
## OPIM 5770

## Advanced Business Analytics and Project Management

# Route to Relief

## Team 8

Aasrith Dara

Hemanth Kumar Bommina

Harikrupa Vedere

Ritika Ghosh

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# 1. Executive Summary

In the healthcare sector, a seamless digital experience is crucial for enhancing patient engagement, streamlining services, and providing accessible health information. Hartford HealthCare, a leading healthcare provider in Connecticut, recognizes the increasing importance of its website in delivering services to patients and the community. As the digital landscape in healthcare evolves, optimizing online platforms becomes vital to meet both patient expectations and organizational goals. With millions of patients and visitors interacting with the website every year, ensuring the site is intuitive, fast, and easy to use is key to fostering positive patient experiences and improving overall healthcare service delivery.

This capstone project was initiated to assess and improve Hartford HealthCare's website performance with a focus on:

1) enhancing user engagement through improved design and functionality.
2) Streamlining navigation improved design and functionality.
3) Addressing operational inefficiencies, such as redundant content and underperforming features.

**Key Challenges Addressed:**

1. **Low Engagement Rates**: Identifying challenges that prevent users from interacting effectively with key services, such as appointment scheduling or finding healthcare providers.
2. **Fragmented Navigation:** Users face difficulty due to inconsistent pathways and redundant content across multiple domains.
3. **Website Usability**: Analyzing the site's structure and design to ensure smooth navigation, clearer paths to critical content, and a reduction in unnecessary steps.
4. **Operational Efficiency**: Identifying redundancies in content and structure, potentially reducing operational overhead and improving the website's efficiency in meeting users' needs.

By focusing on these areas, this project aims to provide Hartford HealthCare with actionable insights that can drive improvements in user satisfaction, reduce barriers to patient engagement, and align the website with the growing demand for digital health services. Enhancing the digital

experience not only helps Hartford HealthCare maintain a competitive edge but also contributes to broader goals of improving healthcare access and patient care in the region.

### Objectives and Outcomes:

Through detailed data analysis, this project aimed to:

- Identify barriers hindering user interaction and conversions.
- Propose actionable solutions, such as streamlining CTAs and reducing redundant content.
- Deliver a comprehensive plan for transforming the website into an intuitive and efficient platform.

Expected outcomes include:

- Improved patient satisfaction by reducing navigation barriers and simplifying appointment bookings.
- Increased engagement rates on high-priority pages.
- Enhanced operational efficiency through cost-saving measures like URL consolidation.

Ultimately, this report outlines the process and findings of a thorough analysis aimed at transforming the website into a more effective, user-friendly platform that aligns with Hartford HealthCare's mission to provide exceptional care to its community.

# 2. Problem Statement

## 2.1 Website Optimization for Hartford HealthCare

Hartford HealthCare's website serves as a critical bridge between patients and essential healthcare services, yet it faces significant usability and engagement challenges. Despite high traffic volumes, key functionalities like appointment scheduling, provider searches, and access to health services suffer from low engagement and high drop-off rates. This directly affects the site's ability to guide users efficiently, reducing its overall effectiveness.

### Identified Issues:

1) **Fragmented Navigation:** The website hosts multiple pathways leading to similar destinations, creating confusion and redundancy for users. Key services, like women's health or senior care, are scattered across various pages, resulting in inconsistent user journeys.
2) **Underperforming CTAs:** Calls-to-action, such as "Find a Doctor" or "Schedule Appointment," often fail to convert users due to overly complex forms, unclear post-click instructions, or unnecessary steps.
3) **Low Engagement Rates:** Pages critical to healthcare delivery, including "Find a Doctor" and "Appointments," exhibit low engagement rates despite their importance. This indicates barriers in functionality and content clarity.
4) **Operational Inefficiencies:** Redundant URLs across multiple domains lead to SEO challenges, fragmented analytics, and unnecessary costs. This creates both technical inefficiencies and a suboptimal user experience.

### Project Goals:

The project aims to identify pain points and deliver actionable solutions to:

1) Simplify navigation and unify fragmented pathways.
2) Optimize CTAs to drive higher user engagement and conversions.
3) Eliminate redundancies in content and structure to reduce operational costs.
4) Align the website design with user expectations and digital healthcare best practices.

By addressing these challenges, Hartford HealthCare can transform its digital platform into a seamless and efficient tool, improving user satisfaction and achieving organizational goals.

# 3. Data Collection and Methodology

## 3.1 Data Domains and Scope

For this project, we were provided with access to a subset of Hartford HealthCare's digital footprint. Specifically, our analysis focused on several key hostnames, which are part of the larger Hartford HealthCare network. These hostnames include:

- **hartfordhealthcaremedicalgroup.org**
- **integratedcarepartners.org**
- **ctorthoinstitute.org**
- **ctorthomidstate.org**
- **ctorthostvincents.org**

While the data collected covered these domains, the analysis also considered all embedded links within these sites to provide a comprehensive view of user interactions and engagement across multiple pages and services. The data set excludes other potential domains under Hartford HealthCare's full digital presence, thus limiting the scope of our findings to the aforementioned sites.

## 3.2 Data Glossary

| Variable | Description | Notes |
|---|---|---|
| Hostname | The subdomain and domain names of a URL that users have visited on a website. | Defines the subdomain or specific page URL being analyzed. |
| Full page URL | The entire URL of a page that a user has visited on a website. | Provides insights into specific content pages on the site. |
| Page Title and Screen Class | The title of the page as tagged within the HTML. | Helpful for understanding the page content and its layout. |
| Views | The number of pageviews on a website and screen views on an app in the selected date range. | Shows overall traffic, measuring general interest in a page. |

| | | |
|---|---|---|
| Sessions | Initiates when a user either opens your app or views a page/screen. | Indicates active user participation on the site. |
| Engaged Sessions | A session that lasts longer than 10 seconds, has key events, or at least 2 pageviews. | A better indicator of real engagement with key site interactions. |
| Total Users | The total number of active users interacting with the site. | Shows the overall number of users interacting with the site. |
| New Users | The number of users who interacted with your site for the first time. | Helps measure first-time visitor engagement. |
| Engagement rate | The percentage of engaged sessions on a website. | Reflects how engaging the content or interaction is. |
| Engagement Time | The amount of time a user spends on a web page. | Indicates the time spent on a given page or interaction. |
| Average Engagement Time | Average engagement time per active user for the selected period. | Shows how engaged each user is during the session. |
| Event name | An event measuring a specific interaction or occurrence on the website. | Key to understanding specific actions and user behaviour. |
| Element | Any time a user clicks on a button or other clickable element. | Useful for measuring interactions like button clicks. |
| Action | A specific interaction or occurrence on the website. | Provides granular details about user actions. |
| Click Text | The text that the user clicks on, such as 'Schedule Appointment'. | Highlights specific clickable elements. |
| Click URL | The URL of the link that the user clicks on. | Links directly to actions like making a call or navigating to another page. |
| Percent scrolled | The measure of how far users scroll on a page before leaving. | Used to track user interaction depth and page engagement. |
| Event count | The number of times users triggered an event. | Tracks how frequently certain actions happen on the site. |

## 3.3 Tools and Techniques

To analyze the collected data, the following tools were used:

- **Google Analytics & Looker Studio**: Used to track website traffic, pageviews, and user interactions.
- **Python**: Utilized for data cleaning, aggregation, and analysis of engagement metrics.
- **Canva**: Created visual aids to present key data insights clearly.
- **Tableau**: Used for interactive visualizations to map user journeys and analyze trends.
- **Google Collab**: Enabled collaborative Python script execution and real-time sharing of analysis results.

## 3.4 Analytical Approach

The project followed a systematic approach to analyze the website data:

1. **Exploratory Data Analysis (EDA)**: The initial step was to explore the dataset, identify patterns, and locate areas of concern, such as underperforming pages and CTAs. EDA helped to define key metrics for deeper analysis.
2. **Data Cleaning**: Raw data was cleaned to remove any duplicates, missing values, or inconsistencies. This process ensured that the analysis was accurate and based on reliable data.
3. **Segmentation**: Users were segmented based on behaviors such as new vs. returning users, session duration, and interaction with specific content or CTAs. This segmentation enabled targeted insights into user engagement.
4. **Conversion Funnel Analysis**: The team analyzed the steps users take to complete key actions, such as scheduling appointments. This analysis helped pinpoint where users were abandoning the process, allowing for targeted improvements.
5. **Event Tracking Analysis**: Key events like clicks on specific CTAs were analyzed to determine how effectively the website guided users through the conversion process. This helped in identifying underperforming elements and optimizing them for better user engagement.

