



NCHS Website Modernization Project

Assessment Findings and Implementation Priorities

Dagny Olivares, MPA
NCHS Associate Director for Communication

NCHS Board of Scientific Counselors Meeting
October 24, 2022

Agenda

- Project background
- Assessment and analysis findings
- Recommendations and year-2 priorities
- Discussion

Project Background

Current NCHS Website

- Purpose
 - Primary digital access point to the nation's health statistics
- Current state
 - Disconnected information
 - Obsolete formats
 - Data and resources are difficult to discover, access, and navigate

The screenshot shows the homepage of the National Center for Health Statistics (NCHS). At the top left is the CDC logo with the text "Centers for Disease Control and Prevention" and "CDC 24/7. Saving Lives. Protecting People™". To the right is a search bar with "Search NCHS" and a magnifying glass icon, and a link for "Advanced Search". Below the search bar is a blue header with "National Center for Health Statistics" and social media icons for Facebook, Twitter, LinkedIn, and YouTube. The main content area features a large banner for "Coronavirus Disease 2019 (COVID-19)" with a 3D virus model and a "Learn more" button. Below the banner are three featured sections: "National Health Interview Survey" (with a "2020 NHIS Data Files Now Available" announcement), "NCHS/AcademyHealth Data Visualization Challenge", and "Health, United States, 2019". At the bottom is a navigation menu with "Data Collection Systems" selected, and other options: "Programs", "Topics", "Data and Tools", "Publications", "News and Events", and "Visual Gallery".

Website Modernization Project

- Led by the NCHS Office of Information Services
- Supported with DMI funds
- Planned as a 2-year project
- Partnered with the Geospatial Research, Analysis, and Services Program (GRASP) in ATSDR
- Managed through contracts

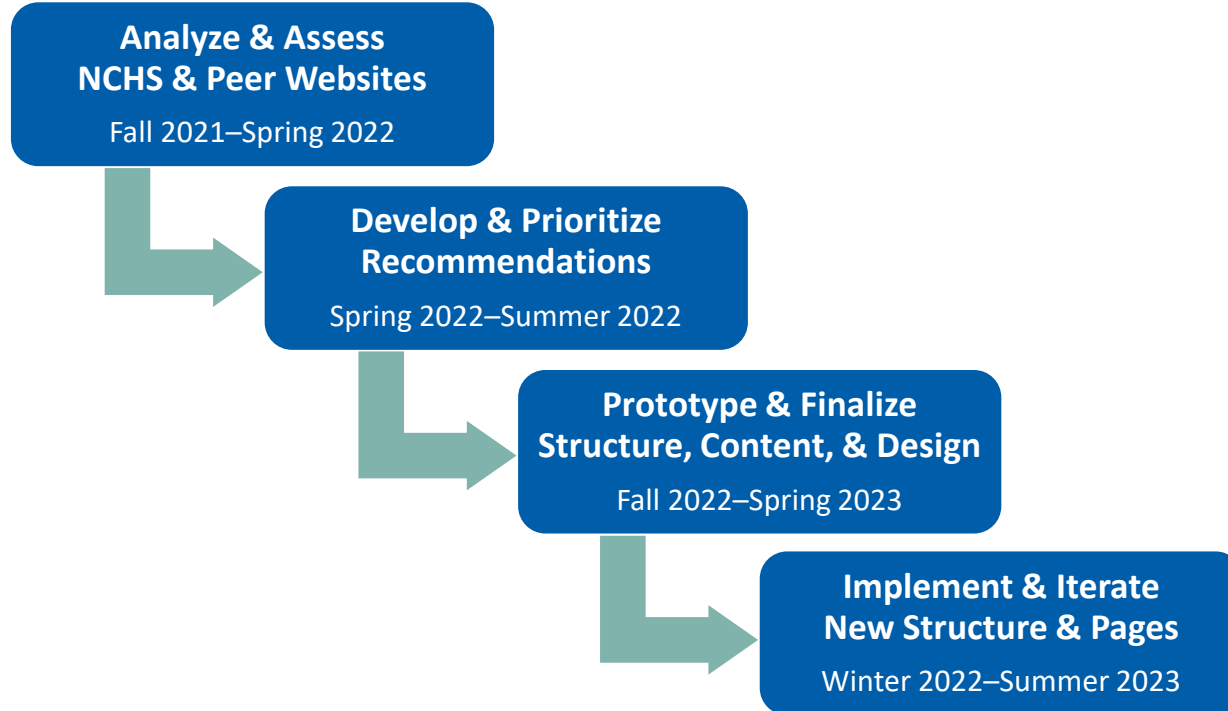
Modernization Objectives

- Focus on digital and data-driven formats
- Improve navigation and organization
- Tailor site experience for all user types and proficiencies
- Deliver relevant statistics from multiple sources on a wide range of topics
- Ensure clear communication using plain language and appealing content
- Increase visibility of tools and resources for data collection and research
- Identify scalable platforms for data storage and transfer

