CDC - CASE STUDY

U.S. Centers For Disease Control and Prevention

https://www.cdc.gov/

Andre Green

Introduction:

As a multidisciplinary designer and digital strategist, I thrive on translating complex challenges into impactful creative solutions across a spectrum of roles—from Product Designer and UX/UI Designer to Graphic Designer, Motion Graphics Artist, Video Editor, Web Developer, and Project Manager. My career reflects a passion for crafting digital experiences that are not only visually compelling but strategically aligned with organizational goals and user needs.

During my tenure supporting the CDC, I've worn many hats, contributing to diverse projects across multiple departments, each demanding a unique blend of skills. As a Graphic Designer and Motion Graphics Artist, I've designed high-volume visual assets for public health campaigns, social media engagement, and educational materials, blending data visualization with storytelling to make critical health information accessible and engaging. My expertise as a Video Editor and Motion Graphics professional has enabled me to produce dynamic animations, explainer videos, and promotional content, elevating the CDC's communication impact across digital channels.

In my capacity as a Product Designer and UX/UI professional, I've developed wireframes, user flows, and high-fidelity prototypes to modernize internal systems and public-facing platforms, ensuring they meet usability, accessibility, and branding standards. As a Web Developer, I've implemented and maintained secure environments, optimized performance, and built reusable component libraries to streamline digital workflows. My role as a Project Manager has seen me leading cross-functional teams, aligning stakeholders, and delivering complex projects under tight deadlines while upholding meticulous quality standards.

Across each endeavor, my approach remains rooted in human-centered design, data-driven decision-making, and the belief that exceptional design bridges aesthetics with functionality. This case study showcases the culmination of my multidisciplinary experience, reflecting my ability to innovate, adapt, and deliver solutions that empower users and drive meaningful outcomes.
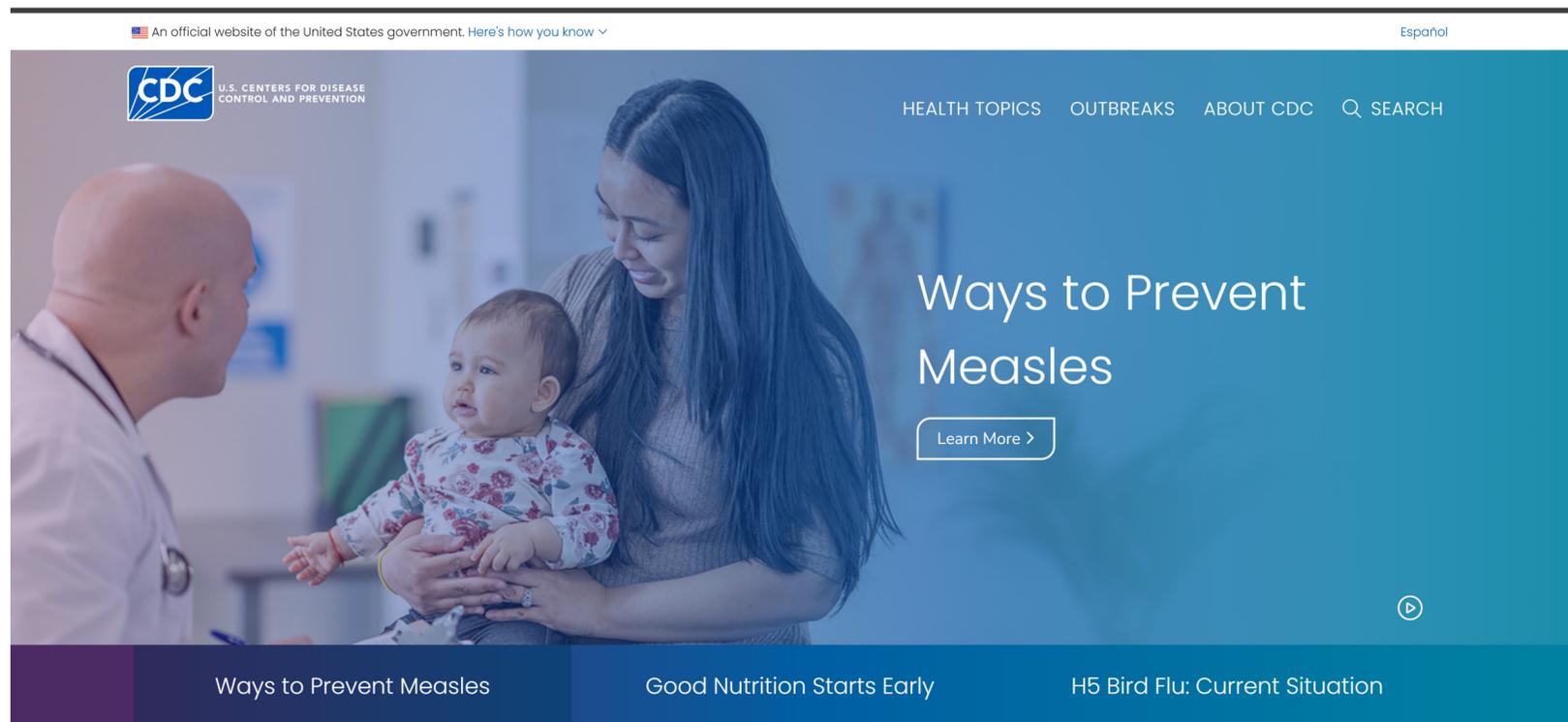
[Project Overview]