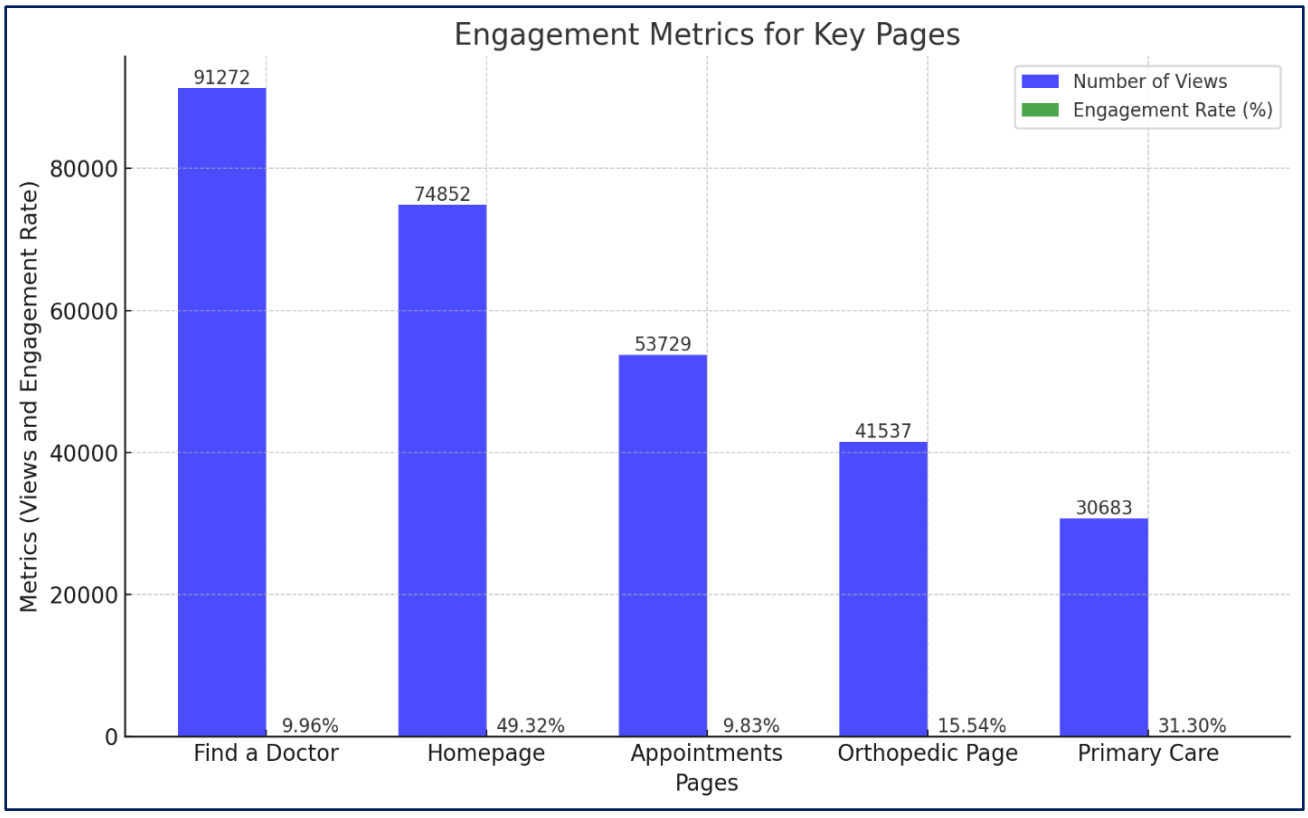
# 4. Data Analysis & Findings

## 4.1 Quantitative Findings

The quantitative findings section provides a comprehensive analysis of user engagement metrics, call-to-action performance, and critical areas for improvement across Hartford HealthCare's website. This analysis reveals insights into user behavior and highlights opportunities to enhance the overall user experience.

### 4.1.1 Engagement Metrics

Engagement metrics serve as a critical indicator of how effectively the website captures and retains user interest. Each core page's performance reveals a unique set of challenges and opportunities:




1. **Find a Doctor Page:**

- **Performance**: The "Find a Doctor" page was the most visited, recording **91,272** views, but showed a relatively low engagement rate of just **9.96%.**

- **Insight:** The high traffic to this page underscores its importance in connecting users with healthcare providers. However, the low engagement suggests users may struggle with navigation or encounter barriers that prevent them from completing their journey. Potential issues include inadequate search functionality, limited filtering options, and a lack of clear calls-to-action guiding users to the next steps.
- **Recommendations:** Improving this page could involve implementing an advanced search interface that allows users to filter results by specialty, location, or insurance type. Clear, visually distinct CTAs, such as "Book an Appointment" or "View Doctor's Profile," could further enhance usability.

2. **Homepage:**

- **Performance**: With **74,852** views and a remarkable **49.32%** engagement rate, the homepage stands out as the most engaging page.
- **Insight:** The homepage effectively serves as a gateway, directing users to various sections of the site. Its high engagement indicates that the design and layout successfully capture user interest, making it an ideal starting point for further navigation.
- **Recommendations:** Leveraging the homepage's success, Hartford HealthCare can strategically place prominent links to high-priority pages like "Find a Doctor" and "Appointments." Personalized recommendations based on user behavior, such as recently viewed pages or frequently searched services, could further enhance its utility.

3. **Appointments Page:**

- **Performance**: This page, essential for converting visitors into patients, garnered **53,729** views but suffered from a similarly low engagement rate of **9.83%**.
- **Insight:** The page's low engagement may stem from a cumbersome booking process, characterized by lengthy forms, multiple steps, and unclear navigation paths. Users may become frustrated and abandon the process before completion.
- **Recommendations:** Streamlining the appointment booking workflow by reducing unnecessary form fields and introducing progress indicators can significantly enhance the user experience. Additionally, making the form mobile-friendly would

cater to the growing segment of users accessing healthcare services on their smartphones.

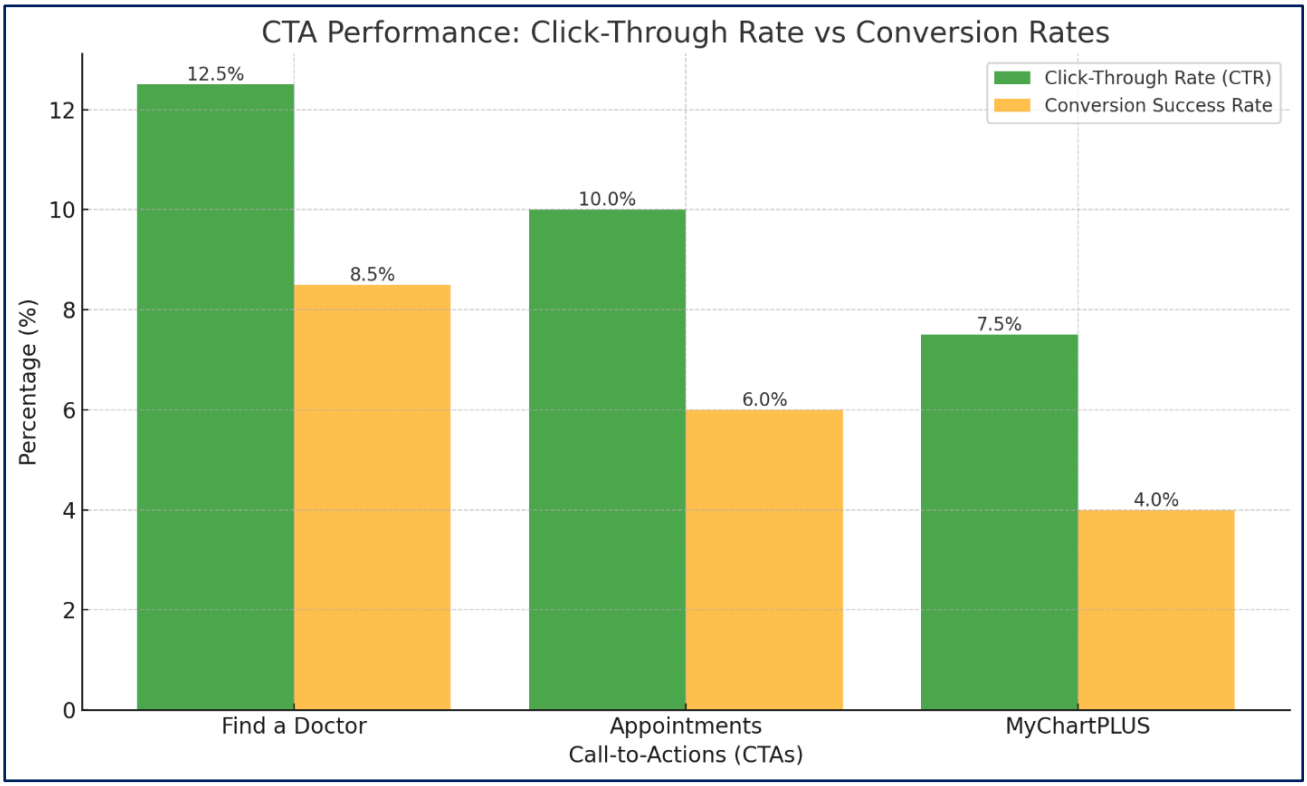
4. **Orthopedic Page:**

- **Performance**: With **41,537 views** and a **15.54% engagement rate**, the page shows moderate traffic and engagement.
- **Insight:** The relatively higher engagement indicates that users seeking orthopedic information are more focused and invested in the content. However, the moderate engagement rate suggests that users may be leaving the page after consuming initial information without taking further actions, such as scheduling an appointment or contacting a provider.
- **Recommendations:** To further enhance user engagement, the orthopedic page should incorporate interactive features like patient testimonials, educational videos, and detailed procedural guides. Additionally, CTAs such as "Schedule a Consultation" or "Find an Orthopedic Specialist Near You" should be prominently displayed to guide users toward actionable next steps.

