



Tech That Listens: Using AI in Telehealth to Support Patients and Providers in Underserved Areas

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Objectives

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



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.

Overview

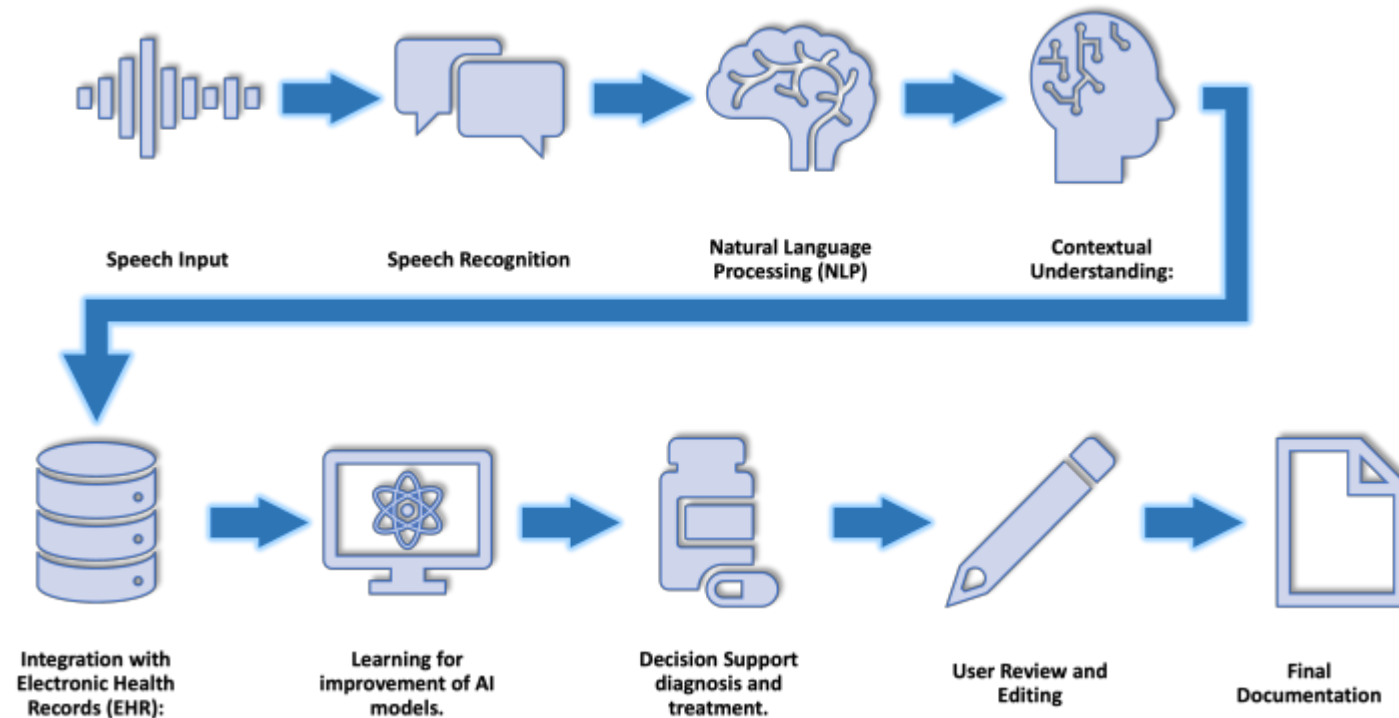
Provide more time for direct interaction/communication between patient and provider by automating the task of documentation using AI based technology (AI Scribe).

