Diving Deeper Into Online Health Search

Examining Why People Trust Internet Content & The Impact Of User-Generated Media

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RESULTS SUMMARY

According to the Pew Internet & American Life Project, 10 million US adults search online for information on health each day [1]. Most (66%) begin their research on a search engine like Yahoo or Google. In addition, Americans are saying that the information they find on the Internet is having an impact. According to Pew, "53% of health seekers report that their most recent health information session [influenced] how they take care of themselves or care for someone else." In addition, 56% say the information they find online has boosted their confidence in their healthcare decision-making abilities.

However, Pew also found that Americans are not practicing due diligence when searching the Internet for health content. Only 15% (85 million) of US health searchers say they "always check the source and date of the . . . information they find online."

Pew's findings raise some interesting questions about how people are consuming Internet healthcare information, including:

- Do Americans trust online content because they are frequenting Websites they consider well established and credible?
- Are they being exposed to user-generated media (UGM)? This is important because it is generally assumed that people tend to be highly trusting of online content developed by their peers [2].

RESULTS SUMMARY

Envision Solutions, using data provided by Hitwise, the leading online competitive intelligence service, set out to answer these questions in late 2006. The company undertook this research because it believes scrutinizing Americans' online health search habits will:

- Provide industry stakeholders and others with important information about the online content that is influencing perceptions and beliefs about healthcare products, services and issues.

- Help decision-makers better understand whether user-generated media is affecting how people contextualize and consume healthcare information.

The key findings of Envision Solutions' research appear below.

Study Design

This two-phase study explored online health searchers' exposure to user-generated media and the Websites they frequent.

- Using data from Hitwise, Envision Solutions selected eight popular health-related terms that were typed into online search engines (e.g., Google, Yahoo, MSN) from November to December 2006.

- In phase one of the research, which took place in December 2006, Envision Solutions conducted 16 searches on Yahoo and Google using these terms. We then examined Websites indexed on the first three pages of each search to determine whether Internet users are being exposed to user-generated media.

RESULTS SUMMARY

- In phase two of the study, Hitwise identified the five most popular Websites people using these search terms visited from mid-December 2006 to mid-January 2007.

Key Findings: Exposure To User-Generated Media

Internet users' exposure to health-related user-generated media is significant. Wikipedia is the most referenced resource.

- UGM appeared on the first three pages of Envision Solutions' searches 88% of the time.
- User-generated media was equally as likely to be indexed on the first page of searches conducted on Google *and* Yahoo.
- Wikipedia was the most frequently cited resource. This wiki appeared on the first page in 63% of searches.

Key Findings: Online Health Information Sources

Online health searchers are relying on government, corporate and non-profit produced Websites for information. However, in certain cases, wikis and blogs receive significant traffic.

- According to data provided by Hitwise, some American Internet users are relying on established sources for their health information. For example:
    - 32% of those who typed "diabetes" into major search engines went to the American Diabetes Association's Website www.diabetes.org.

RESULTS SUMMARY

- 51% searching for information on the antidepressant Lexapro visited the medication's official corporate Website, lexapro.com, which is published by Forest Pharmaceuticals.

- 15% looking for content about bipolar disorder traveled to the Website of the National Institutes of Health, www.nimh.nih.gov.

- Although traditional sources of online health content receive the majority of traffic, there is evidence that user-generated media is becoming an important resource. Most importantly:

  - Five percent of those searching for information about the antidepressant Lexapro went to www.crazymeds.org. This is a popular blog that provides information on the safety and efficacy of psychiatric medications.

  - Seven percent of people searching for bipolar disorder-related content visited Wikipedia.

Diving Deeper Into Online Health Search: Key Results Summary

- A 2006 Pew Internet & American Life Project study of Americans' online search habits raises interesting questions about why many are not checking the source and date of the information they find online. Pew's research also indicates that people may be highly trusting of Internet health content.

