USING AI SMART SEARCH AND SUMMARIZATION TO REDUCE CLINICIANS COGNITIVE LOAD

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Family Medicine / IT Provider Liaison
Mile Bluff Medical Center

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Senior Director, Field Marketing
MEDITECH

ABOUT ME

1995 Graduate of UW-Madison.
Preceptorship at Mile Bluff Medical Center.
Serving as Primary Care Physician Assistant since 1995.

During my career at MBMC I have worked in Family Medicine but also provided service in multiple areas including:

- Acute Care
- Surgical Assisting
- Urgent Care
- Sand Ridge Secure Treatment Center

Lead APP since 2008
2022 started role as IT Provider Liaison
Currently serving on MBMC Medical Exec Committee

ABOUT
MILE BLUFF MEDICAL CENTER

Independent Medical Center located in Mauston, WI. Based in rural South Central Wisconsin, the Medical Center serves a population of more than 55,000 residents in an eight-county region.

- 40-bed acute care hospital
- 2 nursing and rehab centers
- 5 outreach medical clinics
- 2 dialysis centers
- Wide variety of specialty care services

WHY
THE TRANSITION TO IT?

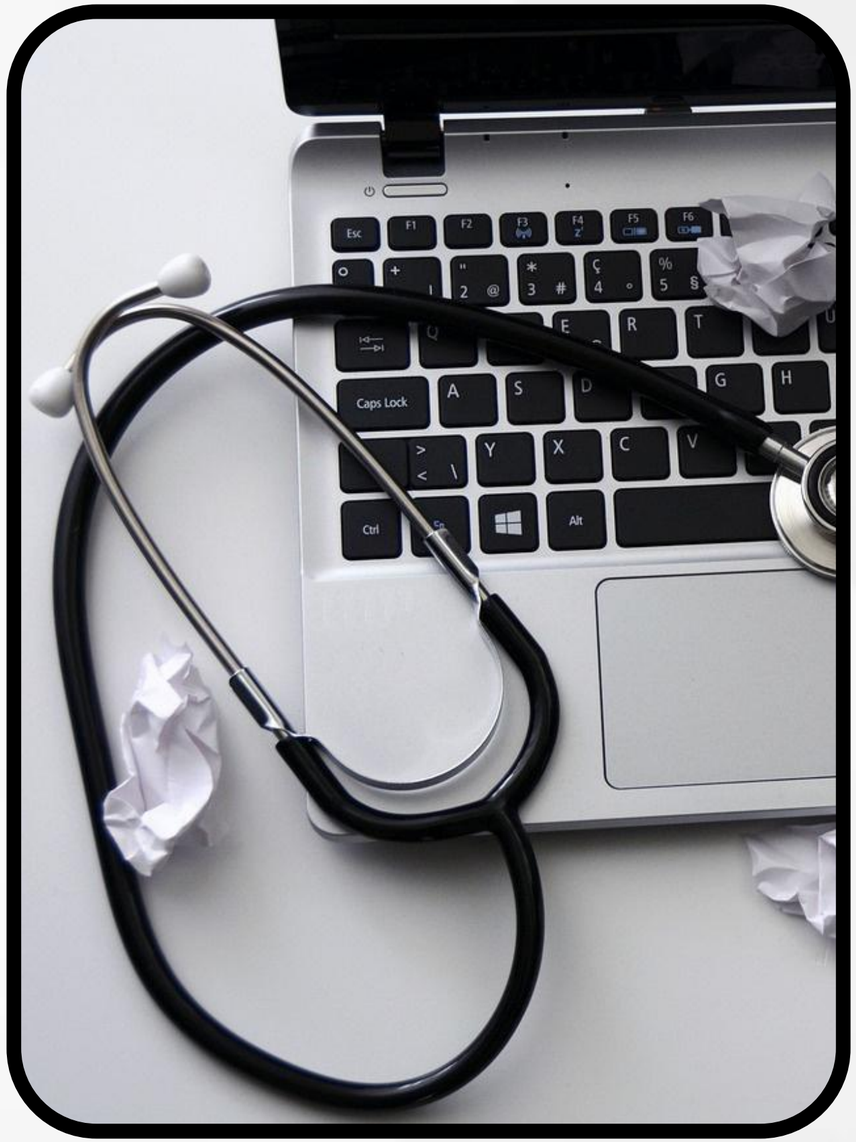
A strong desire to be an efficient provider who delivers a high-level of care to my patients.

Frustrations with our two EHR system started a process of burnout that was worsened by the pandemic.

Request to be a Super User for our new EHR turned into the role of Clinical Co-Champion.

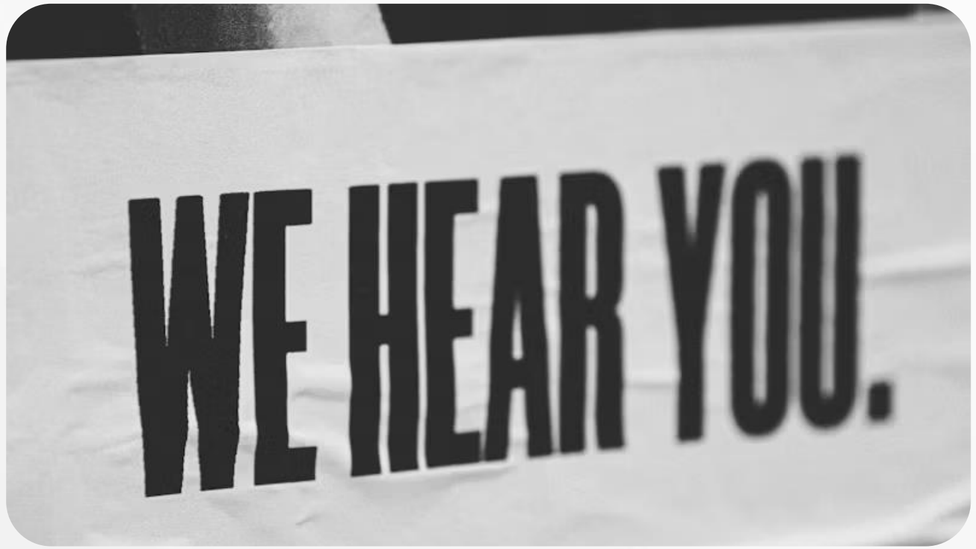
Patient Care and IT Liaison

- Giving our providers a voice with IT
- Train providers in EHR
- Implementation and optimize workflows
- Work to improve EHR functionality



OUR
EHR JOURNEY

- **2008** -Hospital converted from paper chart to MEDITECH C/S
- **2012** -Clinics converted from paper chart to NextGen EHR
- **2012-2021** spent navigating two non-cloud based EHRs
- Small **IT department** of about **9 employees**



SURVEY
SAYS...

- Organizational surveys repeatedly noted dissatisfaction with two EHR system.
- **2021** -Transition to MEDITECH Expanse.
- Cloud-based EHR, Service through MEDITECH. Having one source of truth, leading to better communication, provider engagement, and patient satisfaction.

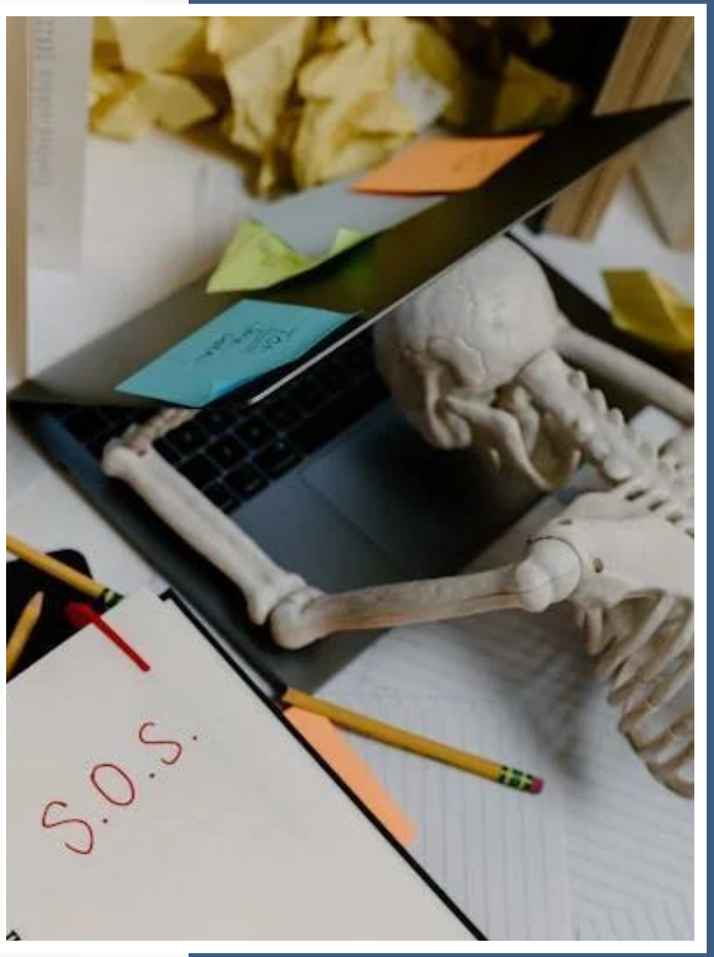
ONE PROBLEM REMAINS.
CHART REVIEW

Cognitive Fatigue and Burnout searching for information.