About the CDC Digital Communications Projects
The CDC manages a diverse ecosystem of digital platforms, internal portals, public-facing websites, and health communication campaigns that serve millions of users. These initiatives require innovative design solutions to communicate complex health information clearly and effectively across multiple channels.

The Challenge
- Outdated user interfaces and inconsistent branding across various CDC websites and portals.
- Low engagement with health content due to dense layouts and overwhelming medial jargon.
- The need for engaging multimedia assets - including motion graphics, videos, and social media content to support public health campaigns.
- Complex content governance and decentralized teams requiring unified design systems and workflows.
- Critical requirement for WCAG 2.2 Level AA accessibility compliance across all digital products.
- Integration of modern development practices, like component libraries and scalable web architecture, into legacy systems.

My Role
Across multiple engagements with the CDC, I served in several key capacities:
- **Product Designer / UX/UI Designer**
  - Conducted user research, journey mapping, and usability analysis to inform design decisions.
  - Designed wireframes, prototypes, and high-fidelity UI for internal portals and public health websites.
  - Established accessible design systems to ensure consistency and compliance.
- **Graphic Designer / Motion Graphics Artist**
  - Created over 100+ visual assets for web, social media, and print, including infographics, data visualizations, and branded campaigns.
  - Produced motion graphics and video content to simplify complex health topics and enhance audience engagement.
- **Web Designer / Developer**
  - Developed and maintained WordPress sites and internal web environments.
  - Built reusable component libraries and optimized website performance and accessibility.
- **Project Manager / Team Leader**
  - Led multidisciplinary teams, coordinated with stakeholders across departments, and managed high-volume production pipelines.
  - Delivered projects under tight timelines while maintaining high quality and adherence to CDC standards.

Problem

The CDC, as the nation's leading public health authority, faces the monumental task of communicating timely, accurate, and actionable health information to diverse audiences ranging from healthcare professionals to everyday citizens. Despite its vital mission, many of the CDC's digital platforms and communication channels had become fragmented and outdated, both visually and functionally. Across multiple projects and departments, I observed numerous critical pain points:

Legacy websites and internal portals featured cluttered interfaces, dense medical language, and inconsistent branding, creating barriers for users trying to locate essential health information quickly. Mobile usability was often poor, making it difficult for users to access critical resources on the go—a significant problem during public health crises when time-sensitive updates were essential.

Engagement across social media and digital channels lagged, as static visuals and text-heavy materials struggled to capture public attention or effectively explain complex scientific concepts. Meanwhile, decentralized design efforts across various CDC departments led to inconsistencies in visual styles, governance practices, and user experience standards, undermining brand trust and complicating cross-departmental collaboration.

