



Integrating AI with Telehealth- Streamlining for better outcomes

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Officer

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Objectives

Describe how AI integration with Telehealth workflows can impact outcomes as well as provider and patient satisfaction.

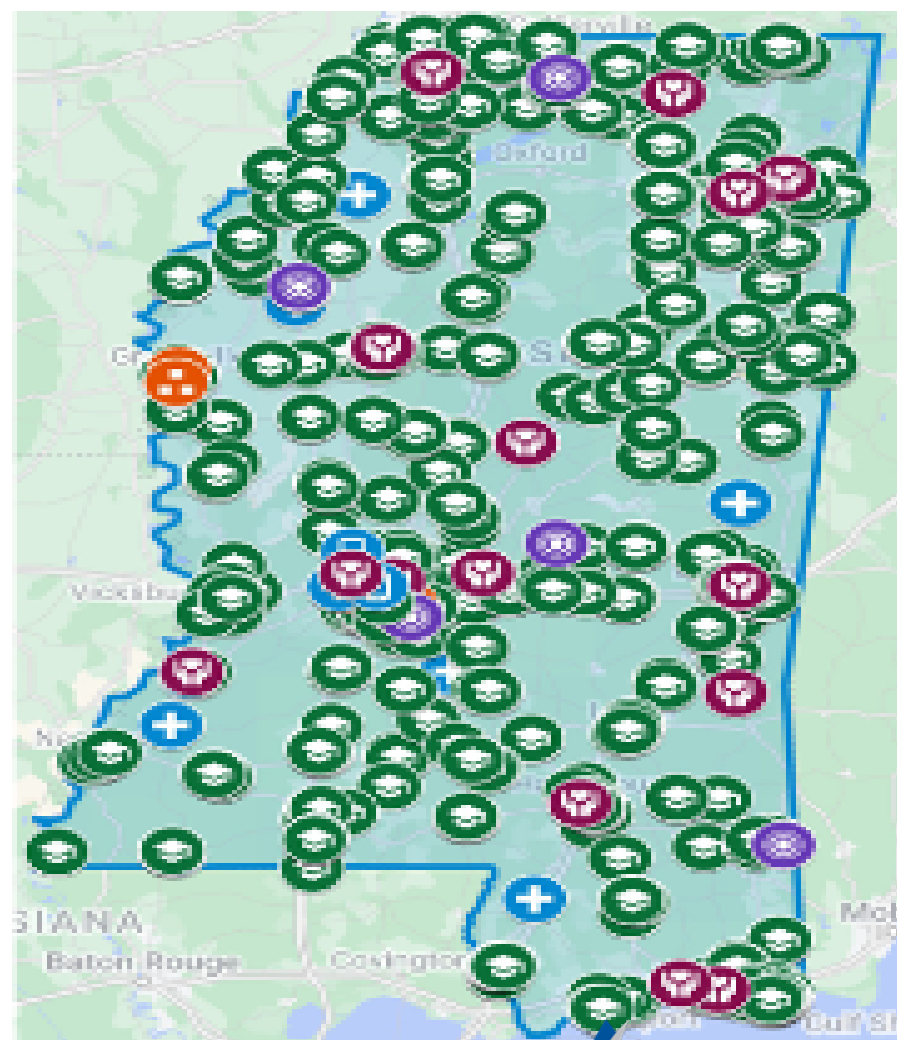
**TELEHEALTH PLAYS A KEY
ROLE BY DRAMATICALLY
INCREASING ACCESS TO
CARE IN RURAL AND
UNDERSERVED AREAS
ACROSS THE STATE**

**53 OF MISSISSIPPI'S 82
COUNTIES ARE MORE
THAN A 40 MINUTE DRIVE
FROM SPECIALTY
SERVICES.**

**UMMC TELEHEALTH
HELPS COMMUNITIES
OFFER MUCH-NEEDED
MEDICAL CARE IN AREAS
WITH FEW OR NO
MEDICAL SPECIALTIES.**

-  **School-Based Telehealth**
-  **TelEmergency**
-  **TeleMental Health**
-  **TeleInfectious Disease**
-  **TeleNetworking**
-  **Corporate**
-  **UMMC2You**

**COMMITTED TO SERVING
MISSISSIPPI COMMUNITIES**



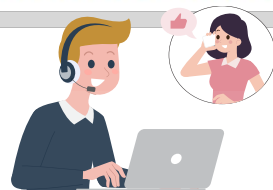
Center for Telehealth



Diagnostic test interpretation
Adult and Pediatric Cardiology



TelePsychiatry Begins



Center for Telehealth
formed 24/7 Telehealth Call
Center



Rapid Response to COVID-
19 Pandemic Integration of
A/V capability in EMH



Telehealth Center of
Excellence Awarded



UMMC[™]
Center for Telehealth and
Emerging Technologies

Renamed the Center to reflect
widening focus such as AI-
powered clinical tools and
digital health platforms

2003

2011

2017

2021

2022

1990

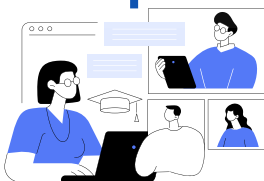
2008

2013

2020

2021

2025



First videoconferencing of
telemedicine
Emergency Medicine



Full-time staff assigned to
Telehealth



Telehealth Center of
Excellence Awarded



FCC Funding for RPM

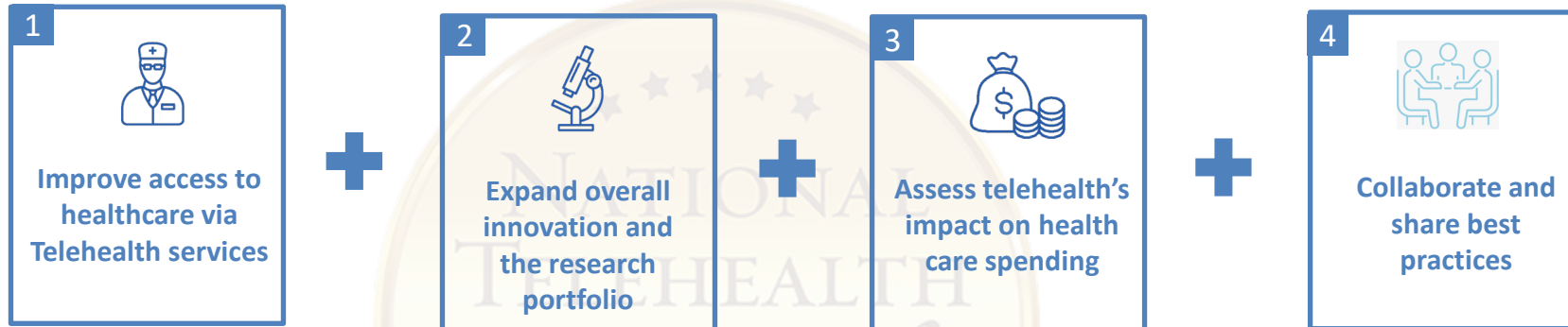


RFP Awarded for School
Based Telehealth

MISSISSIPPI
DEPARTMENT OF
EDUCATION

OUR ROLE AS A NATIONAL CENTER OF EXCELLENCE

UMMC earned the “Center of Excellence” designation from HRSA (October 2017). The CfT is expected to guide/support new and established telehealth programs across the nation, and conduct focused research on telehealth outcomes/economics



Implementation of AI based Scribe to Improve Patient Engagement for Telehealth Visits and Reduce Provider Burnout



Problem: Provider Burnout



1. Excessive Documentation Time

- Clinicians often spend **2–3 hours per day** outside patient visits completing notes.
- This leads to "pajama time" and **reduced work-life balance**.