5. **Primary Care Page:**

- **Performance:** This page attracted 30,683 views and achieved a notably high engagement rate of 31.30%, making it one of the most effective pages on the site.
- **Insight:** The high engagement suggests that users visiting the primary care page are finding content that aligns closely with their needs. However, the relatively low traffic compared to other pages indicates that the page is underutilized or not easily discoverable within the website's navigation.
- **Recommendations:** To capitalize on its strong engagement rate, the primary care page should be more prominently featured in the site's navigation. Enhancing its visibility through homepage links or search optimization could significantly increase traffic. Additionally, adding content like FAQs, patient success stories, and a clear breakdown of primary care services could further solidify its effectiveness.

### 4.1.2 Call-to-Action (CTA) Performance




CTAs (Calls-to-Action) play a vital role in guiding users toward desired actions, such as scheduling an appointment or contacting a provider. The effectiveness of CTAs was evaluated based on click-through rates (CTR) and conversion success rates:

1. **Find a Doctor CTA:**
    - **Performance:** This CTA recorded 6,955 clicks, achieving a CTR of 12.5%. However, the conversion success rate was only 8.5%, highlighting post-click drop-offs.
    - **Insight:** The drop-offs may be attributed to complex post-click navigation, where users are required to complete multiple steps or encounter unclear instructions.
    - **Recommendations:** Introducing a simplified workflow that minimizes the number of steps after the initial click can significantly improve conversion rates. Features like progress bars and pre-filled fields for registered users can reduce friction and encourage completion.

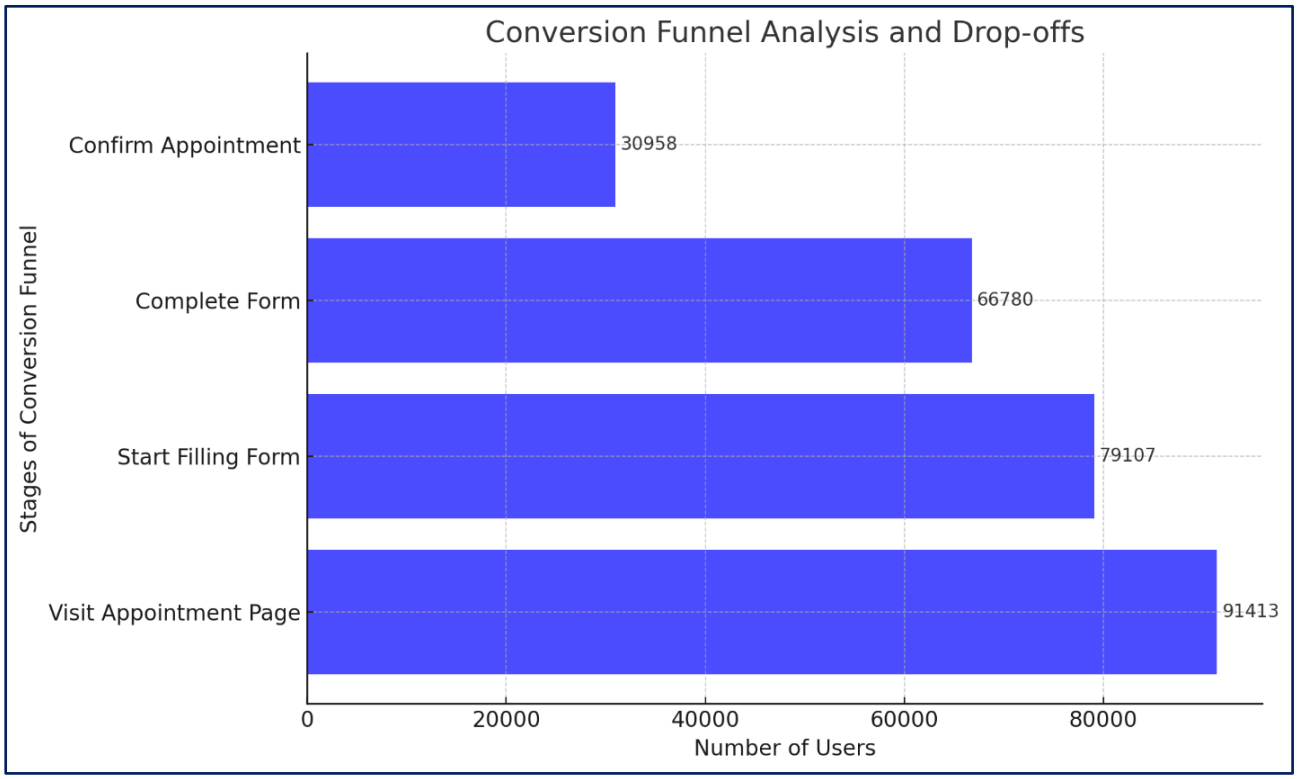
## 2. Appointments CTA:

- **Performance:** This CTA saw 1,836 clicks with a 10.0% CTR but only a 6.0% conversion success rate.
- **Insight:** The low conversion rate suggests that users face significant barriers after clicking the CTA, such as confusing forms, unclear navigation, or technical issues.
- **Recommendations:** To address this, Hartford HealthCare could streamline the booking process by consolidating form steps, offering auto-suggestions for input fields, and integrating third-party authentication options for easier access.

## 3. MyChartPLUS CTA:

- **Performance:** The MyChartPLUS CTA recorded 2,484 clicks, achieving a CTR of 7.5%, but with a conversion success rate of only 4.0%.
- **Insight:** The low conversion rate is primarily attributed to the complex login process. Users are often required to input an activation code or complete multi-step authentication, creating significant friction. Additionally, troubleshooting options, such as contacting customer service, often lead to further frustration when users encounter long wait times or service unavailability.
- **Recommendations:**
    - **Simplify Login:** Introduce a password-less login option or integrate third-party authentication systems like Google or Apple ID.
    - **Enhanced Error Handling:** Improve troubleshooting options, such as providing instant chat support or an automated password recovery system.
    - **User Education:** Add a guided walkthrough or video tutorial on how to set up and use MyChartPLUS effectively. This could be displayed prominently near the login CTA.
    - **Mobile Integration:** Ensure seamless access via mobile devices by optimizing the MyChartPLUS login for smaller screens.

## Conversion Funnel and Drop-offs




The conversion funnel analysis examined user behavior throughout the appointment booking process, revealing significant drop-offs at various stages:

### 1. Key Metrics:

- **Step 1:** 91,413 users visited the appointment booking page.
- **Step 2:** 79,107 users began filling out the form (**13.5% drop-off**).
- **Step 3:** 66,780 users completed the form (**15.6% drop-off**).
- **Step 4:** 30,958 users confirmed their appointment (**53.7% drop-off**).

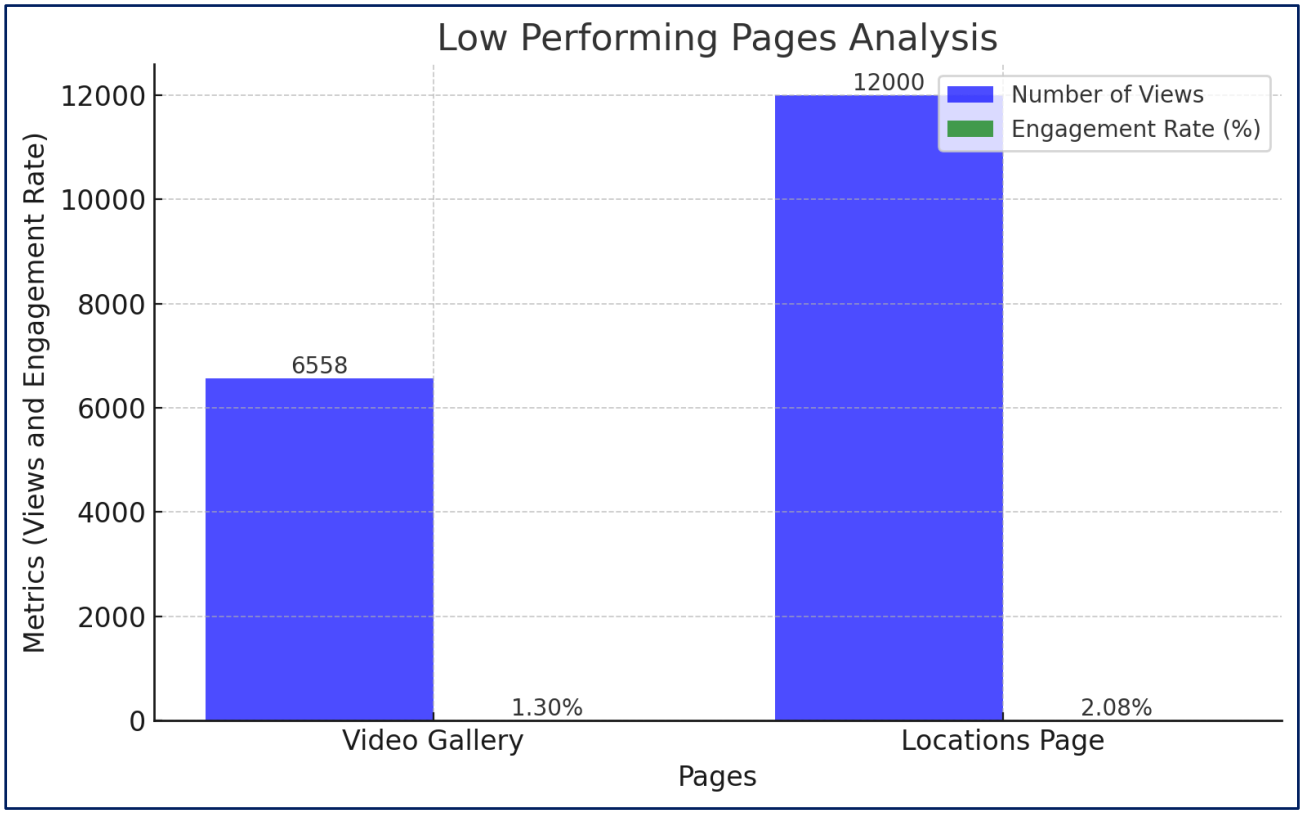
**Analysis**:

