Telehealth Centers of Excellence

The University of Mississippi Medical Center

National Telehealth Center of Excellence

AI-Enabled Clinical Documentation: Early Wins & Lessons Learned

Artificial Intelligence in Healthcare Summit
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UMMC Center for Telehealth

Objectives

Describe how Telehealth and other Emerging Technologies like AI can improve healthcare, specially in rural states like Mississippi.

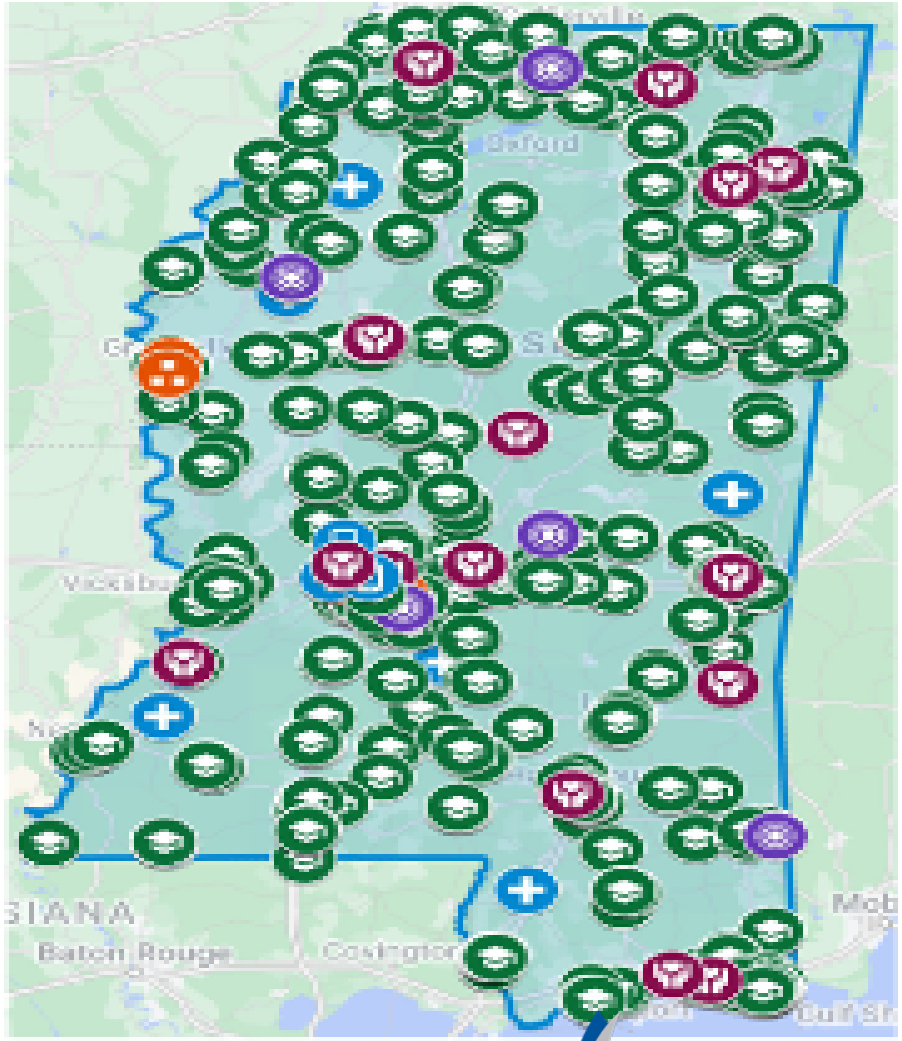
COMMITTED TO SERVING MISSISSIPPI COMMUNITIES

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



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Role of AI in Telehealth

AI has the potential to enhance Telehealth by making it more accessible, efficient, and effective.

Virtual assistant

Improved patient outreach

Remote monitoring

Efficient triage

Patient engagement

Preventing provider burnout

Clinical Decision Support (triage, disease progressions, diagnostic algorithms)