Adding to the urgency, all digital properties needed to adhere to strict accessibility standards (WCAG 2.2 Level AA) to ensure inclusivity and compliance with federal mandates. The scale and diversity of the CDC's content, combined with the ever-evolving demands of public health communication, highlighted the need for a cohesive, innovative approach to design, development, and project management to bring the organization's digital presence up to modern standards.
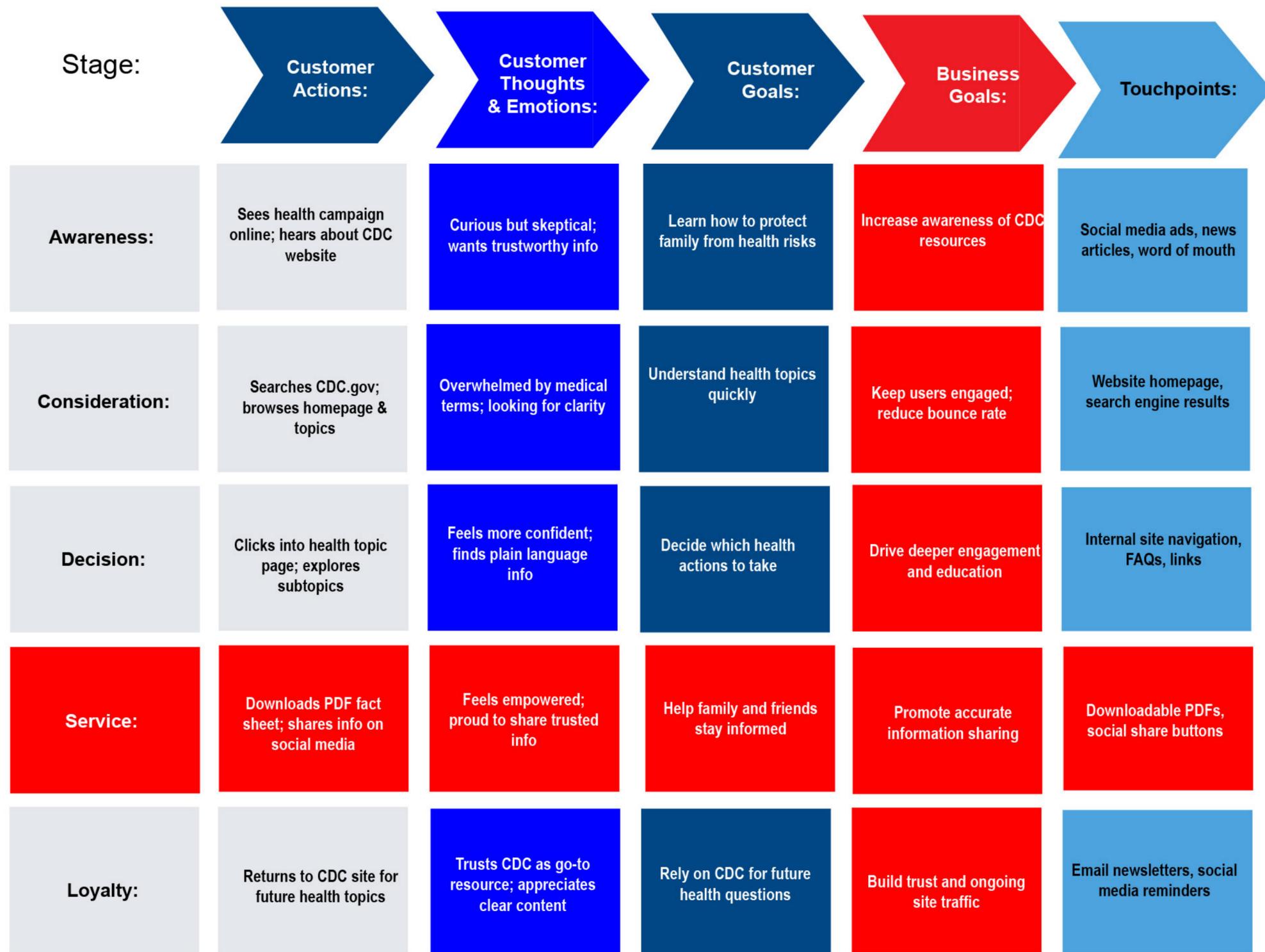
Intended Solution

My solution to these challenges was rooted in the belief that exceptional digital experiences are both human-centered and visually impactful. Drawing upon my diverse expertise as a Product Designer, UX/UI Designer, Graphic Designer, Motion Graphics Artist, Video Editor, Web Developer, and Project Manager, I set out to modernize CDC's digital communications ecosystem through a multidisciplinary approach.

I began with comprehensive user research, including stakeholder interviews, journey mapping, and usability analysis to identify key user pain points and clarify goals. As a Product Designer and UX/UI specialist, I redesigned digital interfaces with simplified layouts, intuitive navigation, and responsive design to improve usability across all devices. I prioritized clear, plain-language content and structured information architecture to help users quickly access vital health information without feeling overwhelmed.

As a Graphic Designer and Motion Graphics Artist, I developed dynamic visual assets—infographics, animated explainer videos, and engaging social media graphics—that transformed complex health topics into accessible, compelling narratives. These assets not only improved user understanding but also increased engagement on social platforms.

From a development perspective, I built reusable component libraries and design systems to ensure consistency and efficiency across CDC projects. This enabled decentralized teams to maintain unified branding while reducing production timelines and errors. As a Project Manager, I led cross-functional teams, managed tight timelines, and facilitated clear communication between stakeholders and technical teams, ensuring projects stayed aligned with both user needs and organizational goals.

Ultimately, my intended solution aimed to deliver a cohesive, modern, and accessible digital experience that empowered users, strengthened public trust, and supported the CDC's mission to safeguard public health.

