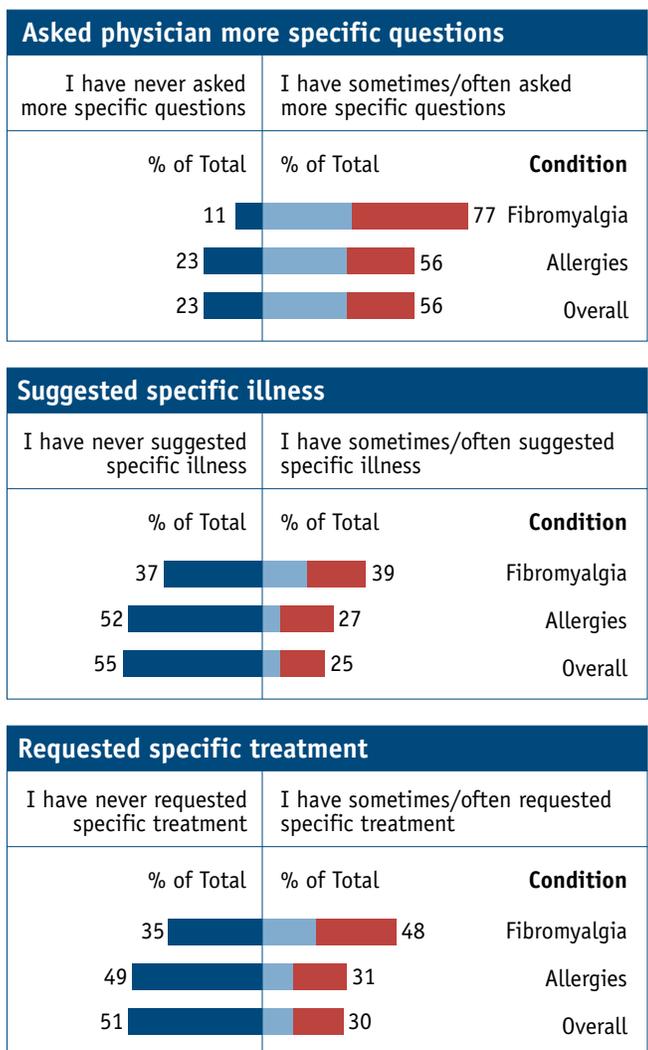
Health care organizations should also gauge their online investments according to the strength of the call to action that they can generate among patients via the Web. This varies substantially by condition. For example, patients suffering from fibromyalgia exhibit a far stronger call to action than patients with allergies, probably because fibromyalgia is neither well understood nor easy to diagnose and therefore is often managed actively by patients. (See Exhibit 5.) Marketing for new fibromyalgia treatments therefore could justify relatively higher investments in ehealth.

EXHIBIT 5

The Call to Action Varies Widely by Condition

Based on health related information that you have gotten from the Internet, how often have you done the following in the past 12 months?

Legend: ■ Never ■ Sometimes ■ Often

Asked physician more specific questions

I have never asked more specific questions	I have sometimes/often asked more specific questions	
% of Total	% of Total	**Condition**
11	77	Fibromyalgia
23	56	Allergies
23	56	Overall

Suggested specific illness

I have never suggested specific illness	I have sometimes/often suggested specific illness	
% of Total	% of Total	**Condition**
37	39	Fibromyalgia
52	27	Allergies
55	25	Overall

Requested specific treatment

I have never requested specific treatment	I have sometimes/often requested specific treatment	
% of Total	% of Total	**Condition**
35	48	Fibromyalgia
49	31	Allergies
51	30	Overall

Sources: Harris Interactive and BCG analysis.

Notes: Results for 14,278 respondents using the Internet for health-related information; weighted to reflect the demographics of the entire online patient population.
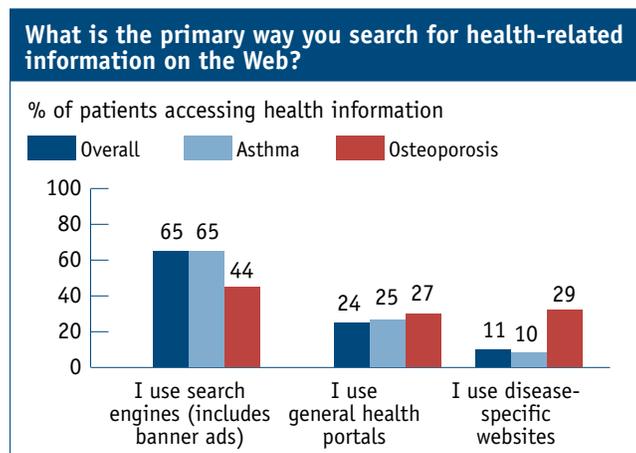
6,787 respondents with allergies; 692 respondents with fibromyalgia.