- This two-phase study, conducted using data from Hitwise, was designed to examine US online health searchers' exposure to user-generated media (UGM) and the Websites they frequent. This research provides clues as to why Americans trust the content they are viewing online.

- Americans looking for online health content are exposed to a significant amount of UGM. In the searches Envision Solutions conducted, Wikipedia was the most frequently cited resource.

- According to Hitwise's data, people are relying on government, corporate and non-profit produced Websites for health information. In certain cases, blogs and wikis are receiving significant traffic.

- This study suggests:

    - Some health searchers may not be practicing due diligence because they are relying on information sources they view as well established and credible. This includes content developed by government, non-profits, corporations and their peers.

    - User-generated media is becoming an important source of online health content. Internet users are exposed to and use UGM on a regular basis. This may increase their confidence in the information they find via a search engine.

Source: Envision Solutions, LLC, *Diving Deeper Into Online Health Search*, February 2007

WHY THIS RESEARCH WAS CONDUCTED

Over the past few years, studies conducted by the Pew Internet & American Life Project and others have indicated that Americans are increasingly turning to the Internet to find health-related information [1]. Many people begin their research at a search engine like Yahoo or Google and go online to find information for others.[1]

As Americans have come to rely on the Internet for health content, there is evidence that they are consuming information produced by hospitals, corporations, pharmaceutical companies and other well established organizations [3]. However, given the growing influence of blogs, podcasts, online bulletin boards and wikis, it is likely they are receiving information from "user-generated" sources as well. This is because this content – especially blogs – is highly indexed by many of the major search engines.

Pharmaceutical companies and other players in the healthcare industry understand the growing influence of user-generated media. This is why they have engaged firms like Cymfony and Nielsen BuzzMetrics to gather and analyze UGM content. However, there is an ongoing need for publicly available research that illustrates how Americans are exposed to and typically interact with it.

[1] Recently, a number of health-specific search engines developed by companies like Healthline (www.healthline.com), Healia (www.healia.com), Revolution Health (www.revolutionhealth.com) and OrganizedWisdom (www.organizedwisdom.com) have become available. However, these services are still very new and have not captured a significant percentage of online health searches.

WHY THIS RESEARCH WAS CONDUCTED

In addition, Pew found that many Americans are not checking the source and date of the information they find online. Do they trust this content because they are visiting Websites they view as credible and reliable? Could they also be relying on information produced by their peers on blogs, bulletin boards and wikis?

To answer these questions and meet the need for more information on online health search, Envision Solutions initiated a research project in December 2006. This study, conducted with the support of Hitwise the leading online competitive intelligence service, was designed to:

- Explain some of the reasons why Americans trust the health content they find on the Internet
- Quantify the impact of user-generated media on online health searchers

Finally, from a communications perspective, it is important for health industry stakeholders to better understand whether and how online content is influencing perceptions, attitudes and beliefs about healthcare products, services and issues. We hope this study meets this need.

METHODOLOGY

Envision Solutions' analysis of online search habits is based on data provided by Hitwise. The competitive intelligence company has developed proprietary software that Internet Service Providers (ISPs) use to analyze Website usage logs created on their network. The anonymous data sent to Hitwise from the ISPs include a range of industry standard metrics relating to the viewing of Websites including page requests, visits and average visit length. This provides Hitwise with the ability to provide information on:

- Popular search terms people are using to find health content
- Which Websites Internet users are visiting after typing health-related keywords into major search engines like Yahoo, Google and MSN.

Envision Solutions conducted its research in two phases.

Phase I

- **Select Search Terms:** According to Pew, "80% of Internet users have looked online for at least one of 17 health topics." Envision Solutions picked four identified by Pew. The company then examined a list of popular search terms in each of these subject areas provided by Hitwise and selected eight based on their popularity.[2] Please see the tables below for a listing of terms and health topics Envision Solutions selected.

