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G R O U P SM

Enhancing Human Health

Effectively Delivering Health Information Online

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Introduction

- Who we are
 - CDC National Prevention Information Network (NPIN)
 - Constella Health Sciences
- What we'll talk about
 - A systematic process for evaluating Web sites
 - How this process was applied to the CDC NPIN Web site



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Web Site Evaluation



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Why Web Site Evaluation Matters

- Costs of poor design
 - Client / user satisfaction
 - Funding
 - Lack of compliance with guidelines and regulations
- Benefits of good design
 - Increased productivity
 - Decreased training costs and support requests
 - Increased guideline and regulatory compliance



What You Are Evaluating

- Adoption
 - Are people using your site?
- Usability
 - Are people able to navigate your site?
- Effectiveness
 - Are people able to complete tasks on your site?

The Evaluation Plan



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The 7-Steps of Web Site Evaluation

- Collect unobtrusive measures
- Conduct user surveys
- Conduct a heuristic assessment
- Consider preliminary site revisions
- Perform a task analysis
- Conduct a usability test
- Consider final site revisions



1. Collect Unobtrusive Measures

A 7-Step Plan

- What are they?
 - Data not obtained through direct user contact
- Where do I find them?
 - Site usage statistics
 - Information requests received through non-Web channels.

2. Conduct User Surveys

A 7-Step Plan

- What are they?
 - Tool for gathering qualitative and quantitative data directly from Web site users
 - Can be formal or informal
- What to ask?
 - Best kept short; limit demographic data
 - Focus on problem-solving
 - Usability recruiting
- How to deliver?

3. Conduct Heuristic Assessment

A 7-Step Plan

Characteristic	Dimensions
Legibility	Contrast
Display element arrangement	<ul style="list-style-type: none"> • Information structure • Grouping • Relative importance • Consistency and predictability
Text readability	<ul style="list-style-type: none"> • Typeface choice • Type size • Text enhancements • Alignment • Line length • Headings
Picture and illustration use	<ul style="list-style-type: none"> • Non-decorative use • Presence of supplemental text
Animation use	<ul style="list-style-type: none"> • Attract viewer's attention • Convey change over time

Table adapted from Williams (2000)



4. Consider Preliminary Revisions

A 7-Step Plan

- Why now?
- What are my choices?
 - Implement changes to existing site
 - Focus efforts on redesign

5. Perform a Task Analysis

A 7-Step Plan

- Method of preparing for usability testing
- Serves as a pre-test of the usability test
- End-user perspective is critical

6. Conduct Usability Testing

A 7-Step Plan

- Usability: *The degree to which design and functionality don't interfere with content*
 - Observation
 - Think-aloud protocol
 - Quantifiable surveys
- Recruitment

7. Consider Final Site Revisions

A 7-Step Plan

- Consider everything
 - Usage statistics
 - User feedback
 - Design principles
 - Usability results
- Keep it in perspective
 - You're the expert on your client and your audience

Putting the Plan into Action



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Defining CDC NPIN

- What is CDC NPIN?
 - Information and referral service for organizations and individuals working to prevent HIV/AIDS, STDs, and TB
- What is the CDC NPIN Web site?
 - Features the nation's largest collection of information and resources on HIV/AIDS, STD, and TB prevention
 - Supports external and staff users



CDC National Prevention Information Network
A Service of the National Center for HIV, STD, and TB Prevention

Redesigning CDC NPIN

- Why was a redesign necessary?
 - Time for change
 - New functionality needed
- Why this approach?
 - Apply a systematic approach to ensure successful delivery of time-sensitive health information



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Redesigning CDC NPIN

Applying the 7-Step Plan

Step	Our Approach
<ul style="list-style-type: none">• Compile unobtrusive measures	<ul style="list-style-type: none">• Review site usage statistics• Compare information request sources
<ul style="list-style-type: none">• Conduct user surveys	<ul style="list-style-type: none">• Evaluate the responses to the survey embedded in the Web site
<ul style="list-style-type: none">• Conduct heuristic assessment	<ul style="list-style-type: none">• Ensure objectivity by contracting with an outside vendor to conduct this assessment



Redesigning NPIN

Applying the 7-Step Plan

Step	Our Approach
<ul style="list-style-type: none">• Consider site revisions	<ul style="list-style-type: none">• Implement minimal development effort but high user impact, such as labeling and help text
<ul style="list-style-type: none">• Conduct task analysis	<ul style="list-style-type: none">• Use team approach to develop tasks that reflect user activity
<ul style="list-style-type: none">• Conduct usability testing	<ul style="list-style-type: none">• Recruit representative NPIN users• Conduct in-person and remote testing• Compile and analyze findings



Redesigning NPIN

Applying the 7-Step Plan

Step	Our Approach
<ul style="list-style-type: none">• Consider final site recommendations	<ul style="list-style-type: none">• Evaluate recommendations in context of:<ul style="list-style-type: none">– What our client wants– What our audiences need• Create a site revision plan



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The Redesigned NPIN Site

The screenshot shows the redesigned NPIN website interface. At the top, there are navigation tabs for HIV/AIDS Prevention, STD Prevention, TB Prevention, and The Connections, along with a Quick Search box. Below this is a secondary navigation bar with links for Database, About Us, NPIN Services, News, Publications, Research, Topics, and Links. The main header reads 'The CDC National Prevention Information Network' with the date 'April 18, 2003'. The central content area features a large red star graphic and a welcome message from the CDC. A 'Spotlight On:' section highlights several key events and initiatives, including National HIV Testing Day and a new CDC initiative for HIV testing. A 'Daily News' sidebar on the right lists various articles and conferences. The footer includes a phone number (1-800-458-5231) and a note that the site is a service of the CDC National Center for HIV, STD, and TB Prevention.

**Launched:
April 2003**



CDC National Prevention Information Network
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The Evaluation Continues

Additional revisions to the site are planned based on:

- External usability review
 - Confirmed 90% of redesign decisions
 - Revealed issues with 2 key site labels
- Unobtrusive measures
 - Increased usage of Spanish-language pages
- User feedback
 - Informal networking confirmed search strategies



Final Thoughts on Web Site Evaluations



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Limitations of Web Site Evaluation

- Feedback sources may not be representative
 - Target surveys and pre-screen usability participants
- Misinterpretation of participant comments
 - Refer to videotapes
- Staff ownership and resistance to change
 - Consider outside involvement
- Usable does not guarantee use
 - Promotion and outreach are essential

To Learn More...

- Visit the CDC NPIN Web site: www.cdcpin.org
- Visit the Constella Health Sciences Web site: www.constellagroup.com
- Visit usability Web sites, such as:
 - Jakob Nielsen's Usability Web site: www.useit.com
 - NCI Usability Web site: www.usability.gov
- Review other references:
 - Nielsen, J. (1993). *Usability Engineering*. San Diego, CA.
 - Williams, T.R. (2000). Guidelines for designing and evaluating the display of information on the web. *Technical Communication*, 47(3), 383-396.
 - Zimmerman, D. (2001). Lectures in JT661: Information Design. Colorado State University, Spring 2001.