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

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



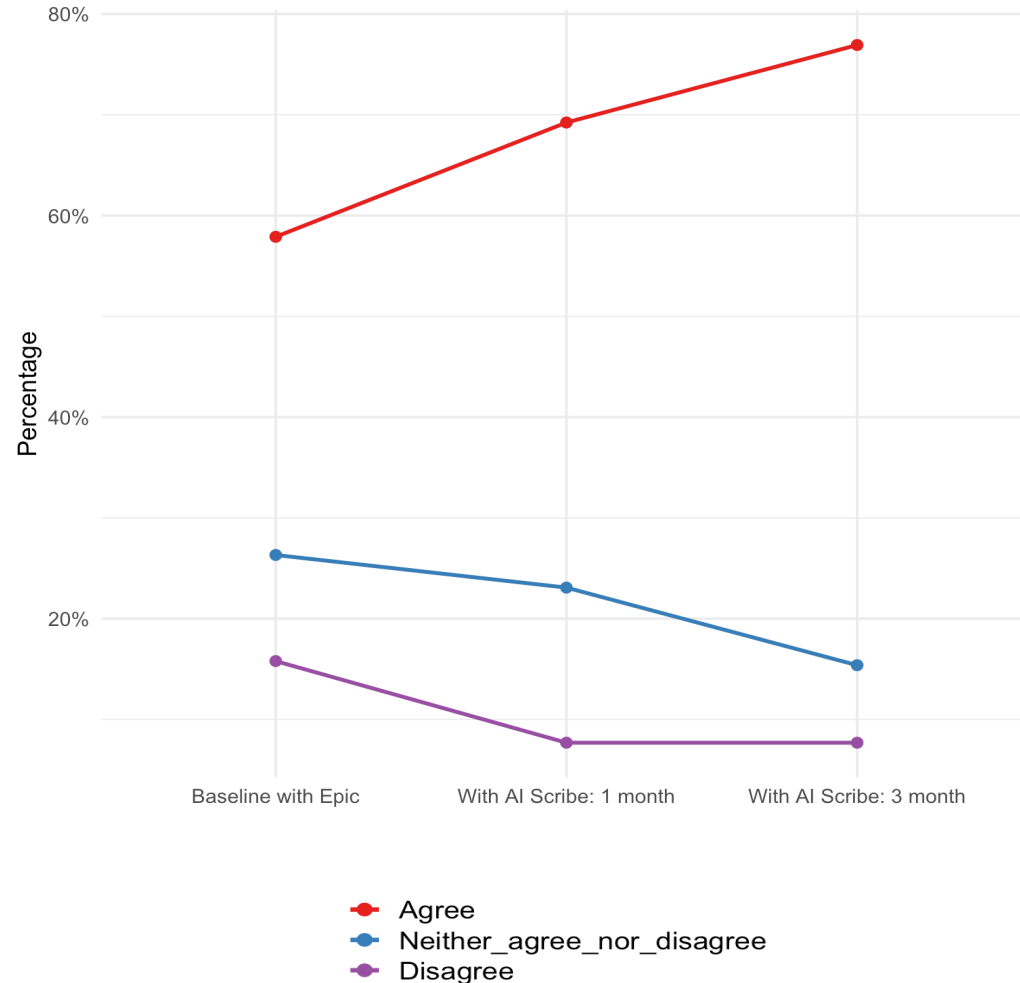
UMMC Software Utilized

EMR: Epic

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

Provider Survey Results

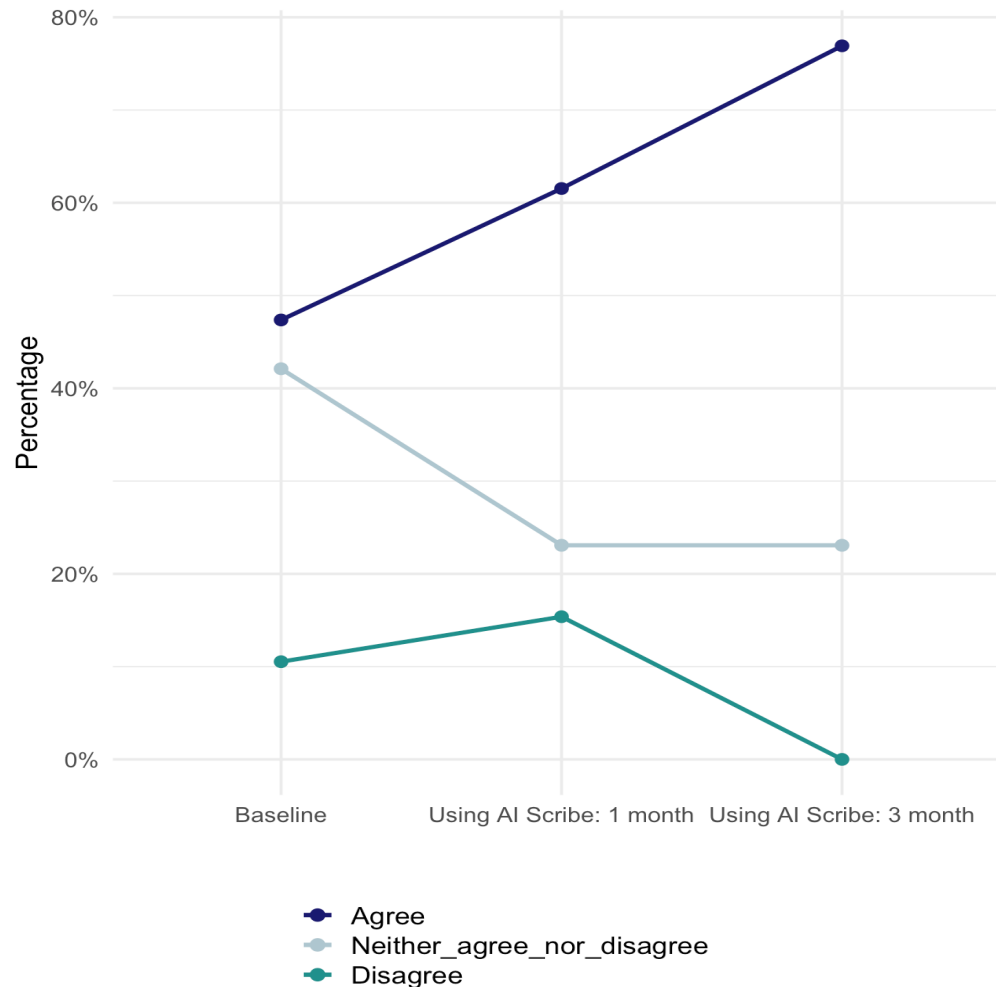
Satisfaction in documentation with Epic, AI scribe after 1 month and 3 month



