



# Chronic Disease and the Internet

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## **Summary of findings**

### **Adults living with chronic disease are disproportionately offline in an online world.**

Recent survey data from the Pew Internet Project and the California HealthCare Foundation show that adults living with chronic disease are significantly less likely than healthy adults to have access to the internet:

- 81% of adults reporting no chronic diseases go online.
- 62% of adults living with one or more chronic disease go online.

People managing multiple diseases are less likely to have internet access:

- 68% of adults reporting one chronic disease go online.
- 52% of adults living with two or more chronic diseases go online.

These findings are in line with overall trends in public health and technology adoption. Statistically speaking, chronic disease is associated with being older, African American, less educated, and living in a lower-income household. By contrast, internet use is statistically associated with being younger, white, college-educated, and living in a higher-income household. Thus, it is not surprising that the chronically ill report lower rates of internet access than other adults. However, when all of these demographic factors are controlled, living with a chronic disease in and of itself has an independent, negative effect on someone's likelihood to have internet access.

### **The internet access gap creates an online health information gap.**

Looking at the population as a whole, 51% of American adults living with chronic disease have looked online for any of the health topics included in the survey, such as information about a specific disease, a certain medical procedure, prescription or over-the-counter drugs, or health insurance.

By comparison, 66% of adults who report no chronic conditions use the internet to gather health information.

Lack of internet access, not lack of interest in the topic, is the primary reason for the gaps. In fact, when demographic factors are controlled, internet users living with chronic disease are slightly *more* likely than other internet users to access health information online.

### **Health professionals dominate the information mix.**

More than any other group, people living with chronic disease remain strongly connected to offline sources of medical assistance and advice:

- 93% of adults living with chronic disease ask a health professional for information or assistance in dealing with health or medical issues.

- 60% ask a friend or family member.
- 56% use books or other printed reference material.
- 44% use the internet.
- 38% contact their insurance provider.
- 6% use another source not mentioned in the list.

By comparison, adults who report no chronic conditions are significantly *more* likely to turn to the internet as a source of health information and *less* likely to contact their insurance provider.

**However, the social life of chronic disease information is robust.**

Interestingly, there are two activities which stand out among people living with chronic disease: blogging and online health discussions. When other demographic factors are held constant, having a chronic disease significantly increases an internet user's likelihood to say they work on a blog or contribute to an online discussion, a listserv, or other online group forum that helps people with personal issues or health problems.

Uptake for these activities is low overall, but those who have participated often praise the information they find. For example, one person wrote, “[An] online support group helped me learn about the disease and provided comfort in knowing that my symptoms were not 'just in my head,' and helped me take steps to adjust to living with a chronic condition.” Another shared, “I live in a small town and it is helpful to be able to use the internet to find others that have the same condition as I do.”

Living with chronic disease is also associated, once someone is online, with a greater likelihood to access user-generated health content such as blog posts, hospital reviews, doctor reviews, and podcasts. These resources allow an internet user to dive deeply into a health topic, using the internet as a communications tool, not simply an information vending machine.

**The impact of online health information may be muted among people living with chronic disease.**

Thirty-six percent of adults living with chronic disease say they or someone they know has been helped by following medical advice or health information found on the internet, which is significantly lower than the 45% of adults with no chronic disease.

Very few adults, regardless of health status, say they or someone they know has been harmed by following medical advice or health information found on the internet. Two percent of adults living with chronic disease report such harm, compared with 3% of adults with no chronic disease.

However, when asked if the health information found in their last online session had an impact on their own health care or the way they care for someone else, those who are

living with chronic disease are significantly more likely than other internet users to say yes, their most recent inquiry made a difference.

**The internet is like a secret weapon – if someone has access to it.**

The deck is stacked against people living with chronic disease. They are disproportionately offline. They often have complicated health issues, not easily solved by the addition of even the best, most reliable, medical advice.

And yet, those who are online have a trump card. They have each other. This survey finds that having a chronic disease increases the probability that an internet user will share what they know and learn from their peers. They unearth nuggets of information. They blog. They participate in online discussions. And they just keep going.

## **Acknowledgements**

**This report is the result of collaboration between the Pew Internet Project and the California HealthCare Foundation.**

The Pew Internet & American Life Project is an initiative of the Pew Research Center, a nonprofit “fact tank” that provides information on the issues, attitudes and trends shaping America and the world. The Project is nonpartisan and takes no position on policy issues. Support is provided by The Pew Charitable Trusts. Lee Rainie, Aaron Smith, and Kathryn Zickuhr provided editorial guidance and support throughout this project.

The California HealthCare Foundation is an independent philanthropy committed to improving the way health care is delivered and financed in California. Veenu Aulakh seeded and nurtured this research project, including an upcoming California-only report.

**All quantitative, numerical data is based on a December 2008 national telephone survey conducted by Princeton Survey Research Associates International (PSRAI).**

PSRAI is an independent firm dedicated to high-quality research providing reliable, valid results for clients in the United States and around the world. Evans Witt and Jennifer Su guided the quantitative research, overseeing interviews of 2,253 respondents, age 18 and older, in both English and Spanish, including 502 cell phone interviews.

**All stories and quotes from consumers are based on qualitative surveys fielded in the summer and fall of 2009 on PatientsLikeMe and HealthCentral.**

PatientsLikeMe is a free online community for patients with life-changing conditions to monitor and share the course of their disease. While patients interact to help improve their outcomes, the data they provide helps researchers, doctors and industry learn how these diseases act in the real world. Paul Wicks and Michael Massagli adapted and fielded a series of questions to a sample of members drawn from the Fibromyalgia, HIV, and Mood Disorders communities for a total of 258 completed surveys.

HealthCentral is a collection of condition and wellness websites providing clinical information, tools, and mobile applications. The sites provide a platform for over 3,000 bloggers, 200 expert patients, and millions of people sharing real-life experiences about specific conditions such as diabetes, asthma, and heart disease. Ted Smith and his patient analytics team adapted and fielded a series of questions to a sample of HealthCentral’s audience for a total of 996 completed surveys.

In addition, Jane Sarasohn-Kahn, Gilles Frydman, and “E-patient Dave” deBronkart provided peer review comments before publication.

The authors would especially like to thank all the people who took the time to respond either to the telephone or the online surveys. Your responses are a gift and deeply affected our understanding of what life is like with chronic disease.

## **Main Report**

### **Adults Living with Chronic Disease**

Adults at every stage of life, in good health or poor health, say they use online resources to connect with each other and make better-informed decisions. In a prior report, “The Social Life of Health Information,” the Pew Internet Project and the California HealthCare Foundation reported on how the general population uses the internet to gather and share health advice.<sup>1</sup> The current study focuses on people living with chronic diseases.

According to the Centers for Disease Control (CDC), nearly half of adults in the U.S. are living with at least one chronic illness.<sup>2</sup> These diseases are among the top killers in the U.S. and represent a significant portion of health care spending.<sup>3</sup>

Online health resources play a supporting role in many people’s lives as they pursue better health and navigate the health care system, either as passive recipients of advice or as active “partners in their care.”<sup>4</sup> Disease-specific patient networks, which have been called “the chicken soup of the internet,” present an opportunity for people to harness social media tools not only for emotional support but to find practical tips and to weigh treatment options.<sup>5</sup> There is also a significant investment being made in the Nationwide Health Information Network, which is meant to bring together streams of medical information and ensure its secure exchange between health care consumers and providers.<sup>6</sup> However, the question remains: Are online health resources reaching the population most in need?

A national telephone survey, conducted in December 2008, asked about the following five chronic diseases: high blood pressure, lung conditions, heart conditions, diabetes, and cancer. This collection of diseases encompasses the most common conditions affecting Americans, but is narrower than the one used by the CDC, for example. This survey finds that 36% of adults in the U.S. say they are living with at least one of those five conditions and 13% say they have two or more.

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<sup>1</sup> Susannah Fox and Sydney Jones, “The Social Life of Health Information” (Pew Internet & American Life Project and the California HealthCare Foundation: June 11, 2009). See: <http://www.pewinternet.org/Reports/2009/8-The-Social-Life-of-Health-Information.aspx>

<sup>2</sup> Centers for Disease Control: Chronic Disease at a Glance 2009. See: <http://www.cdc.gov/nccdphp/publications/AAG/chronic.htm>

<sup>3</sup> Gerard Anderson, “Chronic Conditions: Making the Case for Ongoing Care” (Partnership to Fight Chronic Disease: November 2007). See: <http://www.fightchronicdisease.com/news/pfcd/pr12102007.cfm>

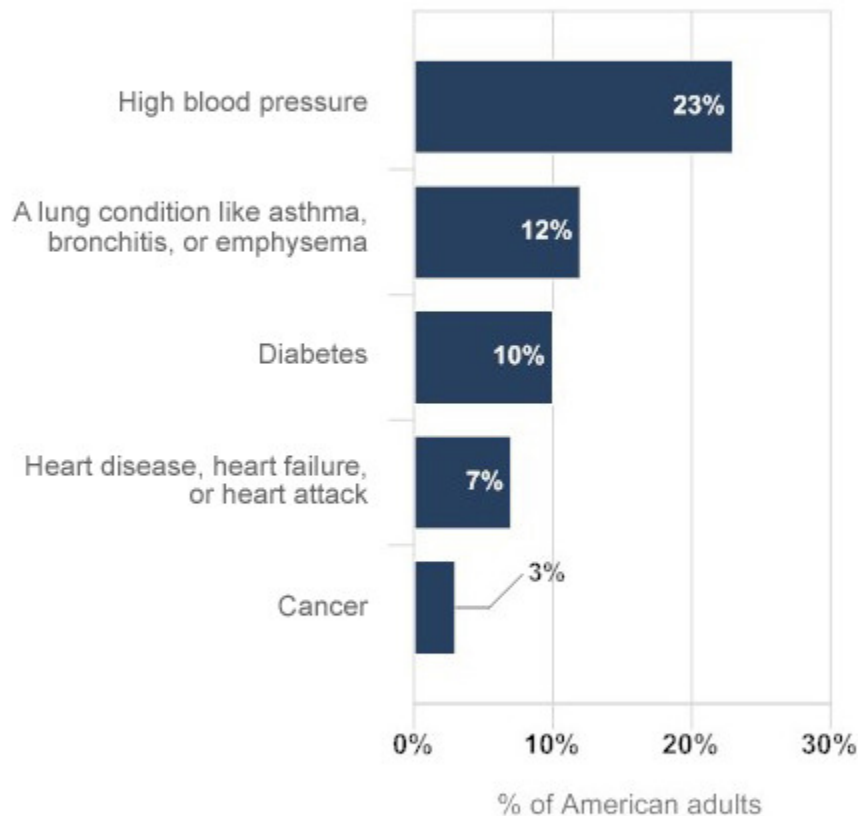
<sup>4</sup> Carol L. McWilliam, “Patients, persons or partners? Involving those with chronic disease in their care” (Chronic Illness: 2009; 5: 277-292). See: <http://chi.sagepub.com/cgi/content/abstract/5/4/277>

<sup>5</sup> Jane Sarasohn-Kahn, “The Wisdom of Patients: Health Care Meets Online Social Media” (California HealthCare Foundation, April 22, 2008). See: <http://www.chcf.org/topics/chronicdisease/index.cfm?itemID=133631>

<sup>6</sup> Office of the National Coordinator for Health Information Technology and the Agency for Healthcare Research and Quality are collaborating on this initiative: <http://healthit.hhs.gov>

## Americans with chronic diseases

36% of adults say they have at least one of the following five chronic conditions. 13% of adults say they are living with two or more chronic conditions.



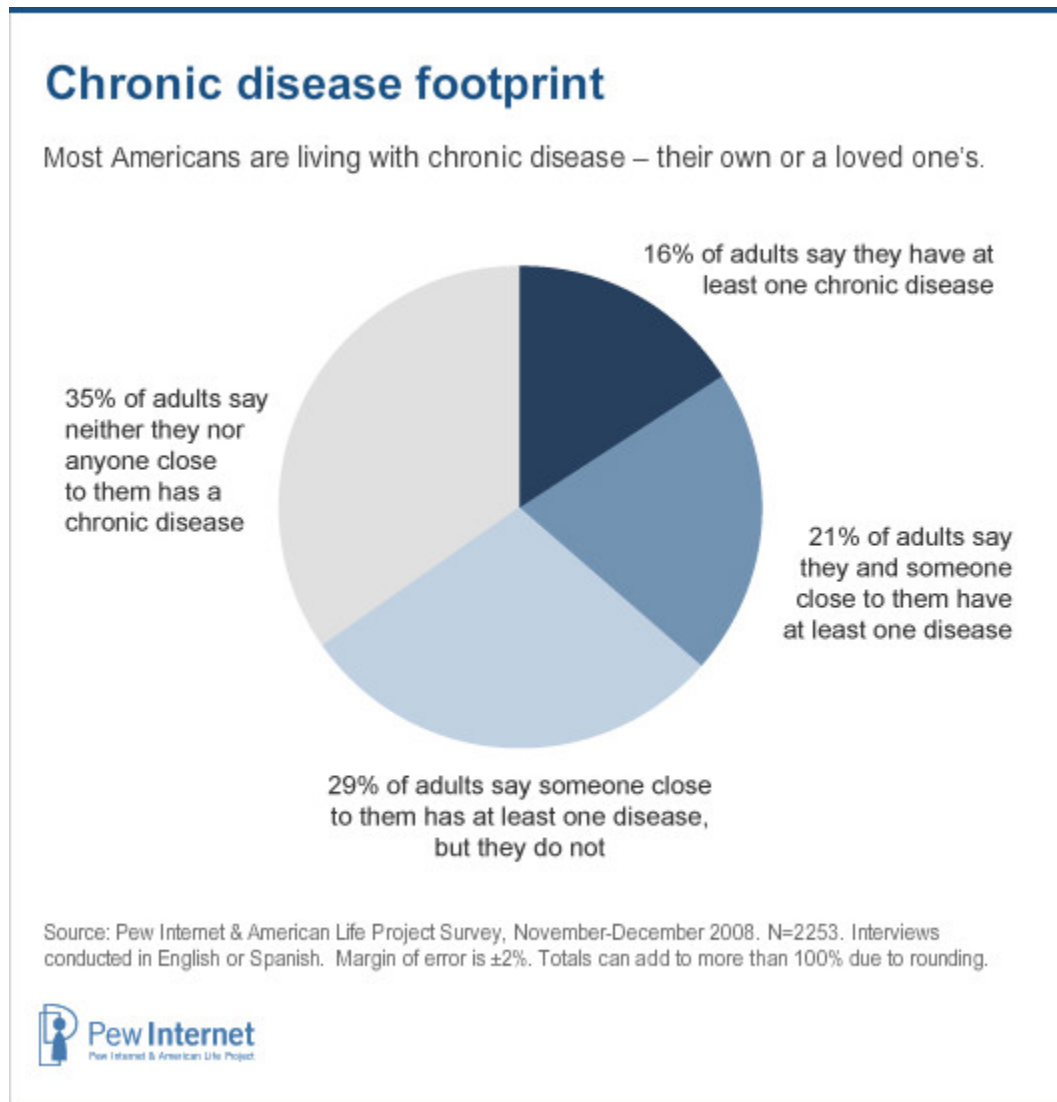
Source: Pew Internet & American Life Project Survey, November-December 2008. N=2253. Interviews conducted in English or Spanish. Margin of error is  $\pm 2\%$ .