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

Overview

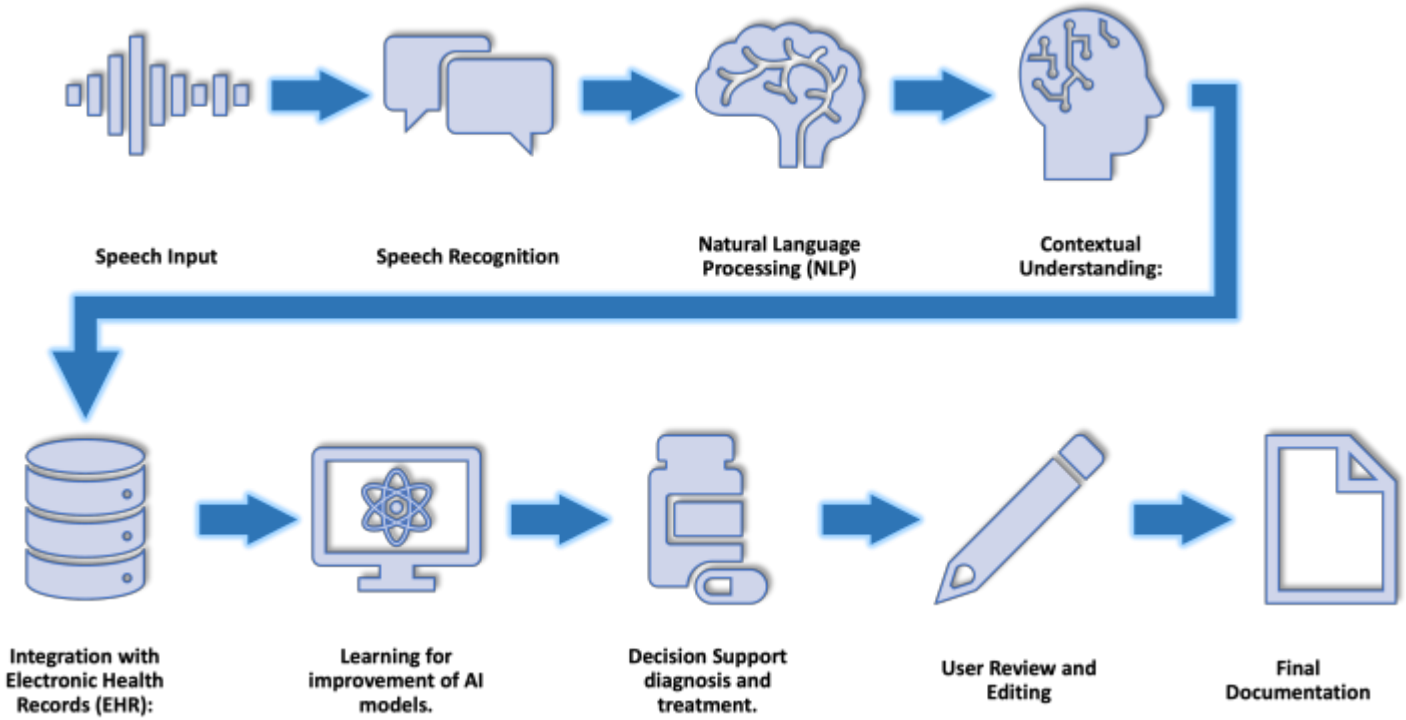
Provide more time for direct interaction/communication between patient and provider by automating the task of documentation using AI based technology (AI Scribe).

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

https://www.linkedin.com/pulse/transforming-healthcare-glimpse-ai-revolution-satish-swarnkar-3a8vc

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 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

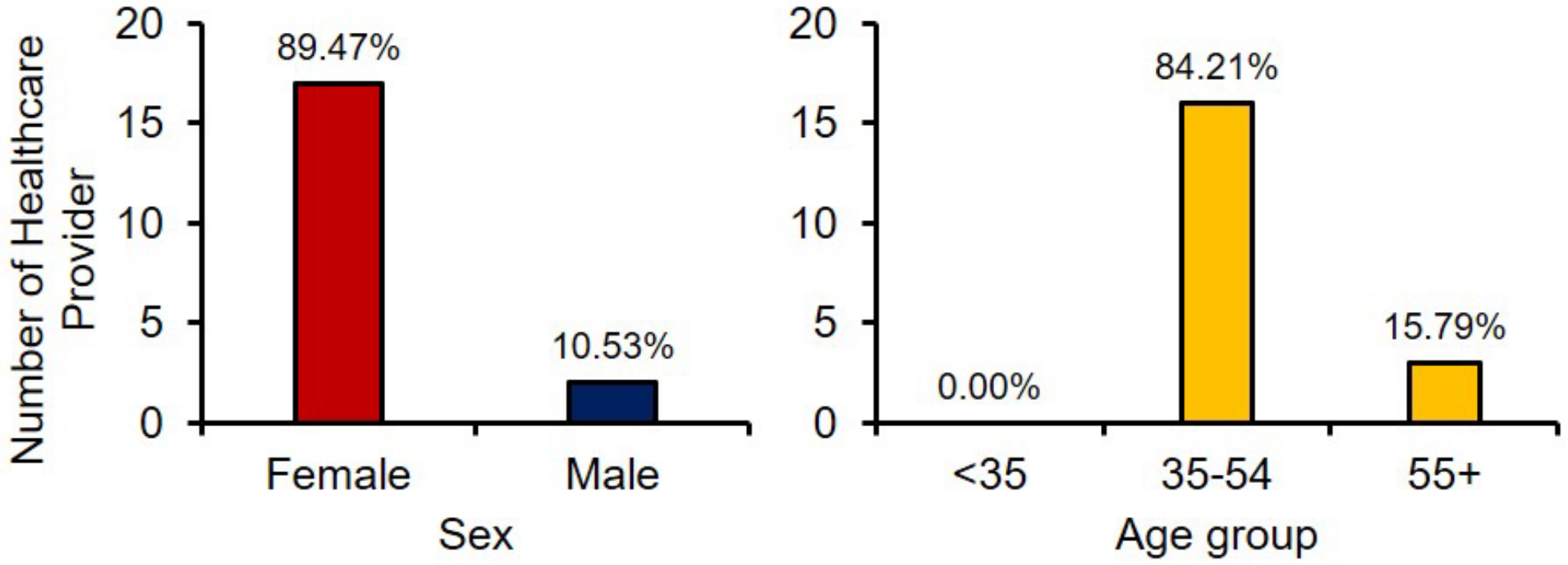
Platform Version Selected: Microsoft Edge Extension