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

Provider Survey Results

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



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

Challenges with AI Scribe Generated Note/Documentation

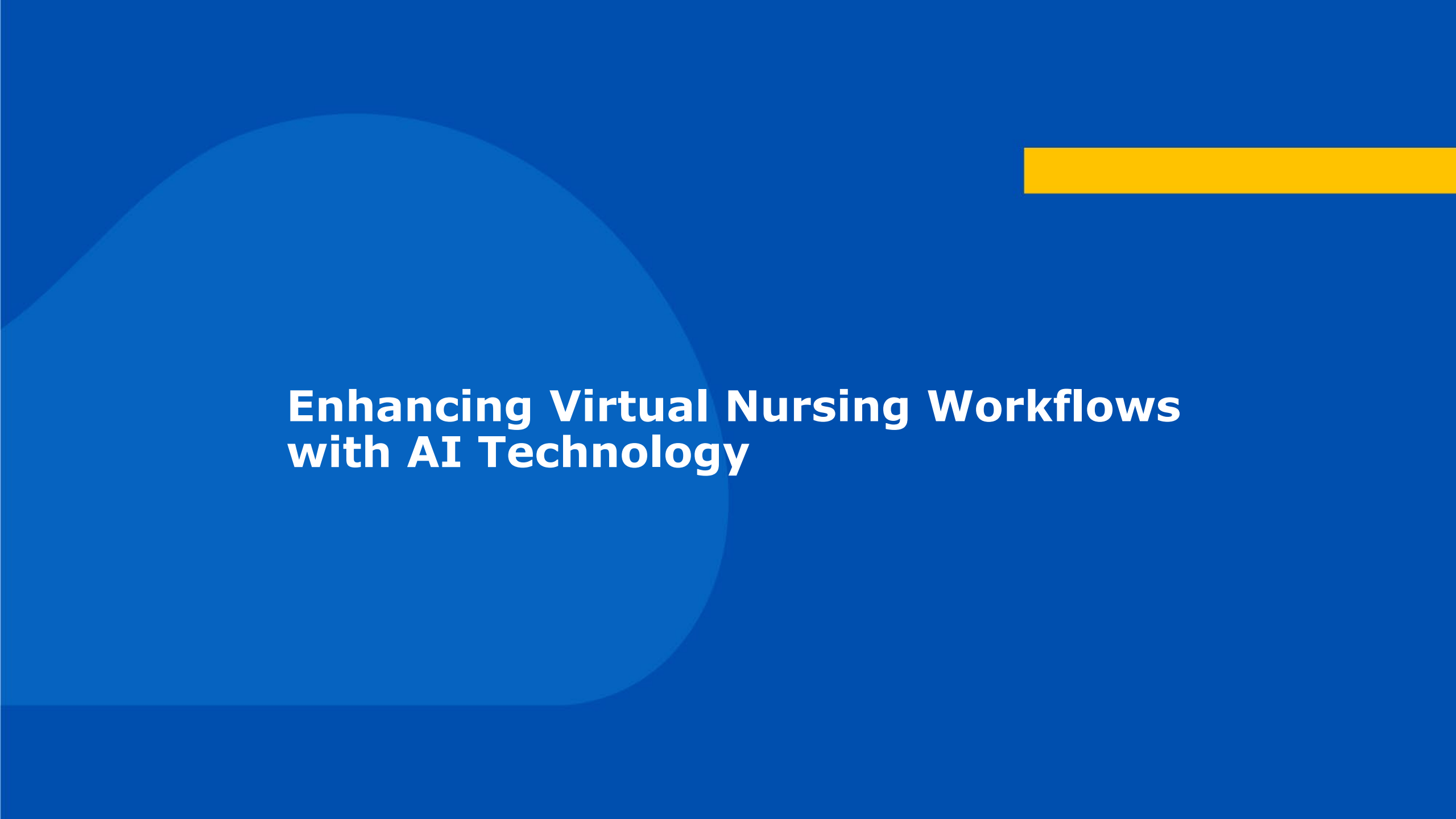
Risk	Potential Impact	Mitigation Strategies
Inaccuracy & Hallucination	Incorrect diagnoses, treatment errors, patient harm	- Require human review - Fine-tune on clinical data - Highlight uncertain content
Contextual Misunderstanding	Loss of nuance; misrepresentation of patient history or intent	- Use 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