[2] Popularity was defined as the percentage of Internet searches featuring these keywords conducted during a four-week period ending December 2, 2006. Hitwise's data is based on market share of US Internet visits from a sample of 10 million US Internet users.

METHODOLOGY

Table I

Popular Health Topics Researched Online	
Health Topic	**% Of US Internet Users Searching For Info On Topic In 2006**
Disease/Medical Problem	64%
Prescription/OTC Drugs	37%
Health Insurance	28%
Mental Health Issues	22%

Source: Pew Internet & American Life Project, *Online Health Search 2006*
N (August 2006 Survey): 1,990

Table II

Popular Health Search Terms (Organized By Topic)	
Search Term	**% Of Internet Searches Featuring Search Term***
Topic: Disease/Medical Problem	
Diabetes	.11%
Herpes	.098%
Topic: Prescription Or OTC Drugs	
Chantix	0.045%
Lexapro	0.058%
Topic: Health Insurance	
Kaiser Permanente	0.063%
Blue Cross Blue Shield	0.052%
Topic: Mental Health Issues	
Depression	0.092%
Bipolar Disorder	0.045%

Source: Hitwise (www.hitwise.com)
Timeframe: Four weeks ending December 2, 2006
*Represents percentage of search volume by Internet users in Hitwise's health and medical category.

METHODOLOGY

- **Conduct & Analyze Internet Searches:** Envision Solutions conducted sixteen queries on Yahoo and Google (eight on each search engine) using the search terms it selected on December 7, 2006.[3] We examined links indexed on the first three pages of each search to measure health searchers' exposure to user-generated media.[4] Limiting searches to several pages is justifiable because research indicates that many Internet users view an average of two pages during a typical search [4].

  UGM was defined as:

  - Weblogs
  - Online bulletin boards (either links directly to bulletin board content or Websites where they were prominently displayed)
  - Wikis
  - Podcasts
  - Other UGM (i.e., Websites with content developed by individuals such as patients and medical professionals)

Following are screen shots of two searches Envision Solutions conducted on Yahoo and Google focusing on diabetes and herpes.

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[3] Envision Solutions limited its research to these search engines because they are the most popular resources people use when searching for information online.
[4] Spam blogs (splogs) and sponsored Websites were excluded from the search results.

METHODOLOGY

Figure I: Google Search - Diabetes*

Google

Web Images Video News Maps more »

diabetes Search Advanced Search Preferences

Web

Diabetes & Nutrition
www.HowIDoDiabetes.com Find a Great On-the-Go Snack for People with Diabetes - Free Trial!

Diabetes and Pain
www.DPNPmanagement.com Diabetic peripheral neuropathic pain (DPNP)-learn about managing it

Adult Diabetes
www.DiabetesNewDay.com Get The Facts About This Condition Find Out If You Might Be At Risk

Refine results for diabetes:

Treatment Tests/diagnosis For patients From medical authorities
Symptoms Causes/risk factors For health professionals Alternative medicine

American Diabetes Association Home Page
Their mission is to prevent and cure diabetes and to improve the lives of all people affected by this disease. Available in English and Spanish.
www.diabetes.org/ - 48k - Cached - Similar pages

Diabetes Information - American Diabetes Association
The American Diabetes Association recommends the FPG because it is easier, ... Take the first steps toward better diabetes care by visiting the Diabetes ...
www.diabetes.org/about-diabetes.jsp - 53k - Cached - Similar pages
[More results from www.diabetes.org]

Diabetes information including treating type 2 diabetes at ...
Offers dietary recommendations, including recipes and tips on managing blood sugar levels. From GlaxoSmithKline.
www.diabetes.com/ - 13k - Cached - Similar pages

Diabetes
Web site for Diabetes. ... publishes Diabetes. Stanford University Libraries' HighWire Press ® assists in the publication of Diabetes Online ...
diabetes.diabetesjournals.org/ - Similar pages