The most significant drop-off occurred between completing the form and confirming the appointment. This indicates potential friction points such as confusing instructions, unclear progress indicators, or technical issues like slow page loads.

**Recommendations:**

Hartford HealthCare should focus on simplifying the final stages of the booking process. Adding real-time error checking, offering live chat support, and displaying a clear confirmation message at the end of the process can help retain users and improve completion rates.

### 2. Low-Performing Pages:




Low-performing pages present opportunities for targeted interventions to boost engagement and user satisfaction. Two pages stood out for their low engagement rates:

### 1. Video Gallery Page:

- **Performance:** Recorded 6,558 views with an engagement rate of 1.3%.
- **Recommendation:** Enhancing the page with interactive features like video playlists, auto-play functionality, and user-friendly navigation can improve engagement. Optimizing video load times for faster playback is also essential.

### 2. Locations Page:

- **Performance:** Despite high traffic, this page recorded an engagement rate of less than 2.08%.

- **Recommendation:** Integrating dynamic maps, search filters for locations, and quick access to contact information can make this page more user-friendly.

### Bounce Rate Analysis

High bounce rates indicate opportunities for improvement in retaining users:

1. **Find a Doctor Page**: 98.8% bounce rate, suggesting either content satisfaction or usability issues.
2. **Appointments Page**: 51.1% bounce rate, highlighting the need for a smoother booking process.
3. **Homepage**: 19.0% bounce rate, reflecting its effectiveness in retaining users.

**Recommendation:** Simplify navigation and add engaging content above the fold to reduce bounce rates.

### Actionable Recommendations for Key Pages

1. **Find a Doctor Page**: Redesign the search interface to make it more intuitive and add advanced filters.
2. **Appointments Page**: Streamline the booking process and optimize it for mobile users.
3. **Primary Care Pages**: Incorporate FAQs and testimonials to provide more relevant content.

## 4.2 Qualitative Findings

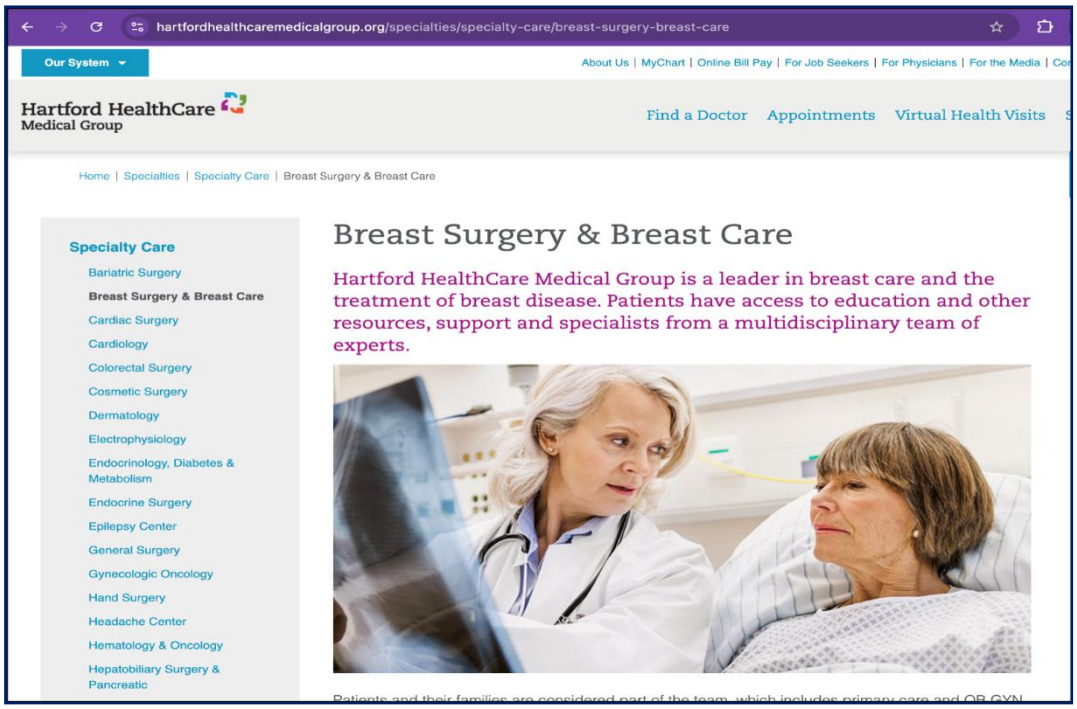
To understand the user experience on Hartford HealthCare's websites, We navigated through the available domains. This hands-on approach helped us uncover issues that could impact user engagement and satisfaction.

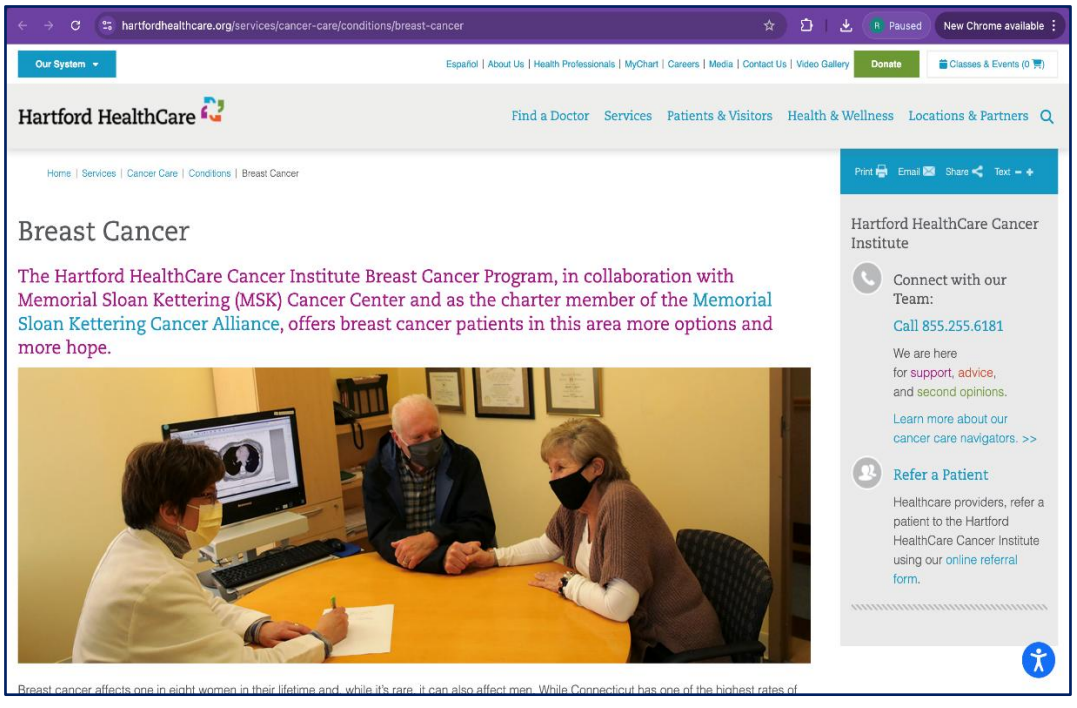
Based on our analysis, we have identified **five key qualitative findings** that highlight significant areas for improvement in user navigation and accessibility.