Stage:	Customer Actions:	Customer Thoughts & Emotions:	Customer Goals:	Business Goals:	Touchpoints:
Awareness:	Sees health campaign online; hears about CDC website	Curious but skeptical; wants trustworthy info	Learn how to protect family from health risks	Increase awareness of CDC resources	Social media ads, news articles, word of mouth
Consideration:	Searches CDC.gov; browses homepage & topics	Overwhelmed by medical terms; looking for clarity	Understand health topics quickly	Keep users engaged; reduce bounce rate	Website homepage, search engine results
Decision:	Clicks into health topic page; explores subtopics	Feels more confident; finds plain language info	Decide which health actions to take	Drive deeper engagement and education	Internal site navigation, FAQs, links
Service:	Downloads PDF fact sheet; shares info on social media	Feels empowered; proud to share trusted info	Help family and friends stay informed	Promote accurate information sharing	Downloadable PDFs, social share buttons
Loyalty:	Returns to CDC site for future health topics	Trusts CDC as go-to resource; appreciates clear content	Rely on CDC for future health questions	Build trust and ongoing site traffic	Email newsletters, social media reminders

Journey Map

This journey map captures far more than steps on a digital path—it illuminates the emotional landscape and practical hurdles shaping how diverse audiences engage with the CDC's health information. As a multidisciplinary designer and strategist, I view each stage not merely as a touchpoint, but as a unique design challenge demanding empathy, creativity, and precision.

In the Awareness phase, the CDC faces intense competition for user attention amid a crowded digital space and evolving health crises. This makes it crucial to design bold, modern visuals and clear, human-centered messaging that immediately conveys trust and authority. As users move into Consideration, they often encounter dense scientific language and inconsistent navigation structures, underscoring the importance of clean layouts, simplified language, intuitive flows, and visual hierarchies that guide users with confidence.

From a project management and UX perspective, the Decision stage emerged as a critical bottleneck across multiple CDC projects. Here, users struggled with complex page structures, hidden calls-to-action, and accessibility barriers, particularly on mobile devices. My role was to unite stakeholders around the business and public health impact of streamlining digital experiences, advocating that usability and accessibility are not optional but essential.

In the Service and Loyalty phases, design had to evolve beyond information delivery toward fostering engagement and trust. Whether through engaging dashboards, interactive infographics, or motion graphics that simplify complex health topics, my goal was to create digital experiences that empower users, encourage repeated visits, and build lasting confidence in CDC resources.

This journey map became our north star—a shared blueprint bridging design, development, and public health objectives. It shaped priorities, influenced design decisions, and kept user needs and emotional contexts front and center. For the CDC, transforming this map into actionable solutions meant converting confusion into clarity, and public apprehension into informed, proactive engagement.

Personas

At the heart of every CDC digital initiative are the people it serves—each bringing unique stories, health concerns, and information needs. Throughout my projects supporting the CDC, our primary personas emerged from user interviews, analytics, and behavioral research, revealing a diverse spectrum of users navigating the complex landscape of public health information.

Stephen, 48, is a healthcare professional who needs authoritative, up-to-date guidelines for patient care. Time-constrained and detail-oriented, he demands a platform that delivers precise information quickly. His frustration lies in navigating dense government websites and deciphering jargon-heavy pages while caring for patients.