Information needed could be buried in a scanned document that are **hundreds of pages**.

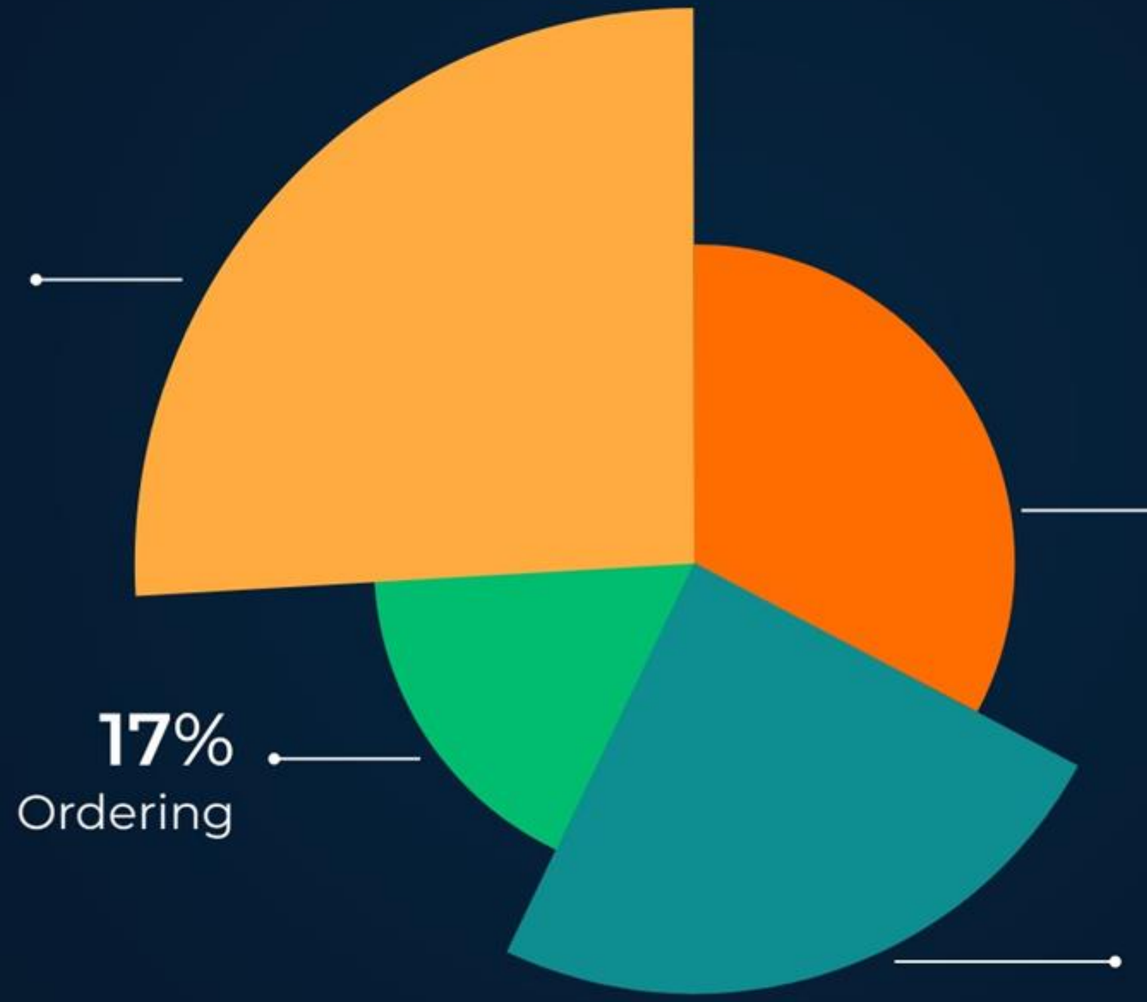
Importing discovered data can be **time-consuming**.

Updating the problem list and medical history management is more difficult without **accurate information**.



- Trying to find hidden data is **less time with the patient** and more focus on the EHR.
- Scanned document review in the EHR could be a **multitude of clicks**.
- Patients can not be relied upon to know all **details** of their medical history.
- Not having the right information can lead to **unnecessary or repeat testing**.

Average Outpatient Patient Encounter = 16 minutes and 14 seconds



33%
Chart Review

24%
Documentation

17%
Ordering

26%
Direct Interaction
with Patient

*** less than 5 minutes**

Source: Physician Time Spent Using the Electronic Health Record During Outpatient Encounters, Annals of Internal Medicine, 4 Feb 2020

PARTNERSHIPS
SOLVE PROBLEMS

If somebody offers you an amazing opportunity but you are not sure you can do it, **say yes** – then learn how to do it later!
- Richard Branson

MEDITECH + Google Health

We have been a long time customer of MEDITECH. A **relationship** of service and trust has been developed over that time.

Having the chance to work with a **big tech** company may not come along again especially with an advancement that fits our exact needs.

MileBluff MEDICAL CENTER
Healthcare evolving for life

HOW TO MAKE A MEANINGFUL IMPACT

Enhance clinician satisfaction

- Reduce burnout
- Reduce cognitive load

Increase efficiency

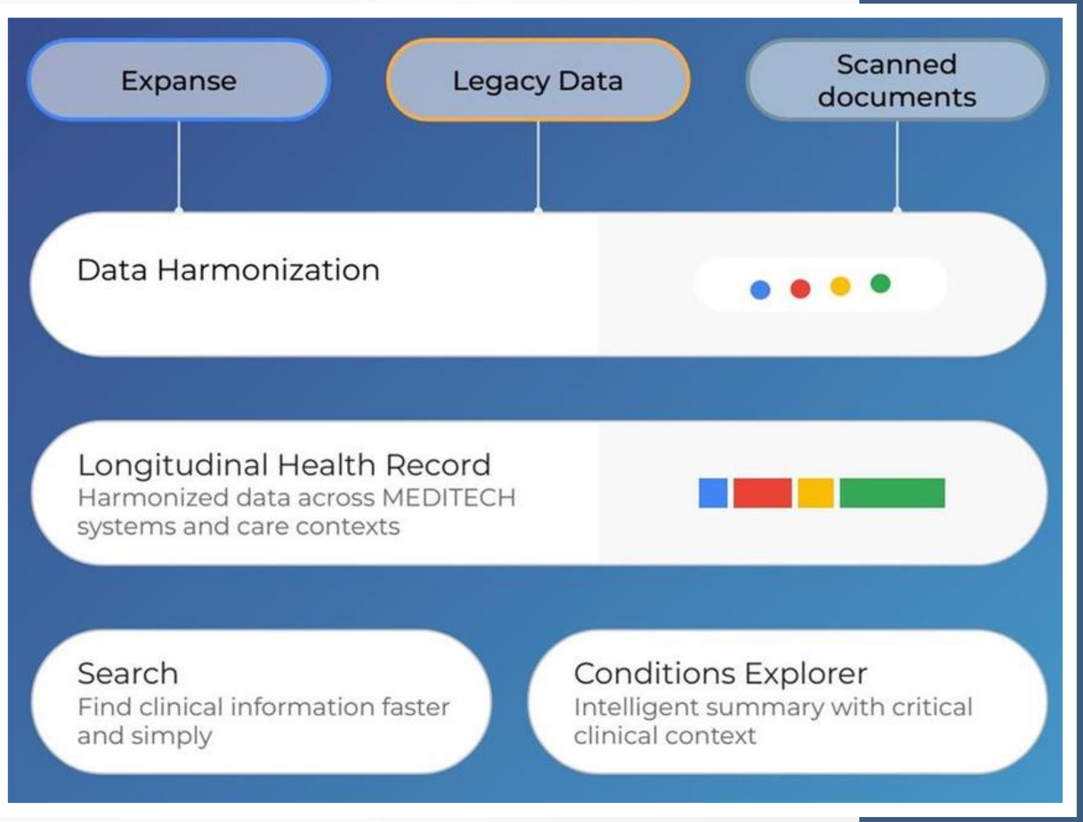
- Better use of information
- Increase throughput