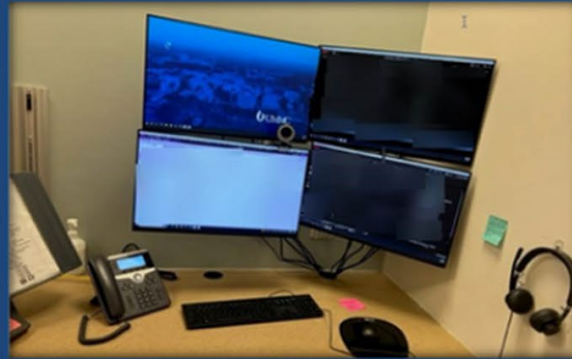
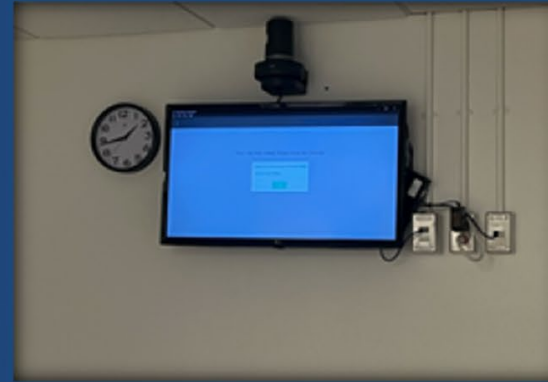
Technology