The broader footprint of chronic disease emerges when loved ones are taken into account. This survey finds that 29% of adults say that although they do not have a chronic disease, someone close to them has a chronic medical condition such as asthma, diabetes, heart disease, high blood pressure, or cancer. Since half of health searches are conducted on behalf of someone else,<sup>7</sup> the social life of chronic disease information may be more wide-

<sup>7</sup> 41% of internet users who have looked online for health information say their last search was related to their own health; 43% say it was related to someone else's health or medical situation; 9% say it was for both themselves and someone else.

ranging than might be suspected by looking only at the population of adults who live with these conditions. A forthcoming report from the Pew Internet Project will focus on family caregivers.



One internet user may collect information to send to multiple friends and relatives, hoping to jump-start an interest in that person's health. As an e-patient wrote, "Both my brother and sister are diabetics. Neither is very concerned or tries hard to avoid foods that are bad for them. I send them reprints and copy anything I find. I am a pest but they need it. I also have a 58-year-old friend who is afraid to know his [A1C] numbers.<sup>8</sup> I also bombard him. Not knowing is no longer an excuse."

<sup>8</sup> The "A1C" is a laboratory test used to monitor blood glucose levels over a 2- to 3-month interval. Someone's A1C numbers are a key indicator for diabetes management. For more information, please see: <http://diabetes.niddk.nih.gov/dm/pubs/overview/>



## Internet access

The Pew Internet Project defines the internet user population by asking two questions:

Do you use the internet, at least occasionally?  
Do you send or receive email, at least occasionally?

Those who answer “yes” to either question are included in the analysis as internet users. According to this definition, three-quarters of adults in the U.S. go online.<sup>9</sup> Yet, internet penetration drops as illness is added to the picture. Fully 81% of adults reporting no chronic conditions go online, compared with 62% of adults living with one or more chronic disease. The more diseases someone has, the less likely they are to have internet access: 68% of adults living with one chronic condition go online, compared with 52% of adults living with two or more chronic conditions.

These findings are in line with overall trends in public health and technology adoption. Statistically speaking, chronic disease is associated with being older, African American, less educated, and living in a lower-income household.<sup>10</sup> By contrast, internet use is statistically associated with being younger, white, college-educated, and living in a higher-income household.<sup>11</sup>

Thus, it is not surprising that the chronically ill report lower rates of internet access than other adults. However, when all of these demographic factors are controlled, living with a chronic disease in and of itself has an independent, negative effect on someone’s likelihood to have internet access.

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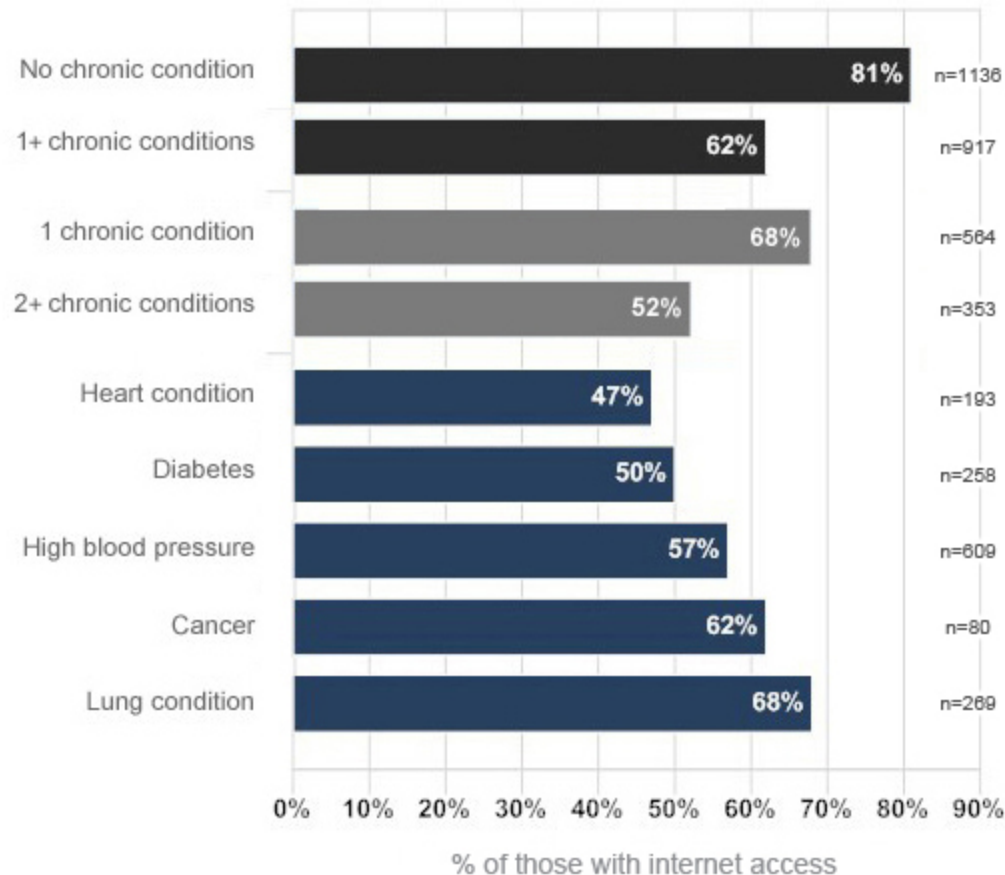
<sup>9</sup> Internet penetration rates increase, particularly for African American adults, when wireless access is taken into account. John Horrigan, “Wireless Internet Use” (Pew Internet & American Life Project: July 22, 2009). See: <http://www.pewinternet.org/Reports/2009/12-Wireless-Internet-Use.aspx>

<sup>10</sup> The MacArthur Research Network on Socioeconomic Status and Health lists extensive publications on this topic: <http://www.macses.ucsf.edu/> The Mobilizing Action Toward Community Health project, a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, includes an interactive guide to health factors: <http://www.countyhealthrankings.org/health-factors>

<sup>11</sup> Lee Rainie, “Internet, broadband, and cell phone statistics” (Pew Internet Project: January 5, 2010). See: <http://www.pewinternet.org/Reports/2010/Internet-broadband-and-cell-phone-statistics.aspx>

## Internet access by condition

The percentage of adults in each group who go online. Overall, 74% of adults in the U.S. go online.



Source: Pew Internet & American Life Project Survey, November-December 2008. N=2253. Interviews conducted in English or Spanish. Margin of error is  $\pm 2\%$ . Note: Margins of error are higher when comparing subgroups.



The remainder of this report focuses on three groups of adults in the U.S.: those living with at least one of the five chronic disease (the broadest group, encompassing those living with one, two, or more conditions); those living with two or more conditions (who provide the starkest contrast); and those who report having none of the diseases named in the survey.

## The Demographics of Chronic Disease

Adults living with chronic disease are likely to be age 50+ and living in lower-income households.

	No conditions	1+ conditions	2+ conditions
<b>Sex</b>			
Men	48%	46%	44%
Women	52	54	56
<b>Race/Ethnicity</b>			
White (non-Hispanic)	69%	70%	70%
African American (non-Hispanic) (n=225)	11	15	17
Hispanic (n=199)	12	8	7
Other	6	5	4
<b>Age</b>			
18-29	22%	12%	5%
30-49	36	24	14
50-64	24	32	34
65+	16	30	45
<b>Education</b>			
Less than high school	14%	19%	27%
High school diploma	32	34	33
Some college	26	26	24
College graduate	26	21	16
<b>Household income</b>			
Less than \$30,000	27%	34%	43%
\$30,000-\$49,999	18	16	14
\$50,000-\$74,999	13	11	10
\$75,000 or more	25	16	10
Don't know/refused	20	22	23
<b>Number of respondents</b>	<b>N=1136</b>	<b>N=917</b>	<b>N=353</b>

Source: Pew Internet & American Life Project Survey, November-December 2008. N=2253. Interviews conducted in English or Spanish. Margin of error is  $\pm 6\%$ .

## Family status

Adults living with chronic disease are generally older, and therefore more likely than the general population to be widowed and not living with children.

	No conditions	1+ conditions	2+ conditions
<b>Marriage</b>			
Married or living w/partner	59%	54%	51%
Divorced or separated	12	15	17
Widowed	4	15	21
Single	24	14	8
<b>Children under age 18 living at home</b>			
Yes	40%	23%	14%
No	60	76	86

Source: Pew Internet & American Life Project Survey, November-December 2008. N=2253. Interviews conducted in English or Spanish. Margin of error is  $\pm 6\%$ .



## Technology adoption

People living with chronic disease are less likely than other adults to surround themselves with the latest technology.

	No conditions	1+ condition	2+ conditions
<b>Internet access</b>			
Go online	81%	62%	52%
Dial-up at home	12	16	15
Broadband at home	61	45	37
Wireless access	50	31	24
<b>Cell phones</b>			
Have a cell phone	89%	76%	70%
Get all or almost all calls on cell phone	21	9	11
Send/receive text messages	60	32	23

Source: Pew Internet & American Life Project Survey, November-December 2008. N=2253. Interviews conducted in English or Spanish. Margin of error is  $\pm 6\%$ .



### Online activities

Internet users living with chronic disease generally stay in the shallow end of the online activities pool. They are less likely than internet users who report no chronic conditions to bank online, look for information on Wikipedia, use a social network site, or get financial information online.

Two activities stood out in the analysis, however: blogging and participating in an online discussion. Holding all other variables constant, living with chronic disease increases the probability that an internet user will say they work on a blog or contribute to an online discussion, a listserv, or other online group forum that helps people with personal issues or health problems. These resources allow an internet user to dive deeply into a health topic, using the internet as a communications tool, not simply an information vending machine.

## Internet activities

What internet users reporting 2+, 1+, and no chronic conditions do online

	No conditions	1+ conditions	2+ conditions
Send or read email	90%	90%	91%
Bank online	58*	46	45
Look for info on Wikipedia	51*	38	31
Get financial information	40*	32	28
Use social network site~	39*	25	19
Read someone else's blog	34*	28	26
Use Twitter or another service~	12*	7	7
Buy or sell stocks, mutual funds, or bonds online	12*	9	5
Create or work on your own blog	11	12	11
Participate in an online discussion	7	8	8

\* indicates a significant difference between those without chronic conditions and those with chronic conditions.

~Twitter and social network site use have grown since this survey was fielded.

Source: Pew Internet & American Life Project Survey, November-December 2008. N=1650. Interviews conducted in English or Spanish. Margin of error is ±8%.



To understand the patterns of technology use among adults, the Pew Internet Project has used statistical techniques to isolate the factors associated with an adventurous engagement in a wide range of online activities. We have consistently found that the older someone is, the less likely they are to sample all that the internet has to offer, as are those with less education and lower incomes.<sup>12</sup> In addition, the more an internet user is tethered to a stationary, home internet connection, the less likely they are to venture far and wide online.<sup>13</sup>

While a majority of internet users have wireless internet access,<sup>14</sup> just one-quarter of internet users living with two or more chronic diseases have such access. People living

<sup>12</sup> Sydney Jones and Susannah Fox, “Generations Online in 2009” (Pew Internet Project: January 28, 2009). See: <http://www.pewinternet.org/Reports/2009/Generations-Online-in-2009.aspx>

<sup>13</sup> John Horrigan, “The Mobile Difference” (Pew Internet Project: March 25, 2009). See: <http://www.pewinternet.org/Reports/2009/5-The-Mobile-Difference--Typology.aspx>

<sup>14</sup> Lee Rainie, “Internet, broadband, and cell phone statistics” (Pew Internet Project: January 5, 2010). See: <http://www.pewinternet.org/Reports/2010/Internet-broadband-and-cell-phone-statistics.aspx>

with chronic disease are likely to be advanced in age, living in lower-income households, and lagging behind the general population in technology adoption. Once again, statistical techniques show that in addition to these factors, the presence of chronic disease has a small but significant negative effect on wireless adoption.

### **Daily internet use**

In order to capture a picture of a typical day online, we ask each respondent, “Did you happen to use the internet yesterday?” It turns out that 60% of internet users living with chronic disease are online on a typical day, compared with 74% of internet users who report no chronic diseases.

This gap carries over into online activities. For example, email is nearly universal, but just 44% of internet users living with two or more chronic diseases and 56% of internet users living with one disease send or receive email on a typical day, compared with 61% of internet users who report no chronic diseases. This pattern is repeated in all the other activities included in this survey. Most internet users living with chronic disease have not made the internet a part of their daily routine and continue to rely on offline information and communications resources.

### **Health information**

Looking at the population as a whole, 51% of American adults living with chronic disease have looked online for any of the health topics we ask about, such as information about a specific disease, a certain medical procedure, prescription or over-the-counter drugs, or health insurance.

By comparison, 66% of adults who report no chronic conditions use the internet to gather health information and 44% of adults living with two or more conditions do so. (Throughout the remainder of the report, the term “e-patient” is used to describe an internet user who has looked online for health information.)

Lack of internet access, not lack of interest in the topic, is the primary reason for the gaps. In fact, statistical analysis finds that, once online, having a chronic disease has a positive effect on someone’s propensity to look online for health information. Education and type of access (broadband or wireless) are still the strongest predictors for seeking health information online but the more diseases an internet user reports, the more likely they are to seek advice online, independent of all other demographic factors.

The motivations to go online for health information are probably as varied as the topics people research. People living with chronic disease are likely to be managing multiple conditions, filling multiple prescriptions, and visiting multiple doctors.<sup>15</sup> In fact, a Harris Interactive study found that 17% of people living with chronic conditions reported receiving conflicting information from providers and 18% reported having duplicate tests

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<sup>15</sup> Anderson, 2007

or procedures performed.<sup>16</sup> And again, the internet can be an information vending machine for some users and a powerful communications resource for others, depending on the nature of their illness or their level of interest in a certain topic.

### **Health topics**

There is almost a universality of interest in the following health topics, no matter someone's health status. Chronic disease increases someone's propensity to look for information about many of these topics, though not all. In addition, information seeking for many of these topics is driven by key demographic factors such as being female, holding a college degree, having broadband at home. These influences are noted in the text below.

