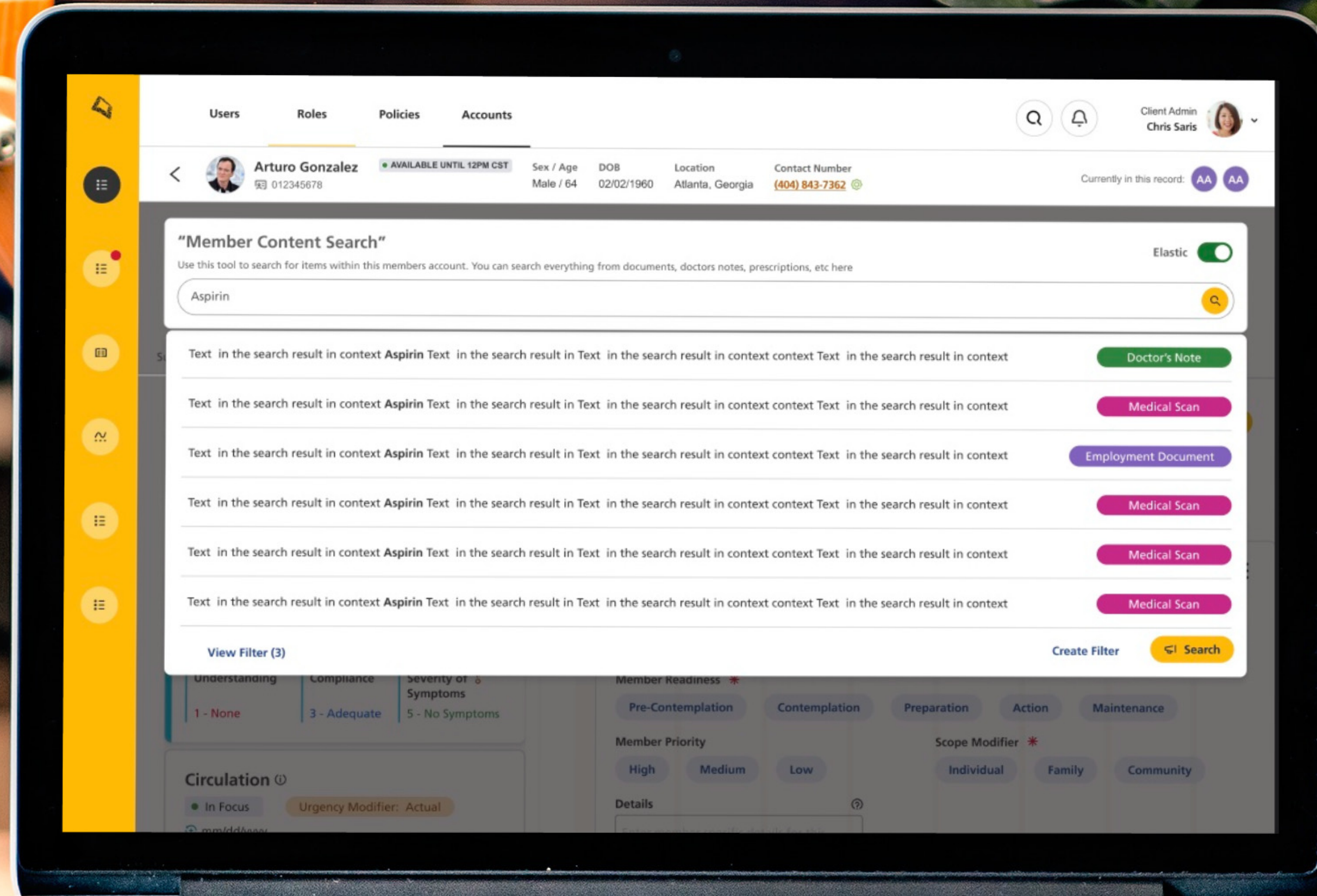


Lester Jones
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Portfolio





Lester Jones

The UX
Researcher/Designer
with Expertise in
Informing Results
Delivering UX
Efforts for Large
Impactful
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Academics

2021 - Graduate Certificate - Cyber Security
Harvard Extension School

2009 - Masters - Information Architecture and
Interaction Design
University of Baltimore

2005 - AAS - Computer Information Systems
Baltimore City Community College

2000 - B.Sc. - Zoology and Botany
University of the West Indies

Special Sauce

- Experience Leading Nation Spanning Ethnographic Studies
- Expert in Generative UX Research Methods
- Experience working with Large Scale Systems that Impact Millions of Users
- Experience with both UX Research and UX Design Methods
- Professional Photographer, Drone Pilot and Overlander
- Experience working in Confidential Environments
- Strong Science Background



UnitedHealthcare[®]

Search

A research project to conduct an internal review of current search applications across different UHC products and provide an initial design model to mitigate existing short comings

Full Design Details and Research Results Not Presented Due to Disclosure Rules

The Research Process



01

Investigate and Understand

Interviews were conducted with Product Owners and Users to determine the following

- Typical Use Cases for Search for Internal Products
- Infrastructure Issues that would impact search applications
- Pain Points in Current Search Implementation across internal products.
- The efficiency of current search related tasks

Research and Analysis

Research Methods Used

The following Research Methods were used in the Analysis of the Search Function across UHC products

1. Workflow Analysis
2. Efficiency Testing
3. Comparative Analysis
4. Competitive Analysis
5. AB Testing
6. Section 508 Accessibility Testing

Search Deficiencies fell into 3 main categories.



Fragmentation

Search is inconsistently deployed across Optum systems.



Missed Opportunities

Search functionalities were missing from key areas where it's addition would significantly improve application functionality.



Lack of Optimization

In some places search Functionalities did not produce the desired results as a result of a programmatic issue.



02|03

Research and Solution

The research methods in the used in the previous slide were used to determine the problems with the current search interface and develop solutions that would resolve these short comings.

Analyze and Document

The Main Member Search

Task: Users enter their query into the text box and the results are populated in the drop down

Challenges

- Users cannot sort results.
- No count to tell users how many results have been returned.
- Difficult to find common names in a list of common names.
- Users must scroll within a narrow view port to find the results.
- Results drop down are not Section 508 Accessible.
- It can be difficult to find a known result.