Major Project Activities

- Analyze current state and conduct environmental assessment
- Provide digital strategy, recommendations, and implementation plan
- Develop internal processes, systems, and trainings to support website
- Create content, graphics, and other digital assets for the website
- Build and launch website and supporting digital assets
- Share and promote website
- Conduct user testing and update website based on findings

Years 1 and 2



Assessment and Analysis Findings

Initial Analysis and Assessment

- Analysis of website heuristics, content, user experience, look and feel, structure, data presentation, functionality, and search engine optimization
- Review of website survey results, metrics, and other existing inputs
- Conversations with senior staff
- Focus groups with program contacts
- Interviews with contacts for key NCHS activities and CDC programs
- Assessments of external benchmarking sites with 3 in-depth follow-ups

Key Findings: Content Review

Legend

0

= no

1

= somewhat/sometimes/infrequent

2

= yes/mostly always

Functional Area	Score	Summary
Originality and comprehensiveness	1	Original content sufficiently conveys information but is often outside the accepted range of word count.
Relevancy	1	Nearly 30% of web content is outdated or will become outdated in the next 6 months.
Readability	0	Nearly 80% of content is written at a high school or higher level.
Grammar and Mechanics	2	Overall, there are no mechanical errors or grammar mistakes.
Word/Image Comparison	0	Approximately 75% of the web pages have zero imagery or graphics.
Headlines	2	Most of the headlines accurately describe the page content.
URL	1	About 75% of URLs are long and not easy to remember. More than 50% of URLs match the web content.
Meta Descriptions	1	Meta descriptions are accurate but do not consistently use key words or language to improve Google SEO rankings or optimization.

Key Findings: User Experience and User Interface

- Wide variations in user experiences, look and feel, inconsistent metadata, structures, SEO practices, and writing styles
 - No clear standardization or consistency (siloes content production)
- Relevance and meaning of data unclear
 - Content lacks (or doesn't highlight) expert analysis to put data in context
 - Organization inhibits discovery of new knowledge, insights from other sources
 - Presentation and quantity obscures accuracy and currency of different data
- Lack of human-centered design based on user needs and behavior
 - Users unable to find information, move within the site, form a mental model
- Inconsistent use of digital best practices and proven strategies
 - Current site reflects resource constraints on implementation and sustainability

Key Findings: Internal Interviews and Focus Groups

- Need for content driven by a diverse set of user requirements
 - Most current web content is written for a highly technical audience
- Opportunities to increase data visualization
 - Resource limitations necessitate strategic solutions (“more bang for our buck”)
- Points of tension and challenges
 - Scoping website topics when our data covers basically every health topic
 - Gaining cross-program consensus for topics and content
 - Maintaining timely information without a single programmatic home
 - Ensuring users find current information
 - Archiving or removing outdated content

Key Findings: Internal Environmental Assessment

- Websites: NCHS, COVID, NCHHSTP
 - Consistent branding (colors, icons, images) and user-driven organization
 - Data provision/display is challenging outside of applications, but improving
 - Metrics can inform continuous progress
- Applications: WONDER, WISQARS
 - Require more resources (funding, people, time) than this project has
 - Would require several years to develop
 - Would require increase of resources beyond the current contract's funding level
 - Current infrastructure and shared services can meet many NCHS needs

These criteria are unweighted.	1. Website Structure	2. Look/Feel	3. Data Presentation	4. Content	5. Functionality	Overall Average
National Center for Health Statistics	2	2	3	0	4	2.75
National Center for HIV, Viral Hepatitis, STD, and TB Prevention	2	2	3	0	4	2.75
CDC COVID-19	5	5	5	0	4	4.75
Likert Scale from 1 (bad)–5 (good)						

Key Findings: External Environmental Assessment

- Website scan: 12 statistical agencies
 - High scores for
 - Strong, intuitive main navigation
 - Strategic design on home page
 - Topic landing pages, overview, articles,
 - Different paths for different audiences
- Interviews: Census, BEA, NCSES
 - Changing audiences had new needs
 - Longer timelines for transformation
 - New staff positions for key roles
 - Condensed, topic-driven navigation
 - User experience monitored regularly to drive improvements and strategy

These criteria are unweighted.	1. Website Structure	2. Look/Feel	3. Data Presentation	4. Content	5. Functionality	Overall Average
Bureau of Economic Analysis (BEA)	4	4	3	5	4	4.00
Bureau of Justice Statistics (BJA)	4	4	3	3	4	3.60
Bureau of Labor Statistics (BLA)	3	3	3	2.5	4	3.10
Bureau of Transportation Statistics (BTS)	4	3	3	3.33	4	3.47
Economic Research Service (ERS)	3	3	4	3	4	3.40
National Agricultural Statistics Service (NASS)	2	2	3	3	4	2.80
National Center for Education Statistics (NCES)	3	3	3	3	4	3.20
National Center for Science and Engineering Statistics (NCSES)	5	5	4	4	4	4.40
Office of Research, Evaluation, and Statistics (SSA)	3	2	2	2	4	2.60
Statistics of Income (SOI)	3	2	2	2.5	4	2.70
U.S. Census Bureau (Census)	4	3	4	5	4	4.00
U.S. Energy Information Administration (EIA)	4	3	4	3.6	4	3.72