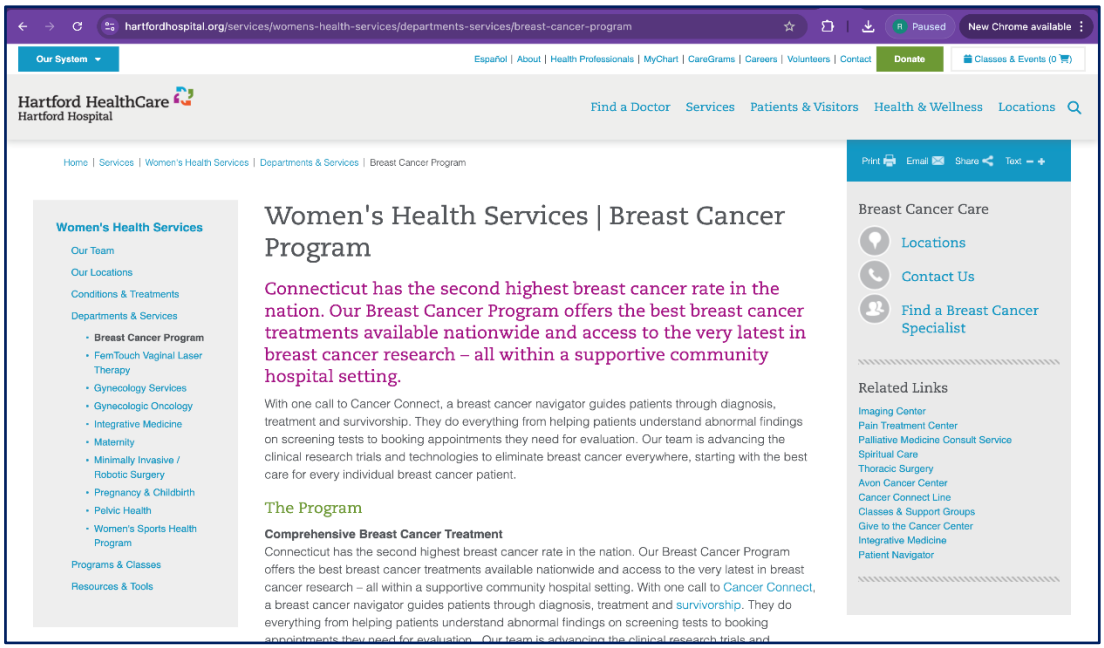
### 4.2.1 Conflicting User Journeys everywhere

When searching for services like **breast cancer care**, users are led down different paths depending on which link they click. For example, navigating between **hartfordhealthcare.org** and **hartfordhealthcaremedicalgroup.org** results in overlapping information but with conflicting user journeys.

This fragmentation creates inconsistency and confusion, leading users to abandon the site or struggle to find the information they need.






## *Problem: Fragmented and Confusing Experience*

The user experience is disrupted by multiple pathways that offer similar content but create confusion about which site to trust. This inconsistency results in high user drop-offs, diminishing the site's effectiveness in driving patient engagement.

## *Recommendation: Create a Unified Women's Health Hub*

To address this, we recommend developing a **Unified Women's Health Hub** that consolidates all relevant women's health services—**Primary Care**, **Specialty Care**, and **Urgent Care**—into one easy-to-navigate platform. By providing a single access point with clear categories (e.g., **Gynaecology**, **Breast Health**, **Fertility**), users will have consistent and straightforward access to services, improving engagement and reducing confusion.

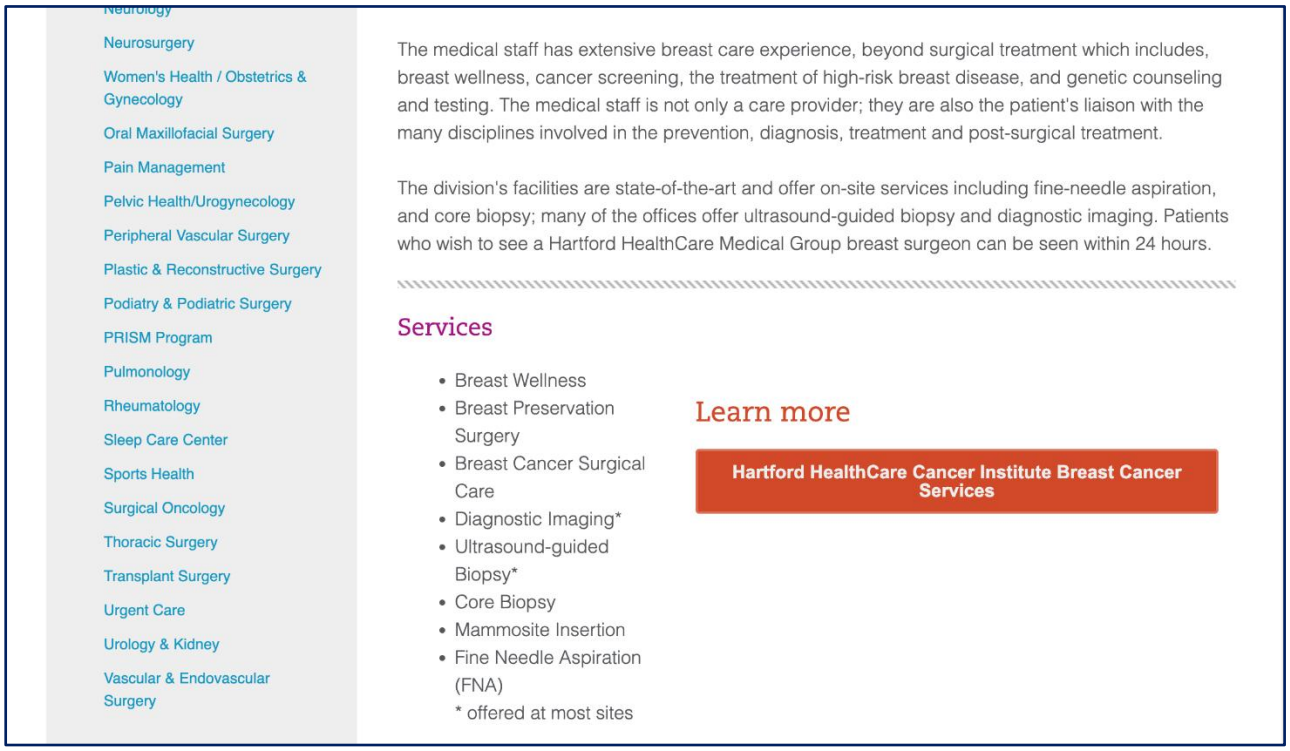
### Supporting Data and Business Impact

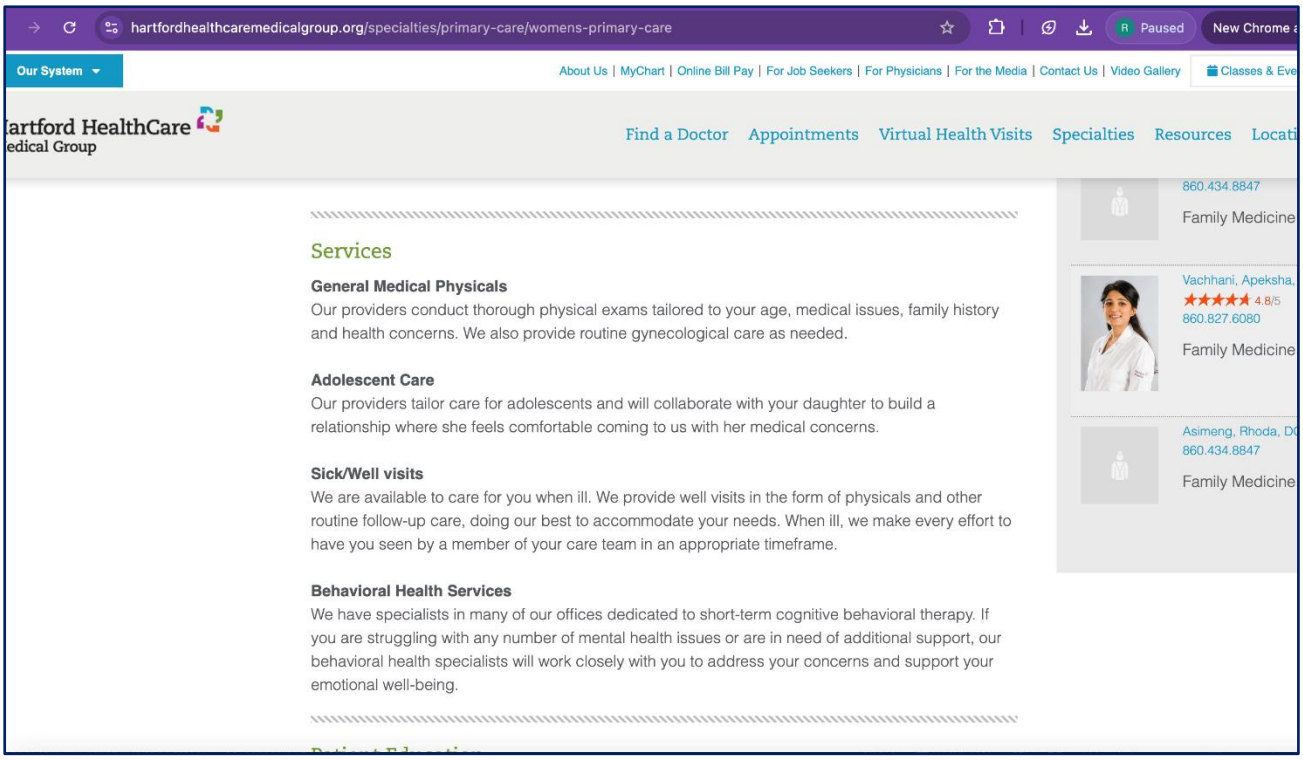
Research shows that inconsistent user experiences lead to higher abandonment rates on healthcare websites. According to **Pew Research Center**, **40% of users** abandon sites when faced with confusing navigation and fragmented service access. A **Nielsen Norman Group** study found that consolidating services into a **single, well-organized hub** can boost user engagement by **40%** and reduce bounce rates by **25-30%**.