The screenshot shows a user interface for a member search system. At the top, there are navigation tabs for 'User', 'Roles', 'Bookmarks', and 'Account'. A date and time indicator shows 'JAN 21 2022' and 'Welcome back, Peter' with the time 'Wednesday, 10:15 AM CDT'. Below this is a 'Member Search' section with a search bar and a '+ Create New Member' button. The search results are displayed in a table with columns for ID, Name, Gender, Age, DOB, ID Number, ID Type, Account Name, Phone, State, and Zipcode. The results list several entries for 'Donald Drapper' with different account names. Below the search results is an 'Announcements' section with a table of messages, including columns for Effective Date, Date Posted, Urgency, and Topic. The interface includes a sidebar with navigation icons for Tasks, Admin, Rules, Metrics, Marketplace, and Analytics.

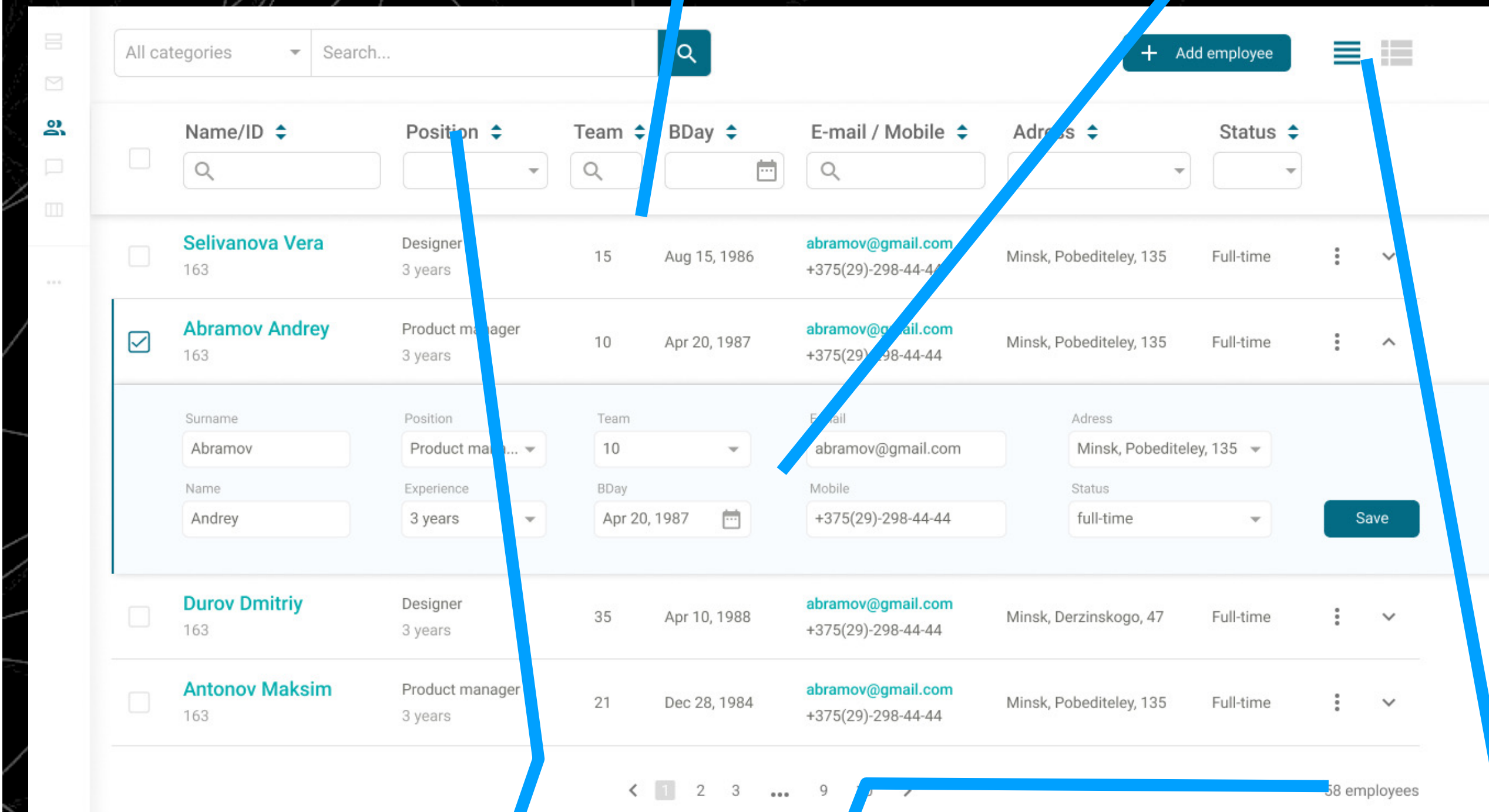
ID	Name	Gender	Age	DOB	ID Number	ID Type	Account Name	Phone	State	Zipcode
DD	Donald Drapper	Male	56 YO	12/01/1964	12345667878	Member ID	United Airlines	(218) 345-0987	MN	55707
DD	Donald Drapper	Male	56 YO	12/01/1964	12345667878	Member ID	Google	(218) 345-0987	MN	55707
DD	Donald Drapper	Male	56 YO	12/01/1964	12345667878	Member ID	Home Depot	(218) 345-0987	MN	55707
DD	Donald Drapper	Male	56 YO	12/01/1964	12345667878	Member ID	A-Plus Ad Agency	(218) 345-0987	MN	55707
DD	Donald Drapper	Male	56 YO	12/01/1964	12345667878	Member ID	C-Minus Ad Agency	(218) 345-0987	MN	55707
DD	Donald Drapper	Male	56 YO	12/01/1964	12345667878	Member ID	Federal Express - The A...	(218) 345-0987	MN	55707

	Effective Date	Date Posted	Urgency	Topic	
• Unread	MM/DD/YYYY	MM/DD/YYYY 10:42 am ET	High	COVID call handling policy	view >
• Unread	MM/DD/YYYY	MM/DD/YYYY 10:42 am ET	High	Seasonal Affect Depression	view >
• Unread	MM/DD/YYYY	MM/DD/YYYY 10:42 am ET	Medium	System Outage -- 02/22/2022	view >
✓ Read	MM/DD/YYYY	MM/DD/YYYY 10:42 am ET	Medium	Global Field Issue	view >
✓ Read	MM/DD/YYYY	MM/DD/YYYY 10:42 am ET	Low	Global Field Issue	view >

Solution

Member Search

- Give user the ability to toggle between the current elastic member search result format and a table result view.
- Give the users a search result number count and pagination.
- Allow for search result sorting.
- Give the users the ability to change the compactness of the search results.
- Give users the ability to view additional details with an “accordion” affordance.