UMMC Software Utilized

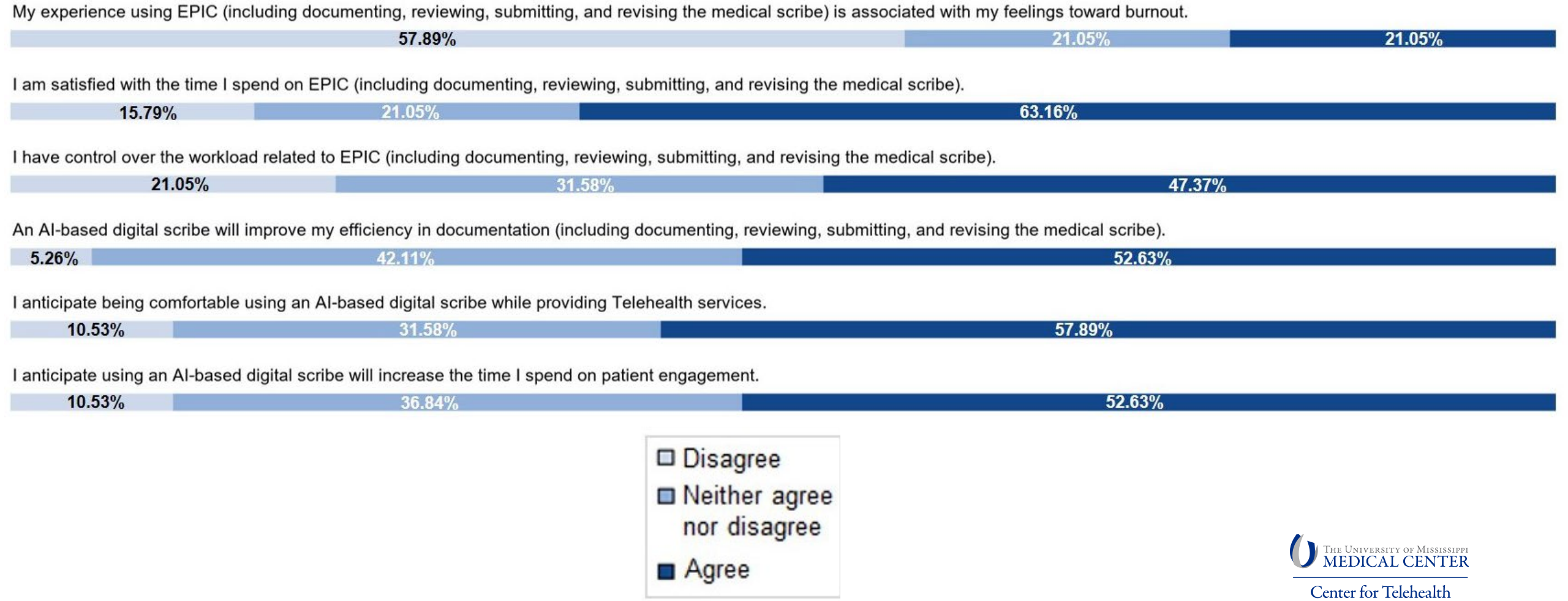
EMR: Epic

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

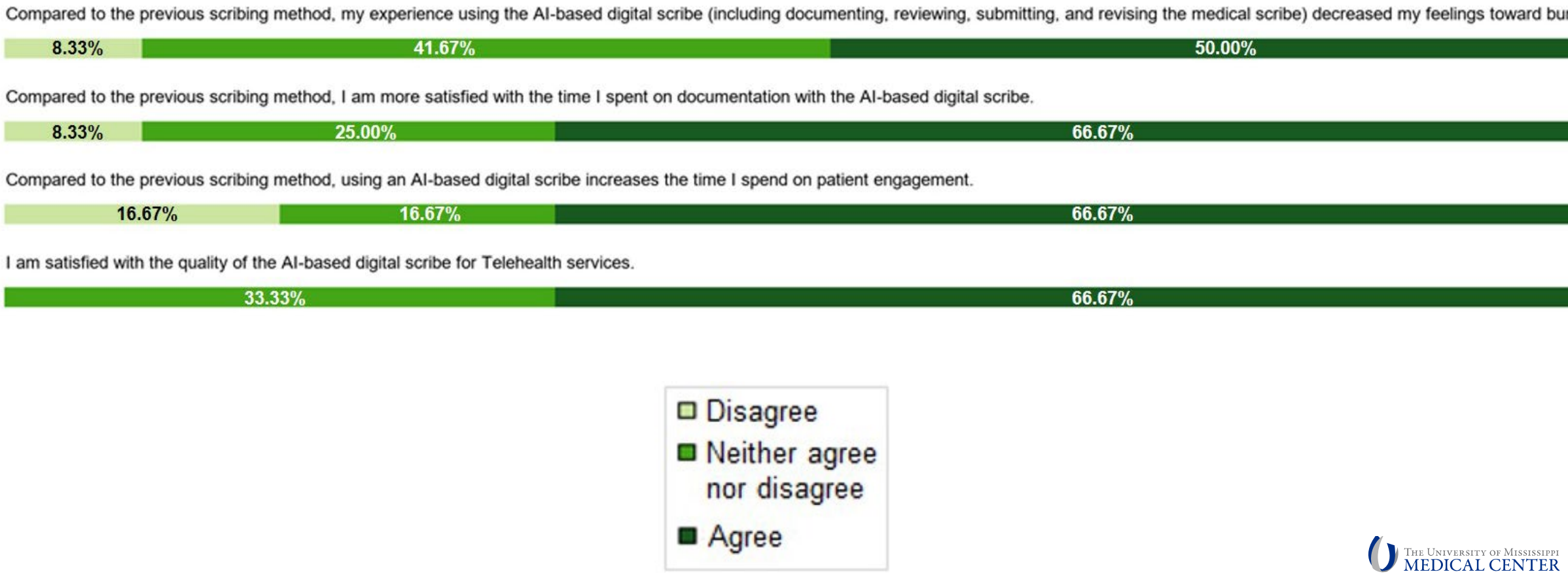
Provider Survey Results



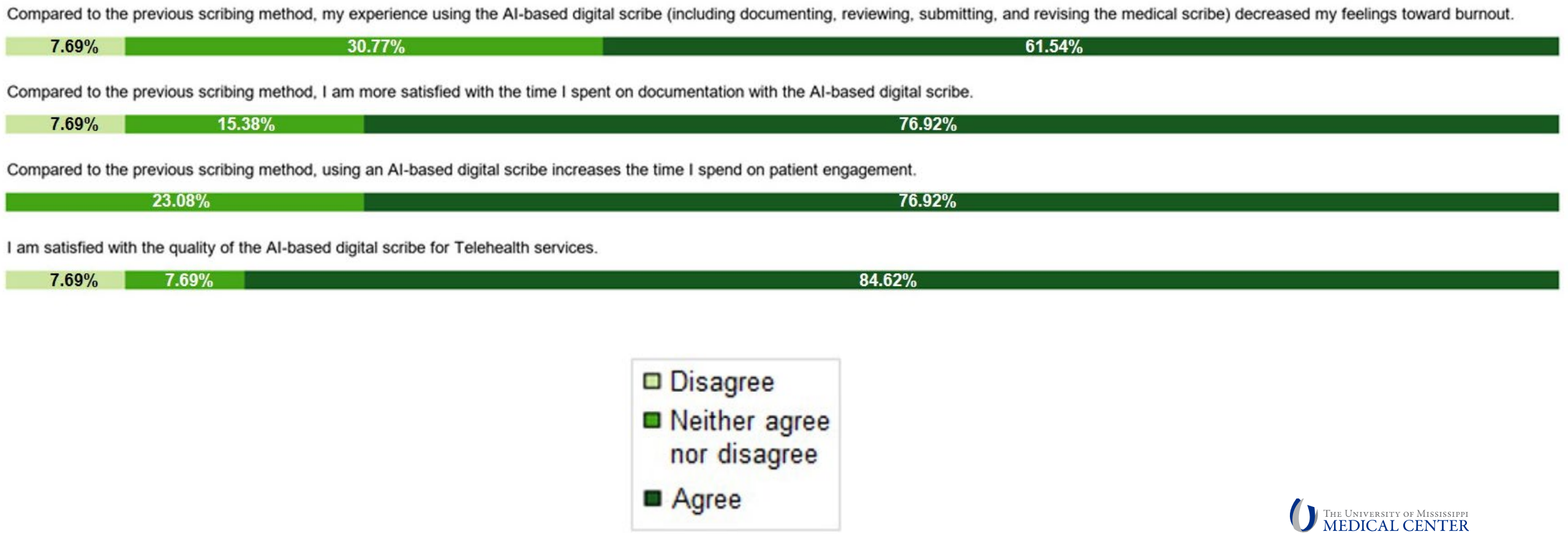
Provider Survey Results: Pre-implementation



1 month post-implementation



3 months post-implementation



Provider Survey: Conclusion and Future Directions

- An AI-based scribe has the potential to improve patient-provider interactions
- Automating documentation tasks allows providers to focus more on patient care
- Future work will focus on addressing cost-effectiveness of the AI-scribing tool