2. Burnout and Job Dissatisfaction

- Up to **60% of clinicians report burnout**, with documentation burden being a top driver.
- Emotional fatigue increases, and retention rates drop.

3. Inefficient Use of Clinical Time

- Documentation reduces time available for direct patient care.
- It creates **bottlenecks in workflows**, especially in high-volume clinics.

Problem: Provider Burnout



4. Inconsistent and Error-Prone Notes

- Manual notes are susceptible to: **Omissions, Copy-paste errors, Incomplete histories or assessments**
- This impacts care quality, compliance, and billing accuracy.

5. Financial and Operational Waste

- Incomplete or inaccurate notes result in **under-coding** and **missed revenue**.
- Hiring human scribes is costly and difficult to scale.

Overview



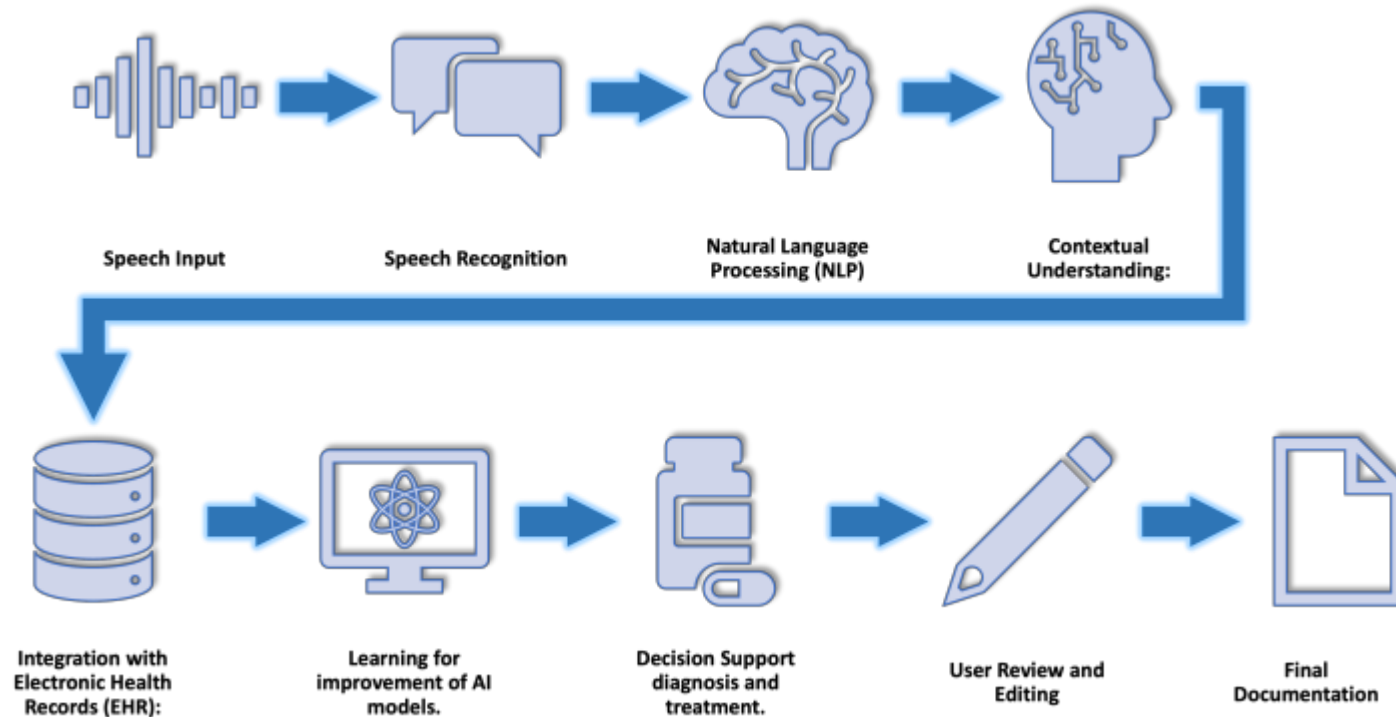
Provide more time for direct interaction/communication between patient and provider by automating the task of documentation using AI based technology (AI Scribe).

What is AI scribe ?

AI scribe uses artificial intelligence to transcribe spoken language into written text.

AI scribes leverage machine learning, natural language processing (NLP), and speech recognition technologies to automate the transcription process. This results in faster, more accurate transcriptions without manual intervention.

How AI Scribes Work



AI Scribe Flowchart



Telehealth Workflow

1. Click to start AutoScribe and speak to the patient as usual
2. Click to end the visit and receive clinical documentation for review immediately
3. Paste the note into Epic

Subjective:

Chief Complaint:

Brendan is a 75 year old male presenting today for medication refills and ongoing back pain.

HPI:

Patient reports needing refills for multiple medications including a heart medication (R pressure medication (L-opril). Patient is unsure of the specific names and dosages for t have their wife send in a list.

Patient has been experiencing back pain for approximately three months, which began boxes. The pain is located over the left part of their buttocks and is described as a dull, and goes, lasting for a long time before subsiding and then returning. Patient denies an sensations. They report some leg weakness, which they attribute to a previous knee su

ROS:

ROS is otherwise negative, see HPI.

Current Medications:

Medication	Dose	Route	Frequency
R-statins (Rosuvastatin)	20 mg	Oral	Once daily
L-opril (Lisinopril)	10 mg	Oral	Once Daily

Allergies:

Allergen	Reaction
Ibuprofen	Asthma, hives
Penicillin	Hives

Objective:

Vitals:

BP:	118/76
BP Location:	Right arm
Patient Position:	Sitting
Pulse:	72
Temp	97.8 F (36.6 C)

UMMC COE Project Overview



Pilot Group

Specialties: Behavioral Health
(Psychiatry, Social Work, and
Counseling), Geriatrics, and Urgent
Care