Improve patient experience

- Focused Engagement
- More time with the provider

Deliver high quality care & Improve outcomes

- Close care gaps
- Holistic preventative care



THE SOLUTION

Search - tuned specifically to medical field

- Recognizes shorthand and acronyms
- Faxed and scanned documents
- Recognizes handwritten notes

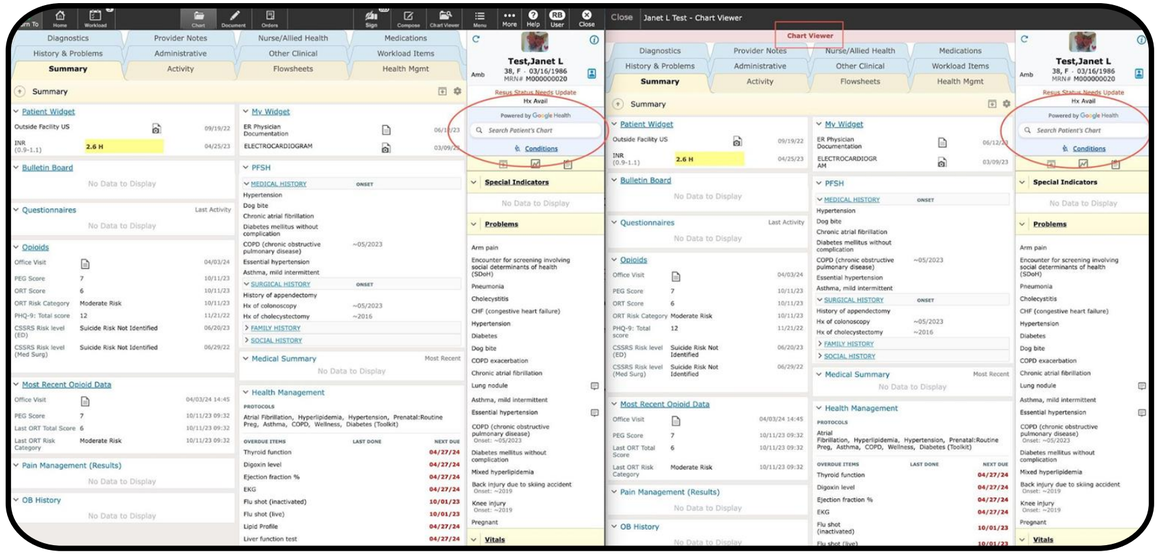
Conditions - AI generated problem list based on clinical notes

- Supporting evidence is presented
- Second level insights - labs, notes, and reports

ENHANCE

CLINICIAN SATISFACTION

By reducing time looking within the EHR and rapidly surfacing information needed.



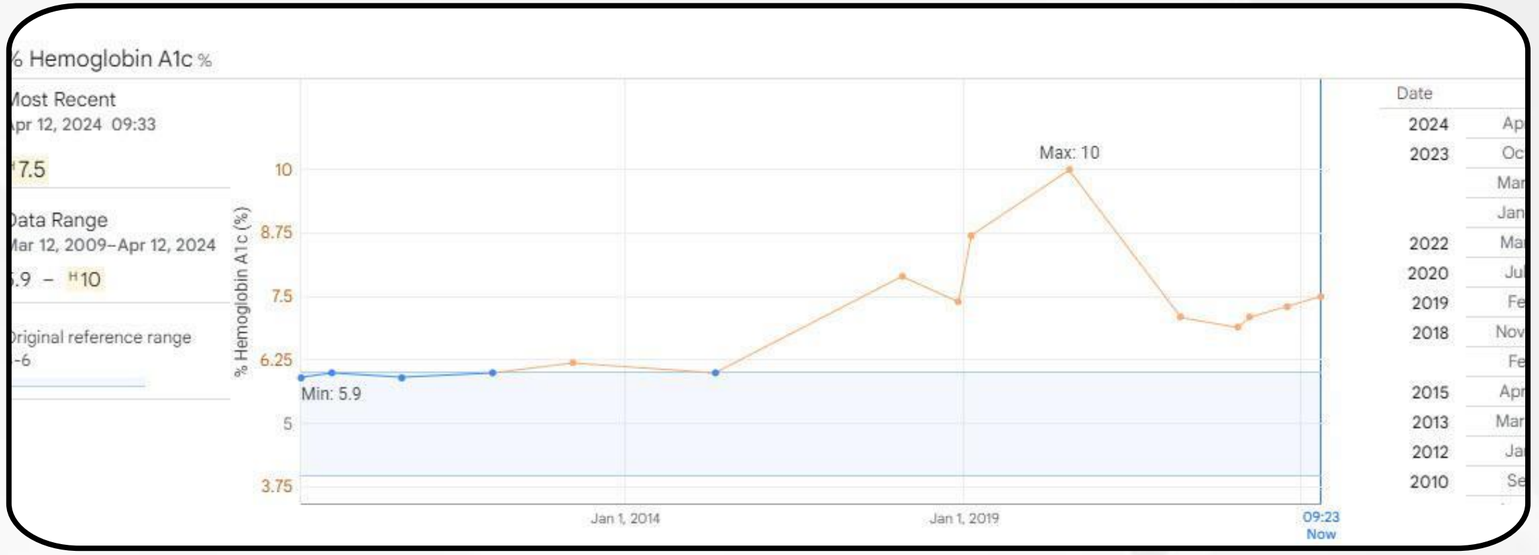
INCREASE

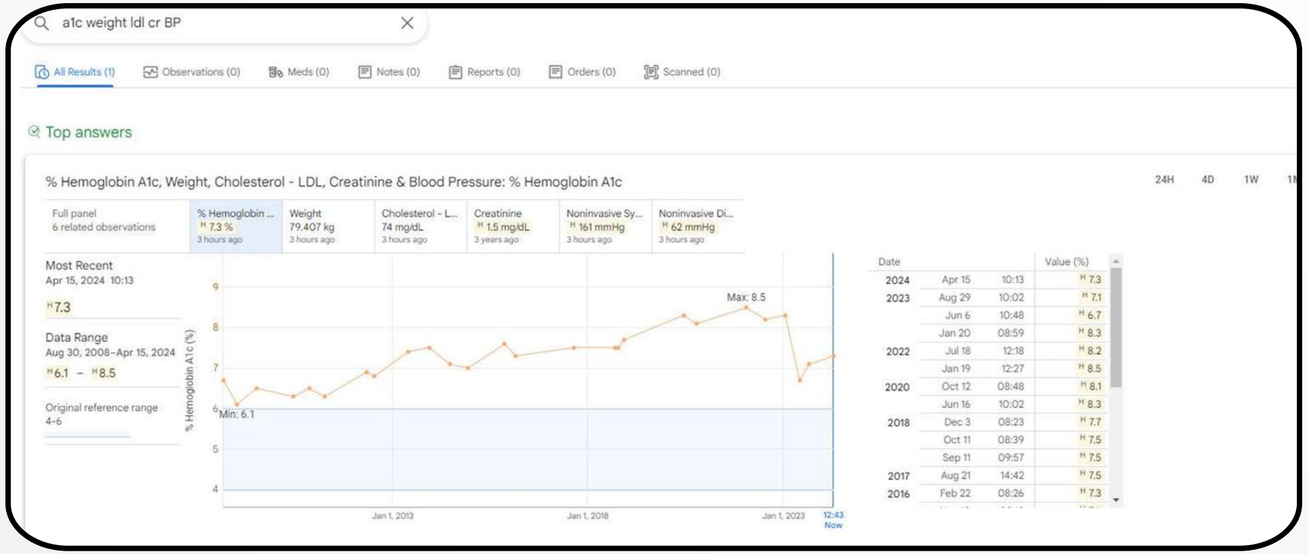
EFFICIENCY

Improving access to information within any workflow.