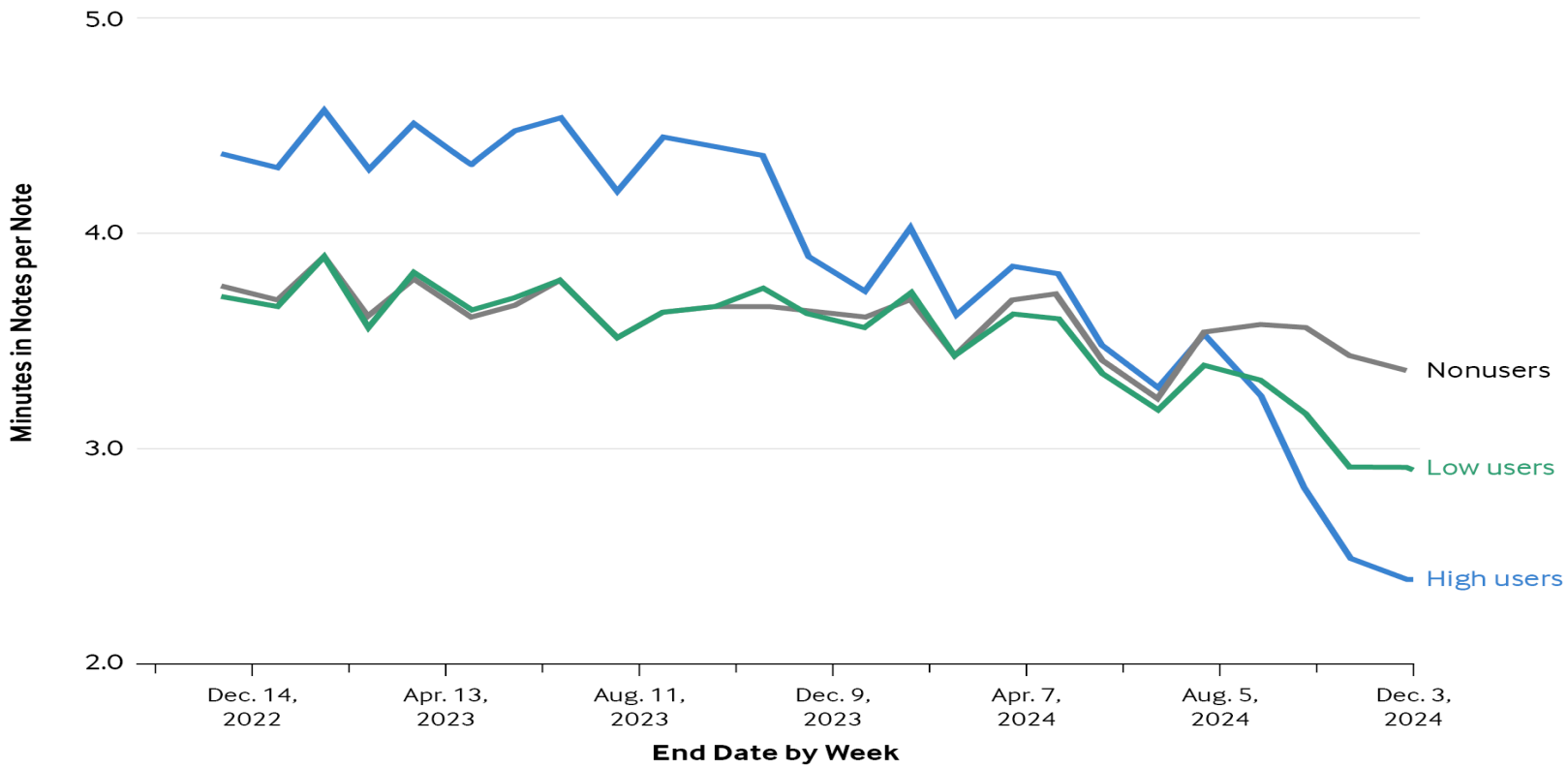
Enterprise wide implementation at Kaiser Permanente

- Implementation of the regional pilot (October 16, 2023.
- In the 63 weeks since implementation between October 16, 2023, and December 28, 2024, ambient AI scribes have been used by 7,260 TPMG physicians to assist in 2,576,627 patient encounters across a wide array of medical specialties and locations.
- Mental health (42%), primary care (32%), and emergency medicine (32%) physicians had the highest adoption by the percentage of total clinicians using the AI scribe.

Enterprise wide implementation at Kaiser Permanente

Time in Notes per Note for all Physicians by AI Scribe Usage Level

This chart shows the time spent on AI scribe notes, in minutes per note, for nonusers, low users, and high users from December 2022 to December 2024.