Likert Scale from 1 (bad)–5 (good)

Assessment Conclusions: Strengths and Gaps

■ Strengths

- Highly functional; limited errors in terms of functionality
- Data sets are available for public access or through the RDC for sensitive data
- Existing shared web, data, and visualization services (OADC, data.cdc.gov, EDAV) mean fewer costly, maintenance-intense custom solutions needed
- CDC content management system performs well and adding new capabilities

■ Gaps

- Content doesn't align with the needs of expanding audiences and new users
- Unclear information doesn't leverage digital writing and design best practices
- User Experience is not intuitive, consistent, or easy to search
- Inconsistent quality control without standardized procedures and training

Assessment Conclusions: Opportunities

- **Changes that can yield the most benefit**
 - Improve content **readability**
 - Develop **more intuitive site organization**
 - Increase **data storytelling**
 - Leverage prebuilt data visualizations
 - Address **new and evolving personas**
 - Provide more tailored user journeys
 - Implement **SEO best practices**
 - Use meta data, URL length, page domain names, etc. more appropriately
 - Present information through a **health equity lens**
 - Develop **workflow dashboards**

Recommendations and Year-2 Priorities

Implementation Priorities for Aug. 2023 (slide 1 of 4)

- Overhaul Website Information Architecture, Navigation, and Taxonomy
 - Create more data-driven, topic-based, audience-focused IA and navigation
 - Develop clear, consistent, validated, and optimized site-wide structure
 - Implement consistent site and assign topics and tags to scientific content
 - Assign topics and tags to scientific content (reports, dashboards, etc.)
 - *Project scope does not include IA within applications*
- Develop Comprehensive Content Strategy
 - Define content development ownership and roles
 - Design and document content workflows
 - Produce and document guidelines, standards, policies, procedures
 - Support trainings and TA for key NCHS stakeholders on content governance

Implementation Priorities for Aug. 2023 (2 of 4)

- Improve User Experience
 - Redesign homepage and landing pages to focus on NCHS impact; our expertise, data, and products; and the high value they provide
 - Prioritize clarity over complexity, reduce distraction, and provide clear and simple meaning
- Establish NCHS Digital Communication Strategist Role
 - Oversees content strategy development, implementation, and maintenance
 - Collaborates with programs to develop web strategy and content
 - Ensures consistency and fidelity to content strategy and adherence to web communication best practices
 - Provides digital guidance and consultation to NCHS programs

Implementation Priorities for Aug. 2023 (3 of 4)

- Develop an NCHS Digital Style Guide
 - Create a center-wide branding guide with sub-variations for key programs
 - Include best practices and guidance for visual graphics and media
- Increase Use of Visuals and Graphics
 - Leverage to increase user understanding, engagement time, and satisfaction
 - Use images, diagrams, or multimedia to visually represent ideas in the content
- Follow Clear Communication Principles
 - Translate technical content to increase user understanding and meet federal plain language requirements
 - Implement guidance and protocols to ensure use of best practices in digital content development

Implementation Priorities for Aug. 2023 (4 of 4)

- Establish Website Management Processes
 - Develop and implement collaboration framework and governance processes
 - Implement tools to operationalize content governance
- Implement Digital First Principles
 - Leverage off-the-shelf functionality of CDC's web content management system
 - Increase the use of digital first formats for NCHS data, reports, and resources
 - Identify technology solution to facilitate transition of scientific reports publications from PDF to HTML (or HTML-like) format
 - Establish processes and protocols to support the creation and release of digital first products

Additional Recommendations

Aspects of these recommendations may be completed if time allows

- Document communication standards and framework for data visualizations
- Increase use of data.cdc.gov to host and catalogue data sets
- Leverage shared services for efficiency and cost effectiveness
- Institute digital KPIs and ongoing metrics analysis rhythm
- Modernize and optimize FastStats
- Develop an SEO (search engine optimization) plan
- Create NCHS website help section
- Produce a series of short videos to assist with finding and using data
- Integrate the NCHS blog into the main website
- Use social media strategically and systematically

Discussion

Discussion Topics

- How do you use the NCHS website (www.cdc.gov/nchs)?
 - Why do you visit the site?
 - How frequently do you visit the site?
 - Do you search for what you need, use bookmarks, navigate from main pages?
- How would you define success for this NCHS website?
 - What should people be able to do when they visit the site?
 - What 1–2 tasks should a new user be able to accomplish?
- Would you be willing to participate in or give feedback on specific modernization activities in 2023?
 - Examples: usability tests, use cases, user personas
 - Please email Rebecca if you are willing to participate or give feedback

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