IMPROVE
PATIENT EXPERIENCE

Increase focused engagement and empowering the patient.



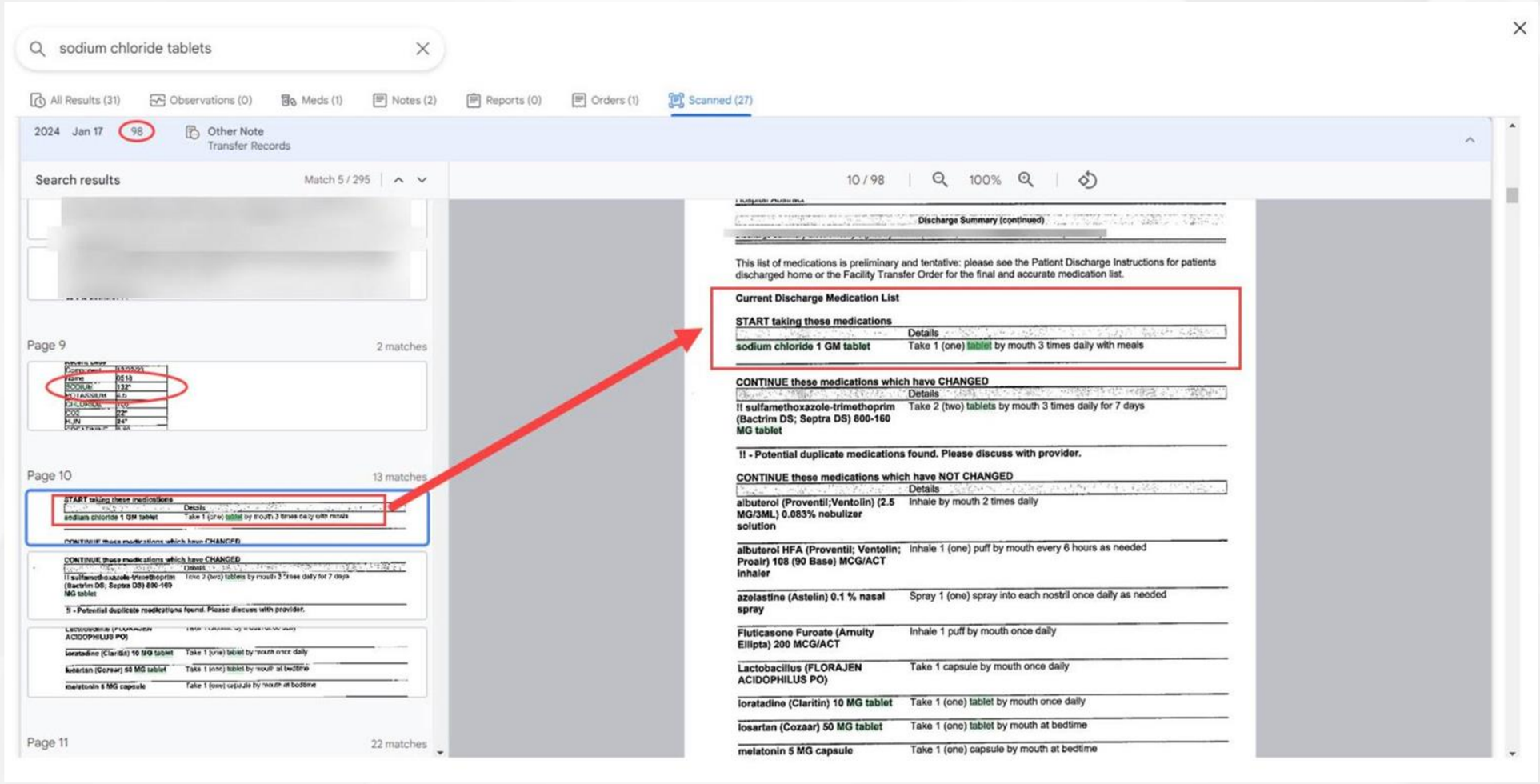


DELIVER HIGH QUALITY CARE
IMPROVE OUTCOMES

Close the gaps in care delivery and provide a complete set of information for disease management.