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<sup>16</sup> Harris Interactive, "Chronic Illness and Caregiving." (2000).



## Health Topics

The percentage of internet users who have looked online for information about certain topics.

	No conditions	1+ conditions	2+ conditions
A specific disease or medical problem	65%	69%	69%
Certain medical treatment or procedure	54	55	54
Exercise or fitness	54	49	41*
Doctors or other health professionals	48	43	42*
Prescription or over-the-counter drugs	43	48	53*
Hospitals or other medical facilities	38	38	36
Health insurance	37	37	42
Alternative treatments or medicines	33	38	36
How to lose weight or how to control your weight	33	35	30
Depression, anxiety, stress or mental health issues	28	28	30
Any other health issue not listed above	26	27	31
Experimental treatments or medicines	19	22	23
How to stay healthy on a trip overseas	13	10	12

\* indicates a significant difference between those without chronic conditions and those with chronic conditions.

Source: Pew Internet & American Life Project Survey, November-December 2008. N=1650. Interviews conducted in English or Spanish. Margin of error is ±8%.



### Specific disease or medical problem

Overall, 69% of internet users living with chronic disease report that they have looked online for information about a specific disease or medical problem, compared with 65% of internet users who report none of the chronic conditions named in the survey. This does not represent a significant difference between the two groups. However, among internet users, being female, having a college degree, or having home broadband access increases the likelihood to look for this type of information online. Chronic disease also slightly increases the probability that an internet user will look online for information about a specific disease or medical problem.

One e-patient wrote about receiving an unexpected diagnosis and needing specific information, on her own time: “[The] doctor just called on the phone and said I had it and did I have any questions. I was in too much shock at that moment and was crying and emotional so I couldn't think of anything to ask. Later, I got on the internet and went to many sites that gave me very good and helpful information. My fears were calmed somewhat. I am still confused about the disease and have many questions so I have scheduled an appointment with the doctor.”

### **Certain medical treatment or procedure**

55% of internet users living with chronic disease report that they have looked online for information about a certain medical treatment or procedure, compared with 54% of internet users who report none of the chronic conditions named in the survey. Again, this does not represent a meaningful difference, but statistical analysis finds that being female, having a college degree, having home broadband access, or living with chronic disease all increase an internet user's likelihood to look online for this type of information.

One e-patient wrote about her motivation to find out everything she could about her condition: “If I had not done my own research then I would have not known to request the surgery that saved my hip. I learned early to do my own research and not rely on the doctor. By my own family doctor's admission, I knew more than he did by the time I was done.”

### **Exercise or fitness**

49% of internet users living with chronic disease report that they have looked online for information about exercise or fitness, compared with 54% of internet users who report none of the chronic conditions named in the survey. This gap represents a significant difference between the two groups. In addition, being young, non-white, female, or college-educated are each predictors for doing online research about this type of information.

Those chronically-ill internet users who do search for this type of information online can find valuable insights to help them manage their illness. One respondent wrote that, rather than finding any new treatments for her condition during her most recent foray online, she found new exercises to try to alleviate both her physical symptoms and her mental state: “I am under a lot of stress and don't know what to do about it.”

### **Prescription or over-the-counter drugs**

48% of internet users living with chronic disease report that they have looked online for information about prescription or over-the-counter drugs, compared with 43% of internet users who report none of the chronic conditions named in the survey. This is the one topic which is significantly more popular among internet users living with chronic disease than among non-chronic internet users, which is in line with studies conducted by Manhattan

Research.<sup>17</sup> Statistical analysis shows that the presence of chronic disease has an independent effect on someone's likelihood to seek information about drugs – the greater the number of diseases reported, the greater the interest in this type of information. In addition, a college degree, broadband, or being female are each associated with a propensity to do online research about prescription or over-the-counter drugs.

Many respondents to the qualitative survey report looking up new prescriptions, either for themselves or on behalf of a loved one. Typical of this theme is the e-patient who wrote, "I always look up new prescriptions and check if new pills will interact with the many that I am already taking."

### **Doctors or other health professionals**

43% of internet users living with chronic disease report that they have looked online for information about doctors or other health professionals, compared with 48% of internet users who report none of the chronic conditions named in the survey. This represents a statistically significant difference between the two groups. In addition, among internet users, being female, having a college degree, or having home broadband access increases the likelihood to look online for information about doctors and other health professionals.

For those chronically ill internet users who do look for this information on the internet, shopping for a doctor online is still a new concept for many people. The information available about health professionals fell short of expectations for one respondent, but she does have a wish list for the future: "I would love it if doctors were rated and blogged about so the majority of patients wouldn't end up with bad doctors or that doctors would try harder because they know that they are being reviewed."

### **Health insurance**

37% of internet users living with chronic disease report that they have looked online for information related to health insurance, including private insurance, Medicare or Medicaid, the same percentage as internet users who report none of the conditions named in the survey. Once again, being female, having a college degree, or having home broadband access increases an internet user's likelihood to look online for information about health insurance.

None of the respondents to the qualitative survey mentioned using the internet to get information about health insurance (it is likely that those living with chronic illness are in touch with their insurance providers on a fairly regular basis by telephone or mail, and are already deeply familiar with their plan and coverage). Nearly all of the responses who did mention health insurance expressed frustration, some using language that cannot be printed here.

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<sup>17</sup> Manhattan Research, "The Online Pharmaceutical Information-Seeking Landscape." See: <http://www.manhattanresearch.com/research/white-papers/consumer-digital-pharma-landscape.aspx>

## **Hospitals**

38% of internet users living with chronic disease report that they have looked online for information about hospitals or other medical facilities, the same percentage as those who report none of the chronic conditions named in the survey. Statistical analysis shows that the presence of disease in someone's life has an independent, positive effect on their likelihood to look online for this type of information. Being female, having a college degree, or having home broadband access increases an internet user's likelihood to look online for this type of information.

One respondent told about how, before seeking treatment, she searched online for a list of local hospitals and reviewed the doctors listed on each website. As she writes, "Some were eliminated based on past negative experiences. I eventually chose a hospital with which I had previous excellent care."

## **Alternative medicine**

38% of internet users living with chronic disease report that they have looked online for information about alternative treatments or medicines, compared with 33% of internet users who report none of the chronic conditions named in the survey. Statistical analysis shows that having wireless access is strongly associated with a propensity to look online for this type of information. Having a college degree, being female, or living with chronic disease are also associated, but to a lesser degree, with looking online for information about alternative treatments.

Many chronic e-patients wrote about their online research related to alternative treatments. The following is a typical comment shared in the qualitative survey: "I have learned other ways to keep my blood pressure in control, e.g. deep breathing and relaxation, so I don't depend entirely on drugs."

## **Mental health**

28% of internet users living with chronic disease report that they have looked online for information about depression, anxiety, stress or mental health issues, the same percentage as those who report none of the chronic conditions named in the survey. Statistical analysis shows that, among internet users, as the number of chronic diseases someone has increases, the more likely they are to seek information online about mental health issues, independent of other factors. Being young or being female are also associated a propensity to do this type of research online.

Coping with mental health issues was a theme threaded through many of the online essays, including this quote: "I love to be able to talk to others who know how bad depression can be from their own experiences."

## **Weight loss**

35% of internet users living with chronic disease report that they have looked online for information about how to lose weight or how to control their weight, compared with 33% of internet users who report none of the chronic conditions named in the survey. Being young, non-white, female, or college-educated are each predictors for doing online research about this type of information, as is having wireless internet access. Chronic illness is not correlated with seeking this type of information.

One e-patient wrote about how she hopes to lose weight and lower her high blood pressure but her diet searches have been in vain: “All I ever get back or find is ‘stay away from salt.’ Well, I don’t use salt and I watch what I buy that has salt already in it. All I want is a diet to follow where I’m not eating like a rabbit and can enjoy eating.”

Another e-patient living with diabetes wrote, “I have a hard time fighting to remember to not eat carbs. [Certain websites] have been extremely valuable to keeping me on line and always coming back to my goals.”

## **Experimental treatments**

22% of internet users living with chronic disease report that they have looked online for information about experimental treatments or medicines, compared with 19% of internet users who report none of the chronic conditions named in the survey. Statistical analysis shows that as the number of chronic diseases someone has increases, the more likely they are to seek information online about experimental treatments, independent of other factors.

One respondent shared that she found herself caught between her medical doctor and her chiropractor, who each dismissed the other’s advice about experimental treatments. She writes, “I was able to find how the two treatments would be complementary if performed correctly. Once I gave my doctors this information they both felt more comfortable with the other doctor’s way of treating me.”

## **Immunizations for travel**

10% of internet users living with chronic disease report that they have looked online for information about how to stay healthy on a trip overseas (such as immunizations and shots), compared with 13% of internet users who report none of the chronic conditions named in the survey. Having a wireless connection, being non-white, or living in a lower-income household each increase an individual’s propensity to look online for this type of information.

None of the respondents to the qualitative survey wrote about this health topic.

### **Any other health topic**

27% of internet users living with chronic disease report that they have looked online for information about any other health issue, not included in our list, compared with 26% of internet users who report none of the chronic conditions named in the survey.

This question was included as a catch-all to be sure everyone who has done online health research is included in the analysis. The essays collected in the qualitative surveys are a window into the variety of health information sought online from home remedies to nutritional information to smoking cessation tips.

### **Few are engaged daily or even weekly with online health resources.**

The vast majority of internet users living with chronic disease (83%) look online for health information. However:

- 81% of internet users living with chronic disease say they go online and do something related to health *less often than once a week*.
- 10% say they do so once a week.
- 5% say they do so every few days.
- Only 3% say they go online and do something related to health once a day or more.

These findings match the habits of the general population of internet users: 81% of all internet users say they go online and do something related to health less often than once a week.

Similarly, Harris Interactive has found that 25% of internet users “often” look for information online about health topics, compared with 38% of internet users who “sometimes” look and 36% of internet users who “hardly ever” or “never” look online for health information.<sup>18</sup>

It appears that online health research is generally conducted episodically, on a need-to-know basis. People living with chronic disease, much like everyone else, are busy working and socializing, hoping to avoid the need to investigate a new diagnosis or treatment. Frequency is not necessarily an indication – in either direction – for the quality of someone’s engagement with online health resources.

### **Chronic disease requires a focus on one’s own health questions.**

Not surprisingly, e-patients living with one or more chronic diseases are often focused on their own concerns: 51% say their last online health inquiry centered on their own medical situation. Thirty-four percent say their last health search focused on someone

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<sup>18</sup> Harris Interactive’s Healthcare News, Volume 8, Issue 8, August 2008. See: [http://www.harrisi.com/news/newsletters/healthnews/HI\\_HealthCareNews2008Vol8\\_Iss8.pdf](http://www.harrisi.com/news/newsletters/healthnews/HI_HealthCareNews2008Vol8_Iss8.pdf)

else's concerns. Eight percent volunteer that their last inquiry was on behalf of both themselves and someone else.

By comparison, e-patients who report none of the chronic diseases recorded in this survey are likelier to say their last health search focused on someone else's concerns. Thirty-seven percent say they were looking on behalf of themselves, 47% say they were looking on behalf of another person, and 10% volunteer that the last search was for both themselves and someone else.

Statistical analysis bears out this observation. If someone is dealing with a chronic disease they are more likely than other e-patients to research their own questions, regardless of their age, education level, or other demographic variables.

### **Health professionals dominate the information mix.**

More than any other group, people living with chronic disease remain strongly connected to offline sources of medical assistance and advice.

When asked, "Now thinking about all the sources you turn to when you need information or assistance in dealing with health or medical issues, please tell me if you use any of the following sources..."

- 93% of adults living with chronic disease ask a health professional, such as a doctor.
- 60% ask a friend or family member.
- 56% use books or other printed reference material.
- 44% use the internet.
- 38% contact their insurance provider.
- 6% use another source not mentioned in the list.

By comparison, adults who report no chronic conditions are significantly *more* likely to turn to the internet as a source of health information and *less* likely to contact their insurance provider:

- 83% of adults who say they have no chronic conditions ask a health professional, such as a doctor, when they need medical assistance or information.
- 64% ask a friend or family member.
- 60% use the internet.
- 52% use books or other printed reference material.
- 29% contact their insurance provider.
- 5% use another source not mentioned in the list.

Statistical analysis shows that living with a chronic disease has a significant, independent effect on someone's likelihood to stick with offline sources. In fact, although other factors, such as advanced age, are associated with a reliance on offline health resources,

having a chronic disease is the strongest predictor of all the variables included in the analysis.

The qualitative survey yielded many stories about how the internet is a supplement, not a substitute, for the care and advice people receive from health professionals. One breast cancer survivor wrote about how she uses the internet to prepare for appointments: “I was never great about asking my doctor the questions that needed to be asked. Now I ask away and never go without asking what’s important about my health and anything I just want to know.”

Other research bears out this finding. Over the course of three national surveys conducted by the National Cancer Institute, researchers found that “the public's trust in physicians as their preferred source of health information has remained high and, if anything, increased from 2002 to 2008.” When respondents were asked where they went first for cancer information, however, the internet was their top choice. In fact, even as trust in physicians remained steady and trust in the internet decreased, the use of the internet as a first stop for respondents seeking health information rose over time.<sup>19</sup>

There is also evidence that people living with chronic disease are discriminating about what sites they visit, when they do go online. A 2006 survey by the Pew Internet Project found that e-patients living with chronic conditions were also more likely than other internet users to go to trusted sites instead of relying on a general search engine to answer their questions.<sup>20</sup>

In the current study, one e-patient wrote, “I hesitate to say 'internet' because I am very picky on the resources I use. I prefer using websites that are written for professionals dealing with the disease because they don't 'talk down' to me.”

Another e-patient wrote, “I send links of relevant articles to my friends and/or family and have many discussions with my husband and 19 year old son... I am a pretty good diagnostician. However, the best advice I give is 'You should see a doctor about that!'”

People living with chronic conditions have good reason to be careful about health information: the consequences of missed opportunities can be very serious. One respondent told about how, in 2003, she heard disturbing news about a medication she was taking. She went to a major disease-specific, consumer-oriented website and found nothing about it. As she wrote, “Now the drug comes with warnings about heart related issues. Would have been nice to know about those things years ago when they kept denying that there was a problem.”

### **Once they find health information online, most talk it over with friends and family.**

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<sup>19</sup> Bradford W. Hesse, Richard P. Moser, and Lila J. Rutten, “Surveys of Physicians and Electronic Health Information.” (*New England Journal of Medicine*: 2010 Mar 4;362(9):859-60.)