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



Enhancing Virtual Nursing
Workflows with AI Technology

Virtual Nursing Bunker



Admission

- Review of patient data

Discharge

- Patient education
- Coordination of Care

Rounding

- Identification of need
 - Safety checks
- Pain reassessment

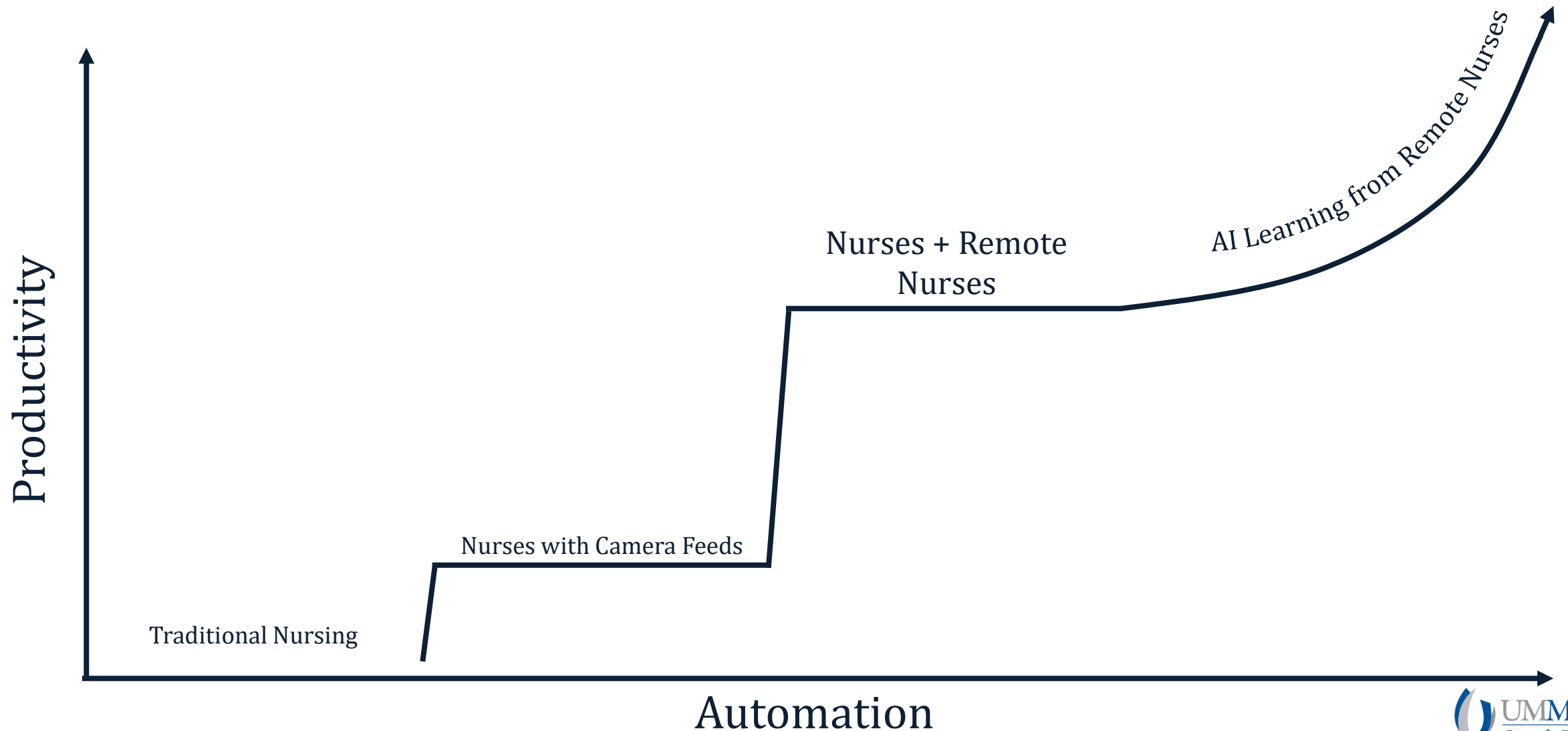


Bedside RN Team



Enhancing Virtual Nursing
Workflows with AI Technology

Virtual Nurse + Artificial Intelligence (AI)



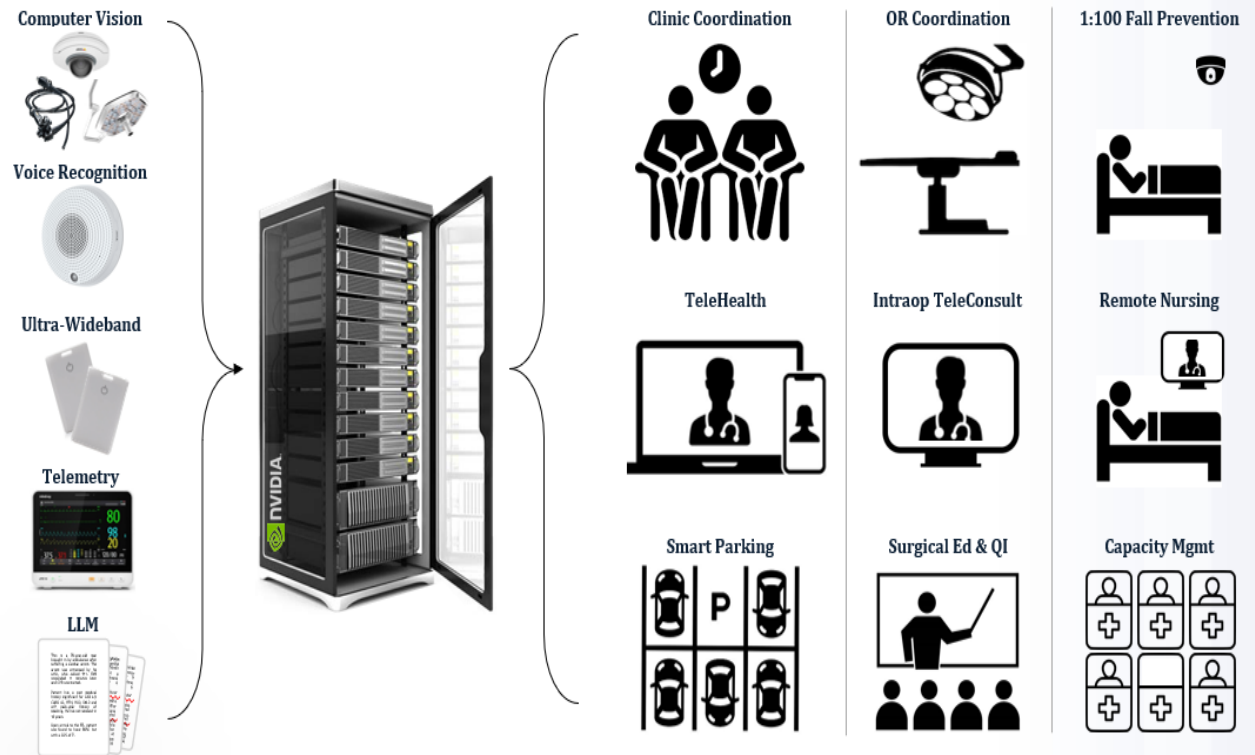
Enhancing Virtual Nursing Workflows with AI Technology