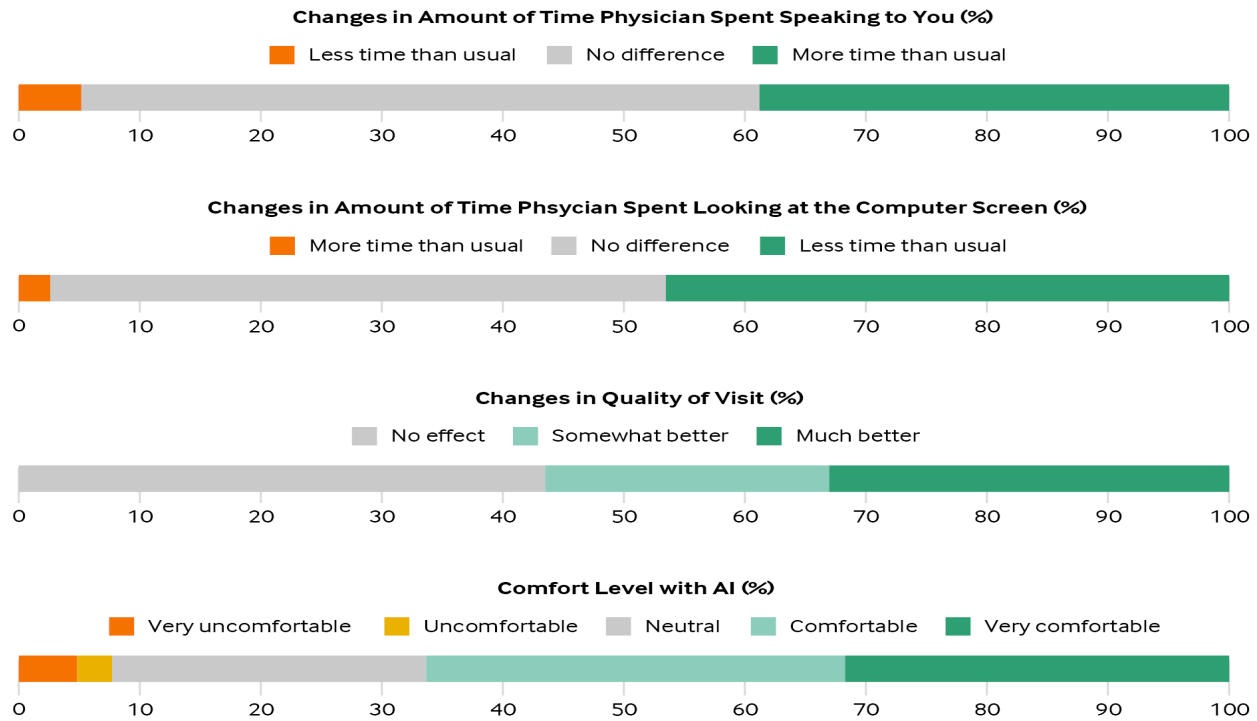


Source: NEJM Catalyst

Enterprise wide implementation at Kaiser Permanente

Patient Responses to Changes in Their Visit Due to the Use of an AI Scribe

These charts show patient responses in percentages for changes in the amount of time the physician spent speaking to the patient (less time than usual, no difference, more time than usual); changes in the amount of time the physician spent looking at the computer screen (more time than usual, no difference, less time than usual); changes in the quality of the visit (no effect, somewhat better, much better); and physician comfort level with AI (very uncomfortable, uncomfortable, neutral, comfortable, very comfortable).



Source: NEJM Catalyst

Expanding the AI Scribe capabilities

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

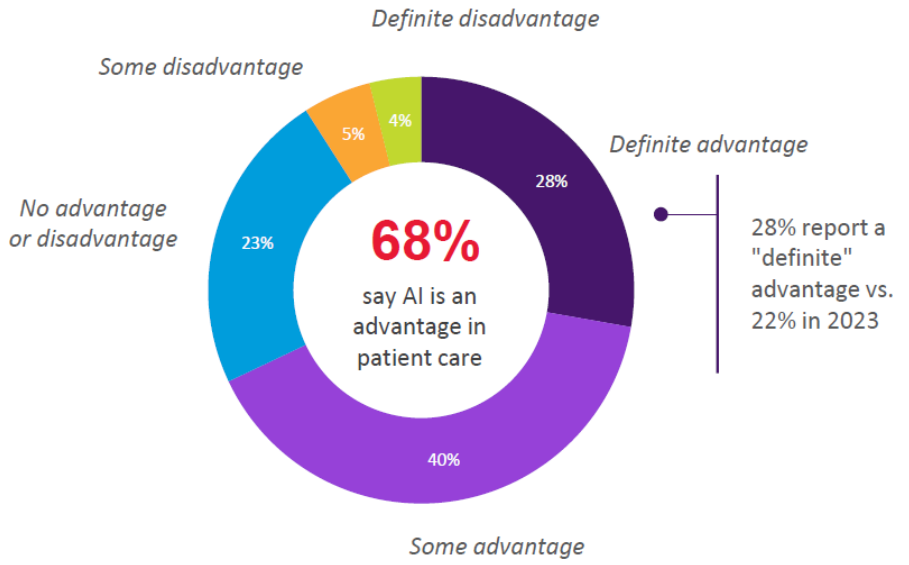
Challenges with AI Scribe Generated Note/Documentation