Reported percentages do not add up to 100% for each category of Internet usage because the categories exclude respondents who reported that they infrequently ask more specific questions, suggest specific illnesses, or request specific treatments.

3. **Customize online traffic-building strategies to the needs and behaviors of targeted patient segments.** For each target segment of patients, organizations must understand the unique ways in which the patients search, where their searches take them, and which specific value propositions will drive return visits. Whereas patients with osteoporosis, for example, are more likely than patients overall to return to a disease-specific site for health information, the inverse is true for patients suffering from asthma. Thus an organization promoting an asthma product or program should build an online presence via search engines and click-through ads. But an organization might build a disease-specific site of its own to capture osteoporosis sufferers, luring them with information about mitigating the risks of accidents and broken bones. Given the importance of diet and weight-bearing exercise in preventing and managing osteoporosis, an interactive diary tool may offer an even better hook, appealing to patients' needs to track and evaluate their intake of calcium and Vitamin D as well as their level of physical activity. (See Exhibit 6.)

EXHIBIT 6

Building Traffic Online Will Require Tailored Strategies

What is the primary way you search for health-related information on the Web?

% of patients accessing health information

Legend: Overall, Asthma, Osteoporosis

	Overall	Asthma	Osteoporosis
I use search engines (includes banner ads)	65	65	44
I use general health portals	24	25	27
I use disease-specific websites	11	10	29

Sources: Harris Interactive and BCG analysis.

Notes: Results for 13,909 respondents using the Internet for health-related information; weighted to reflect the demographics of the entire online patient population.

2,217 respondents with asthma; 653 patients with osteoporosis.

BCG's continued research in this field highlights the significant power of the Internet in changing patient behavior—a power that represents tremendous business value to the incumbent organizations in health care. As an important vehicle for examining, understanding, and affecting customer behavior, ehealth should not be relegated to the periphery of a health care business, but rather must be integrated with overall business strategy. Through our ongoing research, we continue to explore how organizations can refine their ehealth efforts toward this end. In particular, we are examining in greater detail the impact of the Internet on another major constituency of health care: physicians.

This bulletin highlights the key findings of our latest analysis of ehealth and explores their implications for health care organizations. Both the findings and the implications are based on a research arrangement with Harris Interactive using its online research capabilities, which include the Chronic Illness Panel consisting of more than three million patients. Currently, BCG is conducting research to further investigate the role of physicians in ehealth. Through this follow-up and continuing research, we are able to advise our clients on strategies for harnessing the Internet to create value in the business of health care.

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About Boston Consulting Group

The Boston Consulting Group is a general management consulting firm that is a global leader in business strategy. BCG has helped companies in every major industry and market achieve a competitive advantage by developing and implementing unique strategies. Founded in 1963, the firm now operates 50 offices in 33 countries. For further information, please visit our Web site at www.bcg.com. The ideas in this bulletin represent learning from BCG's client work and proprietary research. We welcome your questions and feedback. For inquiries about this bulletin or BCG's Health Care practice, please contact: Deborah Lovich, vice president, The Boston Consulting Group, Inc., e-mail: lovich.deborah@bcg.com, Martin B. Silverstein, M.D., senior vice president, The Boston Consulting Group, Inc., e-mail: silverstein.martin@bcg.com, Rich Lesser, vice president, The Boston Consulting Group, Inc., e-mail: lesser.rich@bcg.com

About Harris Interactive

Harris Interactive (Nasdaq: HPOL), is a worldwide market research, polling and consulting firm. It is best known for *The Harris Poll* and its pioneering use of the Internet to conduct scientifically accurate market research. The Harris Interactive Internet-based forecasts for the 2000 election were the most accurate in the history of the polling industry. With expertise in pharmaceutical, health care, automotive, finance, ecommerce, technology, consumer packaged goods and other markets, the firm has spent 45 years providing its clients with custom, multi-client and service bureau research. In February 2001, the Company acquired the custom research group of Yankelovich Partners, a leading consultative marketing and opinion research firm. Through its U.S. and Global Network offices, Harris Interactive conducts international research in multiple, localized languages. Harris Interactive currently maintains a database of more than 7 million online panelists – the largest of its kind. For more information about Harris Interactive, please visit the Company's website at www.harrisinteractive.com. EOE M/F/D/V

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