- AI Technology Implemented on 6West & 4North (46 beds)

- Focus = Fall Prevention

Staffing

- Virtual Observers 24/7
- Nurse 9A-9P, 7 days



Enhance Care Delivery

Improve Patient Outcomes

Increase Staff Satisfaction

Increase Patient Satisfaction

Enhancing Virtual Nursing Workflows with AI Technology



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

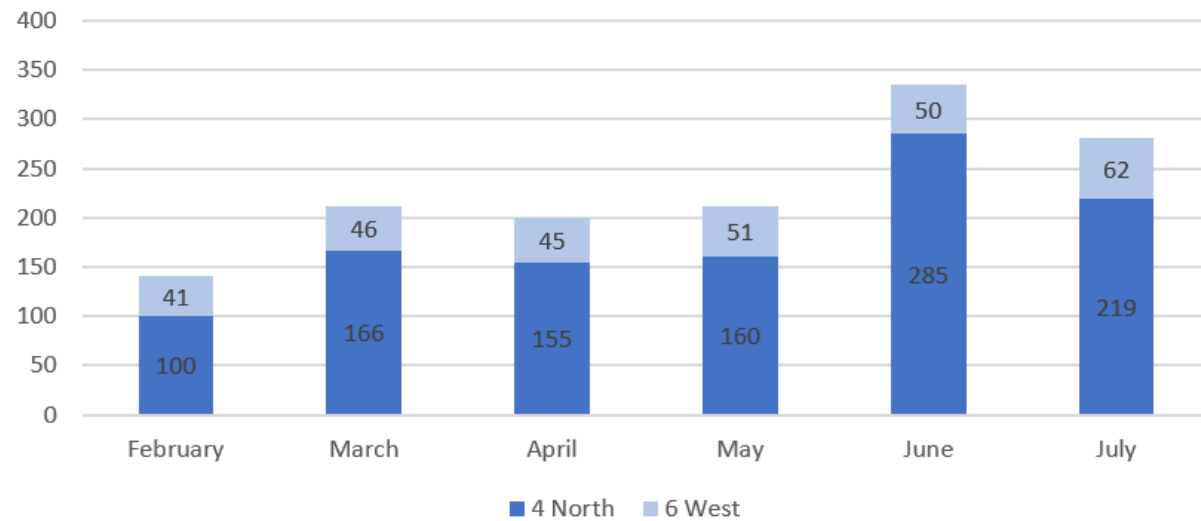
- Alert the patient via Artisight Alarm
- Alert patient (audio/visual communication: "Please stay in bed.")
- If no response from bedside staff, broadcast unit

→ Fall intervention documented

Admissions and Discharges

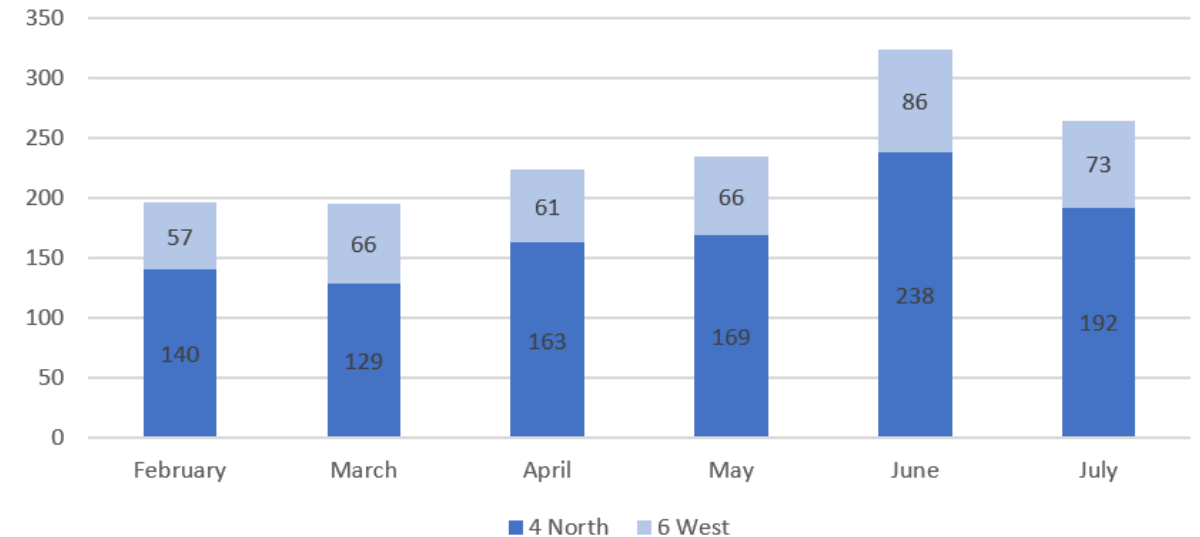
Enhancing Virtual Nursing
Workflows with AI Technology