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

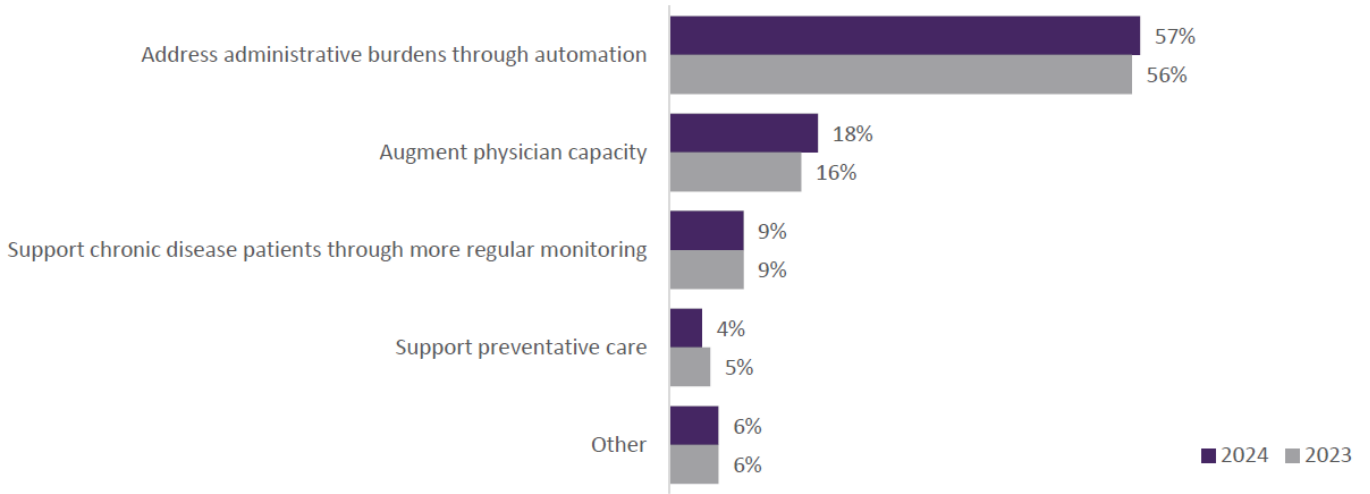
Financial ROI

Rapid increase in AI users

Percent of respondents stating they currently use at least one of the 15 AI use cases presented



Biggest Area of Opportunity for AI



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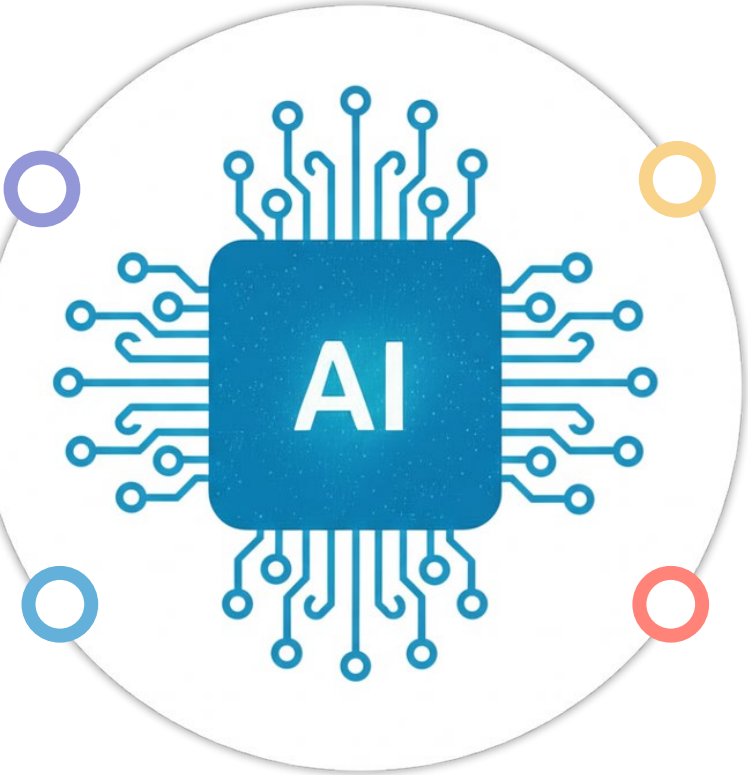
(American Medical Association, 2025)