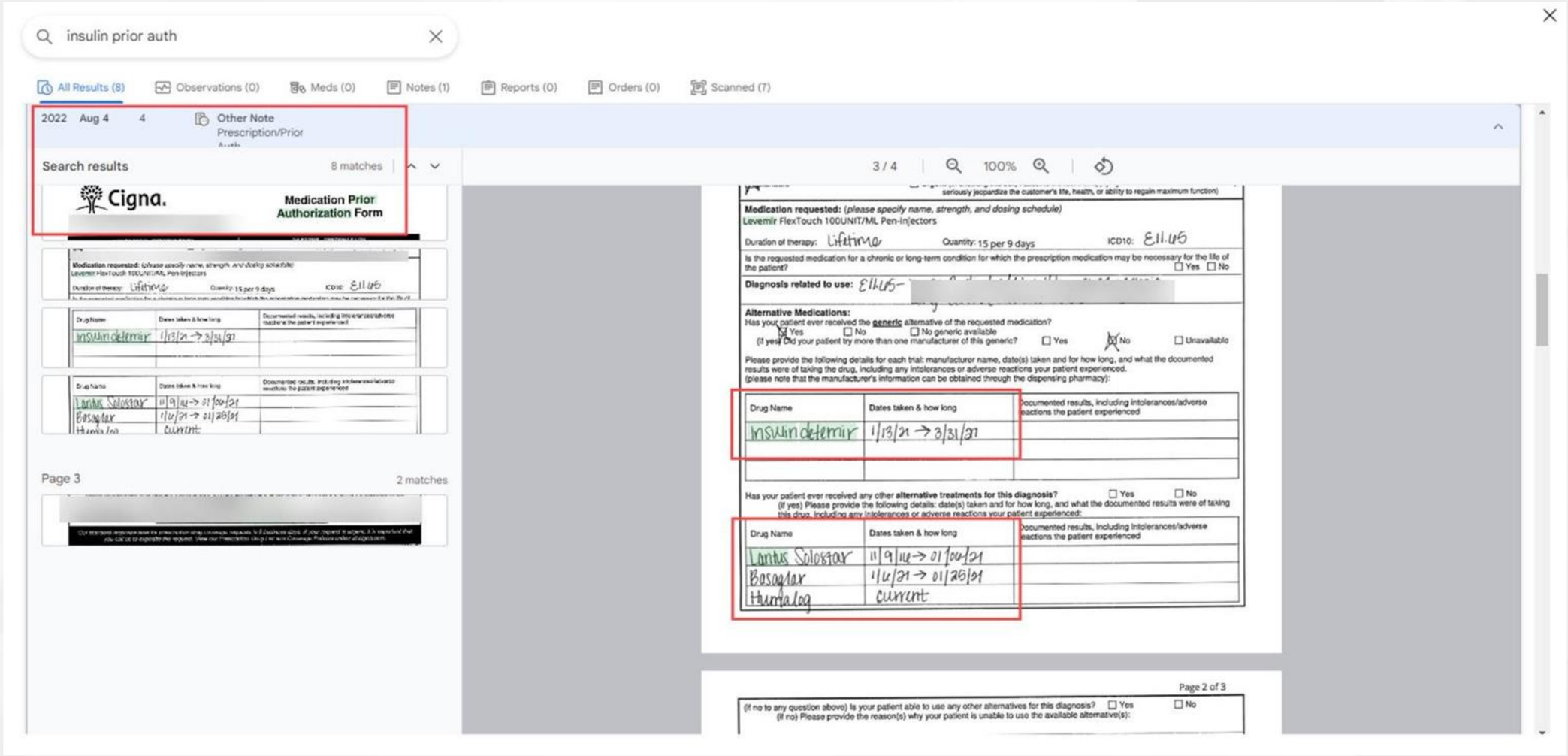
SEARCH

RAPIDLY SURFACE INFORMATION

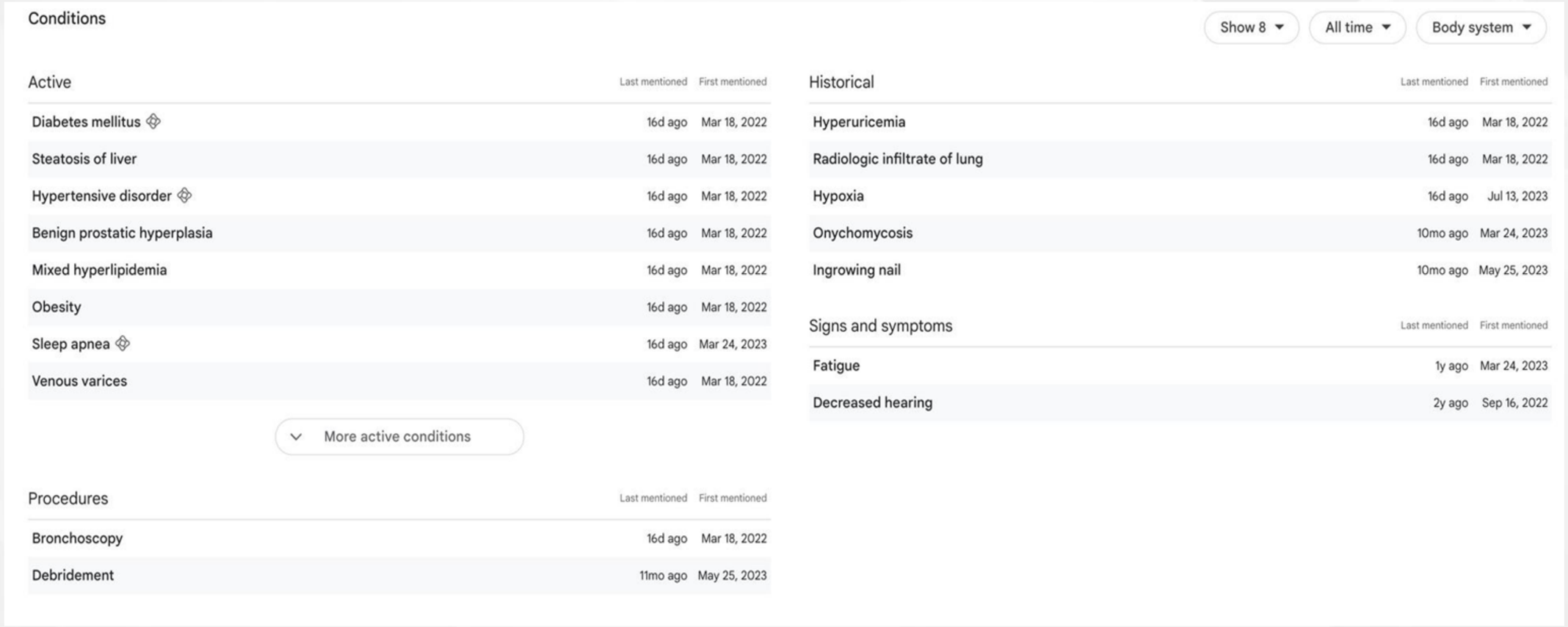


CLOSE THE CARE GAPS

IMPROVE PATIENT COMPLIANCE



AI GENERATED
PROBLEM LIST



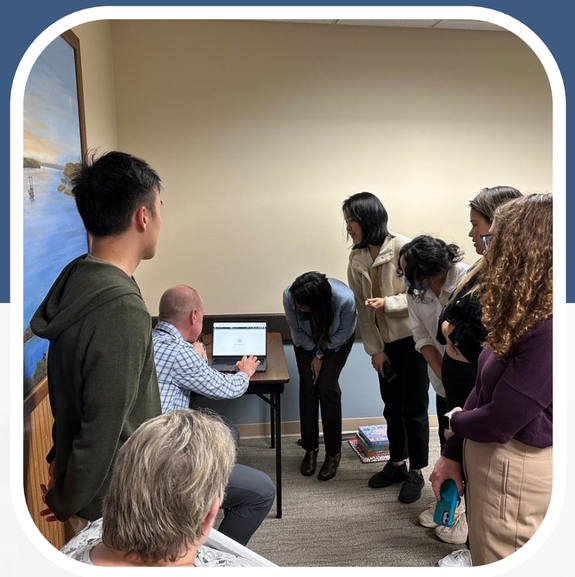
LEADING CHANGE

PROJECT MANAGEMENT

Bringing three teams together

Coordinate Tech Teams

Testing and Validation

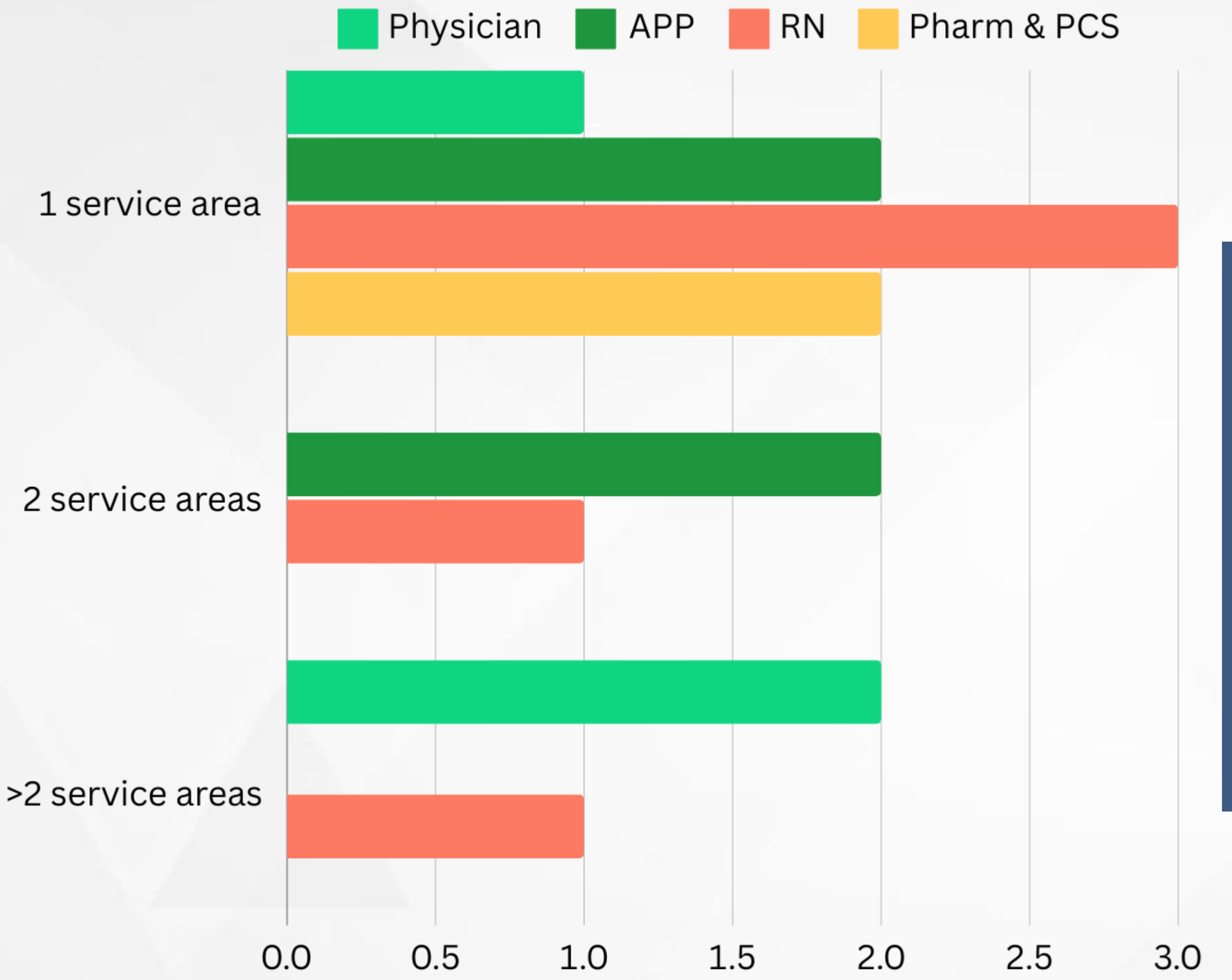


Foster Communication

In-person and Virtual Meetings

Develop Relationships

Site Visits



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CLINICAL

CHAMPIONS

The **Impact of Search and Summarization** at Mile Bluff

176 Users | Rapid Adoption Across **23** Departments

53 MDs/APPs

61 RNs

48 Allied Health Professionals

14 HIM Specialists

- Acute Care
- Obstetrics
- Surgery
- Speech
- ER / Urgent Care
- Outpatient Clinics (9)
- Infusion & Cancer Care (ICC) / Wound Care
- Diabetes Education
- Infection Control
- Pharmacy
- Social Services
- Med Refill Team
- HIM
- Revenue Cycle
- Long Term Care

GO LIVE

JANUARY

- 86.3% of Users on Boarded in 3 days
- 69.5% response rate on pre-pilot survey
- Zero outstanding login issues - smooth sailing!