User Count: 19

Care Setting: Virtual



Ambience Product Scope

Ambience Product: AutoScribe

Platform Version Selected:
Microsoft Edge Extension



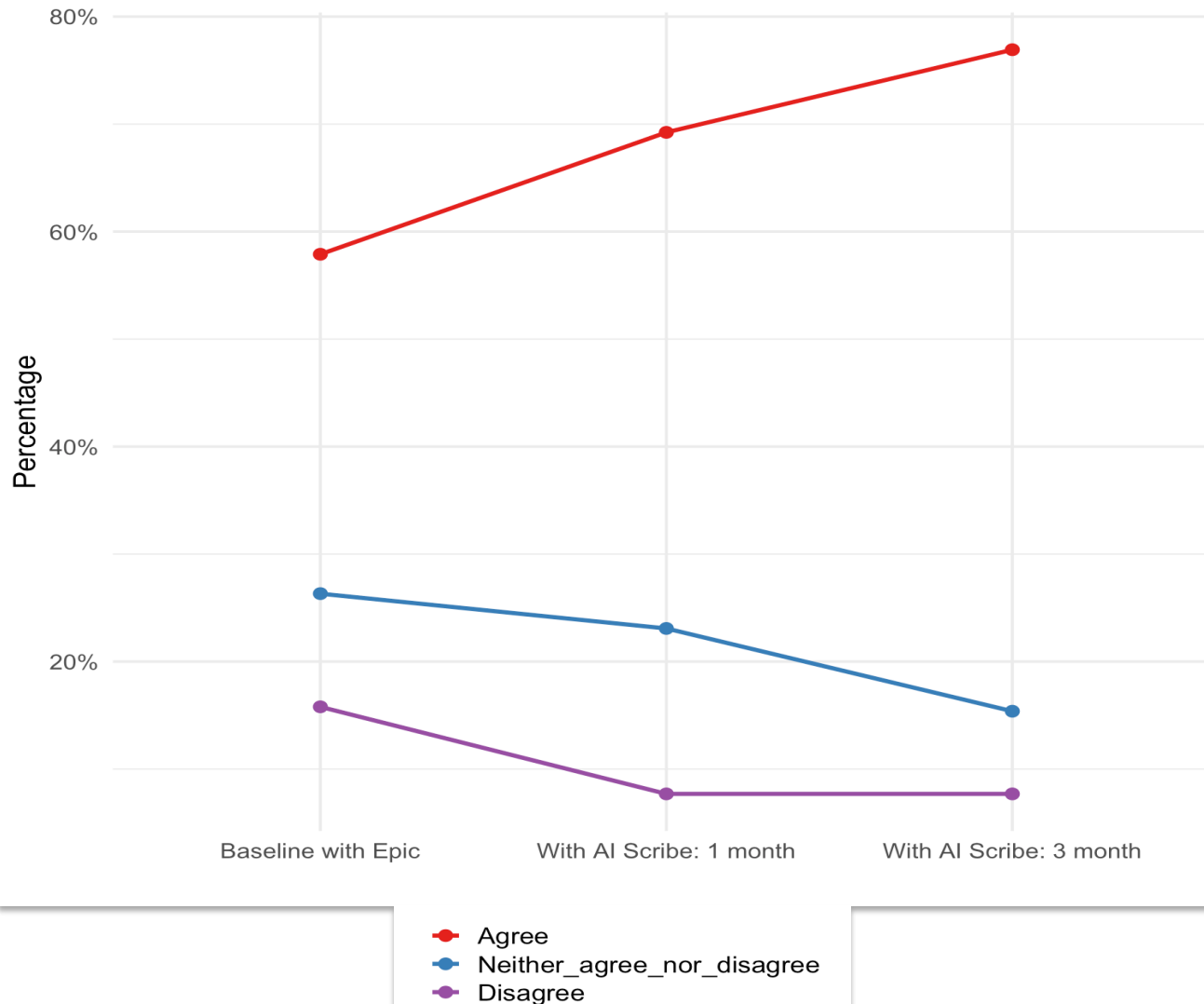
UMMC Software Utilized

EMR: Epic

Telehealth Platform: ExtendedCare
(Launch from Epic and Accessed
Directly via Online Portal)

Provider Survey Results

Satisfaction in documentation with Epic, AI scribe after 1 month and 3 month

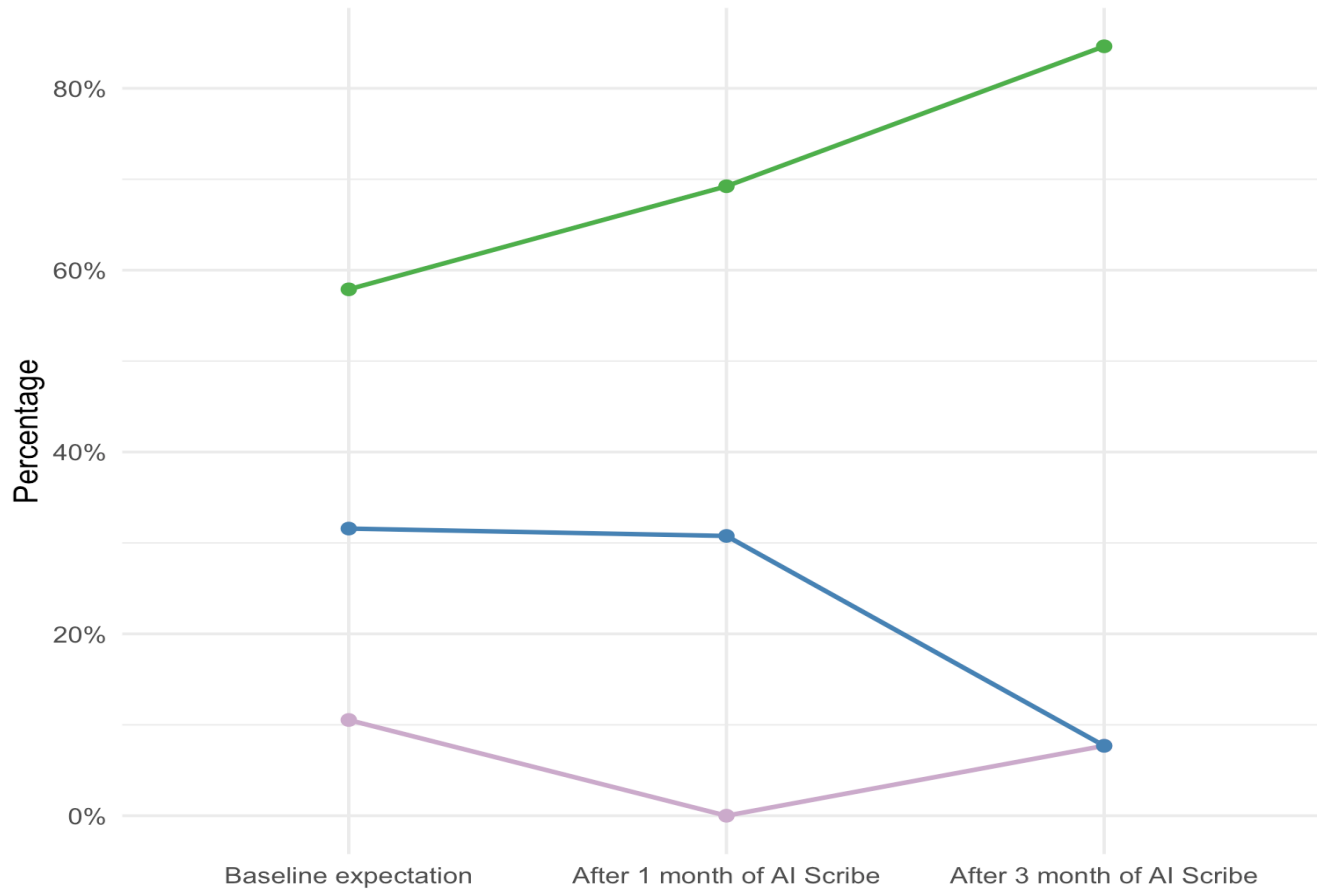


Trend towards higher provider satisfaction with time spent on documentation after using the AI-based scribe for 1-3 months.