<sup>20</sup> Susannah Fox, “E-patients With a Disability or Chronic Disease.” (Pew Internet Project: October 8, 2007). See: <http://www.pewinternet.org/Reports/2007/Epatients-With-a-Disability-or-Chronic-Disease.aspx>



Most internet users, once they find health information online, usually talk with someone about it, regardless of their health status. Two-thirds of e-patients living with chronic disease (66%) say they usually talk with a friend, a spouse or partner, a family member, a co-worker, or a medical professional. The pattern is the same among e-patients who report no chronic disease.

One respondent to the online survey wrote, “I research everything and then discuss with my doctor and family who have to deal with my condition.” Another shared that, because of her online research, “I am better able to give intelligent answers to my doctor's questions on my health generally.”

### **Social media and health**

#### **More than half of e-patients living with chronic disease consume user-generated health information.**

The Pew Internet Project has tracked the internet's role in decision-making, finding that many people use online resources to compare their options.<sup>21</sup> Social media's influence is on the rise as more and more people look for advice from peers as well as experts.<sup>22</sup> The idea is that, if people can pool knowledge and learn to track their own health metrics, such as their weight or cholesterol counts, they can make better choices and have better health outcomes.<sup>23</sup>

Among e-patients living with chronic disease:

- 37% have read someone else's commentary or experience about health or medical issues on an online news group, website, or blog.
- 25% have consulted rankings or reviews online of hospitals or other medical facilities.
- 25% have consulted rankings or reviews online of doctors or other providers.
- 22% have signed up to receive updates about health or medical issues.
- 13% have listened to a podcast about health or medical issues.

Overall, 57% of e-patients living with chronic disease have done at least one of the above activities. These findings mirror patterns in the general population: e-patients living with chronic disease are about as likely as the general population of e-patients to tap into user-generated health content.<sup>24</sup> However, statistical analysis shows that when age, education,

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<sup>21</sup> Lee Rainie, Leigh Estabrook, and Evans Witt, “Information Searches That Solve Problems.” (Pew Internet Project: December 30, 2007) See: <http://www.pewinternet.org/Reports/2007/Information-Searches-That-Solve-Problems.aspx>

<sup>22</sup> Edelman, “Health Engagement Barometer.” See: <http://www.engageinhealth.com/>

<sup>23</sup> Thomas Goetz, *The Decision Tree: Taking Control of Your Health in the New Era of Personalized Medicine* (2010)

<sup>24</sup> Fox and Jones, 2009. See also: Forrester Research's Social Technographics Ladder: <http://www.forrester.com/Groundswell/ladder.html>

and type of internet access are controlled, living with chronic disease increases the likelihood that an internet user will consume user-generated health content.

In the modern world, blogs and other online meeting grounds provide a way for people to share information, emotional support, and practical advice.<sup>25</sup> This is the 21<sup>st</sup> century version of the age-old instinct to seek solace in the community. Thomas Jefferson captured the sentiment in a letter to a friend in 1786, "Who then can so softly bind up the wound of another as he who has felt the same wound himself?"<sup>26</sup>

On a more practical level, one e-patient wrote, "I was having problems sleeping [because of] hip pain. Through this site I received info about proper ways to set up my bed and since then have been sleeping so much better."

Another respondent wrote, "I read the Gluten Free Forum daily for about a year before I really got my celiac disease under control and felt fully informed. You can't call your gastroenterologist everytime you buy a new product."

By contrast, another e-patient does not find the community aspect of online health information to be useful, writing, "I don't find chat rooms helpful because most people are sharing how horrible they feel and I am beyond that. I have bad days but I feel dragged down when I whine about them or listen to others talk about their problems with doctors, family, etc. I don't have those problems."

### **One in five e-patients living with chronic disease create online health content.**

Among e-patients living with chronic disease:

- 7% of chronic e-patients have tagged or categorized online content about health or medical issues.
- 7% have posted comments, queries, or information about health or medical matters in an online discussion, listserv, or other online group forum.
- 6% have posted a review online of a hospital.
- 5% have posted a review online of a doctor.
- 4% have shared photos, videos or audio files online about health or medical issues.
- 6% have posted comments about health on a blog.

Overall, 20% of e-patients living with chronic disease have done at least one of the above activities, which matches the general population of e-patients.

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<sup>25</sup> Regina Overberg, et al. "How Breast Cancer Patients Want to Search for and Retrieve Information From Stories of Other Patients on the Internet: an Online Randomized Controlled Experiment" (Journal of Medical Internet Research 2010; Mar 09; 12(1):e7). See: <http://www.jmir.org/2010/1/e7/HTML>

<sup>26</sup> Letter from Thomas Jefferson to Maria Cosway, 1786:  
<http://www.pbs.org/jefferson/archives/documents/ih195811.htm>

Despite the fact that only a subset of chronic e-patients take part in these activities, it is worth noting once again that, when other demographic factors are held constant, living with chronic disease increases the probability that an internet user will contribute to the online conversation. Specifically, chronic disease increases the likelihood to work on a blog, to post comments on a blog, or to contribute to an online discussion, a listserv, or other online group forum that helps people with personal issues or health problems.

One e-patient wrote, “I spend a lot of time looking for information on the internet. It has been an invaluable resource for me. In addition, I keep a blog so that I can keep all my information in one place. Having a rare disorder along with chronic pain, I need all the help I can get – but I do great. I have a full time job, and participate in many activities, including a half marathon in May – and many of the things I have learned have been from the internet.”

### **Social network sites**

The tendency among chronically ill internet users to stick to the straight and narrow online carries over into other forms of social media. Social network sites such as MySpace and Facebook are becoming mainstream destinations for many internet users, particularly younger adults, but less so for people living with chronic disease.

As of September 2009, 47% of internet users say they use a social network site, up from 35% in December 2008, when this survey focused on health and health care was conducted. There has been a modest growth of interest in this activity among older adults over the last year: 15% of internet users age 65 and older now use social network sites, compared with 7% in December 2008. Therefore, the following numbers may be slightly lower than the current uptake of social tools among people living with chronic disease.

As further context, these findings are in line with the HINTS 2008 survey, which noted a strong inverse relationship between social network site use and age. Internet users between ages 18-24 years-old were 47.8% more likely to be part of a social network site than internet users age 65 and older.<sup>27</sup>

In December 2008, 25% of internet users living with chronic disease said they use a social networking site like MySpace and Facebook. Of those:

- One in four has followed their friends’ personal health experiences or updates on the site.
- One in five has posted comments, queries, or information about health or medical matters.
- One in five has gotten any health information on the sites.

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<sup>27</sup> Bradford W. Hesse, “Technology-Mediated Social Participation in Health and Health Care.” (Health Communication and Informatics Research Branch, National Cancer Institute, National Institutes of Health: January 18, 2010). See: <http://www.tmsp.umd.edu/position%20papers/technology%20mediated%20social%20participaiton%20in%20health.%20Hesse%20%282010%29.pdf>

- One in ten has started or joined a health-related group on a social networking site.

Seven percent of internet users living with chronic disease use Twitter or another service to share updates about themselves or to see updates about others. Of those, very few have posted comments, queries, or information about health or medical matters.

### **Online support groups**

Eight percent of internet users living with chronic disease say they participate in an online discussion, a listserv, or other online group forum that helps people with personal issues or health problems. This mirrors the 7% of internet users who report no disease who participate in online support groups.

The National Center for Health Statistics recently found a similarly low uptake for online discussion groups devoted to health information. Three percent of adults aged 18-64 say they had used an “online chat group” to learn about health topics in the past year.<sup>28</sup>

However, holding all other variables constant in the current survey, living with chronic disease increases the probability that an internet user will participate in online discussions.

The few people who have used such groups often praise the information they find. As one person wrote, “[An] online support group helped me learn about the disease and provided comfort in knowing that my symptoms were not 'just in my head,' and helped me take steps to adjust to living with a chronic condition.”

Another e-patient wrote, “I live in a small town and it is helpful to be able to use the internet to find others that have the same condition as I do.”

### **Impact of online health resources**

#### **About one in six online health inquiries have a major impact on a chronic e-patient’s health care or the way they care for someone else.**

When asked, “Did the health information you found in the last time online have a major impact on your own health care or the way you care for someone else, a minor impact, or no impact at all?”

- 16% of e-patients living with chronic disease say their most recent inquiry had a major impact.
- 41% say it had a minor impact.
- 39% say their most recent inquiry had no impact.

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<sup>28</sup> Cohen, RA, Stussman, B. “Health information technology use among men and women aged 18-64: Early release of estimates from the National Health Interview Survey, January-June 2009.” Health E-Stats. National Center for Health Statistics. February 2010.

By comparison, 11% of e-patients who report no chronic conditions say their last online health inquiry had a major impact on their own care or the way they care for someone else. The two groups come out even overall: 57% of both groups, regardless of their health status, say their last online health inquiry had any impact, major or minor.

Indeed, the following comment succinctly illustrates the disappointment of many people regarding online health resources: “The last time I went online for health information, I did not find the information I needed.” Another respondent wrote about how online health research may not bring earth-shattering revelations, but plays an important role in his life: “The information didn’t change anything I am doing, but it made me feel more educated.”

However, statistical analysis reveals that living with chronic disease does have a fairly strong positive effect on someone’s likelihood to report that online health information has made an impact on their care or the way they care for someone else.

One e-patient wrote, in reference to the impact of her last online search for health information, “It let me know I wasn’t alone in my pain or diagnosis. It gave me a place to share and be open....to ask questions...to get and to give support.”

Another e-patient shared that her last online health inquiry had a major impact on her well-being: “I was having pretty severe side effects from one particular drug I was taking but it was working very well in controlling my symptoms. However, while pain control was good, my fatigue was crushing. I did online searching to see what others have tried in that regard and used that information to visit with my doctor. Together we found another medication that helped which also did not create severe side effects. I find I take a more proactive approach to my healthcare because of what I am able to find out before a doctor visit.”

Of the e-patients living with chronic disease who say their most recent query had an impact, either major or minor:

- Two-thirds say the information found online affected a decision about how to treat an illness or condition.
- Half say it changed the way they cope with a chronic condition or manage pain.
- Half say it changed their overall approach to maintaining their health or the health of someone they help take care of.
- Half say it lead them to ask a doctor new questions, or to get a second opinion from another doctor.
- Half say it changed the way they think about diet, exercise, or stress management.
- One-third say it affected a decision about whether to see a doctor.

These findings match the responses of the general population with one notable, but unsurprising, exception: pain or chronic condition management. Thirty percent of e-patients who report no chronic conditions say their last online health query changed the way they manage pain or cope with a chronic condition, compared with half of e-patients

living with chronic disease. It is worth noting that there are people living with chronic pain who are not included in this survey's definition of the chronic disease population since we ask only about heart conditions, lung conditions, high blood pressure, diabetes, and cancer. Thus, the percent of chronically ill e-patients whose pain or condition is affected in part by information they find online is likely even higher.

One e-patient living with chronic pain wrote that the social aspect of her online community helps her cope: "I can't talk to my family or friends and have them truly understand what I am dealing with. [Online] I can get great advice, and be encouraged to go another day when I am having the worst pain day of my life. It is a wonderful place to be when there is no other place to turn to."

Apropos of asking a doctor new questions, one e-patient wrote, "I like to keep up to date with the latest research on my illnesses. That way if something new comes up that I want to try I can ask my doctor about it."

**One third of adults living with chronic disease say they or someone they know has been helped by online health advice.**

Because we are interested in the internet's impact on the entire population, we asked the following question of all adults, not just internet users:

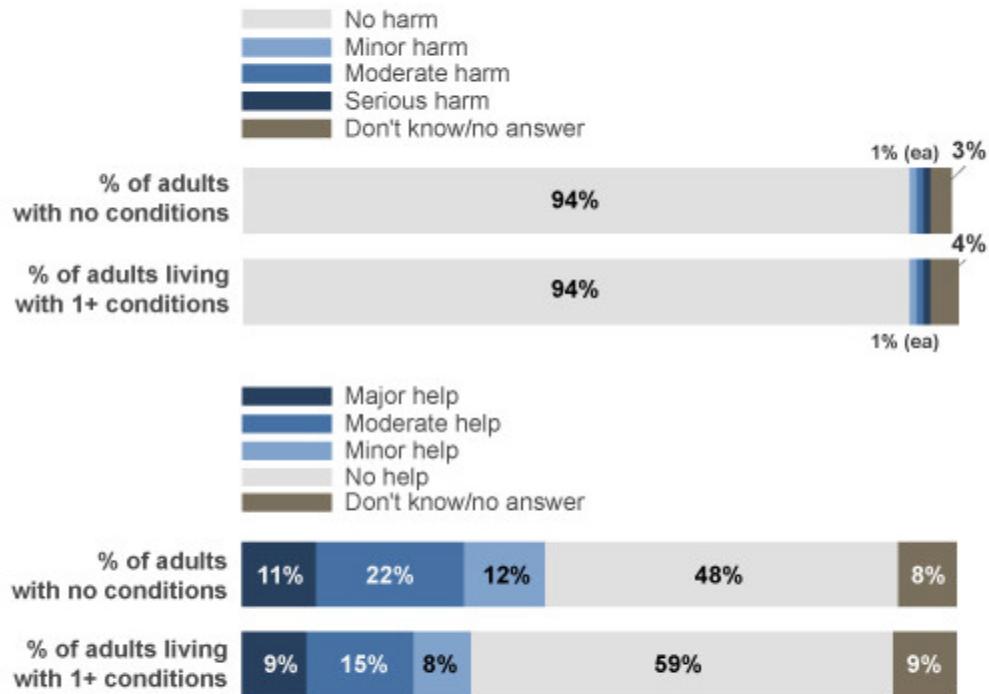
Have you or has anyone you know been helped by following medical advice found on the internet?

Thirty-six percent of adults living with chronic disease say they or someone they know has been helped by following medical advice or health information found on the internet, compared with 45% of adults reporting no diseases.

Very few adults, regardless of health status, say they or someone they know has been harmed by following medical advice or health information found on the internet (2% of adults living with chronic disease, compared with 3% of adults with no chronic disease).

## Impact: Helped or harmed

The percentage of adults in each group who have been helped or harmed by health information they found online.



Source: Pew Internet & American Life Project Survey, November-December 2008. N=2253. Interviews conducted in English or Spanish. Margin of error is  $\pm 5\%$ .



While one would expect chronic e-patients to be more likely to say they have been helped by information they find online, people living with chronic disease are surrounded by thorny issues which may not be as easily solved as the health questions posed by people dealing with more run-of-the-mill concerns. When the stakes are high or the outlook is grave, help may be more measured and breakthroughs few and far between. In addition, someone dealing with a new, life-changing diagnosis has different information needs and expectations than someone who is already living the long, hard slog of a chronic condition.