Jasmine, 29, is a new mother seeking reliable health information for her family. She primarily uses her phone to research topics late at night, juggling parenting and work. Her goal is to find clear, plain-language content that's easy to scan and understand, but she's often overwhelmed by cluttered layouts and medical terminology that leaves her feeling uncertain.
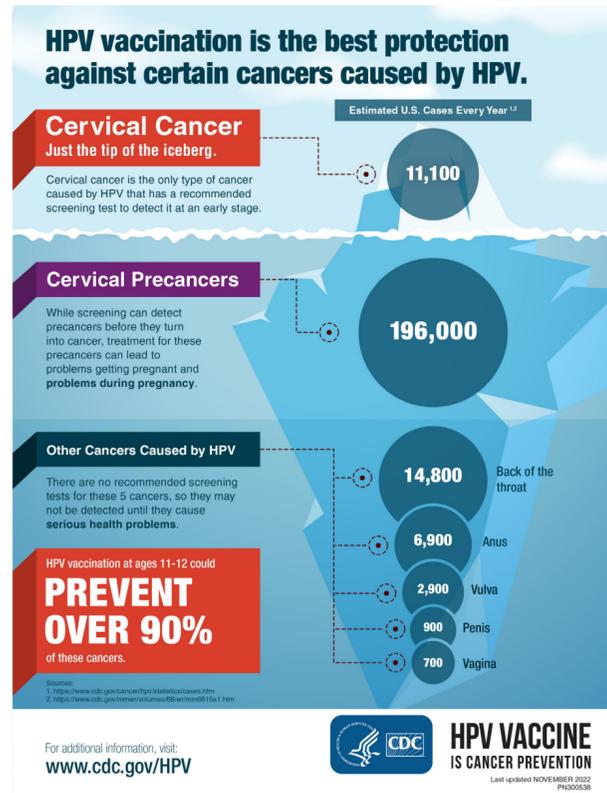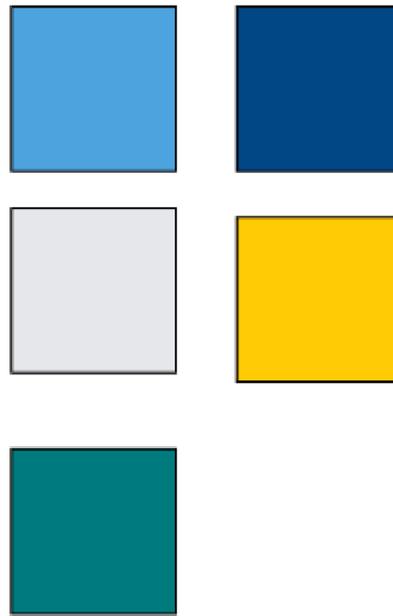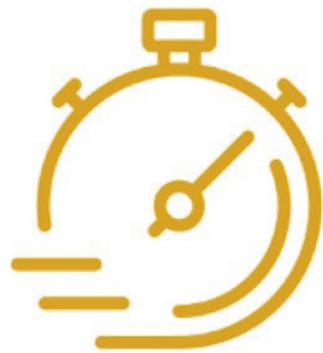
George, 62, represents older adults with lower digital confidence. Highly motivated to stay healthy, he's concerned about chronic conditions but is intimidated by complex navigation, inaccessible design, and long paragraphs of technical text. His goal is to learn about preventive care and wellness at his own pace, without feeling overwhelmed or excluded.

Designing with these personas in mind meant creating intuitive user flows, responsive layouts, and visually engaging interfaces tailored to different literacy levels, languages, and accessibility needs. As a multidisciplinary designer and project leader, I ensured that each touchpoint was not merely built for users—but built around them. These personas became our guiding compass, shaping every design decision and ensuring the CDC's digital resources truly served the diverse communities relying on them.

My Design Responses Across All User Groups:
- Simplified Complex Content: I transformed dense health information into plain-language content and visual summaries to help all users quickly grasp key messages.
- Mobile-First, Responsive Design: I designed mobile-friendly, intuitive interfaces to support both professionals and everyday users on the go.
- Visual Storytelling & Multimedia: I created motion graphics, videos, and social media assets to turn complex topics into engaging, accessible stories.
- Accessibility & Usability: I implemented WCAG 2.2 Level AA standards to ensure inclusive, easy-to-navigate experiences for all users.
- Consistent Design Systems: I built reusable components and unified design systems to maintain brand consistency and streamline production across CDC projects.