Telehealth Centers of Excellence Provider Survey Results



Trends: From baseline expectation to application of AI scribe (1 month and 3 month) in Telehealth services

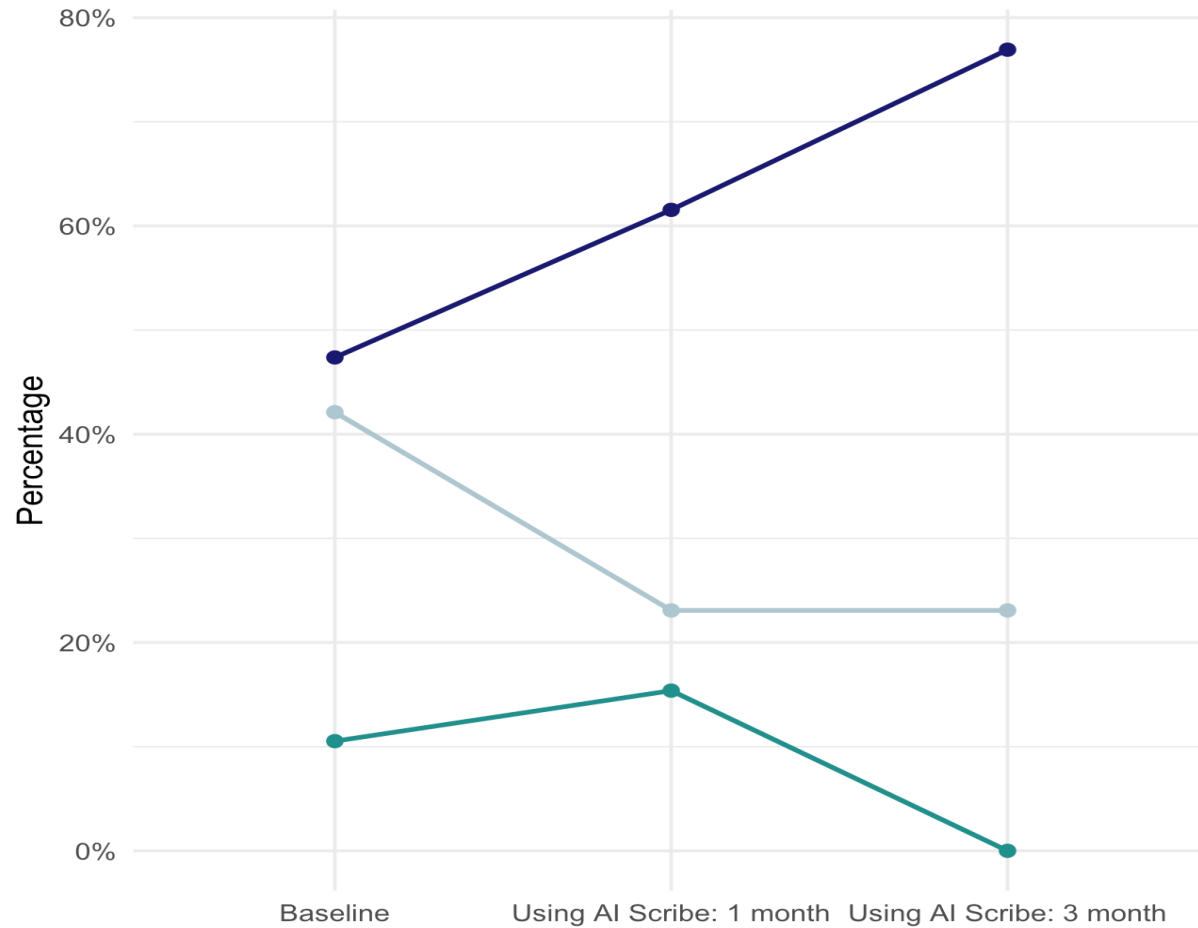


— Agree
— Neither_agree_nor_disagree
— Disagree

Trend towards higher provider satisfaction with quality of the scribing tool after using the AI-based scribe for 1-3 months.

Telehealth Centers of Excellence Provider Survey Results

Trends: from baseline expectation to utilization of AI scribe after 1 month and 3 month in patient engagement



— Agree
— Neither_agree_nor_disagree
— Disagree

Trend towards increased perceived time spent on patient engagement after using the AI-based scribe for 1-3 months.

Expanding the AI Scribe capabilities- Future Directions

A full range AI-powered applications are deeply integrated into the EMR and meet the unique needs of each clinical specialty.



AutoScribe

Gold standard documentation tuned for clinical specialties, generated in real-time.



AutoCDI

CDI assistance that analyzes conversations to ensure ICD-10, CPT codes, and documentation support each other.



AutoAVS

Comprehensive after-visit summaries tailored for the patient and written in their preferred language(s).



AutoRefer

Clinically relevant and well-organized referral letters to specialists.



AutoPrep

Intelligent pre-charting to help catch up on context and design the agenda for the visit.

Challenges with AI Scribe Generated Note/Documentation

Risk	Potential Impact	Mitigation Strategies
Inaccuracy & Hallucination	Incorrect diagnoses, treatment errors, patient harm	- Require human review - Fine-tune on clinical data - Highlight uncertain content
Contextual Misunderstanding	Loss of nuance; misrepresentation of patient history or intent	- Use structured templates - Support multi-modal inputs - Segment small talk
Overreliance on AI	Clinicians overlook errors, propagate flawed documentation	- Provider training - Mandatory review window - Track edits via audit logs

Challenges with AI Scribe Generated Note/Documentation

Privacy & Consent	Violation of patient confidentiality; legal repercussions	- Obtain explicit, informed consent - Allow opt-out - Process data on-device
Data Security	Breaches, data leaks, identity theft	- Encrypt data at rest and in transit - Enforce access controls - Vet third-party tools
Bias & Discrimination	Unequal care or documentation across different patient groups	- Train on diverse datasets - Conduct regular bias audits - Document model behavior
Legal & Regulatory Gaps	Lack of clarity on liability; potential malpractice exposure	- Define shared accountability with vendors - Include legal disclaimers - Engage policymakers

Conclusions

- **AI scribe technology has the potential to significantly reduce clinician documentation time, decrease after-hours work, and lower perceived documentation burden, with additional potential to improve work-life integration and patient engagement.**
- **Concerns remain about factual errors, omissions, and the need for substantial human editing to ensure clinical validity and completeness.**
- **Additional challenges include lack of regulatory oversight, inconsistent interoperability with electronic health records (EHRs), and persistent biases in AI outputs.**