Give users the ability to sort results

Give users an “accordion” to view additional search result details

Give user a search result count.

Allow users to change the search result display density.

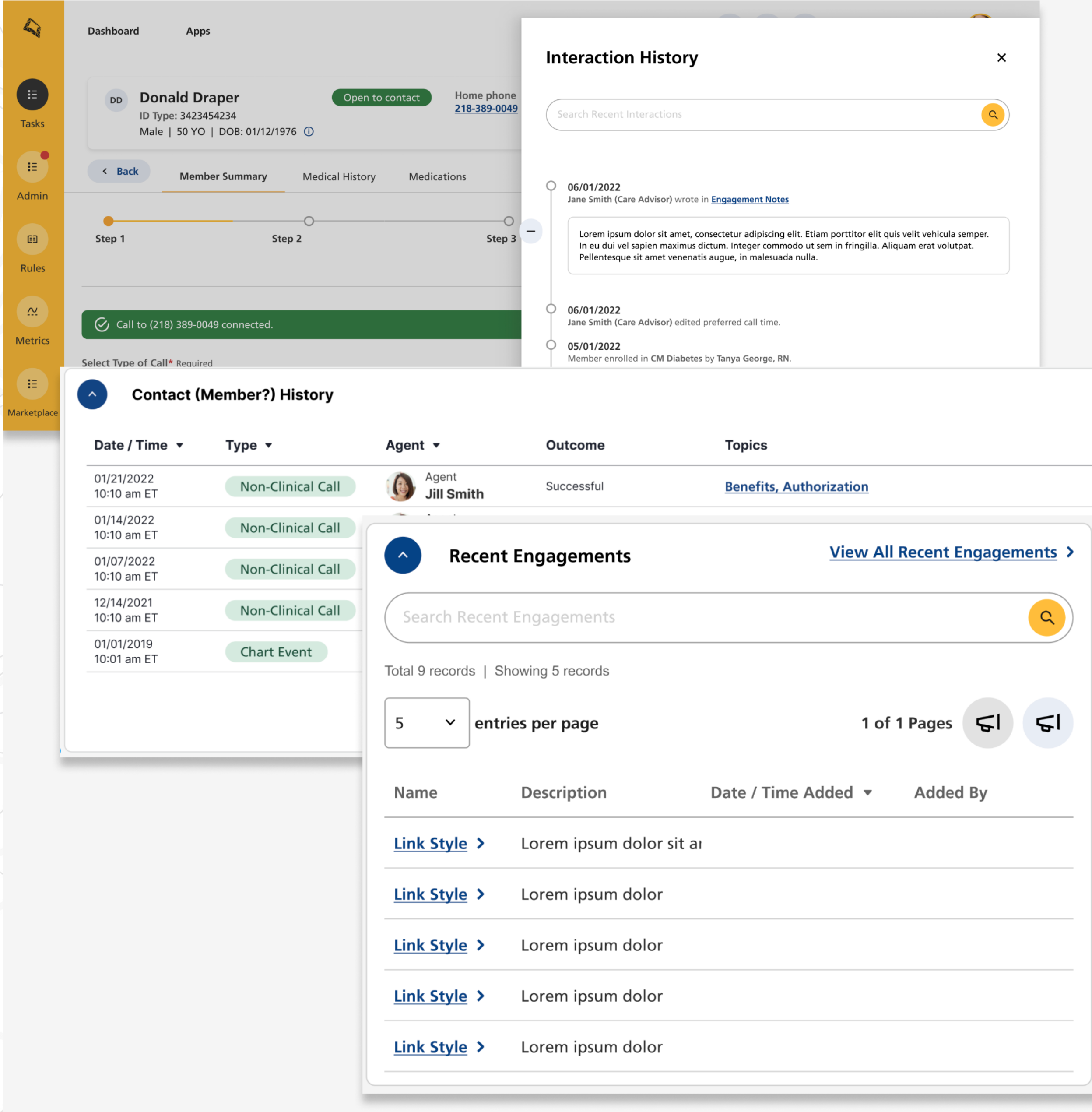
Analyze and Document

Customer Interaction History

Task: Users can view the history of member interaction. There are several types of interaction and each uses its own type of interface.