By implementing a **Unified Women's Health Hub**, Hartford HealthCare can improve patient retention, streamline navigation, and enhance overall engagement. This will align with industry best practices, optimizing the user experience while driving higher conversion rates for key services like appointment bookings.

### 4.2.2 Make your services more accessible!

In our analysis of Hartford HealthCare's websites, we found that many core services were described in text but lacked essential hyperlinks, making them difficult for users to access directly. For example, information about crucial services such as **Breast Wellness**, **Surgical Care**, and **General Medical Physicals** was outlined on service pages, but users had to navigate through multiple layers to find more detailed information or schedule appointments. This lack of easy accessibility can cause frustration, especially when users need immediate medical attention.






## *Problem : Where can I find the services I need?*

Many key healthcare services are presented without direct, clickable links, making it difficult for users to quickly access important information or schedule appointments. This results in a slower and more cumbersome user experience, which can ultimately discourage patients from engaging further with the site.

## *Recommendation: Implement a Mega Menu system with sub-categories*

To address these accessibility challenges, we recommend creating a **Mega-Menu System** that clearly lists services in subcategories. This solution would allow users to find the services they need quickly, without having to navigate through multiple pages or layers. For instance, under a **Women's Health** category, services like **Breast Health**, **Gynecology**, and **Pelvic Health** could be displayed as clickable options, leading users directly to the relevant pages.

This approach will streamline navigation, increase user satisfaction, and reduce bounce rates by improving the accessibility of essential services.

**Cross-Linking** should also be implemented throughout the site. Once a **Unified Women's Health Hub** is created, links between related services (e.g., **Breast Cancer Services** and **Mammography** pages) will allow for faster navigation, enhancing the user experience by presenting the most relevant information at every step.

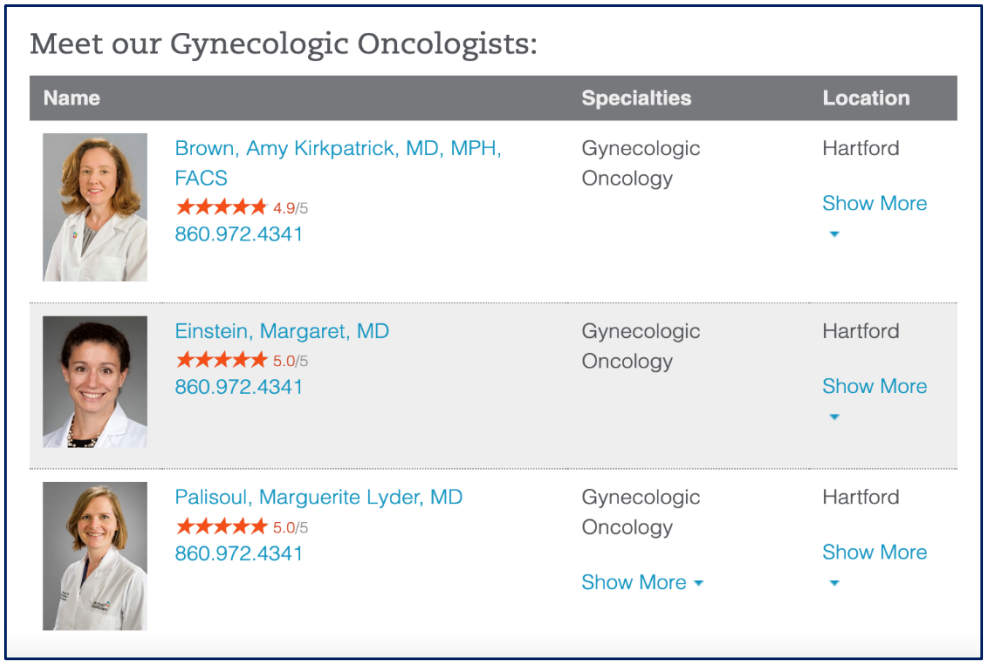
### Supporting Data and Business Impact

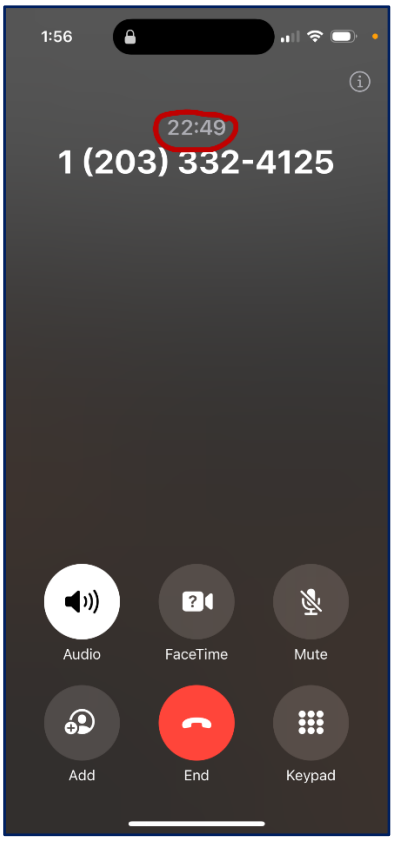
Research has shown that **mega-menus** can improve website usability by up to 40%, helping users find information more efficiently. Additionally, **cross-linking** can reduce bounce rates by 30%, as it encourages users to engage with multiple pages during their visit. Making services more accessible in a user-friendly, organized format will not only boost engagement but also improve conversion rates, particularly for services requiring user actions such as booking appointments or seeking medical advice.

## 4.2.3 Modernize communication

Our third qualitative finding revolves around **modernizing communication** on Hartford HealthCare's website. During our analysis, we found that although users can easily find doctors and contact them via phone or even fax, scheduling an appointment is not as straightforward. The website lists a **"Schedule an Appointment"** option on many pages; however, this option typically leads to a phone number (usually the same one, irrespective of the doctor) forcing users to make a call to book an appointment.

One of the major issues we experienced firsthand was the **long wait times** associated with calling these numbers. Our team called a number listed under a doctor's profile, and we had to wait for **over 30 minutes** to get connected. This lack of digital flexibility is frustrating for users, especially when they expect a more efficient, self-service approach.






## *Problem: Inefficient Communication Process*

Despite offering a digital option to schedule an appointment, Hartford HealthCare's system still largely relies on **phone-based scheduling**, creating bottlenecks and long wait times for users. The phone numbers listed under various doctor profiles often redirect to a **centralized reception number**, rather than a direct line to the doctor's office. This confusion, combined with the waiting times, undermines the convenience expected from a healthcare provider's website.

## *Recommendation: Implement a Request Callback Feature and Online Appointment Scheduling*

To address this, we recommend implementing a **Request Callback** feature, similar to what many leading healthcare providers, such as the **Mayo Clinic**, offer. This feature would allow users to request a callback at a time that is convenient for them, significantly reducing wait times and improving user satisfaction. Additionally, expanding the **online appointment scheduling** process would allow users to book appointments directly through the website, eliminating the need for lengthy phone calls altogether.

This solution would enhance patient experience by providing more **digital flexibility**, saving users' time and reducing the frustration associated with long hold times.

#### Supporting Data and Business Impact

According to **Mayo Clinic**, the **Request Callback** feature has reduced call center wait times by **40%**, resulting in higher user satisfaction and increased patient engagement. By streamlining the appointment scheduling process and offering more **digital touchpoints**, Hartford HealthCare can align itself with **industry best practices** while improving conversion rates and overall patient retention.

### 4.2.4 Finding the right doctor shouldn't be a search, make it simple!

In our analysis, we noticed that many competitors, such as the **Mayo Clinic**, have implemented intelligent search algorithms that significantly improve the user experience. These include features like **"Search by Disease"**, **"Search by Doctor's Last Name"**, and **intuitive filtering options**. Such features help users quickly locate the right healthcare provider or service, regardless of whether they are a first-time visitor or a returning patient.

However, Hartford HealthCare's website lacks these intuitive search functionalities, making it harder for users to quickly find the right doctor. This adds unnecessary friction to the process, especially when users are looking for specific specialists or care providers.

#### *Problem: Difficult Search for Doctors*

Hartford HealthCare's current search functionality is basic, which may frustrate users who are trying to find specific doctors or healthcare services. For instance, patients often cannot filter by **specialty** or **doctor name** as easily as they could on competitor sites. This complicates the process, causing longer search times and a higher likelihood of user drop-off.