Enhancing Virtual Nursing workflows with AI technology

Pilot Program

Implementation - March 20, 2023

- 6 West: 14 Bed Unit
- Adult Med-Surg

Staffing Structure

- Onsite - "Bunker"
- 9am-9pm, 7 days a week

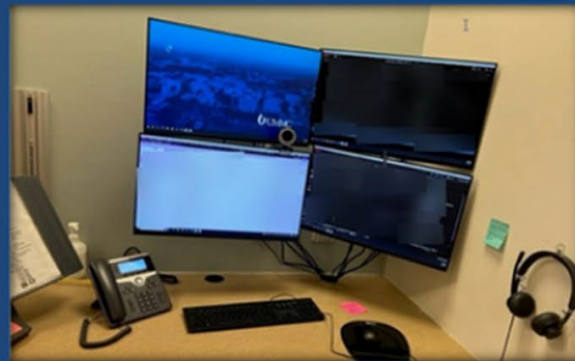
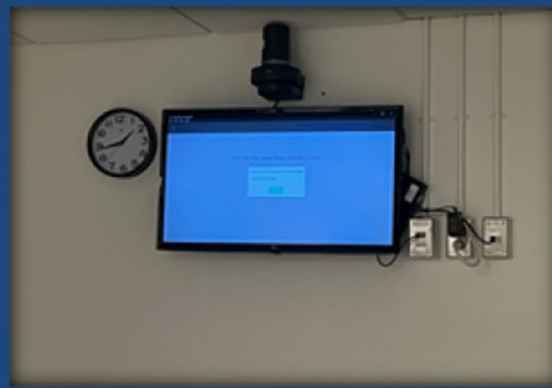
Technology

Patient Room

- Pan/Tilt/Zoom Camera and Monitor, Speakers
- iPad with MyChart Bedside (education, satisfaction questionnaire)

Virtual Nurse Bunker

- Secure Chat Integrated with EPIC Platform
- 4 Screens: Hyperspace, Focuses Patient, Video Call, EPIC Monitor



Virtual Nursing Bunker



Admission

- Review of patient data

Discharge

- Patient education
- Coordination of Care

Rounding

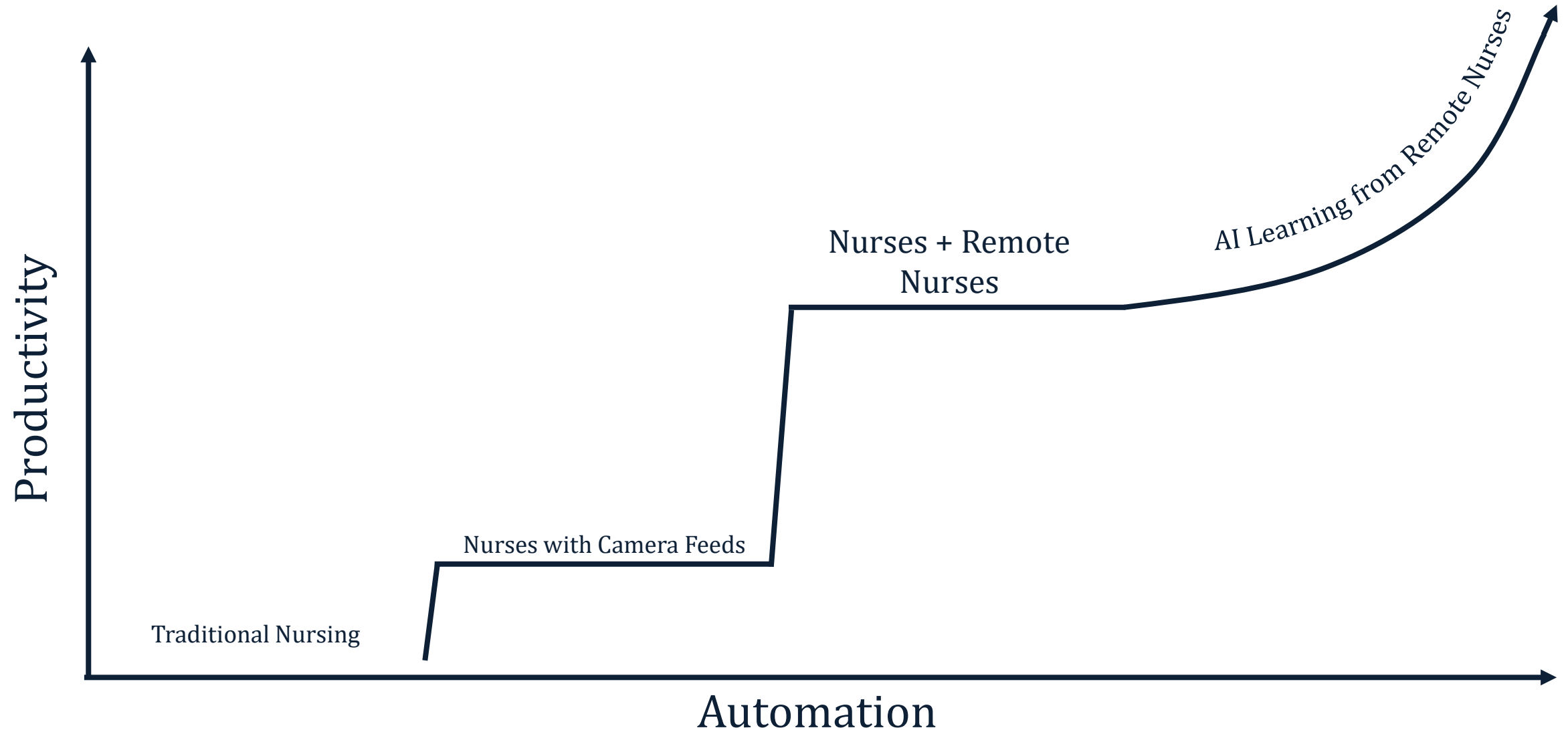
- Identification of need
 - Safety checks
- Pain reassessment



Bedside RN Team



Virtual Nurse + Artificial Intelligence (AI)