Indeed, one person wrote, “I keep looking to find something new to help me function better but new information doesn't come very quickly. The most helpful use of the internet is getting new research articles.”

Another e-patient warned about the dangers of online health information: “It's important to be able to distinguish between reliable and unreliable sources of information on the Internet. Because of my background, I am usually able to do that... I know quite a few people who, in my opinion, have been harmed by bad health information. However, they tend to be people who rely unquestioningly on opinions of friends and/or so-called alternative health practitioners and do NOT take the time to conduct their own research.”

In some cases, basic advice is what makes the difference. One woman wrote, “I was having very little progress in controlling my and my husband’s sugar count as we are diabetics. After looking at various websites we are doing much better at staying active, eating reduced portions and controlling the amount of carbohydrates. We have found the best times to take our various medicines [and] we get good reminders on how we can make changes to improve our health.”

### **Conclusion**

The deck is stacked against people living with chronic disease. They are disproportionately offline. They often have complicated health issues, not easily solved by the addition of even the best, most reliable, medical advice.

And yet, those who are online have a trump card. They have each other. This survey finds that having a chronic disease increases the probability that an internet user will share what they know and learn from their peers. They unearth nuggets of information. They blog. They participate in online discussions. And they just keep going.

The online essays contributed by members of the HealthCentral and PatientsLikeMe communities speak to the potential of online health resources to make a significant impact in people’s lives. The telephone survey results show just how far the field must go to reach the millions of adults who are still searching for answers.



## **Methodology**

This report is based on the findings of a daily tracking survey on Americans' use of the Internet. The results in this report are based on data from telephone interviews conducted by Princeton Survey Research Associates between November 19 to December 20, 2008, among a national sample of 2,253 adults. For results based on the national sample, one can say with 95% confidence that the error attributable to sampling and other random effects is plus or minus 2.3 percentage points. For results based on internet users (n=1,650), the margin of sampling error is plus or minus 2.7 percentage points. For results based on adults living with chronic disease (n=917), the margin of sampling error is plus or minus 5 percentage points. In addition to sampling error, question wording and practical difficulties in conducting telephone surveys may introduce some error or bias into the findings of opinion polls.

A combination of landline and cellular random digit dial (RDD) samples was used to represent all adults who have access to either a landline or cellular telephone. Both samples were provided by Survey Sampling International, LLC (SSI) according to PSRAI specifications. Numbers for the landline samples were selected using standard list-assisted RDD methods from active blocks (area code + exchange + two-digit block number) that contained three or more residential directory listings. The cellular samples were not list-assisted, but were drawn through a systematic sampling from dedicated wireless 100-blocks and shared service 100-blocks with no directory-listed landline numbers.

New sample was released daily and was kept in the field for at least five days. The sample was released in replicates, which are representative subsamples of the larger population. This ensures that complete call procedures were followed for the entire sample. At least 10 attempts were made to complete an interview at sampled households. The calls were staggered over times of day and days of the week to maximize the chances of making contact with a potential respondent. Each household received at least one daytime call in an attempt to find someone at home.

In each contacted household in the landline sample, interviewers asked to speak with the youngest male currently at home. If no male was available, interviewers asked to speak with the youngest female at home. This systematic respondent selection technique has been shown to produce samples that closely mirror the population in terms of age and gender. For the cellular sample, interviews were conducted with the person who answered the phone. Interviewers verified that the person was an adult and in a safe place before administering the survey. Cellular sample respondents were offered a post-paid cash incentive for their participation. All interviews completed on any given day were considered to be the final sample for that day.

Non-response in telephone interviews produces some known biases in survey-derived estimates because participation tends to vary for different subgroups of the population, and these subgroups are likely to also vary on questions of substantive interest. In order to compensate for these known biases, the sample data are weighted in analysis.

A two-stage weighting procedure was used to weight this dual-frame sample for each weighting. A first-stage weight of 0.5 was applied to all dual-users to account for the fact that they were included in both sample frames. All other cases were given a first-stage weight of 1. The second stage of weighting balanced sample demographics to match population parameters. The sample was balanced to match population parameters for sex, age, education, race, Hispanic origin, region (U.S. Census definitions), population density, and telephone usage. The basic weighting parameters came from a special analysis of the Census Bureau’s 2007 Annual Social and Economic Supplement (ASEC). The population density parameter comes from 2000 Census data. The cell phone usage parameter came from an analysis of the July-December 2006 National Health Interview Survey.

Table 1 on the following page is the full disposition of all sampled telephone numbers. At PSRAI it is calculated by taking the product of three component rates:

- Contact rate – the proportion of working numbers where a request for interview was made
- Cooperation rate – the proportion of contacted numbers where a consent for interview was at least initially obtained, versus those refused
- Completion rate – the proportion of initially cooperating and eligible interviews that were completed

Thus the response rates for the land line sample were 21%. The response rates for the cellular sample were 25%.

**Table 1: Sample Disposition**

National Landline	Cell	
20,826	5,357	Total Numbers Dialed
1,274	81	Non-residential
1,050	9	Computer/Fax
6		Cell phone
8,171	2,111	Other not working
1,606	134	Additional projected not working
8,719	3,022	Working numbers
41.9%	56.4%	Working Rate
535	45	No Answer / Busy
826	422	Answering Machine / Voice Mail
85	56	Other Non-Contact
7,273	2,499	Contacted numbers
83.4%	82.7%	Contact Rate
429	192	Callback
4,803	1,461	Refusal
2,041	846	Cooperating numbers

28.1%	33.9%		Cooperation Rate
83	82		Language Barrier
	190		Child's cell phone
1,958	574		Eligible numbers
95.9%	67.8%		Eligibility Rate
207	72		Break-off
1,751	502		Completes
89.4%	87.5%		Completion Rate
20.9%	24.5%		Response Rate

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**Fall Tracking Survey 2008**  
Data for November 19 – December 20, 2008

Final Revised Topline 10/20/09

Princeton Survey Research Associates International  
for the Pew Internet & American Life Project

Sample: n= 2,253 national adults, age 18 and older, including 502 cell phone interviews ;  
n= 1,023 California adults 18+, including 231 CA cell phone interviews  
Interviewing dates: 11.19.08 – 12.20.08

Margin of error is plus or minus 2 percentage points for results based on total national [n=2,253]  
Margin of error is plus or minus 4 percentage points for results based on total California [n=1,023]

Margin of error is plus or minus 3 percentage points for results based on National internet users [n=1,650]  
Margin of error is plus or minus 3 percentage points for results based on National online health seekers [n=1,356]

Margin of error is plus or minus 4 percentage points for results based on California internet users [n=728]  
Margin of error is plus or minus 5 percentage points for results based on California online health seekers [n=605]

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**Q1** Overall, how would you rate the quality of life for you and your family today? Would you say it is... excellent, very good, good, fair or poor?

	<u>CURRENT NATIONAL</u>	<u>CURRENT CALIFORNIA</u>	
%	15	16	Excellent
	26	22	Very good
	34	34	Good
	19	20	Fair
	5	6	Poor
	*	*	Don't know
	1	1	Refused

**No Q2,Q3,Q4**

**Q5** Do you use a computer at your workplace, at school, at home, or anywhere else on at least an occasional basis?

	YES	NO	DON'T KNOW <sup>1</sup>	REFUSED
Current National	75	25	*	--
Current California	71	29	0	--
November 2008 <sup>i</sup>	73	27	*	*
August 2008 <sup>ii</sup>	75	25	*	--
May 2008 <sup>iii</sup>	74	26	*	--
December 2007 <sup>iv</sup>	76	24	0	--
September 2007 <sup>v</sup>	74	26	*	--
February 2007 <sup>vi</sup>	73	27	*	--
December 2006 <sup>vii</sup>	73	27	*	--
November 2006 <sup>viii</sup>	67	33	0	--
August 2006 <sup>ix</sup>	71	29	*	--
April 2006 <sup>x</sup>	75	25	*	--
February 2006 <sup>xi</sup>	74	25	*	--
December 2005 <sup>xii</sup>	68	31	*	--
September 2005 <sup>xiii</sup>	74	26	0	--
June 2005 <sup>xiv</sup>	72	28	*	--
February 2005 <sup>xv</sup>	70	30	*	--
January 2005 <sup>xvi</sup>	69	31	*	--
Nov 23-30, 2004 <sup>xvii</sup>	70	30	0	--
November 2004 <sup>xviii</sup>	68	32	0	--
June 2004 <sup>xix</sup>	71	29	*	--
February 2004 <sup>xx</sup>	73	27	*	--
November 2003 <sup>xxi</sup>	72	27	*	--
August 2003 <sup>xxii</sup>	71	29	*	--
June 2003 <sup>xxiii</sup>	71	29	*	--
May 2003 <sup>xxiv</sup>	69	31	*	--
March 3-11, 2003 <sup>xxv</sup>	71	29	*	--
February 2003 <sup>xxvi</sup>	70	30	0	--
December 2002 <sup>xxvii</sup>	68	32	0	--
November 2002 <sup>xxviii</sup>	70	30	*	--
October 2002 <sup>xxix</sup>	69	31	*	--
September 2002 <sup>xxx</sup>	68	32	*	--
July 2002 <sup>xxxi</sup>	69	31	*	--
March/May 2002 <sup>xxxii</sup>	69	31	*	--
January 2002 <sup>xxxiii</sup>	67	33	0	--

**Q5 continued...**

<sup>1</sup> For this question and many others throughout the topline, results for "Don't know" often reflect combined "Don't know" and "Refused" percentages. As was done in November 2008, DK and REF are reported separately where eligible.

## Q5 continued...

	YES	NO	DON'T KNOW	REFUSED
December 2001 <sup>xxxiv</sup>	64	36	*	--
November 2001 <sup>xxxv</sup>	65	35	*	--
October 2001 <sup>xxxvi</sup>	62	38	*	--
September 2001 <sup>xxxvii</sup>	63	37	*	--
August 2001 <sup>xxxviii</sup>	66	34	0	--
February 2001 <sup>xxxix</sup>	65	35	0	--
December 2000 <sup>xl</sup>	69	31	*	--
November 2000 <sup>xli</sup>	65	35	*	--
October 2000 <sup>xlii</sup>	64	36	*	--
September 2000 <sup>xliii</sup>	62	38	*	--
August 2000 <sup>xliv</sup>	63	37	*	--
June 2000 <sup>xlv</sup>	60	40	*	--
April 2000 <sup>xlvi</sup>	63	37	*	--

Q6a Do you use the internet, at least occasionally?

Q6b Do you send or receive email, at least occasionally?<sup>2</sup>

	USES INTERNET	DOES NOT USE INTERNET
Current National	74	26
Current California	71	29
November 2008	74	26
August 2008	75	25
July 2008 <sup>xlvi</sup>	77	23
May 2008	73	27
April 2008 <sup>xlviii</sup>	73	27
January 2008 <sup>xliv</sup>	70	30
December 2007	75	25
September 2007	73	27
February 2007	71	29
December 2006	70	30
November 2006	68	32
August 2006	70	30
April 2006	73	27
February 2006	73	27
December 2005	66	34
September 2005	72	28
June 2005	68	32
February 2005	67	33
January 2005	66	34

Q6a/b continued...

<sup>2</sup> Prior to January 2005, question wording was "Do you ever go online to access the Internet or World Wide Web or to send and receive email?"

## Q6a/b continued...

	USES INTERNET	DOES NOT USE INTERNET
Nov 23-30, 2004	59	41
November 2004	61	39
June 2004	63	37
February 2004	63	37
November 2003	64	36
August 2003	63	37
June 2003	62	38
May 2003	63	37
March 3-11, 2003	62	38
February 2003	64	36
December 2002	57	43
November 2002	61	39
October 2002	59	41
September 2002	61	39
July 2002	59	41
March/May 2002	58	42
January 2002	61	39
December 2001	58	42
November 2001	58	42
October 2001	56	44
September 2001	55	45
August 2001	59	41
February 2001	53	47
December 2000	59	41
November 2000	53	47
October 2000	52	48
September 2000	50	50
August 2000	49	51
June 2000	47	53
May 2000 <sup>1</sup>	48	52

Q7 Did you happen to use the internet YESTERDAY?<sup>3</sup>

Based on internet users

	YES, USED INTERNET YESTERDAY	NO, DID NOT USE INTERNET YESTERDAY	DON'T KNOW/ REFUSED
Current National [N=1,650]	72	28	*
Current California [N=728]	77	23	*
November 2008	72	27	*
August 2008	72	27	1
July 2008	71	28	1
May 2008	70	30	1
April 2008	72	28	*
December 2007	72	27	*
September 2007	68	32	*
February 2007	69	31	*
December 2006	65	34	*
November 2006	64	36	*
August 2006	66	34	*
April 2006	66	33	*
December 2005	63	36	*
September 2005	65	34	*
February 2005	60	40	*
January 2005	58	42	*
November 2004	61	39	*
June 2004	53	46	1
February 2004	55	44	*
November 2003	54	45	*
July 2003	52	47	1
June 2003	55	44	*
May 2003	58	42	*
March 3-11, 2003	60	40	0
February 2003	60	40	*
December 2002	56	44	*
November 2002	57	43	*
October 2002	57	43	0
September 2002	58	42	*
July 2002	53	47	*
March/May 2002	57	43	*
January 2002 <sup>4</sup>	59	41	*

Q7 continued...

<sup>3</sup> Prior to January 2005, question wording was "Did you happen to go online or check your email **yesterday?**"

<sup>4</sup> Internet user defined as Q5=1 and Q6=1 from Aug. 2001 until Jan 2002.



## Q7 continued...

	YES, USED INTERNET YESTERDAY	NO, DID NOT USE INTERNET YESTERDAY	DON'T KNOW/ REFUSED
Dec. 17-23, 2001	58	42	*
Nov. 19-Dec. 16 2001	60	40	*
Oct. 19-Nov. 18 2001	61	39	*
Oct. 8-18 2001	51	49	1
October 2-7 2001	56	43	1
Sept 20-Oct 1 2001	57	42	1
Sept 12-19 2001	51	49	*
August 2001	56	44	*
February 2001 <sup>5</sup>	59	41	*
Fall 2000 <sup>ii</sup>	56	44	*
August 2000	50	50	*
June 2000	52	48	*
April 2000	55	45	0
March 2000 <sup>iii</sup>	60	40	*

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<sup>5</sup> Internet user for Feb. 2001 defined as Q5=1 and (Q6=1 or Q6A=1-7).

**Q8** About how often do you use the internet or email from... [INSERT IN ORDER] – several times a day, about once a day, 3-5 days a week, 1-2 days a week, every few weeks, less often or never?