Challenges

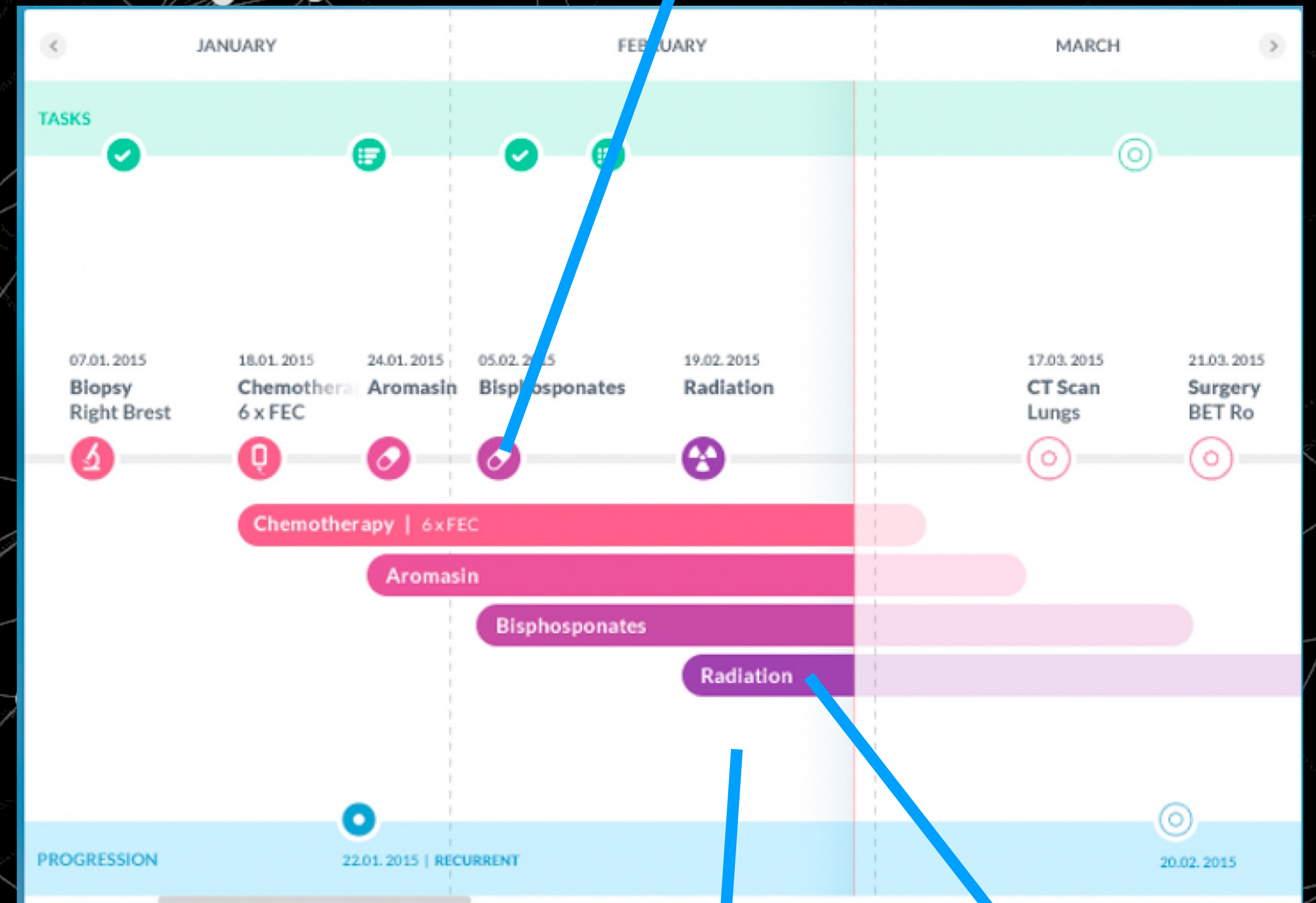
- Some Customer Interaction History Views have a search feature and other interfaces do not.
- The look and feel of search Interactions are different even though they are displaying the same type of content.



Solution

Document Search

- Potentially give an option to display all member interactions with UHC as single gantt style chart
- Present filters to allow Agents to select the interaction type to search for/display for a single element
- Allow users to sort by each column using the header when in table view is used
- Utilize the typical table search results affordances that includes pagination, record counts, filters, etc.
- Potentially utilize icons to differentiate between content types in the search results



Gantt Chart Styled Interaction View

Color Coded Patent Interaction Types

Analyze and Document

Document Search

Task: Users have entire libraries of customer documents. These include scans, prescriptions, reports etc. Internal users need find and access particular records.

Challenges

- Agents cannot use Search to find a documents in question and must manually review the customers 'document list to find the document of interest.

The screenshot shows a web application interface for document management. On the left is a vertical navigation menu with icons for Tasks, Admin, Rules, Metrics, Marketplace, and Analytics. The main content area is divided into two panes. The left pane displays a list of letters with columns for Letter Template and ID, Recipient, and Role. The right pane shows a detailed view of a document titled 'Document_title.pdf', including a download button, zoom controls, and the document's content. The document content includes a header for UnitedHealthcare, a patient information box, a date of April 5, 2021, and a letter body starting with 'Dear Holly Hobby:'. The letter discusses a request for an inpatient facility admission and provides details about the requested service or care, including the physician's name (Scott Lindhorst), facility name, and date of service. It also includes a 'What this means for you' section explaining the clinical guidelines and a 'Level of care' definition. The document concludes with contact information for the UnitedHealthcare Peer-to-Peer Support Team.

Letter Template and ID	Recipient	Role
Letter Template Name 234567876543	Draper, Don	Member
Notification PPO Eandl 234567876543	St. Luke's Hospital	Facility
Don Draper Notification of PPO E&I Automatic		
Carbon Copies		
Notification PPO Eandl 234567876543	Campbell, Pete	Servicing
Notification PPO Eandl 234567876543	Olson, Peggy	Requestin
Resent		
Notification PPO Eandl 234567876543	Campbell, Pete	Requestin
Letter Template Name 234567876543	Draper, Don	Member
Request Clinical 234567876543	Sterling, Roger	Attending
Denial Letter 234567876543	Draper, Don	Member
Fax to Clinical 234567876543	Romano, Sal	Member

Document_title.pdf

Download Zoom in Zoom out

UnitedHealthcare Services, Inc. on behalf of UnitedHealthcare Insurance Company
1311 W President George Bush Fwy
Richardson, TX 75080

UnitedHealthcare

Patient: Holly Hobby
Service Ref #: A002935596
Member: XXXXX7531
Member ID: XXXXX7531
Plan #: 54554
Plan #: 54554
Letter ID: NH_MEDNEC_IPBD_LOC

April 5, 2021

HOLLY HOBBY
100 ROCKET RD
CHARLESTON SC 29401

Dear Holly Hobby:

We received a request to cover an inpatient facility admission. Some days of your admission may be covered, and some are not covered.