IMPLEMENTATION AT UMMC

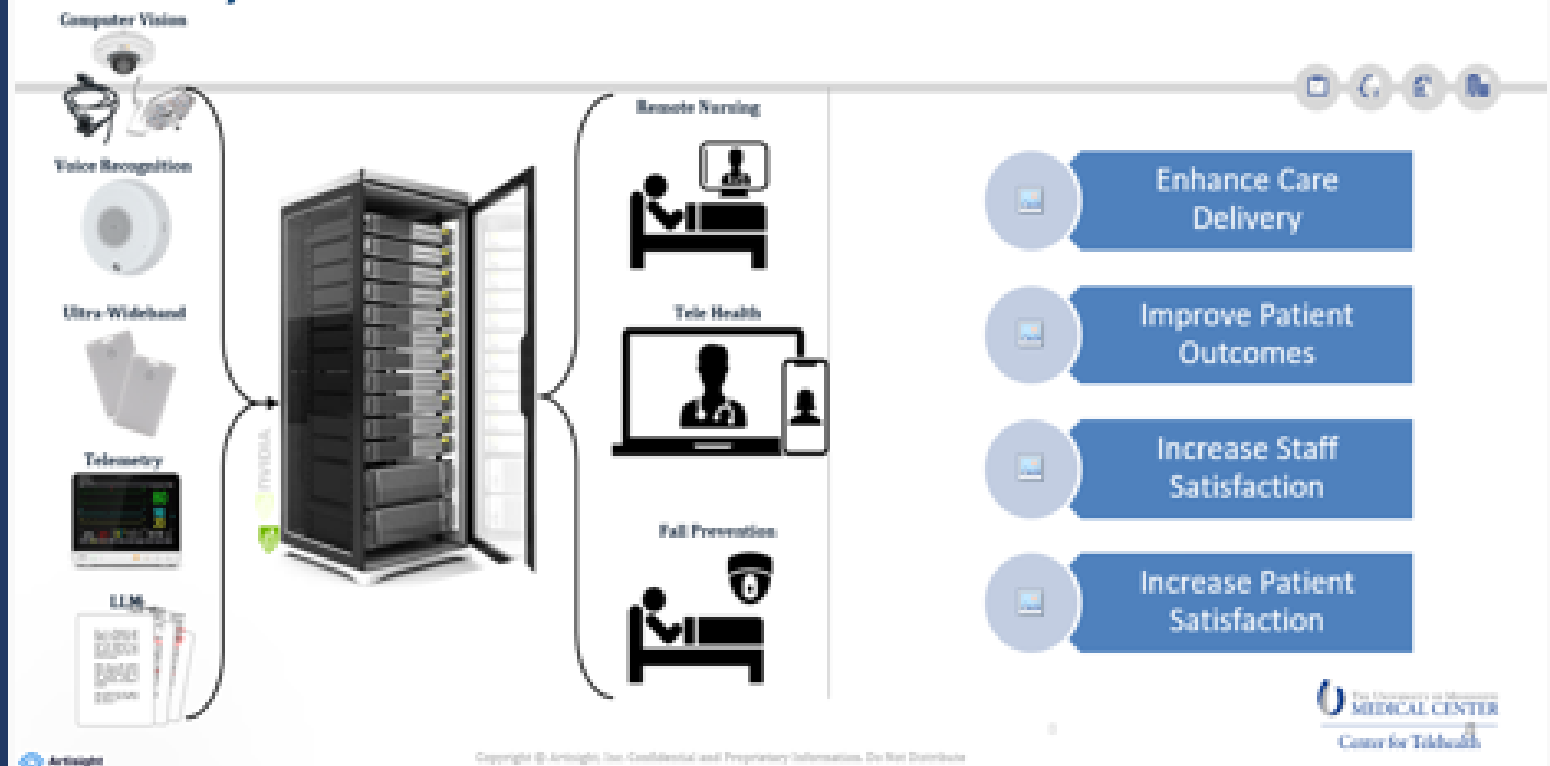
Pilot Program

- AI technology implemented on 6 West and 4 North (46 beds)
- Initial focus on Fall Prevention

Staffing

- Tele Sitters 24/7
- VRN 9am-9pm, 7days

The Industry-Defining AI-Powered Platform Built by Clinicians



Fall Prevention Algorithm



Remote observation for patients meeting fall risk criteria:

Safety Check Rounding

- ✓ Belongings within reach
- ✓ Call bell within reach
- ✓ Fall mats in place
- ✓ Bed low to ground with side rails engaged

→ Safety check documented

Fall Prevention Intervention

Yellow Visual Cue

- Alert patient (audio/visual communication: "Please stay in bed.")
- Notify bedside RN/tech if intervention needed

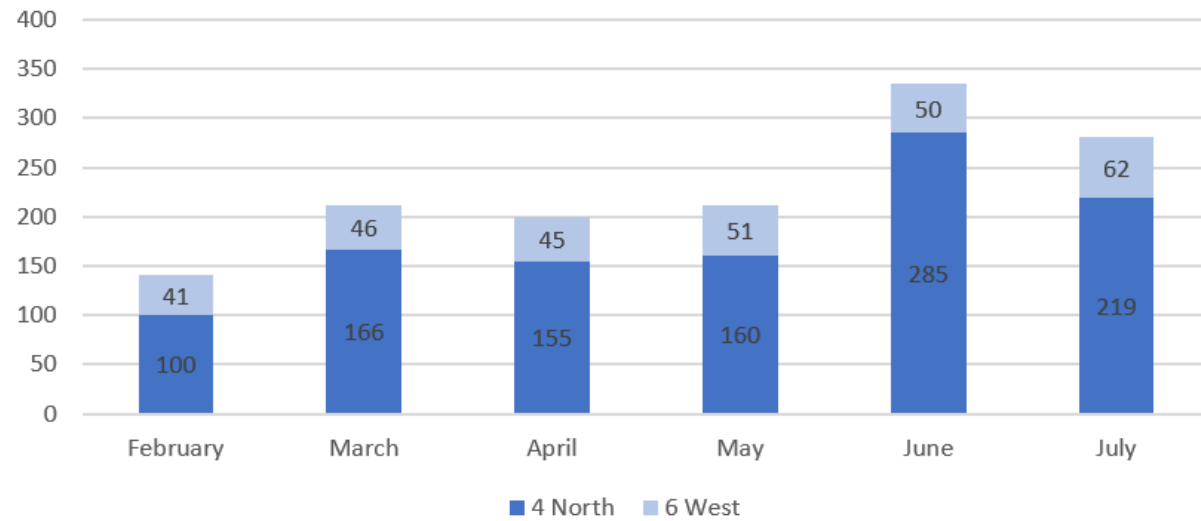
Red Visual Cue

- Alert the patient via Artisight Alarm
- Alert patient (audio/visual communication: "Please stay in bed.")
- If no response from bedside staff, broadcast unit