Based on internet users

	SEVERAL TIMES A DAY	ABOUT ONCE A DAY	3-5 DAYS A WEEK	1-2 DAYS A WEEK	EVERY FEW WEEKS	LESS OFTEN	NEVER	DON'T KNOW	REFUSED
<b>a. Home</b>									
Current National [N=1,650]	35	22	15	13	4	3	6	*	*
Current California [N=728]	42	23	13	11	3	2	5	*	*
November 2008	34	23	15	12	4	5	7	*	*
August 2008	35	22	15	13	5	3	7	*	--
July 2008 <sup>6</sup>	29	25	17	14	4	4	7	*	--
May 2008	37	21	15	11	5	6	6	*	--
December 2007	36	22	14	11	5	6	7	*	--
September 2007	34	21	15	12	5	6	6	*	--
February 2007	31	24	15	12	6	7	5	*	--
November 2006	30	24	16	13	5	5	7	*	--
February 2006	29	25	17	12	5	6	6	*	--
June 2005	27	22	15	13	6	7	10	*	--
July 2004 <sup>liii</sup>	27	27	17	13	5	5	7	*	--
March 2004 <sup>liv</sup>	29	24	15	13	6	5	8	*	--
<b>b. Work</b>									
Current National	36	9	5	4	2	2	40	*	*
Current California	36	8	5	4	2	3	41	1	0
November 2008	36	7	4	4	2	3	44	*	*
August 2008	37	7	5	5	2	2	42	1	--
July 2008	32	8	4	3	1	2	48	2	--
May 2008	36	8	5	5	1	7	37	1	--
December 2007	37	9	3	4	1	5	40	1	--
September 2007	35	9	5	4	1	4	42	*	--
February 2007	38	9	5	3	2	5	38	1	--
November 2006	31	9	5	5	2	4	43	1	--
February 2006	35	8	5	3	2	7	40	1	--
June 2005	35	9	5	4	2	6	39	*	--
July 2004	28	12	5	4	1	5	44	*	--
March 2004	28	10	5	6	2	4	44	*	--
<b>c. Someplace other than home or work</b>									
Current National	7	4	5	9	9	16	50	*	*
Current California	7	5	8	9	10	19	43	*	*
November 2008	5	3	4	6	10	17	55	*	*
August 2008	5	2	4	8	9	16	56	1	--
July 2008	4	3	3	8	6	18	57	1	--
May 2008	6	3	4	8	9	24	45	1	--
December 2007	5	4	5	7	8	22	49	*	--
September 2007	4	2	4	7	8	21	52	1	--
February 2007	5	3	3	5	10	22	52	*	--
February 2006	3	3	4	5	9	21	56	*	--
March 2004	3	3	3	6	6	15	64	1	--

<sup>6</sup> Beginning in July 2008, "Never" is offered as an explicitly read category. Prior to July 2008, it was a volunteered category.

**Q9** When you accessed the internet from someplace other than from home or from work, did you do that [INSERT ITEMS IN ORDER]?

Based on those who used the internet from someplace other than home or work

	YES	NO	DON'T KNOW	REFUSED
a. Using a laptop computer through a WIRELESS connection				
Current National [N=748]	53	46	1	--
Current California [N=379]	56	43	1	--
Nov 2008 [N=626]	48	51	1	*
May 2008 [N=384]	53	47	*	--
Dec 2007 [N=421]	53	47	0	--
b. Using a laptop computer through a WIRED connection				
Current National	28	71	1	--
Current California	37	63	*	--
Nov 2008	29	70	1	0
May 2008	32	67	*	--
Dec 2007	34	65	1	--
c. Using a DESKTOP computer through a wired connection				
Current National	62	37	1	--
Current California	59	40	1	--
Nov 2008	68	32	*	*
May 2008	66	34	*	--
Dec 2007	67	33	*	--
d. Using a cell phone				
Current National	44	56	*	--
Current California	42	57	*	--
Nov 2008	34	65	*	*
May 2008	42	58	0	--
Dec 2007	31	69	0	--
e. Using a Blackberry, iPhone or other handheld device with a wireless connection <sup>7</sup>				
Current National	30	70	1	--
Current California	34	64	2	--
Nov 2008	24	75	*	*
May 2008	24	76	0	--
Dec 2007	23	77	*	--

<sup>7</sup> Prior to November 2008, item wording was as follows: "Using a Blackberry, Palm or other handheld device with a wireless connection"

**Q10** In the past 12 months, have you EVER accessed the internet from someplace other than from home or from work [INSERT ITEMS IN ORDER]?

Based on those who did not use the internet from someplace other than home or work

	YES	NO	DON'T KNOW	REFUSED
<b>a. Using a laptop computer through a WIRELESS connection</b>				
Current National [N=902]	20	80	*	--
Current California [N=349]	26	74	0	--
Nov 2008 [N=965]	21	79	*	0
May 2008 [N=1,169]	27	73	*	--
Dec 2007 [N=1,151]	30	70	*	--
<b>b. Using a laptop computer through a WIRED connection</b>				
Current National	15	84	1	--
Current California	19	81	*	--
Nov 2008	17	82	1	*
May 2008	22	77	*	--
Dec 2007	21	79	*	--
<b>c. Using a DESKTOP computer through a wired connection</b>				
Current National	38	61	1	--
Current California	38	62	1	--
Nov 2008	43	56	1	*
May 2008	45	54	1	--
Dec 2007	38	62	1	--
<b>d. Using a cell phone</b>				
Current National	32	68	*	--
Current California	29	71	0	--
Nov 2008	24	76	*	0
May 2008	36	64	0	--
<b>e. Using a Blackberry, iPhone or other handheld device with a wireless connection<sup>8</sup></b>				
Current National	8	91	*	--
Current California	10	90	0	--
Nov 2008	10	90	0	*
May 2008	11	89	*	--

<sup>8</sup> Prior to November 2008, item wording was as follows: "Using a Blackberry, Palm or other handheld device with a wireless connection"

- Q9** When you accessed the internet from someplace other than from home or from work, did you do that [INSERT ITEMS IN ORDER]?
- Q10** In the past 12 months, have you EVER accessed the internet from someplace other than from home or from work [INSERT ITEMS IN ORDER]?

Based on internet users

	YES	NO	DON'T KNOW	REFUSED
a. Using a laptop computer through a WIRELESS connection				
Current National [N=1,650]	36	63	1	--
Current California [N=728]	43	56	1	--
Nov 2008	33	66	*	*
May 2008	35	65	*	--
Dec 2007	36	64	*	--
b. Using a laptop computer through a WIRED connection				
Current National	22	78	1	--
Current California	29	71	*	--
Nov 2008	22	77	1	*
May 2008	25	74	*	--
Dec 2007	25	75	1	--
c. Using a DESKTOP computer through a wired connection				
Current National	50	49	1	--
Current California	50	49	1	--
Nov 2008	54	45	1	*
May 2008	51	48	1	--
Dec 2007	46	54	*	--
d. Using a cell phone				
Current National	38	62	*	--
Current California	37	63	*	--
Nov 2008	29	71	*	*
May 2008	38	62	0	--
e. Using a Blackberry, iPhone or other handheld device with a wireless connection				
Current National	19	81	*	--
Current California	23	76	1	--
Nov 2008	16	83	*	*
May 2008	15	85	*	--

- Q11** IF LANDLINE SAMPLE: Do you happen to have a cell phone? [IF YES, ASK: Do you ever use it to send or receive text messages?]  
 IF CELL PHONE SAMPLE: Do you ever use your cell phone to send or receive text messages?

	<u>CURRENT NATIONAL</u>	<u>CURRENT CALIFORNIA</u>		<u>MAY 2008</u>
%	50	55	Have cell phone, send/receive text messages	41
	34	29	Have cell phone, do NOT send/receive text messages	37
	16	17	Do not have cell phone	22
	*	0	Don't know	*
	*	*	Refused	0

Now we'd like to ask you some questions about your health.

- Q12** In general, how would you rate your own health — excellent, good, only fair, or poor?

	<u>CURRENT NATIONAL</u>	<u>CURRENT CALIFORNIA</u>	
%	29	29	Excellent
	51	49	Good
	14	16	Only fair
	5	5	Poor
	*	1	Don't know
	*	*	Refused

**Q13** Are you now living with any of the following health problems or conditions—  
[INSERT; RANDOMIZE]?

	YES	NO	DON'T KNOW	REFUSED
a. Diabetes or sugar diabetes				
Current National	10	90	*	1
Current California	9	90	0	*
b. High blood pressure				
Current National	23	76	1	1
Current California	19	80	*	1
c. Asthma, bronchitis, emphysema, or other lung conditions				
Current National	12	87	*	1
Current California	10	90	*	*
d. Heart disease, heart failure or heart attack				
Current National	7	92	1	1
Current California	5	95	*	*
e. Cancer				
Current National	3	96	1	1
Current California	2	97	*	*

**Q14** Is there anyone close to you who has a CHRONIC medical condition, such as  
asthma, diabetes, heart disease, high blood pressure, or cancer?

	CURRENT NATIONAL	CURRENT CALIFORNIA	
%	49	43	Yes
	50	55	No
	*	1	Don't know
	1	*	Refused

[Q16 removed – upcoming report]

- Q16** Now, we'd like to ask if you've looked for information ONLINE about certain health or medical issues. Specifically, have you ever looked online for... [INSERT ITEM]?  
[ASK a-d IN ORDER; RANDOMIZE e-i; ASK j-m LAST IN ORDER]

Based on internet users

	YES, HAVE DONE THIS	NO, HAVE NOT DONE THIS	DON'T KNOW	REFUSED
a. Information about a specific disease or medical problem				
Current National [N=1,650]	66	34	*	0
Current California [N=728]	63	37	*	0
August 2006	64	36	*	--
November 23-30, 2004	66	34	*	--
December 2002	63	37	*	--
b. Information about a certain medical treatment or procedure				
Current National	55	45	*	*
Current California	53	47	*	0
August 2006	51	48	1	--
November 23-30, 2004	51	48	*	--
December 2002	47	53	0	--
c. Information about doctors or other health professionals				
Current National	47	53	*	*
Current California	47	53	*	0
d. Information about hospitals or other medical facilities				
Current National	38	62	*	*
Current California	39	61	0	0
e. Information about alternative treatments or medicines				
Current National	35	65	*	*
Current California	38	62	*	0
August 2006	27	73	*	--
November 23-30, 2004	30	70	*	--
December 2002	28	72	0	--

**Q16 continued...**



## Q16 continued...

	YES, HAVE DONE THIS	NO, HAVE NOT DONE THIS	DON'T KNOW	REFUSED
f. Information about experimental treatments or medicines				
Current National	20	80	*	*
Current California	22	77	*	0
August 2006	18	81	*	--
November 23-30, 2004	23	77	*	--
December 2002	18	82	*	--
g. Information about exercise or fitness				
Current National	52	48	*	0
Current California	57	43	*	0
August 2006	44	56	*	--
November 23-30, 2004	42	58	0	--
December 2002	36	64	0	--
h. Information about prescription or over-the-counter drugs				
Current National	45	55	*	*
Current California	45	55	*	0
August 2006	37	63	*	--
November 23-30, 2004	40	60	0	--
December 2002	34	66	*	--
i. Information about depression, anxiety, stress or mental health issues				
Current National	28	71	*	*
Current California	30	70	*	0
August 2006	22	78	*	--
November 23-30, 2004	23	77	0	--
December 2002	21	79	*	--
j. Information related to health insurance, including private insurance, Medicare or Medicaid				
Current National	37	63	0	*
Current California	37	63	0	0
August 2006 <sup>9</sup>	33	67	*	--

Q16 continued...

<sup>9</sup> August 2006 trend was recalculated to reflect combined responses for two separate items: "Information related to health insurance" and "Information about Medicare or Medicaid"

## Q16 continued...

	YES, HAVE DONE THIS	NO, HAVE NOT DONE THIS	DON'T KNOW	REFUSED
k. Information about how to lose weight or how to control your weight				
Current National	33	66	*	0
Current California	35	64	*	0
l. Information about how to stay healthy on a trip overseas [IF NECESSARY: such as immunizations and shots]				
Current National	12	87	*	*
Current California	17	83	0	*
m. Information about any other health issue				
Current National	26	73	1	*
Current California	32	67	1	0
Total yes to any item above – National	<b>83</b>			
Total no to all items – National	<b>17</b>			
Total yes to any item above – CA	<b>84</b>			
Total no to all items – CA	<b>16</b>			

**Q17** Thinking about the LAST time you went online for health or medical information...  
Did you go online to look for information related to YOUR OWN health or medical  
situation or SOMEONE ELSE'S health or medical situation?

Based on online health seekers

	CURRENT NATIONAL	CURRENT CALIFORNIA		AUGUST 2006	DECEMBER 2002
%	41	39	Own	36	37
	43	44	Someone else's	48	49
	9	10	Both (VOL.)	8	8
	4	4	Don't know	8	7
	2	2	Refused	--	--
	[1,356]	[605]		[1,594]	[1,017]

- Q18** Did the health information you found in the LAST time online have a MAJOR impact on your own health care or the way you care for someone else, a MINOR impact, or no impact at all?

Based on online health seekers

	CURRENT NATIONAL	CURRENT CALIFORNIA	
%	13	13	Major impact
	44	45	Minor impact
	41	39	No impact at all
	2	2	Don't know
	1	1	Refused
	[1,356]	[605]	

- Q19** In which of the following ways, if any, did the information you found online affect your own health care? Did the information you found online [INSERT; ROTATE]?
- Q20** In which of the following ways, if any, did the information you found online affect the way you care for someone else? Did the information you found online [INSERT; ROTATE]?
- Q21** In which of the following ways, if any, did the information you found online affect your own health care or the way you care for someone else? Did the information you found online [INSERT; ROTATE]?

Based on online health seekers who say the info they found had an impact

	YES	NO	DON'T KNOW	REFUSED
a. Affect a decision about how to treat an illness or condition				
Current National [N=744]	60	40	*	*
Current California [N=352]	60	39	1	0
August 2006 [N=809]	58	41	1	--
b. Change your overall approach to maintaining your health or the health of someone you help take care of				
Current National	56	44	*	0
Current California	56	44	*	*
August 2006	55	45	1	--
c. Change the way you cope with a chronic condition or manage pain				
Current National	38	61	*	*
Current California	34	66	0	1
August 2006	39	60	1	--
d. Affect a decision about whether to see a doctor				
Current National	38	61	*	*
Current California	43	57	0	0
August 2006	35	64	1	--

Q19/Q20/Q21 continued...