Total Admission by Virtual RN



1,380
Admissions

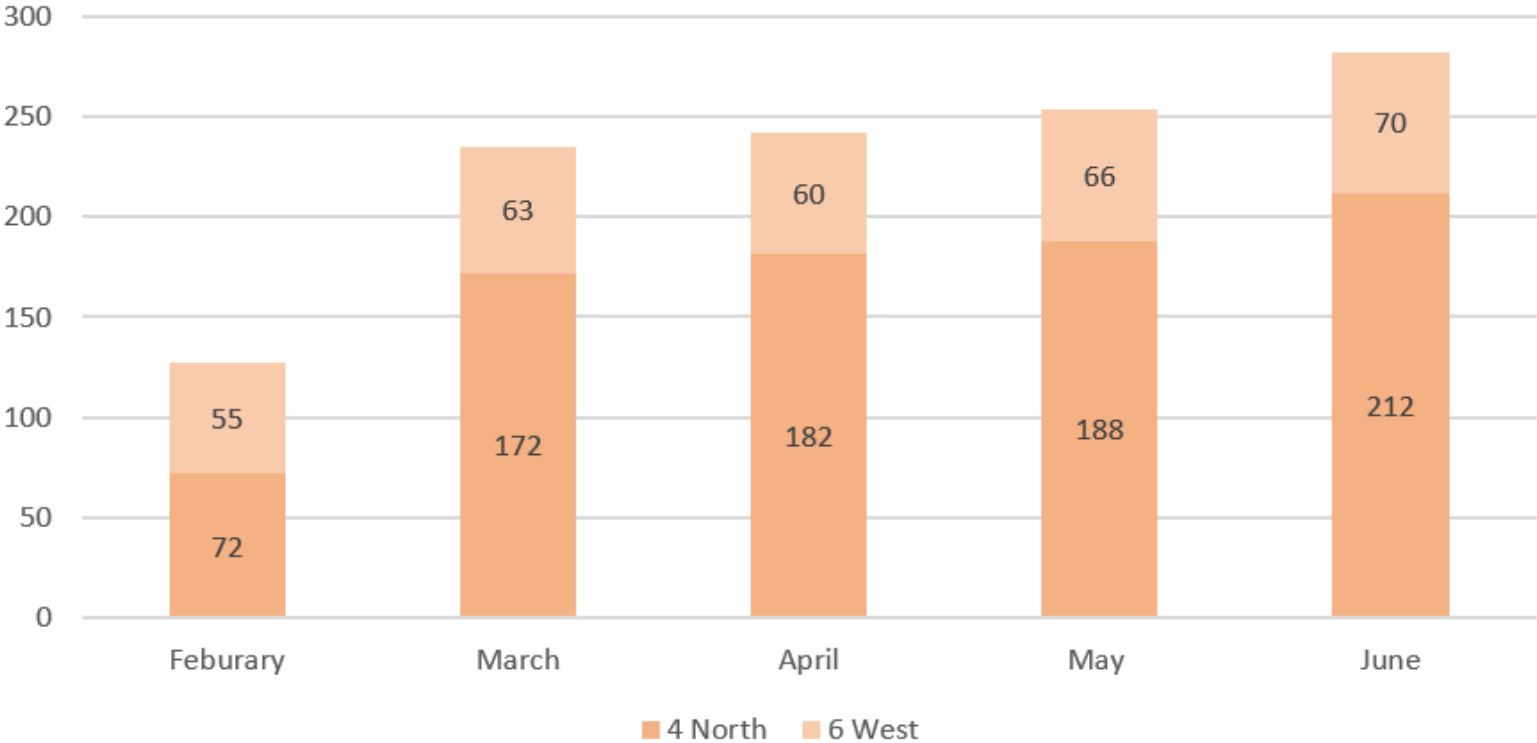
Total Discharges by Virtual RN



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

Enhancing Virtual Nursing
Workflows with AI Technology

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			

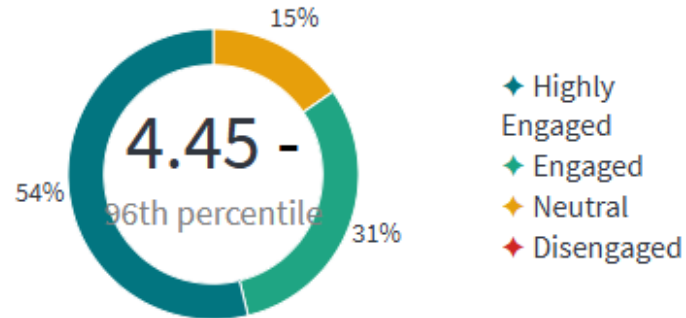
Redirection Total: 2,133
Staff Interventions: 800

Total falls while observed
10

6 West Employee Engagement

Enhancing Virtual Nursing
Workflows with AI Technology

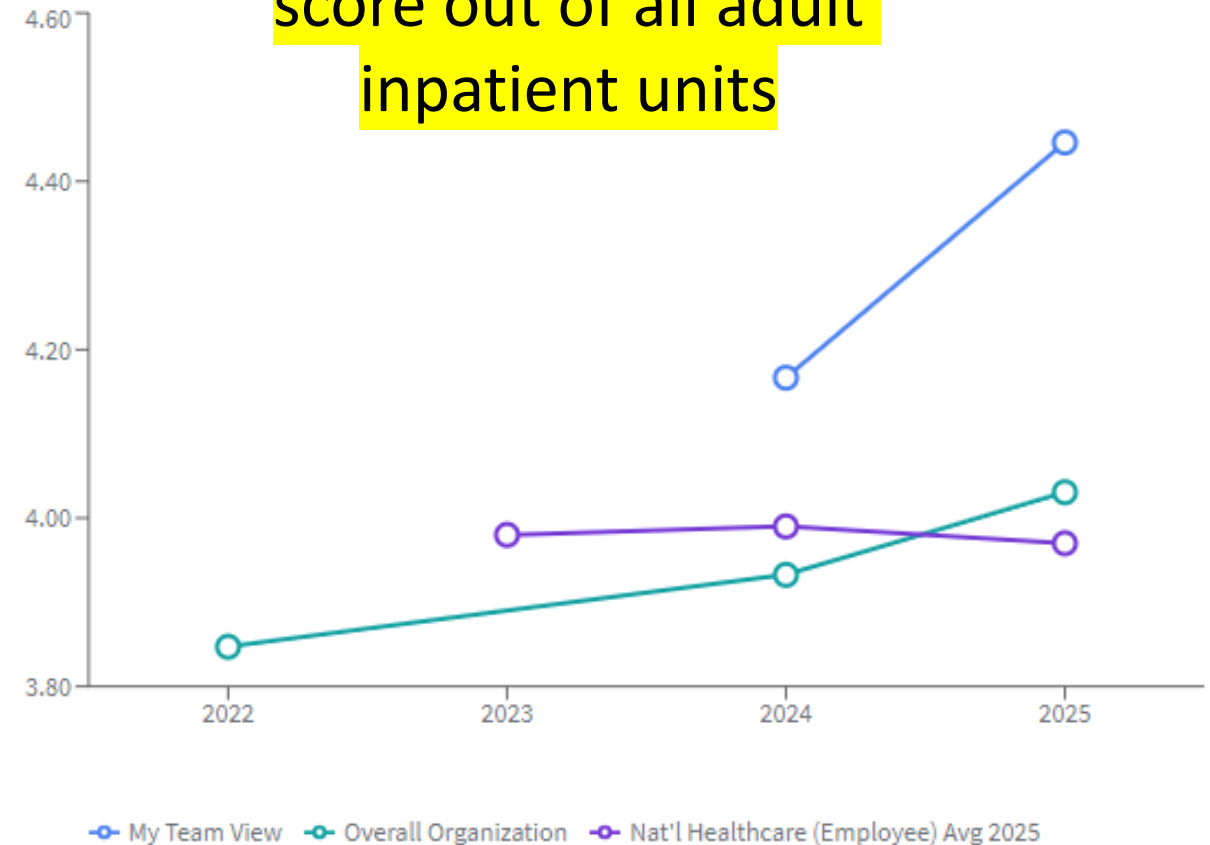
Engagement mean score and level distribution



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



Acknowledgment

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All About The Team ❁



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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



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RN Care
Coordinator



C. LaSource
RN Care
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D. Langston
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Thank You!

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