#### *Recommendation: Implement Enhanced Search Features*

To modernize communication and improve accessibility, we recommend introducing **intelligent search algorithms** similar to those used by competitors. Features such as **"Search by Disease"** or **"Search by Doctor's Last Name"** would make it easier for users to find the doctor or service they need quickly, improving the overall user experience. These features not

only benefit **first-time users** but also provide value to **returning users**, allowing them to navigate more efficiently and find care providers faster.

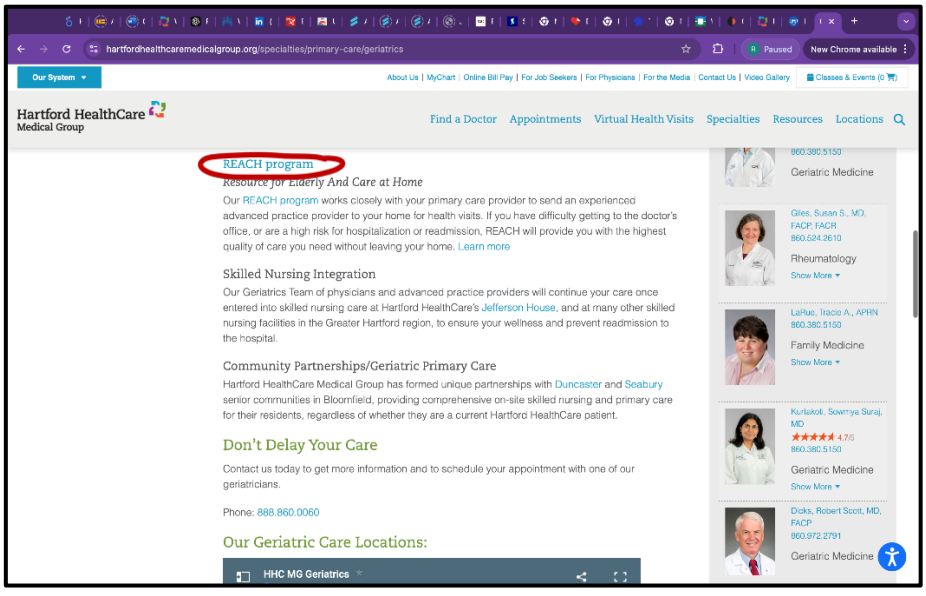
### Supporting Data and Business Impact

Research shows that **intelligent search functionalities** can improve conversion rates by **25-30%** and reduce user frustration. According to **Gartner**, organizations that implement advanced search features see a **40% increase in engagement** and **20% higher retention rates**. By offering users an easier way to find the care they need, Hartford HealthCare can enhance patient satisfaction and drive higher engagement with its services.

## 4.2.5 Senior Care should be easy to find not hidden away!

The **senior population** in Connecticut is growing rapidly, with **the number of people aged 65 and older expected to increase by 57%** between 2010 and 2040, significantly outpacing growth in other age groups (CT Data Collaborative, 2020). In fact, **11,000 people turn 65 every day** nationwide, and Connecticut is no exception. This demographic shift highlights the urgent need for healthcare providers to make senior care services easily accessible.

However, during our analysis of Hartford HealthCare's website, we found that the **REACH Program**, a vital service for seniors, is located **40-50% down the page**, making it difficult for users to find quickly. For seniors seeking care, this creates a barrier to access and could result in delays in obtaining important healthcare services.



### *Problem: Hard-to-Find Senior Care Services*

The growing senior population in Connecticut requires easy access to specialized care programs like **REACH**. However, Hartford HealthCare's website places this crucial service too far down the page, creating unnecessary hurdles for users. Given that **17.5% of Connecticut's older population identifies as people of color**, and the state's older demographic is one of the most diverse in New England (CT Age Well Collaborative), these seniors are at a heightened risk of facing challenges when trying to find the care they need.

### *Recommendation: Prioritize Senior Care Services at the Top of the Page*

To better serve Connecticut's aging population, we recommend that Hartford HealthCare **move the REACH Program to the top of the page**, making it easier for seniors to find and access quickly. Similar to strategies used by competitors like **Michigan Health**, which prominently displays its **geriatrics** services at the top of its website, this change would improve accessibility for older patients and help Hartford HealthCare stay aligned with best practices in senior care.

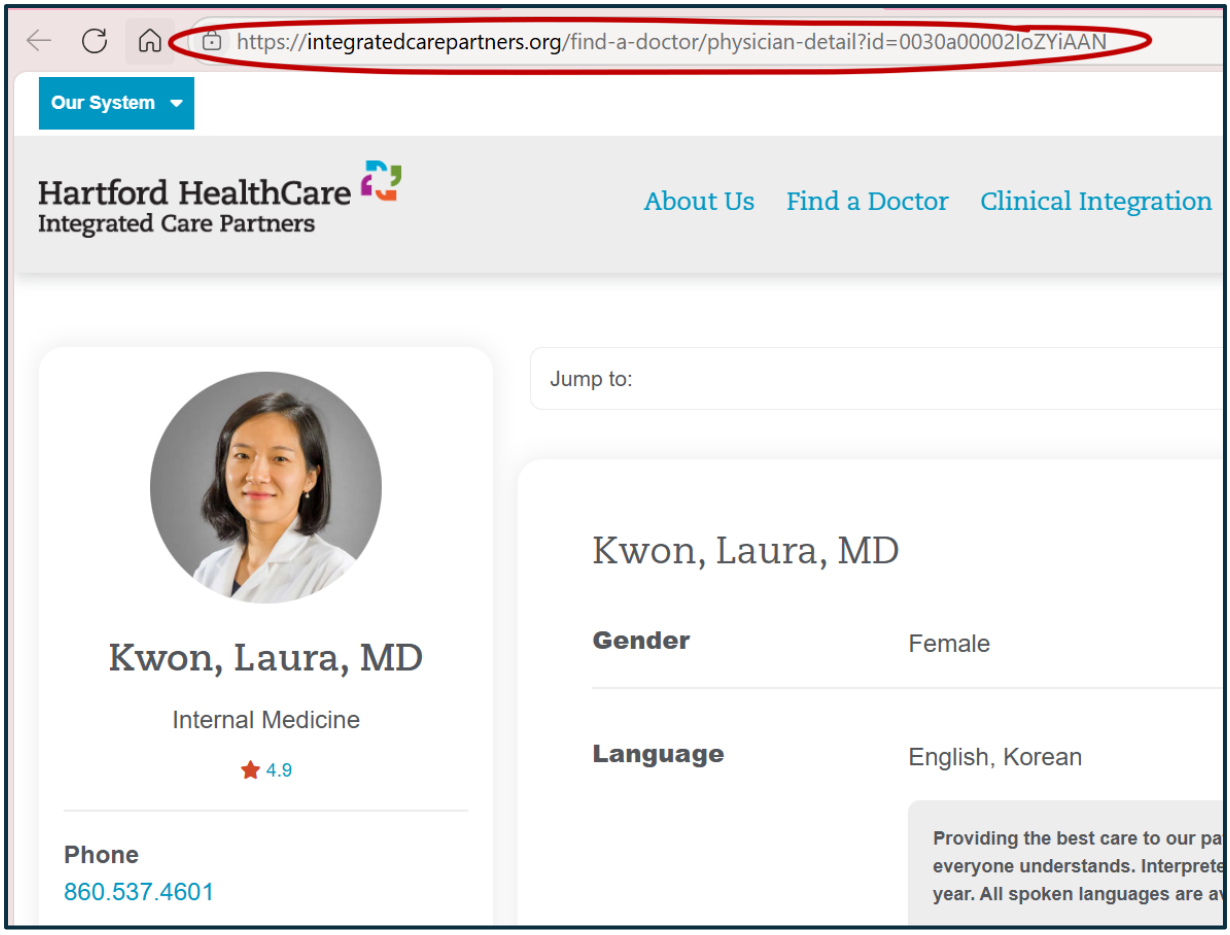
This shift would not only improve accessibility but also demonstrate Hartford HealthCare's commitment to addressing the needs of an aging population, which is particularly critical as more and more seniors seek healthcare services.

#### Supporting Data and Business Impact

Research shows that **increasing visibility** of key services can significantly improve engagement. A **Forrester Research** study found that making services more visible leads to **25-30% higher conversion rates** and greater user satisfaction. By improving the visibility of senior care services, Hartford HealthCare can better meet the needs of Connecticut's aging residents and enhance the overall user experience.