Requested service or care:

- Physician/health care professional: Scott Lindhorst
- Facility name: Scott Lindhorst
- Place of service: Inpatient
- Date(s) of service: 01/13/21 - 04/13/21
- Admission date (if applicable):
- Diagnosis: M54.5 Low back pain
- Date(s) determined not to be medically necessary: 4/1/2021
- The clinical reason for our determination is:
Your doctor has requested a surgery that will place a device (spinal cord stimulator) that is used to send electrical signals to select areas of the spinal cord for the treatment of certain pain conditions. We looked at the health record from your doctor. We looked at the policy for this test. There are other options that need to be considered before this surgery can be approved. Please talk to your doctor about other options for your care.
- Denial code: Not applicable
- Claim amount (if applicable): Not applicable

This decision is based on the following information:IMPLANTED ELECTRICAL STIMULATOR FOR SPINAL CORD Policy Number: 2017T0567J Effective Date: August 1, 2017.

What this means for you

We reviewed the information submitted by your doctor or facility. According to the applicable clinical guidelines, your illness or injury does/did not meet the guidelines for this level of care. Please see the medical rationale above.

"Level of care" is the amount of medical care or treatment needed for an illness or injury, and where that care or treatment should be provided. When a doctor or facility treats a patient above the recommended level of care, we cannot cover it. In this case, an inpatient facility is providing or provided a level of care beyond what the guideline recommends.

Your provider should not bill you for the cost of the services you received.

Please call us at the number on your health plan ID card if you receive a bill from your doctor or facility that is associated with this admission request.

This is a benefit determination, not a medical decision. Only you and your doctor can decide what medical care you need.

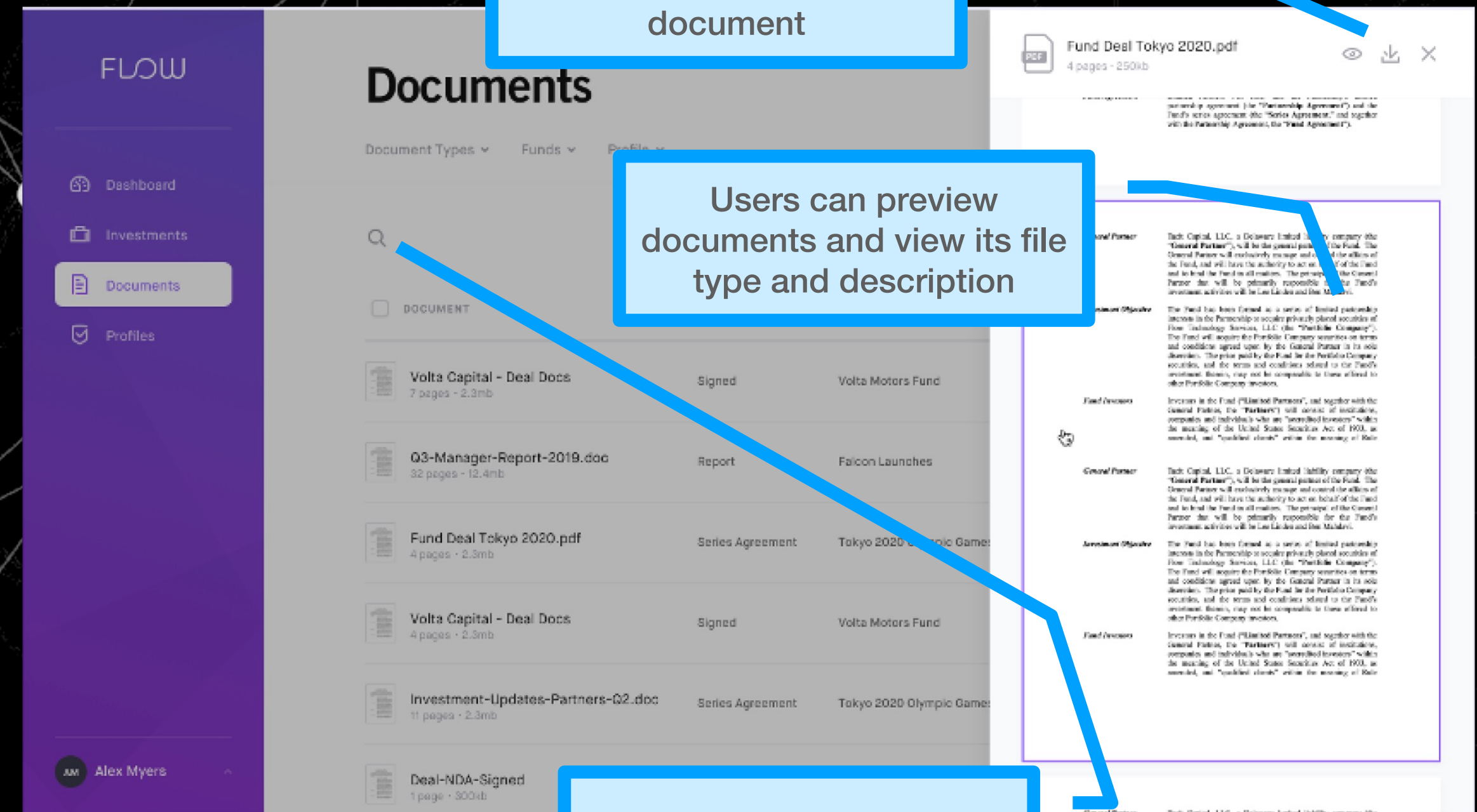
Your provider can discuss this case by calling the UnitedHealthcare Peer-to-Peer Support Team at 1-800-955-7615.

- If your provider asks for a peer-to-peer review, and the request for coverage is still denied, you can ask for an appeal.
- If you have already started an appeal, your provider cannot ask for a peer-to-peer review.