CDC Diabetes Public Health Resource
The diabetes information homepage of the US Centers for Disease Control and Prevention, provided by the CDC's Division of Diabetes Translation.
www.cdc.gov/diabetes/ - 30k - Cached - Similar pages

National Diabetes Information Clearinghouse
Provides educational materials to increase knowledge and understanding about diabetes among patients, health care professionals, and the general public.
diabetes.niddk.nih.gov/ - 28k - Cached - Similar pages

Diabetes
What to expect from your diabetes diagnosis? Get up-to-the-minute information about medications, insulin, blood sugar management, nutrition requirements, ...
diabetes.about.com/ - 49k - Cached - Similar pages

***Date:** December 7, 2006 - Six of 10 search results displayed

METHODOLOGY

Figure II: Yahoo Search - Herpes*

Yahoo! My Yahoo! Mail Welcome, **Guest** [Sign In]

Web | Images | Video | Local | Shopping | more

YAHOO! SEARCH herpes Search

Search Results

Also try: **herpes** pictures, **herpes** symptoms, **herpes** zoster, **herpes** simplex More...

- Quickclear - 5 Day **Herpes** Treatment
  www.quickclear.net - As seen on TV. The fast acting **herpes** treatment, with complete virus elimination after 90 days, 98% success rate.
- Genital **Herpes**
  www.herpesclinicalresearch.com - If you have genital **herpes**, learn about participating in a new study.
- **Herpes**: Signs and Symptoms
  www.genitalherpes.com - Symptoms include itching, burning, redness, bumps, tingling in or around the genital area, blisters, sores or cuts.

Y! Information about Genital **Herpes** on Yahoo! Health
Yahoo! Shortcut - About

1. **Herpes**
   Herpes. issn: 0969-7667 ...
   www.ihmf.org/journal/journal.asp - More from this site
2. **Herpes** HSV-1 & HSV-2
   Herpes - The most comprehensive educational site. ... and emotional attitudes surrounding genital **herpes** can make it hard to compare ...
   www.**herpes**.com/hsv1-2.html - 30k - Cached - More from this site
3. **Herpes**.com
   Includes treatment, products, diagnosis, experiences, and live chat.
   Category: Shopping > Diseases and Conditions > **Herpes**
   www.**herpes**.com - 19k - Cached - More from this site
4. Famvir (Famciclovir)
   From Novartis. Used to treat genital **herpes** and shingles.
   Category: Specific Drugs and Medications
   www.famvir.com - 81k - Cached - More from this site
5. Genital **Herpes**
   Describes the prevalence of the illness, how the HSV-1 and HSV-2 viruses are spread, diagnosis, and more.
   Category: Herpes
   www.cdc.gov/nchstp/dstd/Fact_Sheets/facts_Genital_**Herpes**.htm - 20k - Cached - More from this site

***Date:** December 7, 2006 – Five of 10 search results displayed

METHODOLOGY

Phase II

- **Identify Websites Searchers Visited**: In January 2007, Hitwise conducted an analysis of Websites that received Internet traffic from people using the search terms Envision Solutions selected. Hitwise then reported the top five Websites that received the greatest overall percentage of Internet traffic due to these terms. It analyzed Internet activity for a four-week period ending January 13, 2007.

Research Limitations

Google, Yahoo and other search engines regularly refresh content indexed on their Web properties. Because of this, others repeating this study may find that Internet users' exposure to UGM increases or decreases over time. The same is true for Internet traffic to specific Websites.

In addition, we used a relatively broad criterion for bulletin board exposure. This is because we assumed that many of those viewing a Website where an online forum was prominently featured would view content within it.

Part I

Exposure To User-Generated Media

EXPOSURE TO USER-GENERATED MEDIA

- Online health searchers are exposed to user-generated media on a regular basis. In this study, UGM appeared on the first three pages of searches 88% of the time.