“This is definitely the **smoothest and most engaged go live** that I’ve been part of in my entire career. The collective success of the launch and the widespread adoption wouldn't have been possible without the support of the amazing clinical champions and the strong organizational culture at Mile Bluff. This **collaboration** serves as a prime example of how different organizations can come together, maximize their strengths and achieve mutually beneficial outcomes.”

Matthew Abraham, Google Health, Program Manager

GOALS

VALUE AND IMPACT

Ease of Access - Are users easily able to find and access Search & Conditions Explorer integration?

Helpfulness - Do users find value and joy in using Search & Conditions Explorer?

Engagement - Do users interact frequently and deeply with Search & Conditions Explorer?

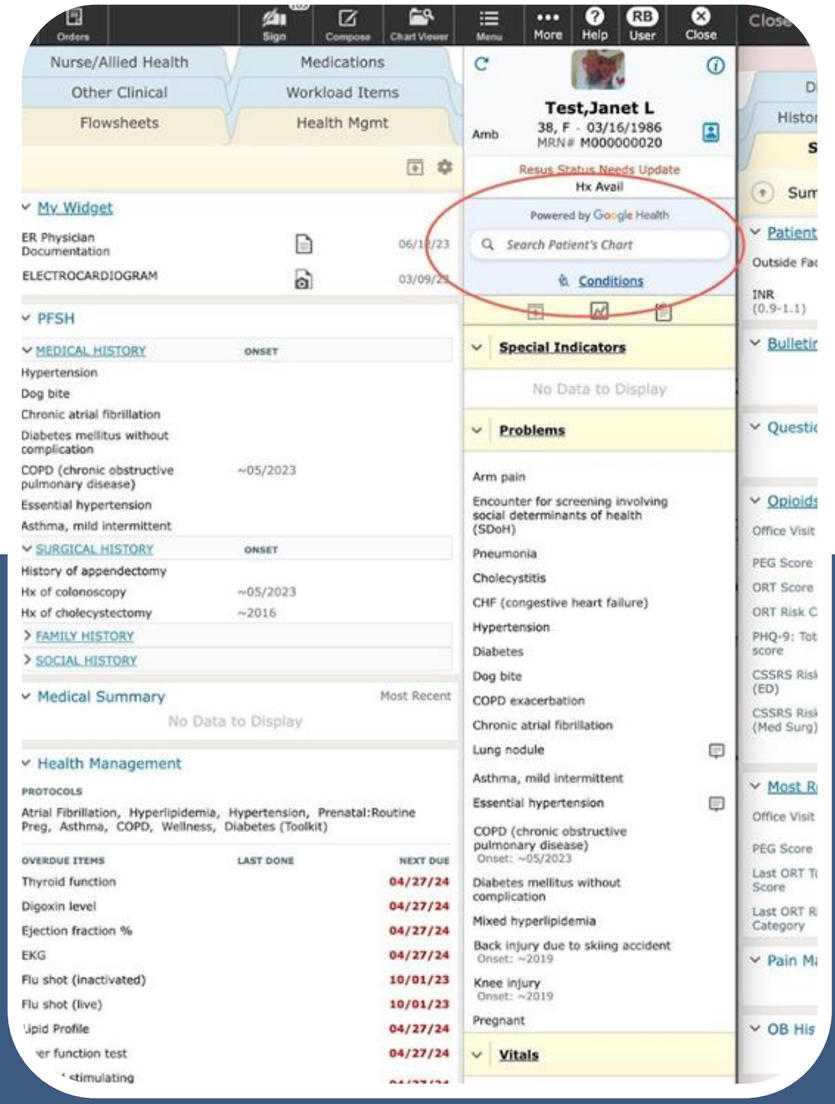
Adoption - Do users discover and try Search & Conditions Explorer?

Retention - Do existing users keep returning to Search & Conditions Explorer?

VALUE AND IMPACT

EASE OF ACCESS

Are users easily able to find and access Search & Conditions Explorer integration?



Post Launch Survey: **86%** of users report being **somewhat or very satisfied with Search and Summarization**

"I searched for a DNR, and it pulled up the scanned document, and **I found it right away. It saved us that day in the ER.**"
Meg Devito - ED Technician

VALUE AND IMPACT

HELPFULNESS

Do users find value and joy in using Search & Conditions Explorer?

Post Launch Survey: **76%** of users report that Search and Summarization is **very or extremely helpful in accomplishing specific tasks**.

"I used to spend about 15 minutes per patient cleaning up problem lists, especially for new patients or patients transferred to me from other providers. The **search and summarization functionality will help me cut this time down significantly.**"

Dr. Gatzke-Plamann - CMO, Family Medicine

VALUE AND IMPACT

ENGAGEMENT

Do users interact frequently and deeply with Search & Conditions Explorer?

Post Launch Survey: **91%** of users report that Search and Summarization **feels somewhat or much faster than before.**

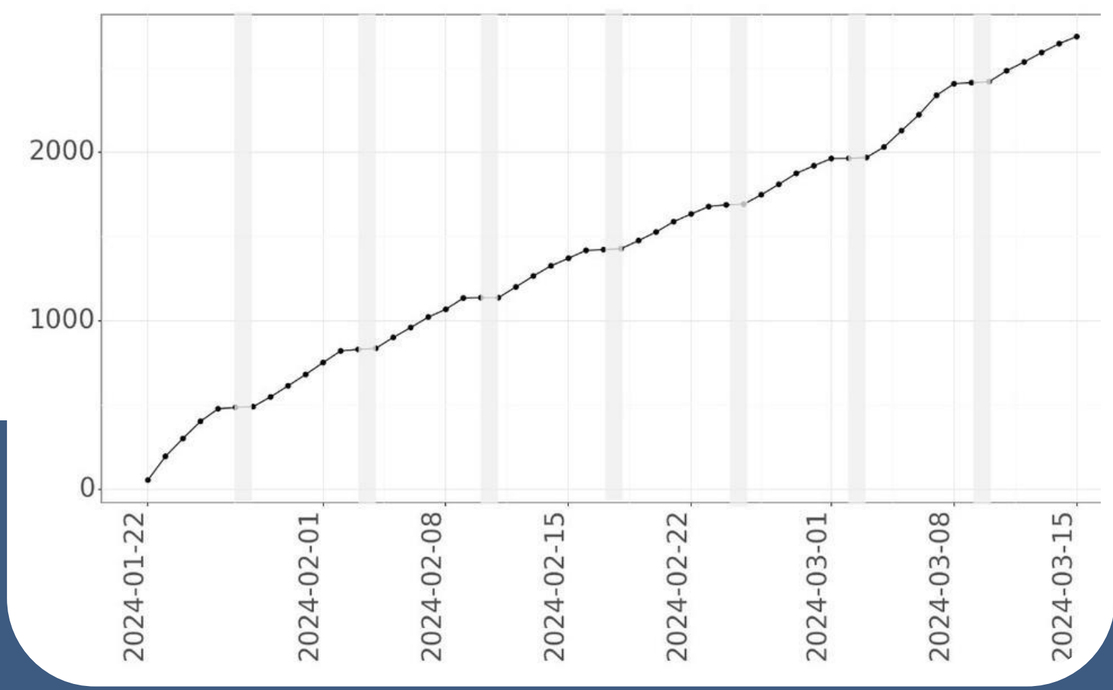
"I am tasked with reviewing hundreds of pages of discharge summaries and scanned documents from other sites each day. **This functionality is going to transform my entire workflow.**"
Kayla Bilek - HIMS Department

VALUE AND IMPACT

ADOPTION

Do users discover and try Search & Conditions Explorer?

Do users interact frequently and deeply with S&S?