Solutions

Document Search

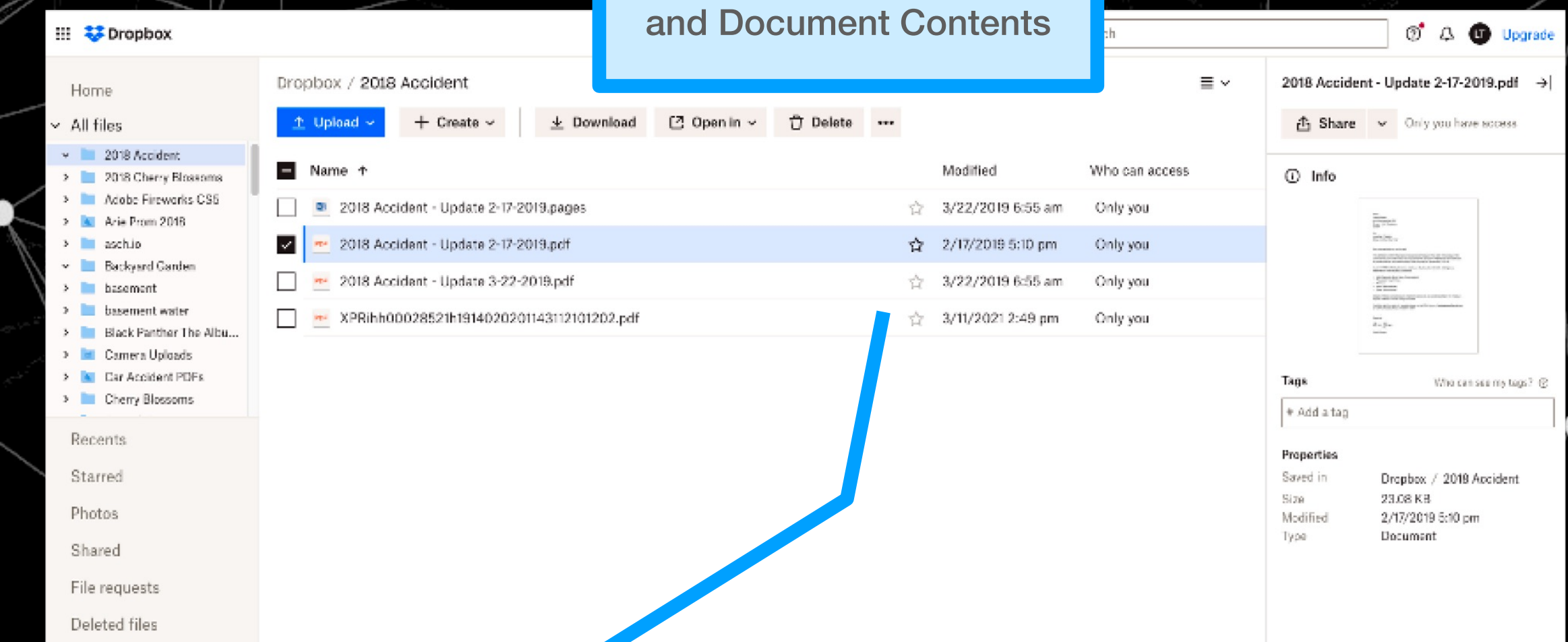
- Present users with a document list with typical search affordances that include pagination, record counts, filters, document types etc.
- Included document categories with callouts to denote document type
- Allow users the ability to search for documents uploaded within a particular date range
- As all document types are PDF's, give the users the selectable option to search the actual contents the documents themselves
- Present the user with a modal with advanced document search and review options that include Download, Send, etc.



Modal with tools to let users download or view the fill document

Users can preview documents and view its file type and description

Users can search metadata and Document Contents



Desktop Styled File Navigator

Analyze and Document

Service Provider Search

Task: Agents often assist members in finding service providers in their vicinity. A location search tool is used for this purpose.

Challenges

- The map view as it exist is not optimized and is crowded with other functionalities.
- The proximity search is broken and defaults to a nationwide search if a provider is not found within the selected radius.

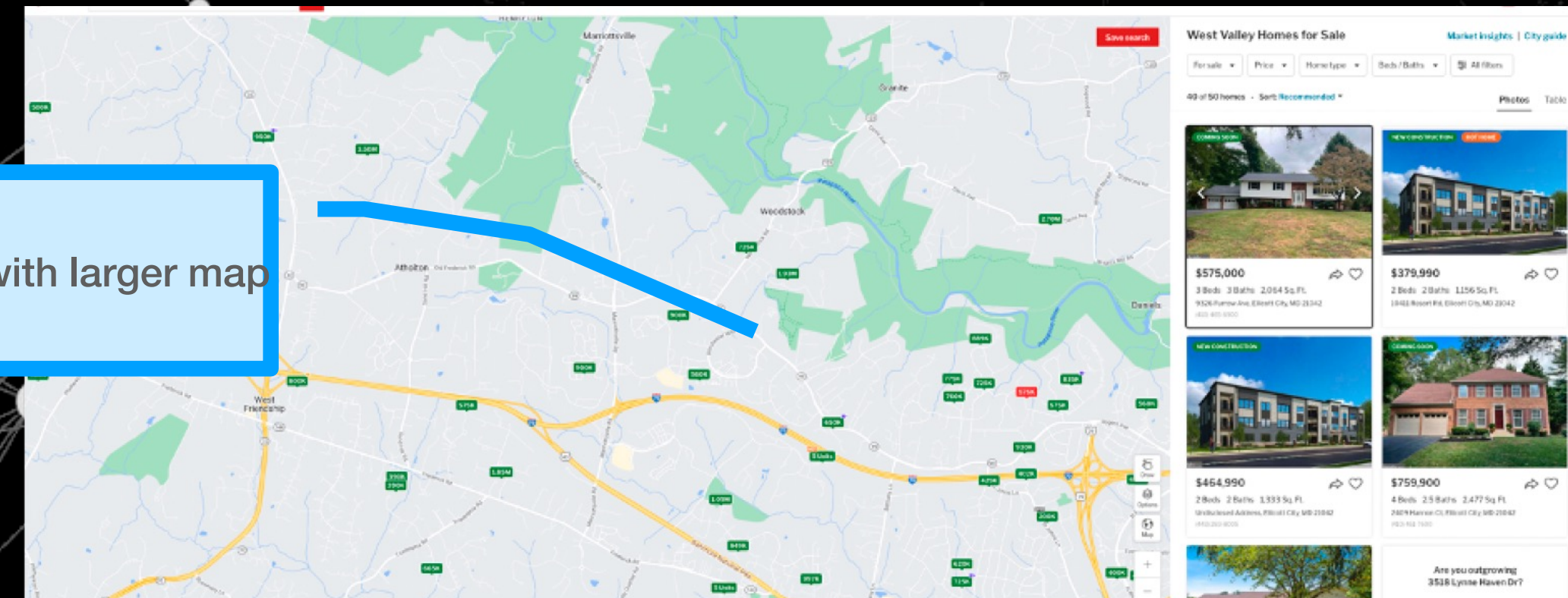
The screenshot displays the OPTUM Provider Referrals search interface. At the top, there is a navigation bar with 'Home', 'Tasks', 'Bookmarks', and 'Apps'. A search bar is located on the right side. Below the navigation bar, there is a 'Provider Referrals' section with a search form. The search form includes a dropdown for 'Find therapists, psychiatrists, or other clinics', a 'Within' dropdown set to '25 Miles', and a text input for 'Location' with a 'Search' button. Below the search form, there is a 'Provider Results' section with a 'Show Map' toggle. The results are displayed in a list view, showing three identical entries for 'Superlonglastnameguy, John, MD'. Each entry includes contact information, location, and a 'Schedule appointment' button. To the right of the list is a map view of Birmingham, AL, showing the location of the provider. The map is crowded with various landmarks and street names.