of anticipated actions and support state health response

PREPARE:
Build state capabilities

TRAIN:
Increase workforce capacity

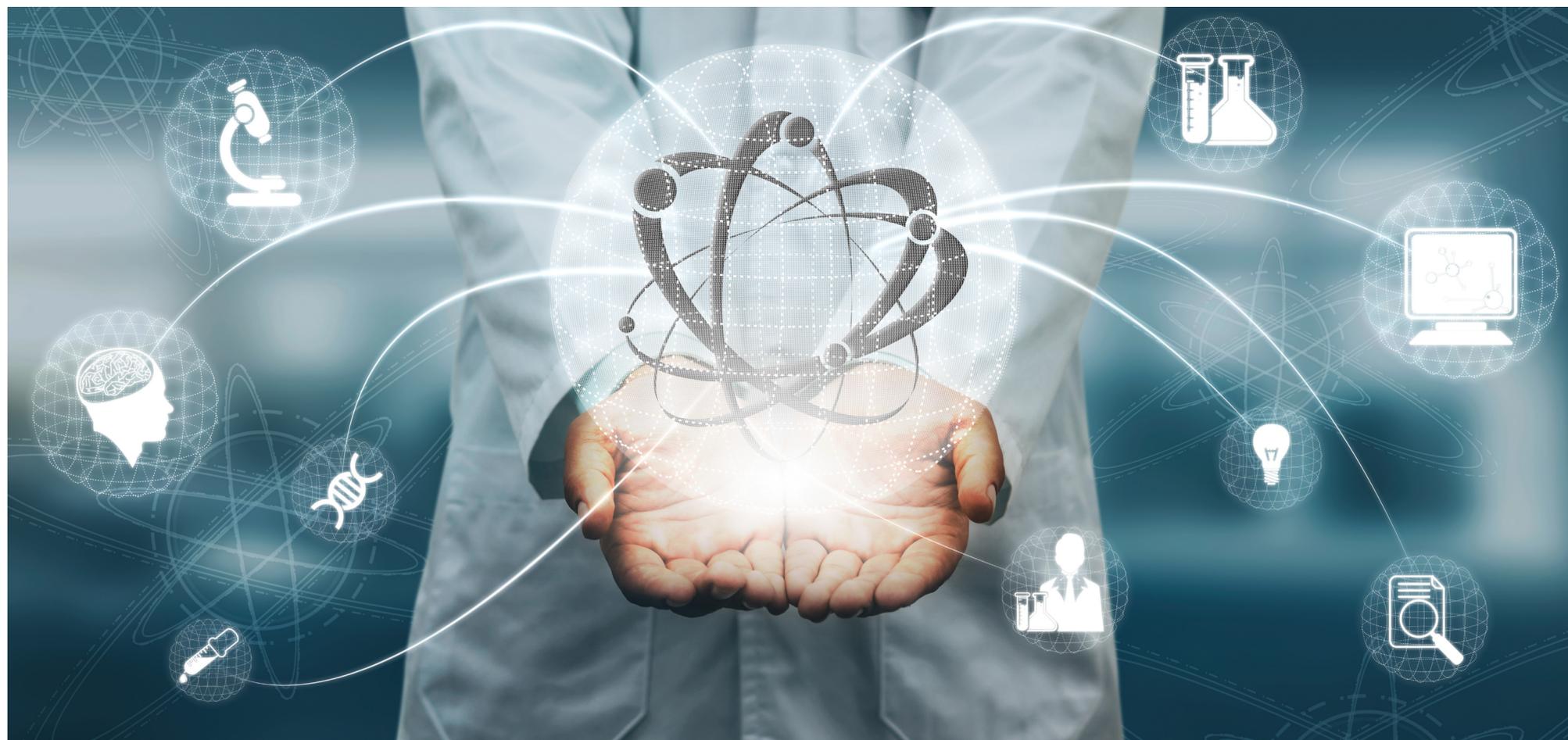**MONITOR:**
Monitor actions, Responses, and outcomes

Research
Imagery, Color, & Logo Development

Designing for the CDC was never just about creating functional digital experiences—it was about crafting a cohesive visual language that communicates trust, authority, and accessibility in the critical realm of public health. Throughout my projects with the CDC, my research included analyzing color psychology, evaluating competitor visuals from other health organizations, and reviewing existing CDC brand assets to inform a refreshed and modern aesthetic direction.

I selected a palette anchored by deep navy and rich teal, evoking professionalism, stability, and scientific credibility—essential qualities for a health organization relied upon during crises and routine care alike. Soft neutrals like cool grays and clean whites were integrated to create an open, breathable design environment, while bright accents in yellow and sky blue injected energy and focus into calls-to-action, guiding users seamlessly through complex health content.

My logo and branding contributions spanned several CDC initiatives, where I developed marks and graphic elements that balanced modern simplicity with the gravitas expected of a national health authority. Whether designing icons for digital interfaces, creating animated logo stingers for video intros, or developing print collateral for conferences and training events, my goal was to maintain brand consistency while elevating visual impact.

Imagery played a crucial role in my design work. I transitioned projects away from generic stock photography to authentic visuals reflecting diverse communities served by the CDC. I incorporated custom illustrations and motion graphics that added warmth and clarity, transforming complex scientific data into engaging, human-centered narratives. Across print materials, web assets, social media graphics, and video productions, these design choices unified the CDC's visual identity, ensuring it remained both authoritative and approachable.

DEPARTMENT OF HEALTH & HUMAN SERVICES·USA

CDC

HPV vaccination is the best protection against certain cancers caused by HPV.

Cervical Cancer
Just the tip of the iceberg.

Cervical cancer is the only type of cancer caused by HPV that has a recommended screening test to detect it at an early stage.

Estimated U.S. Cases Every Year [1,2]

11,100

Cervical Precancers

While screening can detect precancers before they turn into cancer, treatment for these precancers can lead to problems getting pregnant and **problems during pregnancy.**

196,000

Other Cancers Caused by HPV

There are no recommended screening tests for these 5 cancers, so they may not be detected until they cause **serious health problems.**

14,800	Back of the throat
6,900	Anus
2,900	Vulva
900	Penis
700	Vagina

HPV vaccination at ages 11-12 could
PREVENT OVER 90%
of these cancers.

