



Veridian inSight

USABILITY COMPARISON OF FOUR DRUG WEBSITES

2009

www.veridianinsight.com

Notice

This document describes a study performed by Veridian inSight with the goal of contributing scientific knowledge to the field of medical website usability. This document is publicly available on the Web at

http://www.veridianinsight.com/uploads/Drug_Website_Usability_2009.pdf

It may be downloaded, copied, and distributed.

The study described in this document was not solicited by any client or other external source. Nor was it performed with any funding or support from clients or external sources –

The study described within this document is objective and independent and Veridian inSight has no stake in the study outcomes.

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Background



Context

- Health and medical websites are among the most popular sites on the Internet today¹
- Over 70% of adults have made a medical decision after consulting a health website²
- Over 1/3 of adults have only basic or below basic health literacy levels, that is, they struggle to comprehend basic medical or health information³
- In our experience, many medical websites have room for improvement⁴

1. Kutner, M., Greenberg, E., Yin, J. & Paulsen, C. (2006). *The health literacy of America's adults: Results from the 2003 National Assessment of Adult Literacy* (NCES 2006-483). U.S. Department of Education. Washington, DC: National Center for Education Statistics. [PDF version](#)
2. Paulsen, C.A., Leclerc, K. & Goff, D. (2004). Usability of health Web sites: What have we learned? *Proceedings of the 2004 Usability Professionals' Association Conference*, Minneapolis, MN. [PDF version](#)
3. Taylor, H. Explosive growth of "cyberchondriacs" online. Available at: http://www.harrisinteractive.com/harris_poll/printerfriend/index.asp?PID=229. Accessed November 5, 2003.
4. Fox, S. & Rainie, L. (2000). *The online health care revolution: How the Web helps Americans take better care of themselves*. Washington, DC: Pew Charitable Trusts.



Study Purpose

- Because of the popularity of medical websites, we were interested in performing an independent, expert review of those sites that were designed to provide information for the most commonly prescribed drugs.

Drug	Company	2007 Revenue ^a
Lipitor	Pfizer	\$8.1B
Nexium	AstraZeneca	\$5.5B
Advair Diskus	GlaxoSmithKline	\$4.3B
Plavix	Sanofi Aventis/Bristol-Myers Squib	\$3.9B

^aSource: IMS Health, IMS National Sales Perspectives . Cited in Frederick, J. (2009, January 19). Seeking solutions as sluggish Rx sales continue. *Drug Store News*, 31(1), 23-24.



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What We Did



Methodology

- We evaluated four websites that were designed to provide patient information for the following drugs:
 - ▣ Lipitor
 - ▣ Nexium
 - ▣ Advair Diskus (Asthma)
 - ▣ Plavix



The Websites We Studied

Lipitor

LIPITOR
atorvastatin calcium
tablets

Search this site

High Cholesterol and Heart Disease
What Is High Cholesterol?
Heart Disease Risk Factors
Cholesterol Treatment Options

About LIPITOR
How LIPITOR Compares
What LIPITOR Users Should Know About Generics
Benefits of LIPITOR
How LIPITOR Works to Treat High Cholesterol
LIPITOR Side Effects
Research on LIPITOR
Staying on LIPITOR
LIPITOR Patient Experiences
Tell Your Story

I was caught off-guard.
A heart attack at 53.

Steve A.
New York, NY

hear my story ▶

Watch John E.'s story ▶ Click here to share your wake-up call ▶

Please see Important Safety Information below. Real patients featured. Individual results may vary.*

Recently diagnosed with high cholesterol? Or, managing your cholesterol for a while?