Table III

Did UGM Appear In First Three Pages Of Search?	
	% Of Searches (N)
Yes	87.5% (14)
No	12.5% (2)

Source: Envision Solutions, LLC, 2007
Number Of Searches: 16

EXPOSURE TO USER-GENERATED MEDIA

- In addition, UGM was equally as likely to be indexed on the first three pages of searches conducted on Yahoo and Google.

Table IV

Did UGM Appear In First Three Pages Of Search? (Results By Search Engine)	
	% Of Searches (N)
Search Engine: Google	
Yes	87.5% (7)
No	12.5% (1)
Search Engine: Yahoo	
Yes	87.5% (7)
No	12.5 (1)

Source: Envision Solutions, LLC, 2007
Number Of Searches: 16
Search Date: December 7, 2006

EXPOSURE TO USER-GENERATED MEDIA

- Google was more likely to index UGM on the first page than Yahoo. UGM appeared on the first page of Google searches 88% of the time and Yahoo 63%.

Table V

Did UGM Appear On First Page Of Search? (Results By Search Engine)	
	% Of Searches (N)
Search Engine: Google	
Yes	87.5% (7)
No	12.5% (1)
Search Engine: Yahoo	
Yes	62.5% (5)
No	37.5% (3)

Source: Envision Solutions, LLC, 2007
Number Of Searches: 16
Search Date: December 7, 2006

EXPOSURE TO USER-GENERATED MEDIA

- Of UGM indexed by search engines, Wikipedia was the most frequently cited resource. This wiki was referenced on the first page in 63% of searches.

Table VI

% Of UGM Appearing On First Page Of Search (Organized By Type Of UGM)	
Type Of UGM	***% Of Searches Where UGM Appeared On First Page (N)***
Wikipedia	62.5% (10)
Bulletin Board*	25% (4)
Blog	12.5% (2)
Other UGM†	18.8% (3)

Source: Envision Solutions, LLC, 2007
Search Date: December 7, 2006
Number Of Searches: 16
*Includes Websites developed by users where links to bulletin board content appeared prominently on site's home page.
†Other UGM: Websites developed/written by physicians, patients, caregivers, etc. that provide healthcare content.

EXPOSURE TO USER-GENERATED MEDIA

- UGM appeared on the first three pages in the majority of searches.

Table VII

Did UGM Appear In First Three Pages Of Search? (Results By Search Term)	
Search Term	**% Of Searches (N)**
Bipolar Disorder	
Yes	100% (2)
No	0% (0)
Depression	
Yes	100% (2)
No	0% (0)
Diabetes	
Yes	100% (2)
No	0% (0)
Herpes	
Yes	100% (2)
No	0% (0)
Chantix	
Yes	100% (2)
No	0% (0)
Lexapro	
Yes	100% (2)
No	0% (0)
Kaiser Permanente	
Yes	100% (2)
No	0% (0)
Blue Cross Blue Shield	
Yes	0% (2)
No	100% (2)

Source: Envision Solutions, LLC, 2007
Number Of Searches: 16
Search Date: December 7, 2006

Part II

Websites Searchers Are Visiting For Health Content

WEBSITES SEARCHERS ARE VISITING FOR HEALTH CONTENT

- Across health topics, searchers are relying on content produced by non-profits, pharmaceutical companies, corporations and government. For example:
    - 32% of people searching for information on diabetes went to the American Diabetes Association's Website www.diabetes.org.
    - Eight percent went to the Website of the Centers for Disease Control, www.cdc.gov.

Table VIII

Search Term: Diabetes (Disease Or Medical Problem)	
Website	**% Of Overall Traffic Going To Website***
www.diabetes.org	31.85%
www.cdc.gov	7.93%
www.walmart.com	5.95%
www.diabetes.com	5.48%
www.wikipedia.org	2.79%

Source: Hitwise (www.hitwise.com)
Timeframe: Four weeks ending January 13, 2007
*Among Internet users typing in search term

WEBSITES SEARCHERS ARE VISITING FOR HEALTH CONTENT

- In certain cases, health searchers are viewing content from blogs and wikis.
  - Five percent of those searching for information on the antidepressant Lexapro went to crazymeds.org, a popular blog that provides information on the safety and efficacy of antidepressant medications.
  - Seven percent of people researching bipolar disorder went to Wikipedia (www.wikipedia.org).