Sources:
1: https://www.cdc.gov/cancer/hpv/statistics/cases.htm
2: https://www.cdc.gov/mmwr/volumes/68/wr/mm6815a1.htm

For additional information, visit:
www.cdc.gov/HPV

HPV VACCINE IS CANCER PREVENTION

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Research & Analysis:

User Research Approach
- Facilitated collaborative workshops with CDC stakeholders and cross-department teams to align on project goals, public health priorities, and user pain points across multiple digital platforms.
- Conducted 20 user interviews with diverse groups, including:
  - Healthcare professionals seeking rapid access to clinical guidelines and emerging health data.
  - Parents and caregivers looking for clear, trustworthy information about family health and diseaese preventon.
  - Older adults and individuals with lower digital confidence navigating complex health information.
- Audited website analytics and user behavior data to identity key drop-off points, search term gaps, and gneagement trends across both desktop and mobile experiences.

Key Insights
- Users frequently felt overwhelmed by dense-content layouts and struggled to distinguish the most critical helath information.
- Mobile users experienced signaificant friction, particularly with navigation and long, text-heavy pages that were difficult to read on smaller screens.
- Accessibility barriers persisted across various digital properties, posing challenges for screen reader and users and those with visual impairments.
- Users expressed a desire for more visual aids--such as infographics and videos to simplify complex health topics.

Personas & Journey Mapping
- Developed key user personas representing the CDC's diverse audiences::
  - Stephen: Healthcare professional needing authoritative; rapidly accessible data for patient care.
  - Jasmine: Young mother seeking plain-language health resources for her family, primarily on mobile devices.
  - Georgia: Older adult with lower digital confidence; motivated to stay informed about chronic health conditions.
- Mapped user journeys highlighting critical frustration points, including:
  - Difficulty navigating dense content structures to locate urgent health guidance.
  - Abandonment during mobile interactions due to poor readability and confusing page layouts.
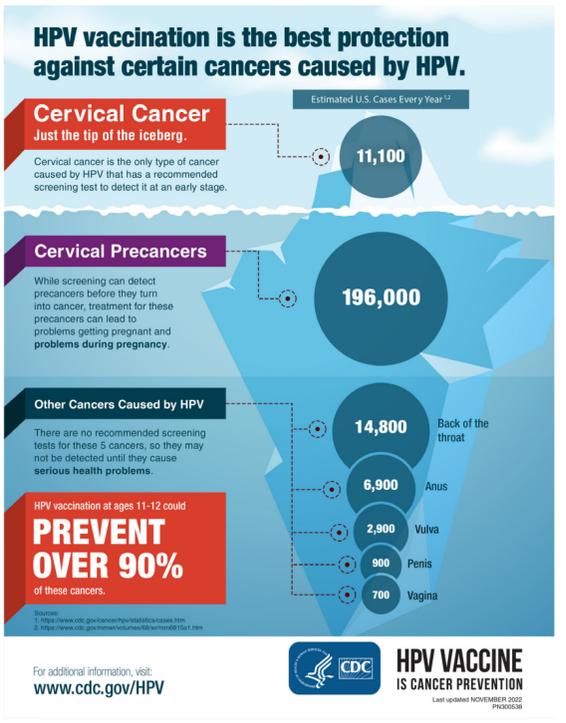
64 Open Sans

36 Open Sans

32 Arial Bold

24 Arial Italic

20 Helvetica Bold

18 Helvetica

16 Open Sans

Usability:

User Experience Elements

Designing user experiences for CDC digital projects meant merging visual design excellence with functional clarity to guide diverse users confidently through complex public health information.
Every element was intentionally crafted to balance scientific authority with human connection—an essential task when users are seeking health guidance that could profoundly impact their well-being.

I established a modern, professional typography system using clean sans-serif typefaces that ensured readability across devices, from desktop workstations used by healthcare professionals to mobile screens accessed by parents or older adults. The type scale was carefully structured to support visual hierarchy and allow users to scan content efficiently, reducing cognitive load for audiences already navigating stressful health concerns.

Icons and buttons were unified into a cohesive visual system, leveraging simple geometric shapes and generous white space for clarity. Button colors followed the CDC's brand palette, with navy and deep teal conveying trust and reliability, while bright accent colors like sunlight yellow strategically drew attention to critical calls-to-action without overwhelming the interface.

Illustrations and motion graphics played a vital role in humanizing the digital experience. I replaced impersonal stock imagery with custom visuals reflecting the diverse communities served by the CDC, including vibrant characters and culturally relevant contexts. Animated explainer videos and micro-interactions added warmth and helped simplify complex health topics, transforming scientific information into engaging, easily understood narratives.