Solutions

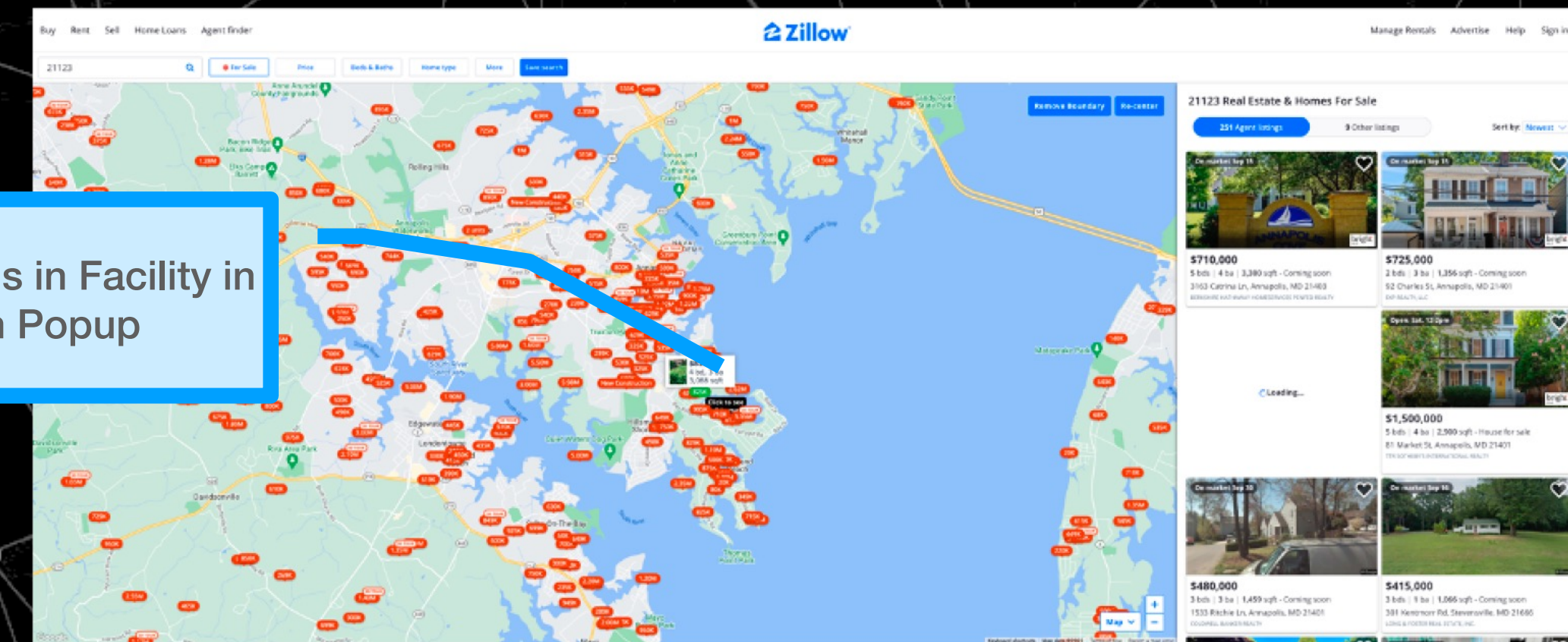
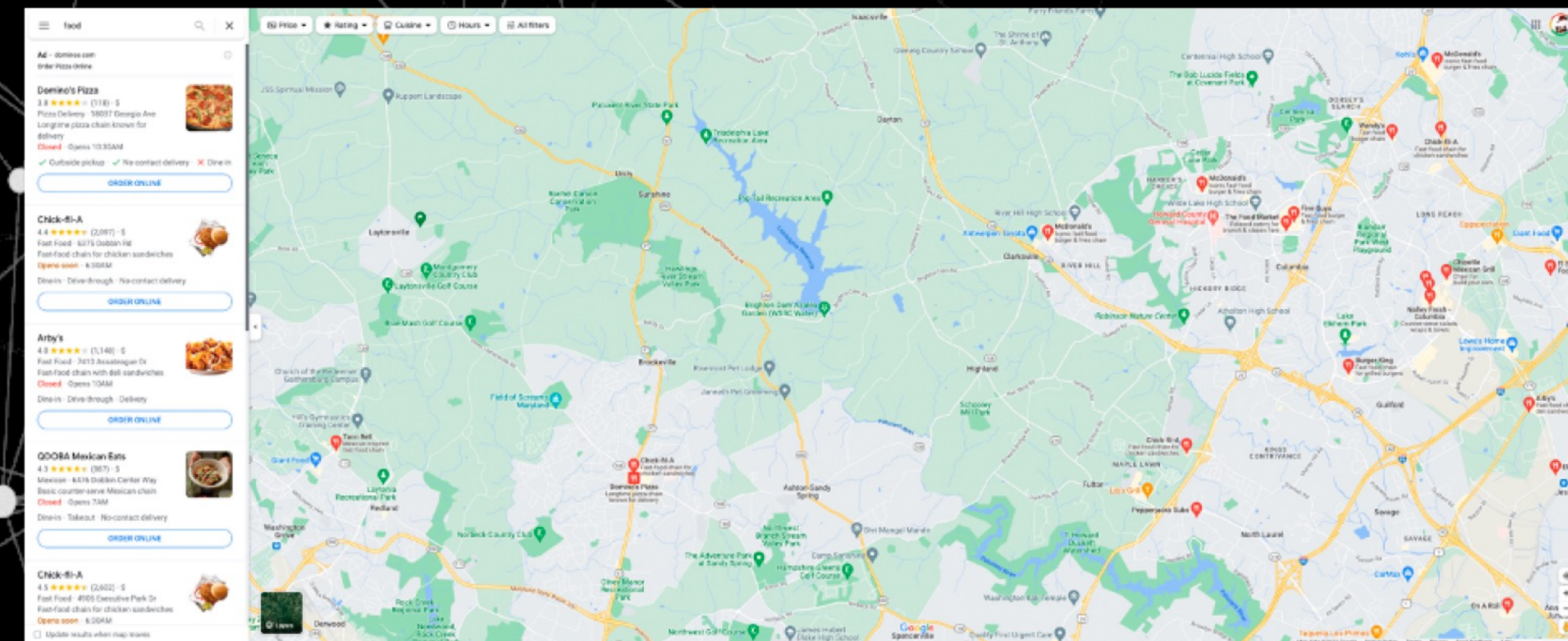
Service Provider Search