DIRECT VALUE

Task Automation

- Focus on Complex or Value-Add Activities



Improved Revenue Cycle Management

- Faster Claims Processing
- Reduced Denials

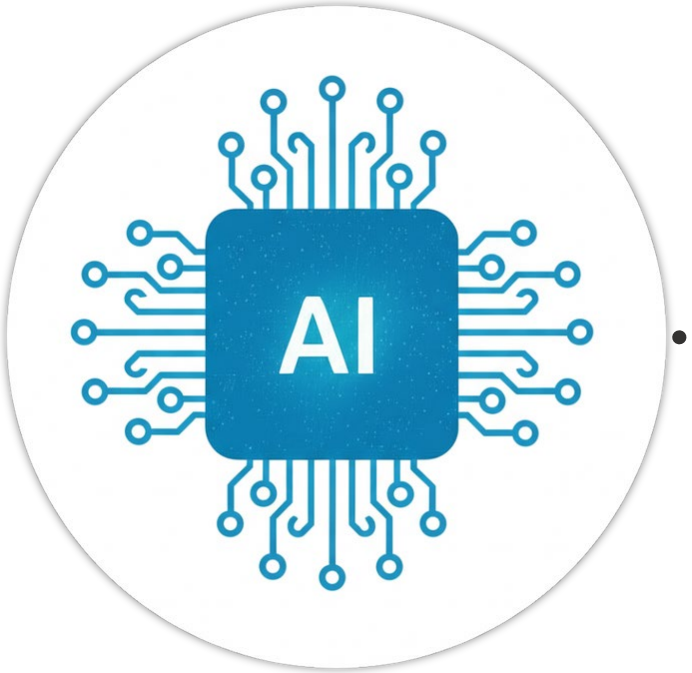
Enhanced Diagnostic Efficiency and Accuracy

- Faster and Accurate Diagnoses
- Reduced Misdiagnosis and Complications

Predictive Analytics

- Reduced Readmissions
- Value-Based Care

INDIRECT VALUE



Reduce Physician Burnout

Data Driven Decision Making

Patient Experience

- Streamlined Scheduling
- Pre-Visit Data Aggregation
- Personalized Resources
- Improved Outcomes

HEALTHCARE AI EXAMPLES

Clinical Documentation

AI SCRIBE

Direct Savings

1 hr/day saved =
$48-$69k/yr per provider

(AMA, 2024)

Indirect Benefits

- Reduce Burnout
- Improve Work/Life Balance
- Provider Retention

Coding and Billing

AI CODING AND CHARGE CAPTURE

Direct Savings

30-50% denials reduction on $10k denials/mo =
$36k-$60k/yr

(McKinsey, 2021)

Indirect Benefits

- Faster Submissions
- Fewer Denials

Prior Authorization

AI PRIOR AUTH FORMS

Direct Savings

13 hrs/week saved =
$50,700 per physician annually

(AMA, 2024)

Indirect Benefits

- Reduced Delays in Care
- Improve Approval Rates

HEALTHCARE AI EXAMPLES

Risk Stratification

PREDICTIVE ANALYTICS

Direct Savings

10% less readmissions for chronic conditions = $150,000/yr

(AMA/Geisinger, 2024)

Indirect Benefits

- Reduced Readmissions
- Improve ACO/Shared Savings

Patient Triage

AI CARE ROUTING

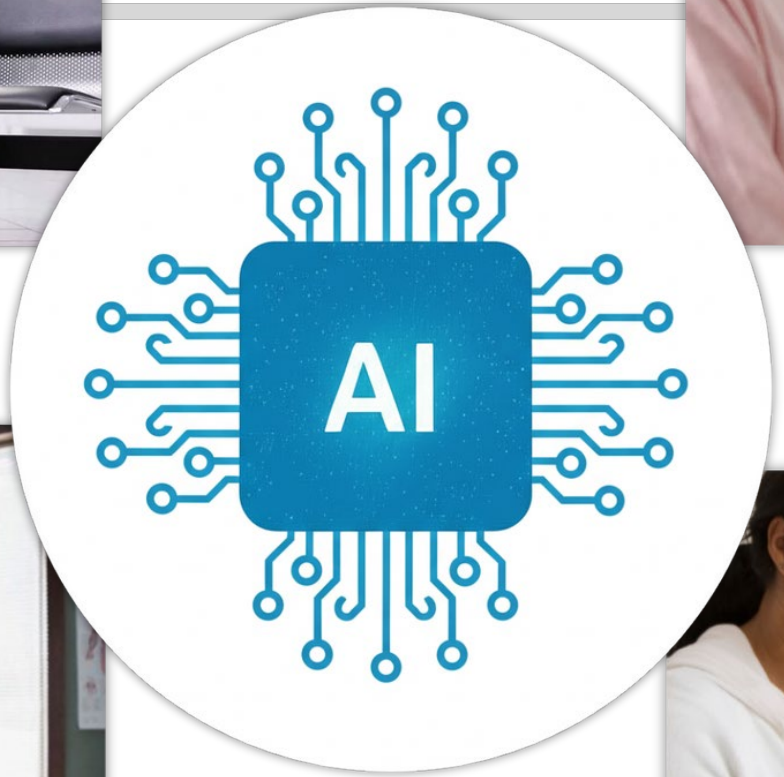
Direct Savings

45% ER Deflection = $36-$90k/yr in shared savings

(Novant, 2022)

Indirect Benefits

- Optimize Patient Flow
- Reduce Overburdened Areas



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It’s all About Teamwork!

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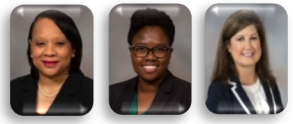

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Thank You!

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