## Q19/Q20/Q21 continued...

	YES	NO	DON'T KNOW	REFUSED
e. Lead you to ask a doctor new questions, or to get a second opinion from another doctor				
Current National	53	47	*	0
Current California	59	40	*	*
August 2006	54	46	1	--
f. Change the way you think about diet, exercise, or stress management				
Current National	49	51	*	0
Current California	51	49	*	0
August 2006	44	56	*	--
Total yes to any item above – National	<b>91</b>			
Total no to all items – National	<b>9</b>			
Total yes to any item above – CA	<b>94</b>			
Total no to all items – CA	<b>6</b>			

- Q22** Now thinking about ALL the sources you turn to when you need information or assistance in dealing with health or medical issues, please tell me if you use any of the following sources. Do you [INSERT ITEM] when you need information or help with health or medical issues? [ASK a FIRST; RANDOMIZE b-e; ASK f LAST]
- Q23** [If internet users who initially say they do not use the internet for health or medical information, ASK:] In addition to the sources you just mentioned, do you ever use the internet or email to look for information or help with health or medical issues?
- Q24** [If those who initially say they do not ask friends and family members for help with health or medical issues, ASK:] In addition to the sources you just mentioned, do you ever ask friends or family members for help with health or medical issues?

	YES, I USE THAT SOURCE	NO, I DO NOT USE THAT SOURCE <sup>10</sup>	DON'T KNOW	REFUSED
a. Ask friends and family members				
Current National	68	32	--	--
Current California	70	30	--	--
b. Ask a health professional, such as a doctor				
Current National	86	13	*	*
Current California	85	15	0	*
c. Use the internet				
Current National	57	43	--	--
Current California	55	45	--	--
d. Contact your insurance provider, whether a private insurance company, Medicare or Medicaid				
Current National	33	67	*	*
Current California	31	68	*	*
e. Use books or other printed reference materials				
Current National	54	46	*	*
Current California	54	46	*	*
f. Use another source not mentioned already (SPECIFY)				
Current National	5	93	1	*
Current California	5	93	1	*

<sup>10</sup> For items A and C, percentages for "No, I don't use that source" reflect combined responses for "No, I don't use that source," "Don't know" and "Refused."

**Q25** Do you usually talk with anyone else about the information you find online, or don't you usually do this?

Based on online health seekers

	CURRENT NATIONAL	CURRENT CALIFORNIA	
%	66	69	Yes, talk to someone else
	34	31	No, do not talk to someone else
	*	*	Don't know
	*	*	Refused
	[1,356]	[605]	

**Q25b** What is this person's relationship to you? [PRE-CODED OPEN-END]

Based on online health seekers who usually talk to others about the info they find online

	CURRENT NATIONAL	CURRENT CALIFORNIA	
	35	37	Friend
%	27	24	Spouse/Partner
	17	17	Other Family member/Family relationship
	12	16	Parent
	9	9	Brother/Sister/Sibling
	6	5	Co-worker
	5	6	Health or medical professional: doctor, nurse
	5	3	Your child
	1	*	Neighbor
	*	1	Advisor
	*	1	Internet/Online Friend/Acquaintance
	0	0	Member of Group: Church, community association, volunteer group
	3	2	Other (SPECIFY)
	*	1	Don't know
	1	1	Refused
	[890]	[412]	

*Note: Total may exceed 100% due to multiple responses.*

**Q26** Have you or has anyone you know been HELPED by following medical advice or health information found on the internet? [If yes: Would you say the information provided MAJOR help, MODERATE help or MINOR help?]

	CURRENT NATIONAL	CURRENT CALIFORNIA	
%	10	9	Yes, major help
	20	20	Yes, moderate help
	11	10	Yes, minor help
	50	53	No
	8	7	Don't know
	1	1	Refused

**Q27** Have you or has anyone you know been HARMED by following medical advice or health information found on the internet? [If yes: Would you say the information caused SERIOUS harm, MODERATE harm or MINOR harm?]

	CURRENT NATIONAL	CURRENT CALIFORNIA	
%	1	1	Yes, serious harm
	1	1	Yes, moderate harm
	1	1	Yes, minor harm
	94	93	No
	3	3	Don't know
	*	*	Refused

**WEB1** Please tell me if you ever use the internet to do any of the following things. Do you ever use the internet to.../Did you happen to do this **yesterday**, or not?<sup>11</sup>

Based on internet users

	TOTAL HAVE EVER DONE THIS	----- DID YESTERDAY	HAVE NOT DONE THIS	DON'T KNOW	REFUSED
Send or read e-mail					
Current National [N=1,650]	91	58	9	*	--
Current California [N=728]	93	63	7	*	--
November 2008	89	56	11	0	*
August 2008	92	60	8	*	--
December 2007	92	60	8	*	--
September 2007	90	56	10	*	--
February 2007	91	56	9	*	--
December 2006	91	54	8	*	--
November 2006 <sup>12</sup>	91	52	9	*	--
August 2006 <sup>13</sup>	90	53	10	*	--
December 2005	91	53	9	*	--
September 2005	91	54	9	*	--
February 2005	91	52	9	*	--
January 2005	90	49	9	*	--
November 23-30, 2004	92	48	8	*	--
November 2004	93	54	7	*	--
June 2004	93	45	7	*	--
February 2004	91	48	8	*	--
Nov 2003	91	48	8	*	--
June 2003	91	49	9	*	--
May 2003	93	52	7	*	--
March 20-25, 2003	94	50	6	*	--
March 12-19, 2003 <sup>lv</sup>	91	52	9	0	--
March 3-11, 2003	94	54	6	*	--
February 2003	91	50	9	*	--

WEB1 continued...

<sup>11</sup> Prior to January 2005, question wording was "Please tell me if you ever do any of the following when you go online. Do you ever...?/Did you happen to do this yesterday, or not?"

<sup>12</sup> November 2006 results for this activity series reflect the landline respondents only [N=1,578].

<sup>13</sup> August 2006 WEB1 trends were asked of internet users based on split form. Results shown for "Send or read e-mail" reflect combined responses for total internet users.



## WEB1 continued...

	TOTAL HAVE EVER DONE THIS	----- DID YESTERDAY	HAVE NOT DONE THIS	DON'T KNOW	REFUSED
Dec 2002	93	49	7	0	--
Nov 2002	94	51	6	*	--
Oct 2002	93	50	7	0	--
Sept 2002	93	51	7	*	--
July, 2002	93	46	7	*	--
March/May 2002	93	50	7	*	--
Jan 2002	95	52	5	0	--
Dec 17-23, 2001	95	54	5	*	--
Nov 19-Dec 16, 2001	95	53	5	*	--
Oct 19-Nov 18, 2001	94	52	6	*	--
Oct 8-18, 2001	95	44	5	*	--
Oct 2-7, 2001	92	46	7	*	--
Sept 20-Oct 1, 2001	94	49	6	0	--
Sept 12-19, 2001	93	42	7	*	--
Aug 2001	93	52	7	*	--
Feb 2001	93	53	7	*	--
Fall 2000	92	49	8	*	--
August 2000	93	43	7	*	--
Get financial information online, such as stock quotes or mortgage interest rates					
Current National	38	11	62	0	--
Current California	39	13	61	*	--
September 2007	36	10	64	*	--
August 2006	41	9	59	*	--
November 23-30, 2004	44	8	56	0	--
April/May 2003 <sup>14</sup>	44	12	56	*	--
March 20-25, 2003	45	12	55	*	--
March 12-19, 2003	44	13	55	*	--
Sept 9-Oct 9, 2002	42	10	58	*	--
Jan 2002	47	13	53	*	--
Dec 17-23, 2001	44	13	56	*	--
Nov 19-Dec 16, 2001	47	15	53	*	--
Oct 19-Nov 18, 2001	44	13	56	*	--
Oct 8- 18, 2001 <sup>15</sup>	47	13	53	*	--
Feb 2001	44	13	56	*	--
Fall 2000	44	13	56	*	--
July-August 2000	45	11	55	*	--
May-June 2000	43	12	57	*	--
April 2000	47	14	53	*	--
March 2000	44	15	56	*	--

WEB1 continued...

<sup>14</sup> In April/May 2003, this item read "Get financial information, such as the value of your stocks, mutual funds, or mortgage rates."

<sup>15</sup> This item based on those interviewed starting 10/9/01.

## WEB1 continued...

	TOTAL HAVE EVER DONE THIS	----- DID YESTERDAY	HAVE NOT DONE THIS	DON'T KNOW	REFUSED
<b>Do any banking online</b>					
Current National	55	19	45	*	--
Current California	60	27	39	1	--
September 2007	53	21	47	*	--
February 2005	41	12	58	*	--
January 2005	44	15	56	0	--
November 23-30, 2004	44	11	55	1	--
October 2002	30	7	70	*	--
Sept 2002	32	10	68	*	--
June 26-July 26, 2002	32	8	68	*	--
March/May 2002	30	9	70	*	--
May-June 2000	18	4	82	*	--
<b>Buy or sell stocks, mutual funds, or bonds online<sup>16</sup></b>					
Current National	11	1	89	*	--
Current California	14	2	86	0	--
September 2007	11	1	88	*	--
November 23-30, 2004	13	1	87	0	--
Feb 2004	12	1	88	*	--
Sept 2002	12	1	87	*	--
March/May 2002	13	1	86	*	--
Feb 2001	12	1	88	*	--
Fall 2000	13	2	86	*	--
May-June 2000	12	2	88	*	--
April 2000	11	2	89	0	--
March 2000	12	3	88	*	--
<b>Participate in an online discussion, a listserv, or other online group forum that helps people with personal issues or health problems<sup>17</sup></b>					
Current National	7	1	92	*	--
Current California	9	1	91	*	--
August 2006	12	3	88	*	--
December 2002	54	4	46	*	--
Sept 2002	47	5	52	*	--
May-June 2000 <sup>18</sup>	36	3	64	*	--

WEB1 continued...

<sup>16</sup> Through the November 23-30, 2004 trend, item wording was "Buy or sell stocks, mutual funds, or bonds"

<sup>17</sup> Prior to August 2006, item wording was "Go to web sites that provide information or support for people interested in a specific medical condition or personal situations"

<sup>18</sup> This item asked May 19 through June 30, 2000 only [N=1,568]

## WEB1 continued...

	TOTAL HAVE EVER DONE THIS	----- DID YESTERDAY	HAVE NOT DONE THIS	DON'T KNOW	REFUSED
Create or work on your own online journal or blog <sup>19</sup>					
Current National	11	3	89	*	--
Current California	14	4	86	0	--
August 2008	13	5	87	*	--
July 2008	13	n/a	86	1	--
May 2008	12	5	87	*	--
December 2007 <sup>20</sup>	12	n/a	88	*	--
February 2007	12	5	87	*	--
September 2005	9	2	90	1	--
February 2005	9	1	91	*	--
January 2005	10	2	89	1	--
November 2004	6	2	93	*	--
February 2004	5	1	94	1	--
September 2002	7	1	93	1	--
July 2002	3	*	96	*	--
Read someone else's online journal or blog <sup>21</sup>					
Current National	32	10	67	*	--
Current California	35	11	64	*	--
August 2008	36	12	64	*	--
May 2008 <sup>22</sup>	33	11	67	*	--
February 2007	29	10	71	*	--
Sept 2005	27	7	71	2	--
February 2005	23	5	75	2	--
January 2005	27	7	71	2	--
November 2004	27	6	71	1	--
Feb 2004	17	3	82	1	--

WEB1 continued...

<sup>19</sup> In Sept 2005 and before, item wording was "Create a web log or 'blog' that others can read on the web."

<sup>20</sup> December 2007 trend was not asked in the standard activity series. It was an item in a separate series, with the following question wording: "Here's another list of activities people sometimes do online. Please tell me whether you ever do each one, or not. Do you ever...?" Results reflect all landline internet users and Form 1 Cell sample internet users [N=1,359].

<sup>21</sup> Prior to February 2007, item wording was "Read someone else's web log or blog."

<sup>22</sup> In May 2008, item was form split, asked only of Form 1 internet users [n=783].

## WEB1 continued...

	TOTAL HAVE EVER DONE THIS	----- DID YESTERDAY	HAVE NOT DONE THIS	DON'T KNOW	REFUSED
Use a social networking site like MySpace or Facebook <sup>23</sup>					
Current National	35	19	65	*	--
Current California	40	21	60	*	--
November 2008	37	19	63	0	0
May 2008	29	13	70	*	--
August 2006	16	9	84	*	--
September 2005	11	3	88	1	--
February 2005	8	2	91	1	--
Look for information on Wikipedia					
Current National	47	12	52	1	--
Current California	53	14	47	1	--
February 2007	36	8	62	2	--
Use Twitter or another service to share updates about yourself or to see updates about others <sup>24</sup>					
Current National	11	4	89	1	--
Current California	13	4	86	1	--
November 2008	9	3	90	*	*
August 2008	6	2	93	1	--

<sup>23</sup> In November 2008 and May 2008, item wording was "Use a social networking site like MySpace, Facebook or LinkedIn.com." In August 2006, item wording was "Use an online social networking site like MySpace, Facebook or Friendster". Prior to August 2006, item wording was "Use online social or professional networking sites like Friendster or LinkedIn."

<sup>24</sup> In August 2008, item wording was "Use Twitter or another "micro-blogging" service to share updates about yourself or to see updates about others"

- Q28** There are many different activities related to health and medical issues a person might do on the internet. I'm going to read a list of things you may or may not have ever done online related to health and medical issues. Just tell me if you happened to do each one, or not. Have you... [INSERT ITEM; ROTATE]?

Based on online health seekers

	YES	NO	DON'T KNOW	REFUSED
a. Signed up to receive updates about health or medical issues				
Current National [N=1,356]	19	81	*	*
Current California [N=605]	18	82	*	0
b. Read someone else's commentary or experience about health or medical issues on an online news group, website or blog				
Current National	41	59	0	*
Current California	39	61	*	0
c. Listened to a podcast about health or medical issues				
Current National	13	87	1	0
Current California	11	89	*	*
<i>There are no items D or E.</i>				
f. Consulted rankings or reviews online of doctors or other providers				
Current National	24	76	*	*
Current California	26	74	*	0
g. Consulted rankings or reviews online of hospitals or other medical facilities				
Current National	24	76	*	0
Current California	24	76	0	*
h. Posted a review online of a doctor				
Current National	5	95	0	0
Current California	5	95	0	0
i. Posted a review online of a hospital				
Current National	4	96	*	0
Current California	5	95	0	0
j. Shared photos, videos or audio files online about health or medical issues				
Current National	4	96	0	0
Current California	6	94	0	*
k. Tagged or categorized online content about health or medical issues				
Current National	6	93	*	*
Current California	8	91	1	*

- Q29** Thinking about all the types of information, news and other activities you can do online related to health and medical issues, about how often do you go online and do something related to health... several times a day, about once a day, every few days, once a week or less often?