- Develop a map interface with a larger map and more minimized controls
- Put provider details in the Map Pushpins
- Fix the search radius issue so default to a state level result listing if the standard zip code listing yields no results.

Map Interface with larger map



Location details in Facility in Push Pin Popup



04

Iterative Prototype

After the [aforementioned UX Research and Testing Methods](#) were utilized, prototypes iteratively developed the consolidated into solutions, **two** of which are presented.

- **Member Search:** This search interface lets agents find the member of their choice from a total list of members.
- **Member Content Search:** This search interface lets agents search for any piece of member content, including, doctor visit records, prescriptions, medical scans, etc,

Member Search Results

- Agents are presented with search pagination and can change the number of results presented per page
- Agents have a show hide accordion that displays notes on a members last interaction with UHC
- Agents can use a smart search that all that allows them to enter semi colon separated variables which are recognized and treated as search criteria.
- Agents can sort and filter search results
- Account Sponsors are lighted and colored for rapid recognition.

Rules Authoring Parameters Phrases Conditions Admin Area

← Search Results David St John; 123121234

Filters applied Name: St John x Subscriber ID: 123121234 x Clear all

10 entries per page Pg 01 of 20

Smart Search that can recognize search variables

Name	Subscriber ID	Coverage Dates	Issue State	Coverage Type	Relationship	Account
David St John	123121234	MM/DD/YYYY-MM/DD/YYYY	Maryland	BH, EAP WL	Self	Twitter
Last Interaction: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Suspendisse sit amet orci ut felis facilis porta. Nam fermentum lacus magna, sit amet dignissim elit sodales quis. Morbi pulvinar ex volutpat, maximus massa in, dignissim mi. Curabitur non luctus nisl. Aliquam id tortor velit.						
Interacted with: Mary Sue Interacted on: MM/DD/YYYY DOB: 1/2/2000						
David St John	123121234	MM/DD/YYYY-MM/DD/YYYY	Maryland	BH, EAP WL	Self	Twitter
David St John	123121234	MM/DD/YYYY-MM/DD/YYYY	Maryland	BH, EAP WL	Self	Twitter
David St John	123121234	MM/DD/YYYY-MM/DD/YYYY	Maryland	BH, EAP WL	Self	Twitter
David St John	123121234	MM/DD/YYYY-MM/DD/YYYY	Maryland	BH, EAP WL	Self	AT&T
David St John	123121234	MM/DD/YYYY-MM/DD/YYYY	Maryland	BH, EAP WL	Self	Twitter
David St John	123121234	MM/DD/YYYY-MM/DD/YYYY	Maryland	BH, EAP WL	Self	AT&T
David St John	123121234	MM/DD/YYYY-MM/DD/YYYY	Maryland	BH, EAP WL	Self	Twitter
David St John	123121234	MM/DD/YYYY-MM/DD/YYYY	Maryland	BH, EAP WL	Self	Twitter
David St John	123121234	MM/DD/YYYY-MM/DD/YYYY	Maryland	BH, EAP WL	Self	AT&T
David St John	123121234	MM/DD/YYYY-MM/DD/YYYY	Maryland	BH, EAP WL	Self	AT&T

Notes on most recent interaction with UHC

Results presented in traditional table format

10 entries per page Pg 01 of 20

Search Result Pagination

Solutions

Member Content Search

- Users no longer have to use multiple search interfaces to find patient content.
- The content of documents are search and presented to agents.
- Agents can toggle between a Dynamic Elastic Search Results and Traditional Table Results view
- Agents see which other agents are viewing their current account.
- Users can save searches as filters to speed common searches in the future.
- Search results are categorized with tactic's that denote their category and type.
- Technical and learning debt reduced by iteratively updating interface elements.

Member. Detail remain visible to anchor the agent to the task

Users can toggle between a dynamic elastic search and a standard table view of search results

The screenshot displays the 'Member Content Search' interface for a user named Arturo Gonzalez. The interface includes a search bar with 'Aspirin' entered, a search button, and a toggle for 'Elastic' search. Below the search bar, there are several search results, each with a text snippet and a colored filter tag (e.g., 'Doctor's Note', 'Medical Scan', 'Employment Document'). A sidebar on the left contains navigation icons. At the bottom, there are filter options for 'View Filter (3)' and 'Create Filter', along with a 'Search' button.

User can search for any piece of user content from a single interface.

Results are tagged with color coded tic-tac's based on it content type

Users can save frequent searches as filters they can use on other accounts



UnitedHealthcare®

Outcome

Successfully provided UX Artifacts and Guidance to develop new search interface that
reduced information
retrieval times by 74% and
improved retrieval accuracy by 25%.