→ Fall intervention documented

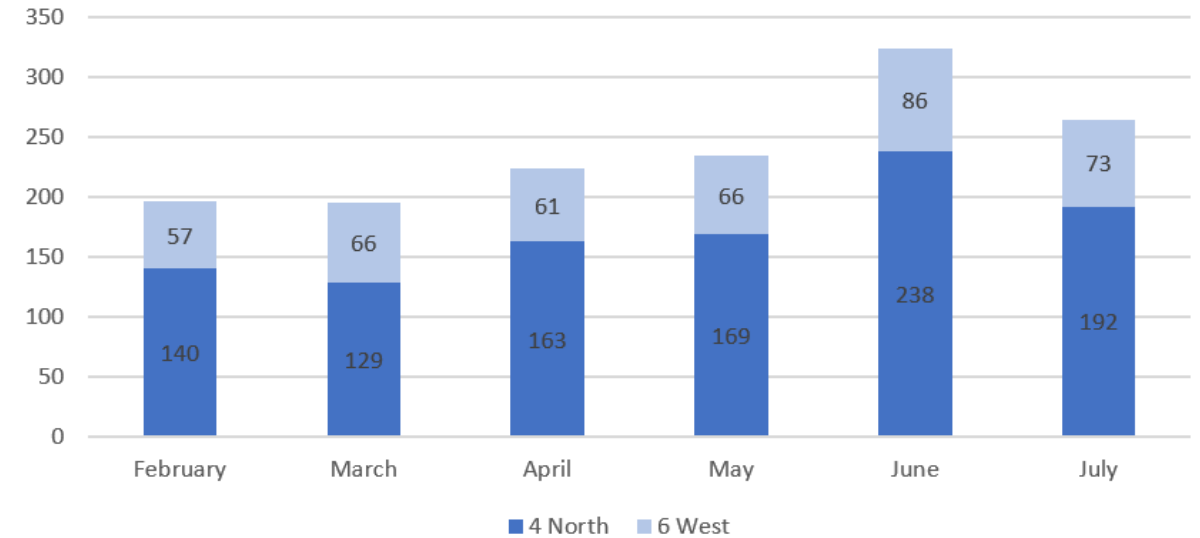
Admissions and Discharges

Total Admission by Virtual RN



1,380
Admissions

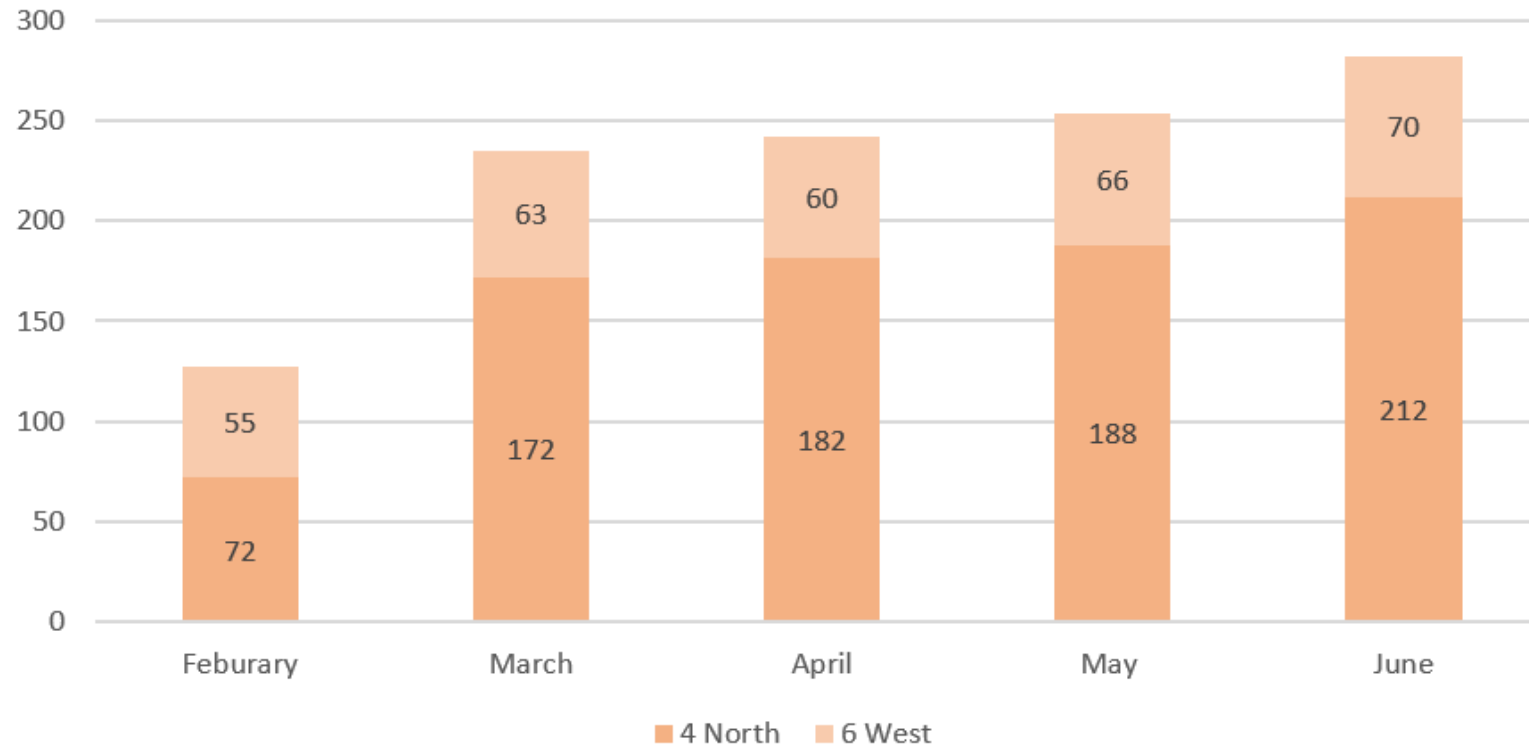
Total Discharges by Virtual RN



1,440
Discharges

Time Saved

Bedside RN Time Saved (hours) Due to Virtual RN
(admission/discharge only)



1140 Hours Saved

48 Days

95 12-hours shifts

Virtual Observer

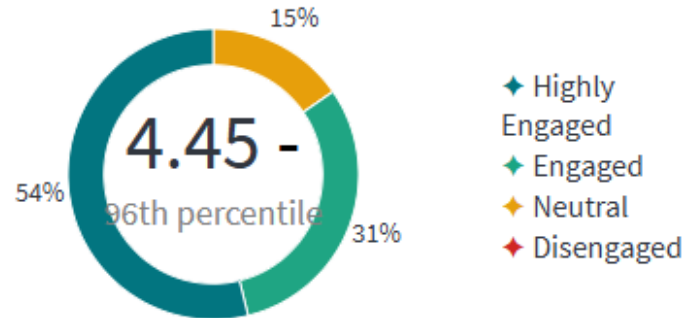
Artisight on 6W and 4N								
Patients being monitored: 20								
		Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	
Falls prevented with redirection: (call into room or use phrases)		223	529	396	683	302		
Falls prevented with staff interventions: (Red overhead alarm)		49	149	176	298	128		
FALLS:		Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul-25	
		0	0	3	2	0		
				4/7/2025	5/8/2025		7/13/2025	
				4/25/2025	5/13/2025		7/14/2025	
				4/30/2025	5/15/2025		7/21/2025	
					5/19/2025			