Based on internet users

	CURRENT NATIONAL	CURRENT CALIFORNIA	
%	2	1	Several times a day
	2	2	About once a day
	6	5	Every few days
	9	11	Once a week
	71	67	Less often
	11	13	Never <b>(VOL.)</b>
	*	*	Don't know
	*	*	Refused
	[1,650]	[728]	

- Q30** Have you ever posted comments, queries or information about health or medical matters in any of these places online? [INSERT ITEM; RANDOMIZE]... Have you ever posted there about health or medical matters?

Based on internet users

	YES	NO	DON'T KNOW	REFUSED
a. In an online discussion, a listserv, or other online group forum				
Current National [N=1,650]	5	94	*	*
Current California [N=728]	6	94	*	0
b. On a blog				
Current National	4	96	*	*
Current California	4	96	0	*
<i>Item C: Based on SNS users</i>				
c. On a social networking site such as Facebook, MySpace or LinkedIn				
Current National [N=459]	15	85	*	0
Current California [N=255]	12	88	0	0
d. On a website of any kind, such as a health site or news site that allows comments and discussion				
Current National	6	94	*	*
Current California	8	92	*	*
<i>Item E: Based on Twitter users</i>				
e. On Twitter or other status updates				
Current National [N=128]	11	89	0	0
Current California [N=76]	13	86	1	0

**Q31** Thinking about what you have done on social networking sites like Facebook and MySpace, have you... [INSERT ITEM; ROTATE]?

Based on SNS users

	YES	NO	DON'T KNOW	REFUSED
a. Gotten any health information on the sites				
Current National [N=459]	11	89	0	0
Current California [N=255]	13	85	2	0
b. Started or joined a health-related group on a social networking site				
Current National	6	94	0	0
Current California	2	98	0	0
c. Followed your friends' personal health experiences or updates on the site				
Current National	20	80	*	0
Current California	16	84	0	0

[CARE removed – upcoming report]

**MODEM** Does the computer you use at home connect to the internet through a dial-up telephone line, or do you have some other type of connection, such as a DSL-enabled phone line, a cable TV modem, a wireless connection, a fiber optic connection such as FIOS or a T-1?

Based on those who use the internet from home

	DIAL-UP	TOTAL HIGH SPEED	----- DSL	----- CABLE MODEM	----- WIRELESS	----- FIBER OPTIC <sup>25</sup>	----- T-1	OTHER	DON'T KNOW/ REFUSED
Current National [N=1,538]	13	80	30	32	15	3	*	1	5
Current California [N=691]	11	82	35	27	16	4	*	2	5
Nov 2008 [N=1,481]	12	82	33	34	13	3	*	1	5
Aug 2008 [N=1,543]	13	81	37	30	10	3	1	1	5
July 2008 [N=1,797]	14	81	35	30	13	3	1	1	4
May 2008 [N=1,463]	15	79	36	31	9	2	*	1	5
Dec 2007 [N=1,483]	18	77	34	31	10	2	1	1	3
Sept 2007 [N=1,575]	20	73	34	30	8	2	n/a	1	6
Feb 2007 [N=1,406]	23	70	35	28	6	1	n/a	1	6
Aug 2006 [N=1,787]	28	68	34	30	3	1	n/a	1	3
Dec 2005 [N=1,715]	35	61	29	27	4	1	n/a	1	3
June 2005 [N=1,204]	44	53	24	25	3	1	n/a	1	1
Feb 2005 [N=1,287]	47	50	22	25	3	1	n/a	1	3
Jan 2005 [N=1,261]	48	50	21	26	2	1	n/a	1	1
Feb 2004 [N=1,241]	55	42	18	23	1	1	n/a	1	2
Nov 2003 <sup>26</sup> [N=1,199]	62	35	13	21	1	*	n/a	1	2

**DISA** Does any disability, handicap, or chronic disease keep you from participating fully in work, school, housework, or other activities, or not?

	CURRENT NATIONAL	CURRENT CALIFORNIA		AUGUST 2006	DECEMBER 2002
%	14	13	Yes	17	15
	85	87	No	82	85
	*	*	Don't know	1	1
	1	*	Refused	--	--

**IMM1** Where were you born – in the United States, or in another country?

	CURRENT NATIONAL	CURRENT CALIFORNIA	
%	88	69	In the U.S. (including Puerto Rico or other U.S. territory)
	12	31	In another country
	*	0	Don't know
	*	*	Refused

<sup>25</sup> In Sept. 2007 and before, "Fiber optic connection" and "T-1 connection" were collapsed into one category. Percentage for "Fiber optic connection" reflects the combined "Fiber-optic/T-1" group.

<sup>26</sup> In November 2003, question wording was "Does the computer you use at home connect to the internet through a standard telephone line, or do you have...?"



- L2** Of all the telephone calls that you receive, do you get [READ AND ROTATE OPTIONS 1 AND 3—KEEP 2 ALWAYS IN THE MIDDLE]?

Based on landline respondents who have a cell phone

	CURRENT NATIONAL	CURRENT CALIFORNIA	
%	17	19	All or almost all calls on a cell phone
	46	47	Some on a cell phone and some on a regular home phone
	36	31	All or almost all calls on a regular home phone
	2	2	<b>(DO NOT READ)</b> Don't know/Refused
	[1,320]	[583]	

- c1** Now thinking about your telephone use... Is there at least one telephone INSIDE your home that is currently working and is not a cell phone?

Based on cell phone respondents

	CURRENT NATIONAL	CURRENT CALIFORNIA	
%	44	44	Yes, home telephone
	56	55	No home telephone
	1	1	Don't know/Refused
	[502]	[231]	

- c2** Of all the telephone calls that you receive, do you get [READ AND ROTATE OPTIONS 1 AND 3—KEEP 2 ALWAYS IN THE MIDDLE]?

Based on cell phone respondents who have a landline

	CURRENT NATIONAL	CURRENT CALIFORNIA	
%	41	48	All or almost all calls on a cell phone
	42	36	Some on a cell phone and some on a regular home phone
	16	15	All or almost all calls on a regular home phone
	1	1	<b>(DO NOT READ)</b> Don't know/Refused
	[316]	[151]	

**THANK RESPONDENT:** That concludes our interview. The results of this survey are going to be used by a non-profit research organization called the Pew Internet & American Life Project, which is looking at the impact of the internet on people's lives. A report on this survey will be issued by the project in a few months and you can find the results at its web site, which is [www.pewinternet.org](http://www.pewinternet.org) [w-w-w dot pew internet dot org]. Thanks again for your time. Have a nice day/evening.

## Endnotes

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- <sup>i</sup> November 2008 trends based on the Post-Election 2008 Tracking survey, conducted November 20-December 4, 2008 [N=2,254].
- <sup>ii</sup> August 2008 trends based on the August Tracking 2008 survey, conducted August 12-31, 2008 [N=2,251].
- <sup>iii</sup> May 2008 trends based on the Spring Tracking 2008 survey, conducted April 8-May 11, 2008 [N=2,251].
- <sup>iv</sup> December 2007 trends based on the Annual Gadgets survey, conducted October 24-December 2, 2007 [N=2,054, including 500 cell phone users].
- <sup>v</sup> September 2007 trends based on the Consumer Choice survey, conducted August 3-September 5, 2007 [N=2,400, oversample of 129 cell phone users].
- <sup>vi</sup> February 2007 trends based on daily tracking survey conducted February 15-March 7, 2007 [N=2,200].
- <sup>vii</sup> December 2006 trends based on daily tracking survey, conducted November 30 - December 30, 2006 [N=2,373].
- <sup>viii</sup> November 2006 trends based on Post-Election tracking survey, conducted Nov. 8-Dec. 4, 2006 [N=2,562]. This includes an RDD sample [N=2,362] and a cell phone only sample [N=200]. Results reflect combined samples, where applicable.
- <sup>ix</sup> August 2006 trends based on daily tracking survey, conducted August 1-31, 2006 [N=2,928].
- <sup>x</sup> April 2006 trends based on the Annual Gadgets survey, conducted Feb. 15-Apr. 6, 2006 [N=4,001].
- <sup>xi</sup> February 2006 trends based on the Exploratorium Survey, conducted Jan. 9-Feb. 6, 2006 [N=2,000].
- <sup>xii</sup> December 2005 trends based on daily tracking survey conducted Nov. 29-Dec. 31, 2005 [N=3,011].
- <sup>xiii</sup> September 2005 trends based on daily tracking survey conducted Sept. 14-Oct.13, 2005 [N=2,251].
- <sup>xiv</sup> June 2005 trends based on the Spyware Survey, conducted May 4-June 7, 2005 [N=2,001].
- <sup>xv</sup> February 2005 trends based on daily tracking survey conducted Feb. 21-March 21, 2005 [N=2,201].
- <sup>xvi</sup> January 2005 trends based on daily tracking survey conducted Jan. 13-Feb.9, 2005 [N=2,201].
- <sup>xvii</sup> November 23-30, 2004 trends based on the November 2004 Activity Tracking Survey, conducted November 23-30, 2004 [N=914].
- <sup>xviii</sup> November 2004 trends based on the November Post-Election Tracking Survey, conducted Nov 4-Nov 22, 2004 [N=2,200].
- <sup>xix</sup> June 2004 trends based on daily tracking survey conducted May 14-June 17, 2004 [N=2,200].
- <sup>xx</sup> February 2004 trends based on daily tracking survey conducted February 3-March 1, 2004 [N=2,204].
- <sup>xxi</sup> November 2003 trends based on daily tracking survey conducted November 18-December 14, 2003 [N=2,013].
- <sup>xxii</sup> August 2003 trends based on 'E-Government' survey conducted June 25-August 3, 2003 [N=2,925].
- <sup>xxiii</sup> June 2003 trends based on 'Internet Spam' survey conducted June 10-24, 2003 [N=2,200].
- <sup>xxiv</sup> May 2003 trends based on daily tracking survey conducted April 29-May 20, 2003 [N=1,632].
- <sup>xxv</sup> March 3-11, 2003 trends based on daily tracking survey conducted March 3-11, 2003 [N=743].
- <sup>xxvi</sup> February 2003 trends based on daily tracking survey conducted February 12-March 2, 2003 [N=1,611].
- <sup>xxvii</sup> December 2002 trends based on daily tracking survey conducted Nov. 25-Dec. 22, 2002 [N=2,038].

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- <sup>xxviii</sup> November 2002 trends based on daily tracking survey conducted October 28-November 24, 2002 [N=2,745].
- <sup>xxix</sup> October 2002 trends based on daily tracking survey conducted October 7-27, 2002 [N=1,677].
- <sup>xxx</sup> September 2002 trends based on daily tracking survey conducted September 9-October 6, 2002 [N=2,092].
- <sup>xxxi</sup> July 2002 trends based on 'Sept. 11<sup>th</sup>-The Impact Online' survey conducted June 26-July 26, 2002 [N=2,501].
- <sup>xxxii</sup> March/May 2002 trends based on daily tracking surveys conducted March 1-31, 2002 and May 2-19, 2002.
- <sup>xxxiii</sup> January 2002 trends based on a daily tracking survey conducted January 3-31, 2002.
- <sup>xxxiv</sup> December 2001 trends represent a total tracking period of December 1-23, 2001 [N=3,214]. This tracking period based on daily tracking surveys conducted December 17-23, 2001 and November 19-December 16, 2001.
- <sup>xxxv</sup> November 2001 trends represent a total tracking period of November 1-30, 2001 [N=2,119]. This tracking period based on daily tracking surveys conducted October 19 – November 18, 2001 and November 19 – December 16, 2001.
- <sup>xxxvi</sup> October 2001 trends represent a total tracking period of October 1-31, 2001 [N=1,924]. This tracking period based on daily tracking surveys conducted September 20 – October 1, 2001, October 2-7, 2001, October 8-18, 2001, and October 19 – November 18, 2001.
- <sup>xxxvii</sup> September 2001 trends represent a total tracking period of September 1-30, 2001 [N=742]. This tracking period based on daily tracking surveys conducted August 13-September 10, 2001, September 12-19, 2001 and September 20 – October 1, 2001.
- <sup>xxxviii</sup> August 2001 trends represent a total tracking period of August 13-31, 2001 [N=1,505]. This tracking period based on a daily tracking survey conducted August 13-September 10, 2001.
- <sup>xxxix</sup> February 2001 trends based on a daily tracking survey conducted February 1, 2001-March 1, 2001 [N=2,096].
- <sup>xl</sup> December 2000 trends based on a daily tracking survey conducted December 2-22, 2000 [N=2,383].
- <sup>xli</sup> November 2000 trends based on a daily tracking survey conducted November 2, 2000 – December 1 [N=6,322].
- <sup>xlii</sup> October 2000 trends based on a daily tracking survey conducted October 2 – November 1, 2000 [N=3,336].
- <sup>xliiii</sup> September 2000 trends based on a daily tracking survey conducted September 15 – October 1, 2000 [N=1,302].
- <sup>xliiv</sup> August 2000 trends based on a daily tracking survey conducted July 24 – August 20, 2000 [N=2,109].
- <sup>xli v</sup> June 2000 trends based on a daily tracking survey conducted May 2 – June 30, 2000 [N=4,606].
- <sup>xli vi</sup> April 2000 figures based on a daily tracking survey conducted April 1 – May 1, 2000 [N=2,503].
- <sup>xli vii</sup> July 2008 trends based on the Personal Networks and Community survey, conducted July 9-August 10, 2008 [N=2,512, including 505 cell phone respondents]
- <sup>xli viii</sup> April 2008 trends based on the Networked Workers survey, conducted March 27-April 14, 2008. Most questions were asked only of full- or part-time workers [N=1,000], but trend results shown here reflect the total sample [N=2,134].
- <sup>xli ix</sup> January 2008 trends based on the Networked Families survey, conducted December 13, 2007-January 13, 2008 [N=2,252].
- <sup>i</sup> May 2000 trends based on a daily tracking survey conducted March 1 – May 1, 2000 [N=6,036].
- <sup>ii</sup> Fall 2000 figures based on a daily tracking survey conducted September 15 – December 22, 2000 [N=13,342].
- <sup>iii</sup> March 2000 figures based on a daily tracking survey conducted March 1 – March 31, 2000 [N=3,533].
- <sup>iiii</sup> July 2004 trend figures based on the "Selective Exposure" survey, conducted June 14-July 3, 2004 [N=1,510].
- <sup>iv</sup> March 2004 trends based on "Weak Ties" survey conducted February 17-March 17, 2004 [N=2,200].
- <sup>lv</sup> March 12-19, 2003 trends based on daily tracking survey conducted March 12-19, 2003 [N=883].