<http://www.lipitor.com/content/index.jsp>
Accessed 3/2/09

Nexium

For Health Care Professionals | Important Safety Information | AstraZeneca Web Sites Search

Nexium.
(esomeprazole magnesium)

AstraZeneca

- Home
- About NEXIUM
- Talking With Your Doctor
- About Acid Reflux Disease
- Living Better With Acid Reflux Disease
- Tools & Resources
- Real Patient Stories
- NEXIUM for Children Ages 1 to 17 Years

Discover NEXIUM—The Purple Pill™ That Offers 24-Hour Heartburn Relief

If you have persistent heartburn from acid reflux disease, discover how one prescription NEXIUM pill a day can help you find relief for your symptoms. NEXIUM can also heal possible damage caused by acid reflux disease. [Talk to your doctor](#) to see if NEXIUM is right for you. Your results may vary.

[Learn more about NEXIUM.](#)

Save up to \$30 a month on NEXIUM*

Sign up for the Purple Plus™ Savings Card. Tools are available to help you manage your heartburn symptoms, plus you may get savings.

Purple Plus™ Savings Card

See how the Healing Purple Pill works.
NEXIUM heals possible damage from acid reflux disease.

[LEARN MORE](#)

[REGISTER NOW](#)

AZ & me
AstraZeneca
Prescription Savings programs

*Some restrictions apply.

<http://www.purplepill.com/>
Accessed 3/2/09



The Websites We Studied

Advair Diskus (asthma)

The screenshot shows the Advair Diskus website for asthma. At the top, it says "ADVAIR DISKUS[®] 100/50 (fluticasone propionate 100 mcg and salmeterol 50 mcg inhalation powder)". Below this is a navigation bar with "Site Map | Glossary | Important Information About ADVAIR" and a search box. The main heading is "ADVAIR[®] for Asthma" with a link "Go to ADVAIR for COPD >". A sidebar on the left lists "About ADVAIR" (Learn About ADVAIR, If You Are Taking ADVAIR, Coupons & Special Offers) and "About Asthma" (Understand Asthma, Living With Asthma, Kids With Asthma). The main content area features the question "Is there more you can do to help prevent asthma symptoms?" followed by text explaining that unlike most controllers, Advair treats both airway constriction and inflammation. Below this are three promotional boxes: "ADVAIR DISKUS is convenient to use.", "Special Offers" (Sign up for savings! on ADVAIR and more.), and "Help prevent asthma symptoms." (Find out what makes ADVAIR).

<http://www.advair.com/asthma/asthma.html>
Accessed 3/2/09

Plavix

The screenshot shows the Plavix website. At the top, it says "Plavix (clopidogrel bisulfate) 75mg tablets". Below this is a navigation bar with "Glossary" and a search box. The main heading is "A tiny clot can be a real danger. Help fight back with PLAVIX." with the note "For U.S. Residents Only". A sidebar on the left lists various conditions: Learn More About PLAVIX, Heart Attack, Stroke, Peripheral Artery Disease (P.A.D.), Acute Coronary Syndrome (ACS), Already Taking PLAVIX?, Helpful Tips, Product Information, and For Health-care Professionals. The main content area features text explaining that clots in the blood cause more than 90% of heart attacks and more than 85% of strokes. Below this is a video player with the text "Click here to view animation". At the bottom, there are two sections: "Get your FREE Information Kit" (Take steps to help protect yourself. Get our free booklet, medicine guide, and more.) and "PLAVIX and Aspirin" (PLAVIX, taken with aspirin and your other heart medicines, can add protection if you've been).

<http://www.plavix.com/>
Accessed 3/2/09



Methodology

- Two website usability experts reviewed the four websites independently
- The experts reviewed the four sites following a standardized research protocol
- The sites were evaluated against a set of more than 100 website design heuristics (commonly accepted practices within the field)
- After reviewing the sites, the two experts convened to come to consensus on major usability issues



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Results



Results

- We compared the websites on five (5) key factors:
 - ▣ **Look and feel:** How appealing are the websites? Do they appear credible and professional?
 - ▣ **Navigation:** Is it clear to users how to move around within the websites and find the information they need?
 - ▣ **Content:** Is the content (text) written in a way that will be understood by a majority of the patients who may use the sites?
 - ▣ **Information architecture:** Are the sites well-organized? Is it easy for users to locate what they need?
 - ▣ **Support:** If users cannot find what they need, is it clear how they can get help?