Users are effortlessly trained in the solution, swiftly onboarded, ensuring no additional burden for both the user and the patient.

If Search and Summarization were a separate application or located elsewhere in Expanse, I wouldn't use it as much or more likely at all. **I think it's a phenomenal tool and has made my life easier."**

Dr. Allegra Ponshock - Family Medicine, OB

VALUE AND IMPACT

RETENTION

Do existing users keep returning to Search & Conditions Explorer?

The seamless integration of the solution into workflows and its benefits ensure enduring engagement from users across the board.

“A powerful solution with intuitive ease of use and reliability makes for a revolutionary leap in healthcare delivery.
I believe this solution will elevate both patient experience and provider satisfaction.”
Randall Brandt, PA-C - Family Medicine

EMERGING
USE CASES

- Nephrology/Dialysis
- Cardiac Rehab
- eICU
- Radiology

- Cardiology
- Hematology/Oncology

FROM PILOT
TO SCALE

Careful consideration of further use cases with an ongoing emphasis on training and optimization of our system. Any additional AI tools will continue to focus on patient and provider success.

Explore Use Cases

Focus on Training

Ambient Listening

WHAT WOULD YOU DO WITH 5 MINUTES?

Dr. Kattenbraker - Sleep Medicine
Saves at least 5 minutes per patient for visit planning.

See another patient

Jen Anderson, MA - General Surgery
Pre-op planning time reduced by at least 5 minutes per patient.

Make a phone call

Brianna Juszczak, RN - Acute Care Director
Saves at least 5 minutes per chart for quarterly reporting and sepsis reviews.

Return an email

Run a mile???

Brenda Totzke, RN - Infection Control
At least 5 minutes saved with Surgical Site Infection review and other reporting measures.

Review your calendar

Jason Nuttall, ATC - Orthopedics
5 minutes saved for new patient visits and total joint surgery prep.

Get the kids to soccer practice

Randy Brandt, PA-C - Family Medicine
5 minutes saved in reviewing workload messages and transfer documents.

Help make supper

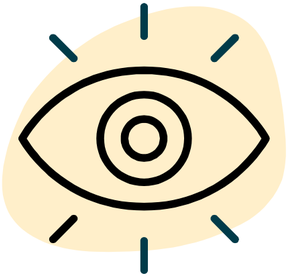
MEDITECH

EXPANSE

THE INTELLIGENT EHR PLATFORM

MEDITECH

VISION



Advance digital health record technology so every patient and their providers can access their health information and fully participate in their care.

MISSION

Enable global healthcare organizations to deliver safe, efficient, and impactful care to the communities they serve through our comprehensive software, services, and technology

VALUES

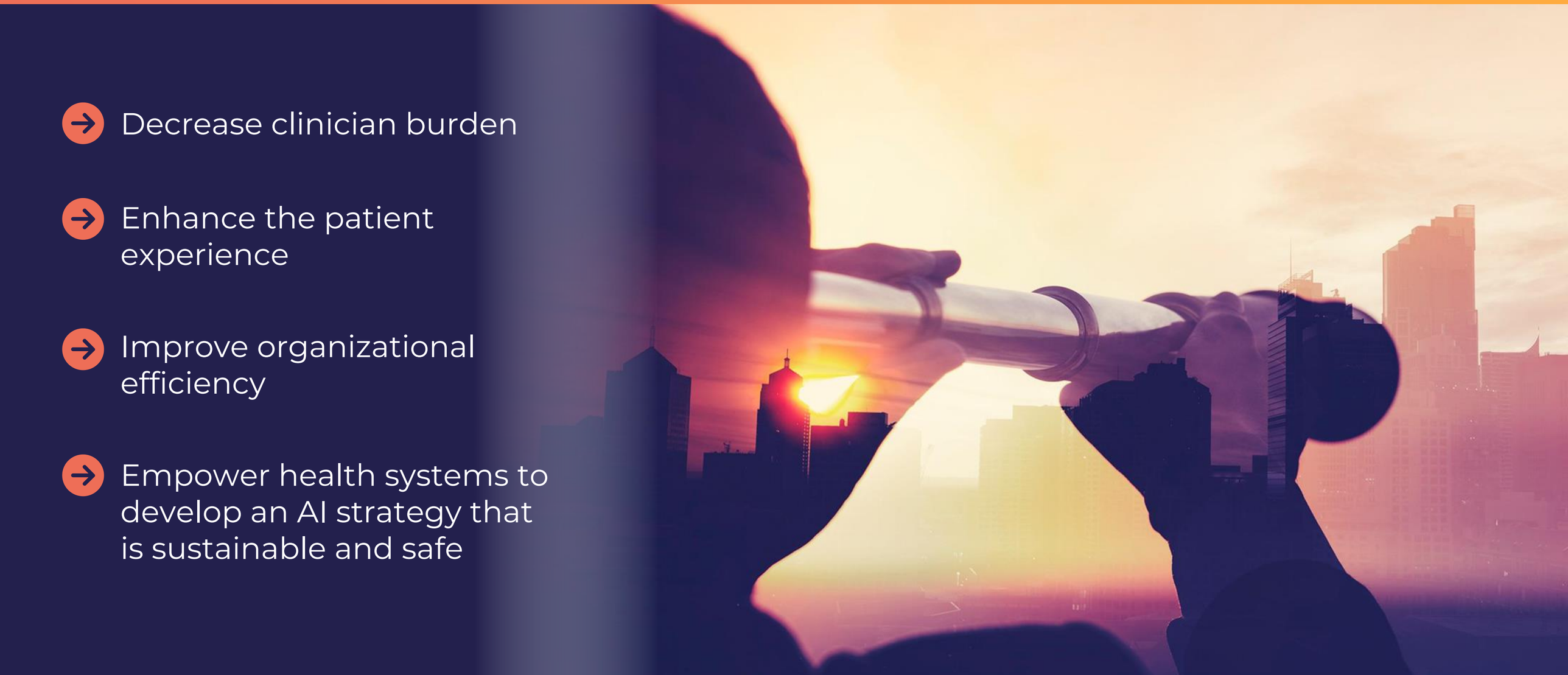
- Integrity
- Investing in the future
- Sustainability and focus
- Fiscal responsibility
- Positive long-term impact

MEDITECH and AI: Our Mission

MEDITECH's mission is to provide technology that enables healthcare organizations to deliver **safe**, **efficient**, and **impactful care**; our approach to incorporating AI into EHR solutions is thoughtful, deliberate, and driven by an understanding that it should safely **enhance the experience** for **patients, care teams, and health systems**.

A Vision for the Practical Integration of AI

- Decrease clinician burden
- Enhance the patient experience
- Improve organizational efficiency
- Empower health systems to develop an AI strategy that is sustainable and safe



MEDITECH

EXPANSE

THE INTELLIGENT PLATFORM

Patient Connect
Natural language understanding & sentiment analysis to route patient responses

Virtual Assistant
Conversational AI to streamline navigation and ordering

Ambient listening
LLMs & NLP to auto generate clinical visit notes

Expanse search and summarization, powered by Google Health
LLM, NLP, GenAI

Auto generation of clinical documentation
Hospital course summary, nurse hand-off

Capacity management
No-Show Prediction
OR Block Utilization

IMPACT

Expanse search and summarization

CLINICIANS

Saving an average of 7.5 minutes per patient

Pre-visit prep for primary care, sleep medicine; clinic pre-op

INFECTION CONTROL

Saving ~40 hours a month

~5 SSI reviews/month. Reviews previously took hours or days, now done in 15 minutes.

HEALTH INFORMATION MANAGEMENT

Saving approximately 16.7 hours a week

Used on 50 patients/week; saves 10-30 minutes per patient, which is a 25-40% reduction of time.