Accessibility was a non-negotiable priority in all my work. Every visual component—from color contrast and text legibility to motion timing and icon clarity—was rigorously designed and tested to meet or exceed WCAG 2.2 AA standards. These user experience elements collectively transformed CDC digital products into environments that feel authoritative yet approachable, ensuring critical health information is accessible, inclusive, and user-focused for all.

Component
Desktop Landing Page

Redesigning the CDC's digital presence was about more than aesthetics—it was about transforming how millions of users access vital health information. As part of a broad rebranding initiative, I helped modernize the CDC's main website and various departmental sites, replacing outdated designs with a clean, contemporary aesthetic that balanced scientific authority with user-friendly clarity.

My role spanned developing consistent typography systems for readability, crafting modern color palettes anchored in navy and teal to convey trust, and creating cohesive design patterns recognizable across different CDC platforms. This rebrand extended beyond visuals into functionality as we supported migrating vast amounts of content into a newly developed, CDC-managed CMS. I designed flexible templates and reusable components for the CMS, ensuring usability, brand consistency, and adaptability for diverse departmental needs.

On redesigned landing pages, prominent hero sections clearly communicated critical health guidance and directed users swiftly to high-priority topics like pandemic updates and disease prevention resources. Strategic white space, simplified navigation, and authentic imagery replaced text-heavy layouts and generic stock photos, helping diverse users feel included and respected.

Interactive elements like subtle animations and hover states added modernity without distracting from important public health messaging. Across all departmental sites, I maintained rigorous adherence to WCAG 2.2 AA standards, ensuring the CDC's commitment to accessibility for all users.

Through this comprehensive redesign and CMS migration, I helped transform the CDC's web ecosystem into a unified, professional, and approachable resource, empowering users to make informed health decisions from their very first click.

Component
Mobile Landing Page

Designing mobile experiences for CDC digital platforms was about delivering critical health information clearly and efficiently for users relying on smartphones as their primary device. Embracing a mobile-first approach, I created simplified navigation structures with collapsible menus and large, tap-friendly buttons, ensuring users could quickly locate vital resources without overwhelming scrolling.

Hero messages stayed prominent to immediately communicate urgent health guidance, while vibrant icons and concise headlines guided users toward essential actions like finding vaccination sites or accessing health alerts. The color palette was carefully chosen for strong contrast and readability in varied lighting, supporting users in both everyday and clinical settings.

Illustrations and authentic imagery scaled beautifully on small screens, maintaining the CDC's human-centered brand without adding clutter. As both designer and project manager, I ensured all mobile components met WCAG 2.2 AA standards, from text legibility and color contrast to touch target sizing, guaranteeing accessibility for all users.

Subtle motion graphics and micro-interactions added moments of engagement while respecting the gravity of public health messaging. The result is a modern, user-focused mobile experience, reflecting the CDC's commitment to making trustworthy health information as seamless and approachable as any app people depend on in their daily lives.

Reflection

Redesigning and modernizing digital experiences for the CDC has been one of the most meaningful chapters of my career, shaping me into the multidisciplinary designer and leader I am today. For me, impactful design transcends aesthetics—it's about solving real problems that affect real lives, especially in the high-stakes world of public health where clarity and trust are critical.

Throughout my work at the CDC, I wore many hats—UX/UI designer, graphic designer, motion graphics artist, web designer, developer, product designer, and project manager. I led stakeholder workshops and conducted in-depth user research to uncover pain points unique to healthcare audiences: dense technical content, inconsistent navigation, accessibility barriers, and legacy systems that hindered rapid communication during health crises. These experiences sharpened my skills in synthesizing complex insights into clear, actionable design strategies while aligning diverse stakeholders toward a shared vision.

From a technical and creative standpoint, contributing to the CDC's rebranding and content migration into a new CMS was a milestone achievement. I built scalable design systems, crafted accessible interfaces, and developed visual assets—from infographics to motion graphics—that translated complex scientific information into engaging, human-centered narratives. As a leader, I ensured that design wasn't siloed but integrated seamlessly with development, creating reusable components and workflows that accelerated collaboration and delivery.

The measurable impact of our efforts—higher engagement, reduced bounce rates, and overwhelmingly positive user feedback—validated my belief that thoughtful design drives both user trust and organizational success.

Reflecting on my CDC projects, I'm most proud of how I navigated the intersection of empathy, design craft, technical execution, and leadership. I bring not just deep design expertise, but a strategic mindset focused on connecting user experience to broader business and mission objectives. I'm excited to keep tackling complex challenges, transforming user pain points into seamless, accessible solutions that deliver real-world impact and advance the mission of any organization I serve.