Table IX

Search Term: Lexapro (Prescription Or OTC Drugs)	
Website	**% Of Overall Traffic Going To Website***
www.lexapro.com	50.58%
www.drugs.com	12.13%
www.healthsquare.com	5.77%
www.crazymeds.org	5.36%
www.rxlist.com	5.02%

Search Term: Bipolar Disorder (Mental Health)	
Website	**% Of Overall Traffic Going To Website***
www.nimh.nih.gov	14.86%
bipolar.about.com	12.42%
www.seroquel.com	8.26%
www.wikipedia.org	7.17%
www.bipolar.com	6.21%

Source: Hitwise (www.hitwise.com)
Timeframe: Four weeks ending January 13, 2007
*Among Internet users typing in search term

CONCLUSIONS

This study provides some answers to the questions raised by Pew's research on Americans' online health search habits. First, large numbers of Internet users rely on government, non-profit and corporate Websites that are widely viewed as credible and well established. This explains why some may not be practicing due diligence when conducting online health searches. They may not feel it is necessary.

In addition, it is clear that user-generated media is becoming an increasingly important resource for US online health searchers. Because Wikipedia is referenced so often, those maintaining it should take steps to ensure that its health-related content is accurate.

Finally, "citizen medical experts" producing Websites like crazymeds.org are helping people better understand what they can expect from the drugs they take and the diseases and conditions they or their loved ones suffer from.

REFERENCES

1. Fox, S., *Online Health Search 2006*. 2006, Pew Internet & American Life Project: Washington, DC.

2. Anonymous, *The Seventh Annual Edelman Trust Barometer: A Global Study of Opinion Leaders* 2006, Edelman: London.

3. Hitwise. *Health and Medical Websites Received Highest Percentage of Visits from Search Engines Last Week*. 2006 October 17 [cited December 12]; Available from: http://www.hitwise.com/press-center/hitwiseHS2004/us-category-search-10172006.php.

4. Jansen, B.J., A. Spink, and T. Saracevic, *Real Life, Real Users, and Real Needs: A Study and Analysis of User Queries on the Web.* Information Processing and Management 2000(36): p. 207-227.

ABOUT ENVISION SOLUTIONS

Envision Solutions, LLC is a full-service healthcare marketing communications consulting firm. We focus on providing innovative products and services to not-for-profit and for-profit organizations. We exist to help make our clients more efficient and successful.

Envision Solutions' core competencies are in the areas of analysis, strategic/tactical recommendation development, training and content development.

Visit www.envisionsolutionsnow.com for more information about the firm.

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ABOUT HITWISE

Hitwise is the leading online competitive intelligence service. Only Hitwise provides its 1,200 global clients with daily insights on how their customers interact with a broad range of competitive Websites, and how their competitors use different tactics to attract online customers.

Since 1997, Hitwise has pioneered a unique, network-based approach to Internet measurement. Through relationships with ISPs around the world, Hitwise's patented methodology captures the anonymous online usage, search, and conversion behavior of 25 million Internet users. This unprecedented volume of Internet usage data is seamlessly integrated into our easy to use, web-based service, designed to help marketers better plan, implement, and report on a range of online marketing programs.

Hitwise is a privately held company headquartered in New York City and operates in the United States, United Kingdom, Australia, New Zealand, Hong Kong and Singapore. More information about Hitwise is available at www.hitwise.com.

For up to date analysis of online trends and statistics, please visit the Hitwise Intelligence Analyst Weblogs at http://weblogs.hitwise.com and the Hitwise Data Center at www.hitwise.com/datacenter.