Look and Feel



All of the websites offered professional, credible-looking presentations.



The sites relied on color schemes that users typically associate with health-related websites (e.g., purples and blues).



The sites used images sparingly and only to demonstrate key concepts or offer images of the products.



The left navigation bar on the Lipitor and Plavix websites relied on a color contrast that may be difficult for users with different types of color blindness to read (the contrast ratios should be higher).



All of the websites contained pages that were too crowded with information, making them difficult to read.



Usability Strength



Usability Weakness



Navigation



All of the websites used familiar and effective left navigation menus.



The Nexium website used effective anchor links or a table of contents at the top of long web pages to help users navigate quickly.



When users navigated from the Advair Diskus homepage to another page, there was no efficient way to get back to the homepage.



The Lipitor website contained some long pages that could benefit from the use of jump links or tables of contents at the top of the pages.



Usability Strength



Usability Weakness



Content



The websites provided content that should answer many of the most common types of patient questions.



The websites all used legal and medical terminology that may be difficult for most users to comprehend.



Most of the content on the websites was written at a high school reading level which is far too high for the average US adult.



While the Advair website provided helpful tooltips for users to explain medical words, people who use screen readers were not able to see these definitions.



Usability Strength



Usability Weakness



Information Architecture



All of the websites downplayed “Important Information” by placing it very low on the home pages, below the section of the page that is visible without scrolling (“fold”). Moreover, on the Lipitor site, the information was presented as “grayed-out” instead of highlighted as important information usually is.



Three of the four websites (Lipitor, Nexium, Advair) did not offer key information within the main website pages, but instead provided key information only in their PDF versions of the typical medication inserts.



Such PDFs are difficult to read on-screen: the typeface is too small, the column format hinders reading, and the pages are dense and hard to scan.



Plavix handled the important information differently: Instead of providing only a PDF, the content was converted to HTML and housed within the regular website. Thus, the content is easier to read: It appears in one column, the font is easy to read, and users can navigate to the information they need by using the table of contents at the top.



Usability Strength



Usability Weakness



Support



The Lipitor and Plavix websites provided users with an option to increase the size of the typeface on the page, which will support users with low vision.



The websites did not provide obvious ways for users who might have trouble using the sites to seek help.



Usability Strength



Usability Weakness



Conclusions

- The websites of the four top-selling drugs can be enhanced to improve their usability and accessibility.
- Important content, or links to such content, should be placed in more prominent locations.
- Important medical and legal language should be simplified so that the average US adult can understand it (written at a sixth grade reading level).
- Navigational aids should be used to help users better navigate long or content-heavy pages.



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Who We Are



Who We Are

- Veridian inSight is a small, woman-owned, business enterprise (WBE).
- Staff members have over 20 years of practical, hands-on experience.
- Our team consists of website usability and health information design experts.



Who We Are, continued

- Our founder, **Dr. Christine Andrews Paulsen**, has been practicing behavioral research since 1990. She has worked for the Institute for Social Analysis, Walcoff & Associates, and was the Director of the Human Factors Research and Design group at American Institutes for Research. Dr. Paulsen started **Veridian inSight** in 2008. Dr. Paulsen has a B.A. in psychology from Clark University, a M.A. in Applied Social Psychology from the George Washington University, and a Ph.D. from the University of Pennsylvania in evaluation and measurement. Over the years, Dr. Paulsen's work has spanned a wide range of fields, including health, education, and consumer products.
- **Chris Bransfield** brings extensive experience in human factors research and design, usability and focus group testing, project management, and communication research to **Veridian inSight**. Working with both private and public center clients, Chris provides insight into user experience and perspective as it relates to technological and product development and enhancement. Chris holds a B.A. from Wheaton College and will complete his M.S. in professional communication from Clark University in May of 2009.



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