Redirection Total: 2,133
Staff Interventions: 800

Total falls while observed
10

6 West Employee Engagement

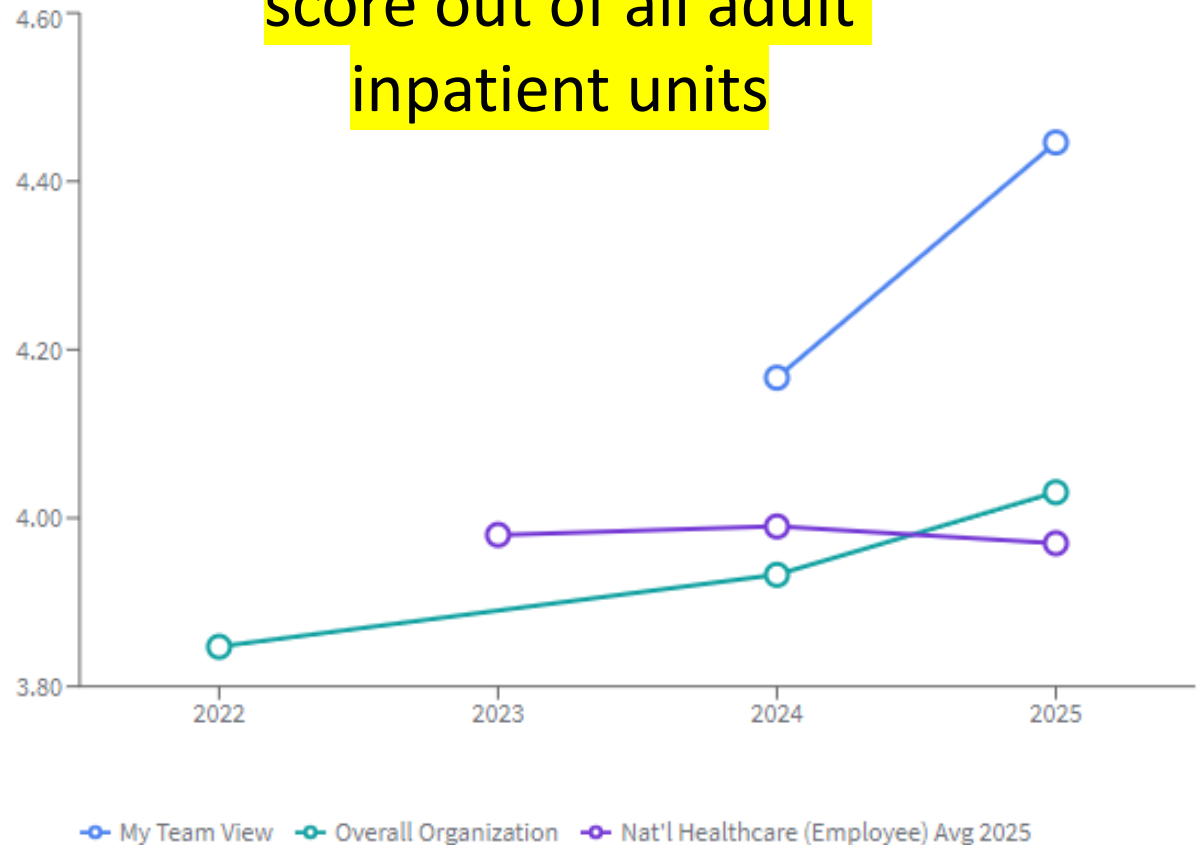
Engagement mean score and level distribution



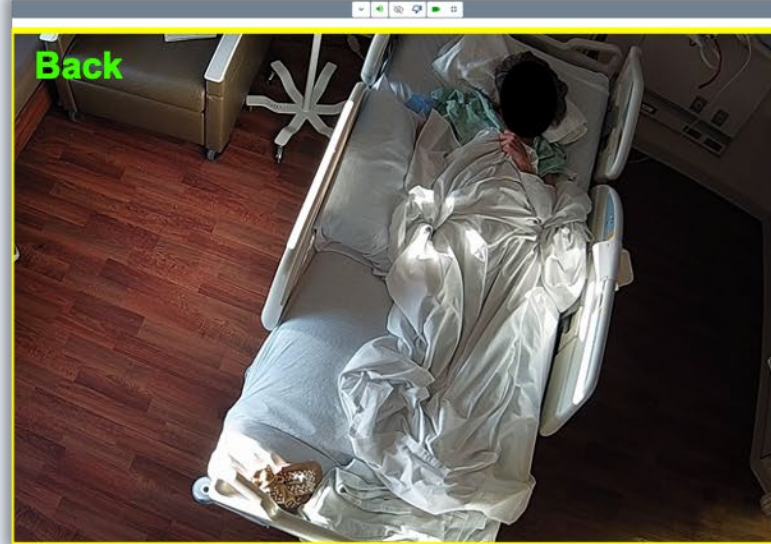
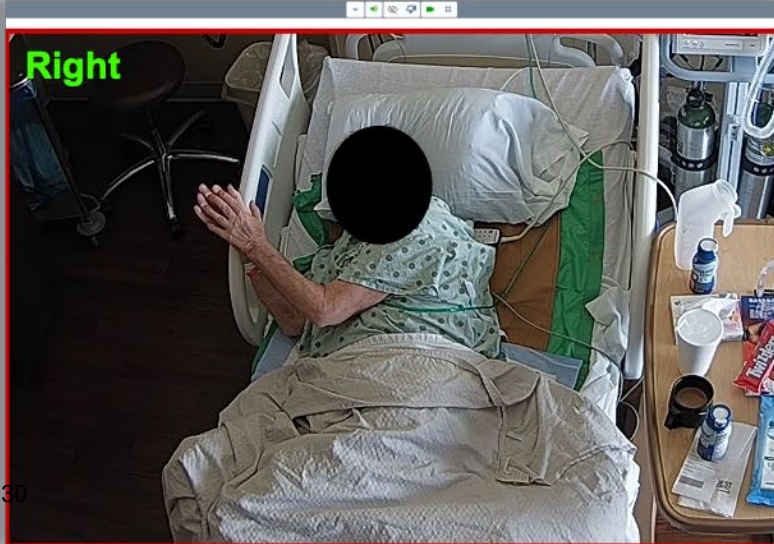
Items included in your Engagement score (mean score / percentile)

1	I would stay with this organization if offered a similar position elsewhere.	4.46↑	98th
2	I would like to be working at this organization three years from now.	4.38↑	92nd
3	I feel like I belong in this organization.	4.62	98th
4	Overall, I am a satisfied employee.	4.23↑	85th
5	I would recommend this organization as a good place to work.	4.54↑	96th

Highest overall engagement score out of all adult inpatient units



Pressure Ulcer Prevention



Acknowledgment

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All About The Team ❁



S. Chandra
Chief Telehealth
Officer



K. Brewer
Administrator



T. Davis
Dir. of Clinical
Programs & Strategy



G. Hall
Director of IT



J. Bryant
Director of
Operations



L. Kuiper
Research
Administrator



C. Wright
Dir of SBTH &
Outreach



H. Thomas
Program Manager



L. Hughes
Grants Accounting
Manager



A. Lee
Revenue &
Contracts Manager



V. Trammell
Project Manager



D. Ivory
Project Manager



J. Johnson
Project Manager



T. Morgan
Administrative
Assistant



T. Tucker
Clinical Programs
Manager



T. Andrews
IT



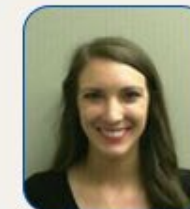
R. King
IT



L. Tucker
IT



M. Sanders
IT



C. Brown
Clinical
Pharmacist



K. Goodson
Nurse Practitioner



L. Coxwell
Nurse Practitioner



C. Broome
RN Care
Coordinator



C. LaSource
RN Care
Coordinator



D. Langston
RN Care
Coordinator



S. Lewis
RN Care
Coordinator



T. Regan
RN Care
Coordinator



F. Powers
Coordinator



A. Finley
Coordinator



R. Howard
Coordinator



Thank You!

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