## 4.2.6 Cost saving opportunity, redundant URLs

In analyzing Hartford HealthCare's website, we identified a significant issue: **2,588 redundant URLs** for **605 doctors**, spread across multiple domains. For instance, Dr. Laura Kwon's profile can be found on both hartfordhealthcaremedicalgroup.org and integratedcarepartners.org. This redundancy creates inefficiencies that affect SEO, user experience, and operational costs.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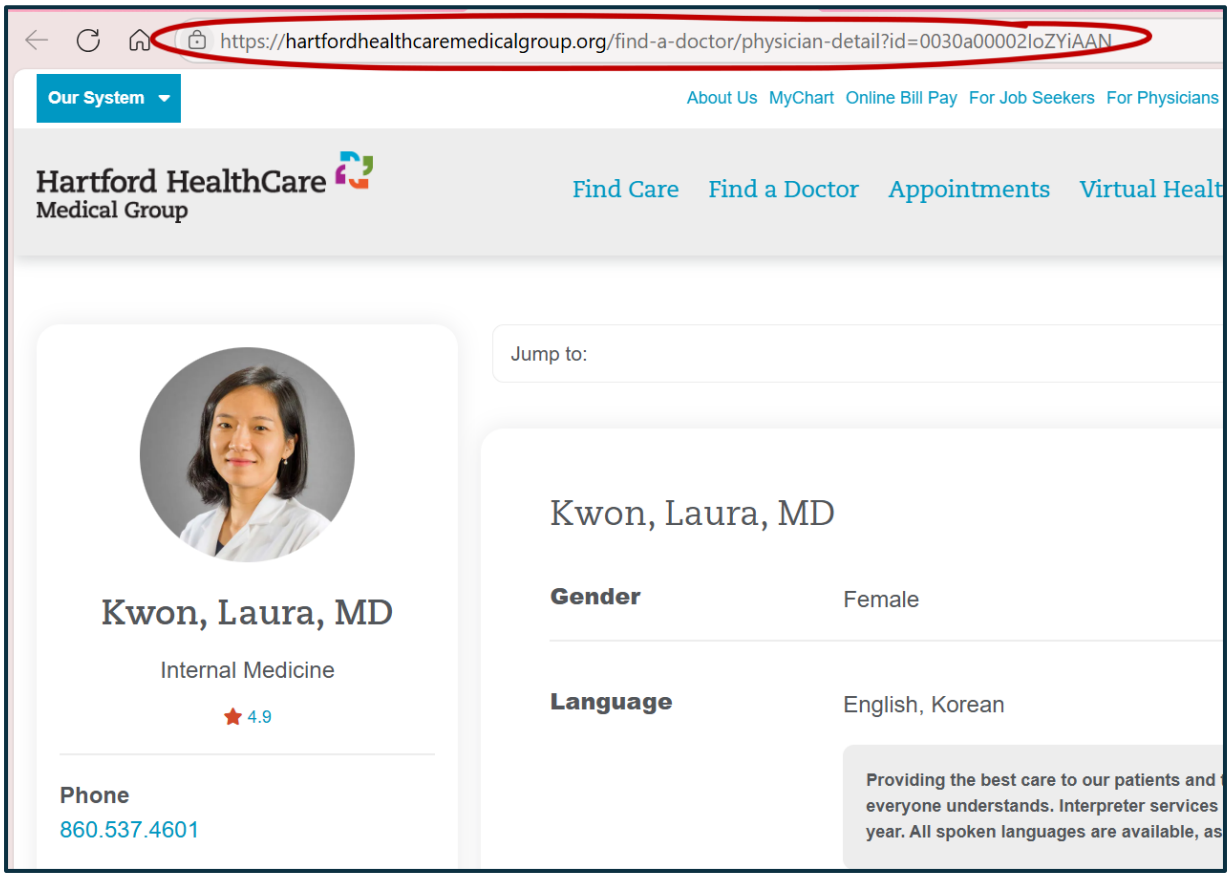
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## *Problem Statement:*

The 7% redundancy within the digital footprint assigned to our analysis poses significant challenges to Hartford HealthCare's website. Redundant URLs lead to multiple critical issues:

1. SEO Penalties: Duplicate content confuses search engines, which may lower the site's ranking and reduce its online visibility.
2. Wasted IT Resources: These redundant URLs consume unnecessary server space and bandwidth, leading to increased maintenance efforts.
3. User Confusion: Patients are left uncertain about which URL to use, which could cause frustration and missed appointments.
4. Increased Costs: Maintaining redundant URLs results in unnecessary costs, potentially amounting to $54,000 annually, based on the $27 per URL estimate.

By addressing these issues, Hartford HealthCare can improve the user experience, enhance SEO, and reduce operational costs.

## *Recommendation: Consolidate, Standardize, and Optimize URLs*

To address these challenges, we propose a comprehensive approach:

1. **Consolidate Redundant URLs**: Merge duplicate profiles across domains into a single authoritative domain (i.e., hartfordhealthcaremedicalgroup.org). This will centralize content and streamline navigation.
2. **Implement 301 Redirects**: Set up **301 redirects** to point all redundant URLs to the canonical URL, ensuring that users and search engines are directed to the correct page without disruption.
3. **Use Canonical Tags**: Implement **canonical tags** on pages that need to remain live but should point to the primary URL for SEO purposes. This helps search engines understand which URL to prioritize, avoiding SEO penalties.
4. **Remove Unnecessary Query Parameters**: Eliminate unnecessary tracking parameters such as fbclid and mkt_tok from the URLs. These parameters, while useful for backend tracking, clutter the URL and can reduce trust among users and search engines alike. By cleaning up the URLs, the website will appear more polished and user-friendly.

5. **Optimize Analytics Tracking**: Use tools like **Google Tag Manager** to track user interactions without appending tracking tokens to URLs. This allows for more efficient analytics without sacrificing tracking accuracy.

### Supporting Data and Business Impact

- **SEO Improvements**: Consolidating URLs and eliminating duplicate content will improve search engine rankings. Research indicates that streamlining content reduces crawl errors and enhances SEO performance, ultimately boosting organic traffic (Search Engine Journal).
- **Cost Savings**: By eliminating redundant URLs, Hartford HealthCare could save an estimated **$54,000 per year** based on minimal hosting, content management, and maintenance costs. This reduction in redundant URLs will free up valuable IT resources and improve operational efficiency.
- **Enhanced User Experience**: Users will benefit from **consistent and intuitive navigation**. By consolidating profiles and removing unnecessary content, patients will find the information they need faster, reducing frustration and improving patient engagement.

By following these recommendations, Hartford HealthCare can address redundancy effectively, improving its website's performance, user satisfaction, and SEO rankings. This will not only lead to cost savings but also provide a more seamless and efficient digital experience for patients.

# 5. Key Insights

The analysis of Hartford HealthCare's website provides a comprehensive understanding of its current strengths and areas for improvement. Broadly, the insights can be categorized into four main themes:

### 1. User Experience

The website functions as a critical touchpoint for patients seeking care but is hindered by fragmented navigation and underperforming elements. High-traffic pages, including the homepage and "Find a Doctor," show potential for driving engagement but require enhancements to usability and interactivity. Streamlined workflows and intuitive design can bridge gaps in user experience.

### 2. Digital Engagement and Conversions

Engagement metrics highlight significant opportunities to convert website visits into meaningful interactions, such as appointment bookings and consultations. Conversion funnels, particularly for appointment scheduling, suffer from high drop-offs due to complex forms and unclear post-click pathways. Addressing these challenges is key to improving patient satisfaction and operational outcomes.

### 3. Operational Efficiency

Redundant URLs and overlapping content create inefficiencies in website management, SEO performance, and analytics tracking. Consolidation and optimization of resources offer both cost savings and improved navigation for users. These operational improvements align with broader goals of enhancing healthcare accessibility and reducing technical barriers.

### 4. Strategic Opportunities

Certain areas, such as senior care and specialized services (e.g., orthopedics), show strong user interest but are not leveraged effectively. Making these services more accessible and visible across the website can meet growing patient demand and align with Hartford HealthCare's mission of providing comprehensive, patient-centered care.

By addressing these insights, Hartford HealthCare can create a seamless, engaging digital experience that aligns with modern healthcare demands.

# 6. Conclusion

Hartford HealthCare's website is a vital component of its service delivery, connecting patients with essential healthcare resources and information. However, the current structure and design pose challenges that limit its effectiveness and user satisfaction. This project has identified key areas for improvement while also recognizing the strengths that can be built upon.

**Broader Recommendations**

1. **Enhance Accessibility:** Simplify navigation, unify fragmented pathways, and ensure all services are easy to find and interact with.
2. **Optimize Digital Engagement:** Refine CTAs, reduce complexity in conversion processes, and incorporate user-friendly elements like progress indicators and pre-filled forms.
3. **Streamline Operations:** Consolidate redundant URLs, eliminate duplications, and improve analytics tracking to maximize efficiency.
4. **Promote High-Value Services:** Elevate the visibility of critical programs like senior care and women's health, leveraging user interest to drive conversions and satisfaction.

**Anticipated Outcomes**

- **Improved User Satisfaction:** A streamlined digital experience that aligns with patient needs will foster trust and loyalty.
- **Higher Conversion Rates:** Simplified workflows and optimized engagement strategies will increase appointment bookings and service utilization.
- **Operational Savings:** Consolidating resources will reduce costs while improving overall website performance.
- **Strategic Leadership:** A modernized, user-centric website positions Hartford HealthCare as a leader in digital healthcare engagement.

By implementing these changes, Hartford HealthCare will not only meet the immediate needs of its patients but also set a benchmark for digital excellence in the healthcare industry. These improvements will have long-lasting impacts, enhancing patient outcomes, operational efficiency, and organizational reputation.

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