Empower with Generative AI
Auto-Generating Clinical Documentation:

| Hospital Course Summary

Problem Statement

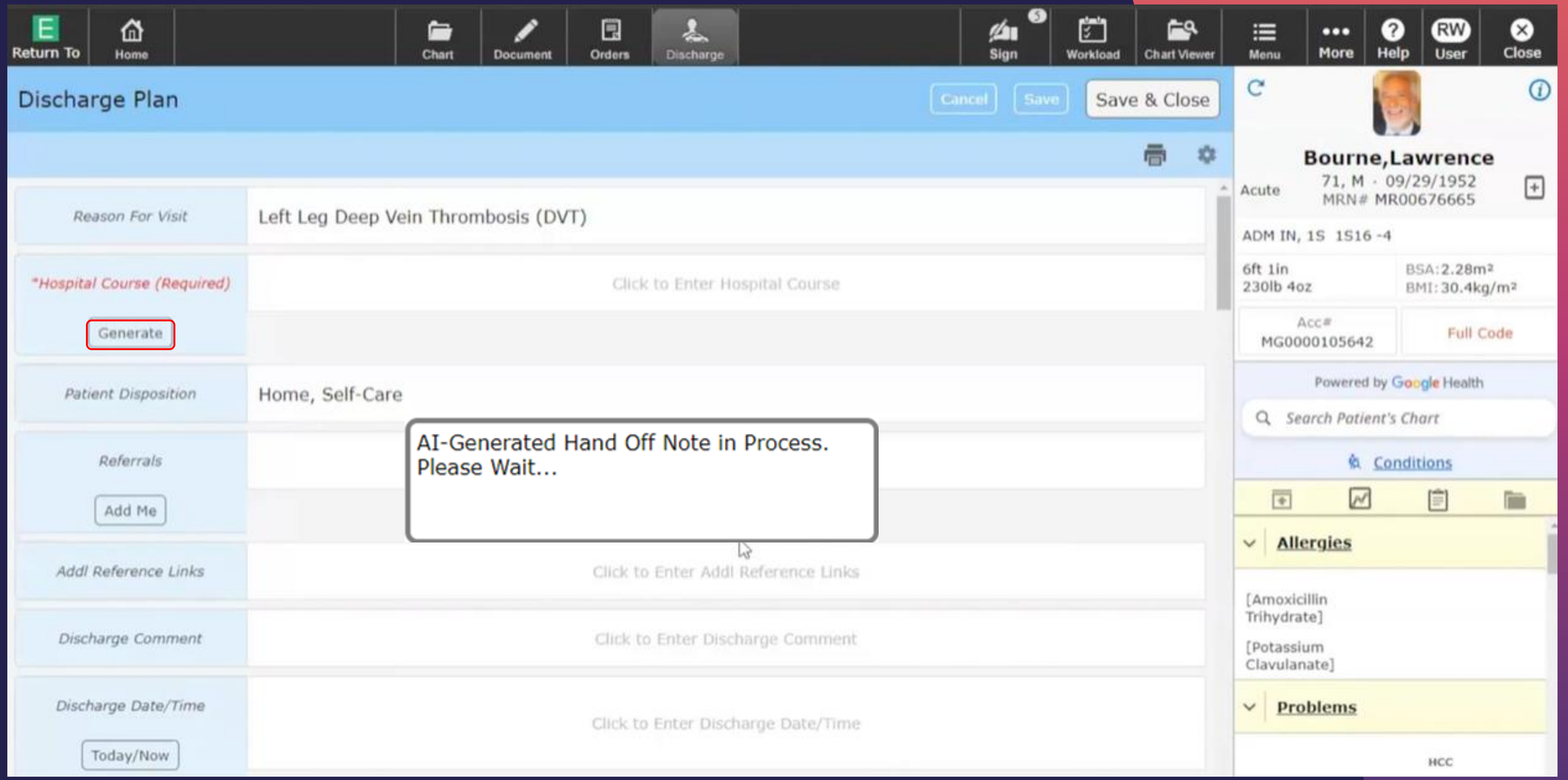
Transitions of care are highly vulnerable points in the care process for patients. Care transitions should be facilitated through comprehensive and concise communication of pertinent information necessary to maintain a high-quality of care and treatment for patients.

Benefits

Automate the generation of a hospital course narrative within the discharge summary. Potential benefits include:

1. time-savings.
2. enhanced note quality through more concise narratives and a reduction in errors or accidental omissions of information.
3. timely transfer of discharge documentation.

Hospital Course/Discharge Summary



Empower with Generative AI
Auto-Generating Clinical Documentation:

Nurse Handoff

Problem Statement

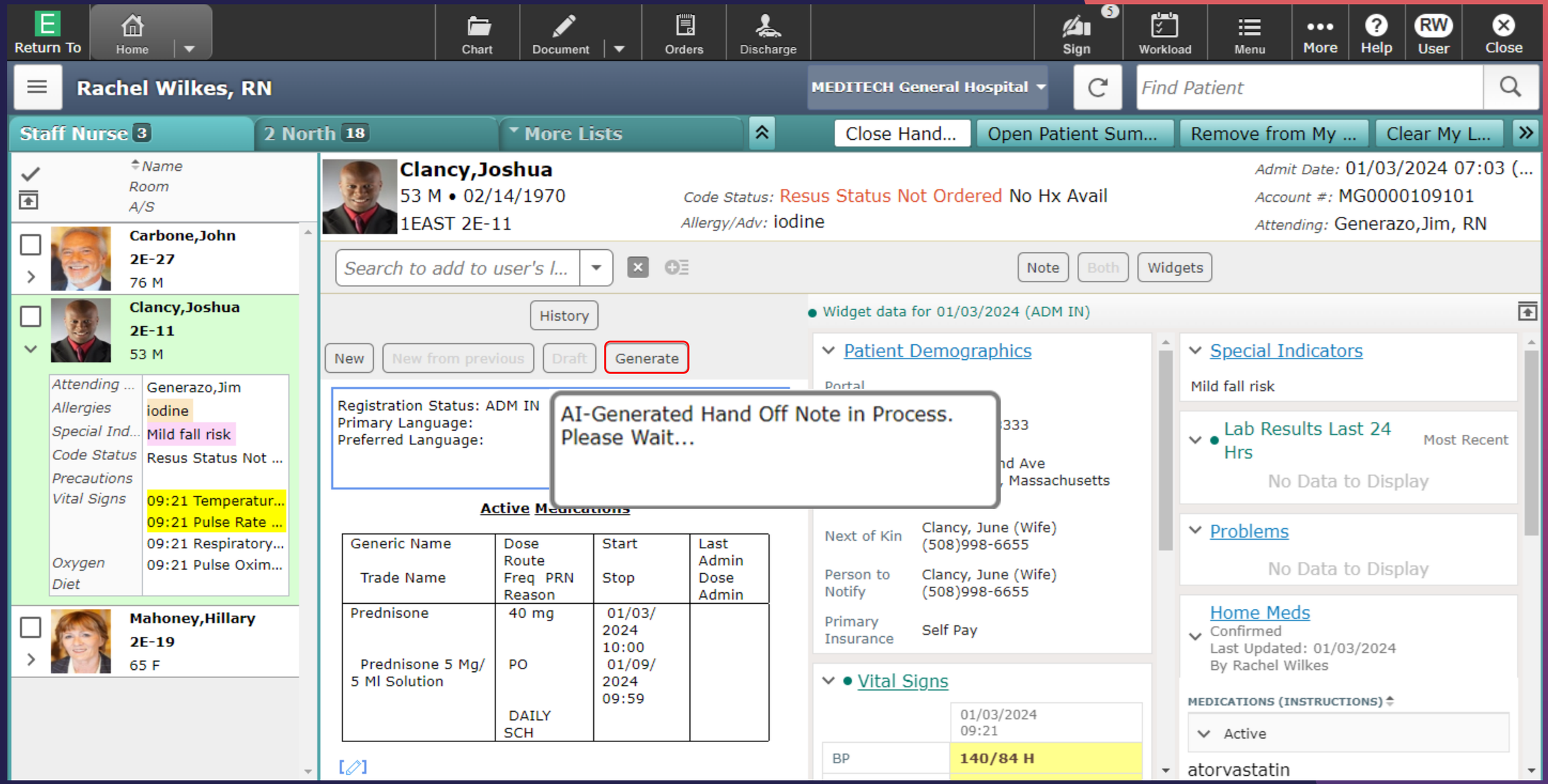
Transitions of care are highly vulnerable points in the care process for patients. Shift changes and transitions of care within the acute setting require nursing staff to exchange necessary patient information to ensure continuity of care and patient safety.

Benefits

Automate the generation of a nurse note within the Expanse Nurse Handoff routine. Potential benefits include:

1. time-savings.
2. enhanced note quality through more concise narratives and a reduction in errors or accidental omissions of information.

Nurse Handoff Summary



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Thank You

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