

Evaluation of Ambient Artificial Intelligence Scribe Technology in Ambulatory Care: A Pilot Study at a Large Urban Academic Medical Center

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Overview

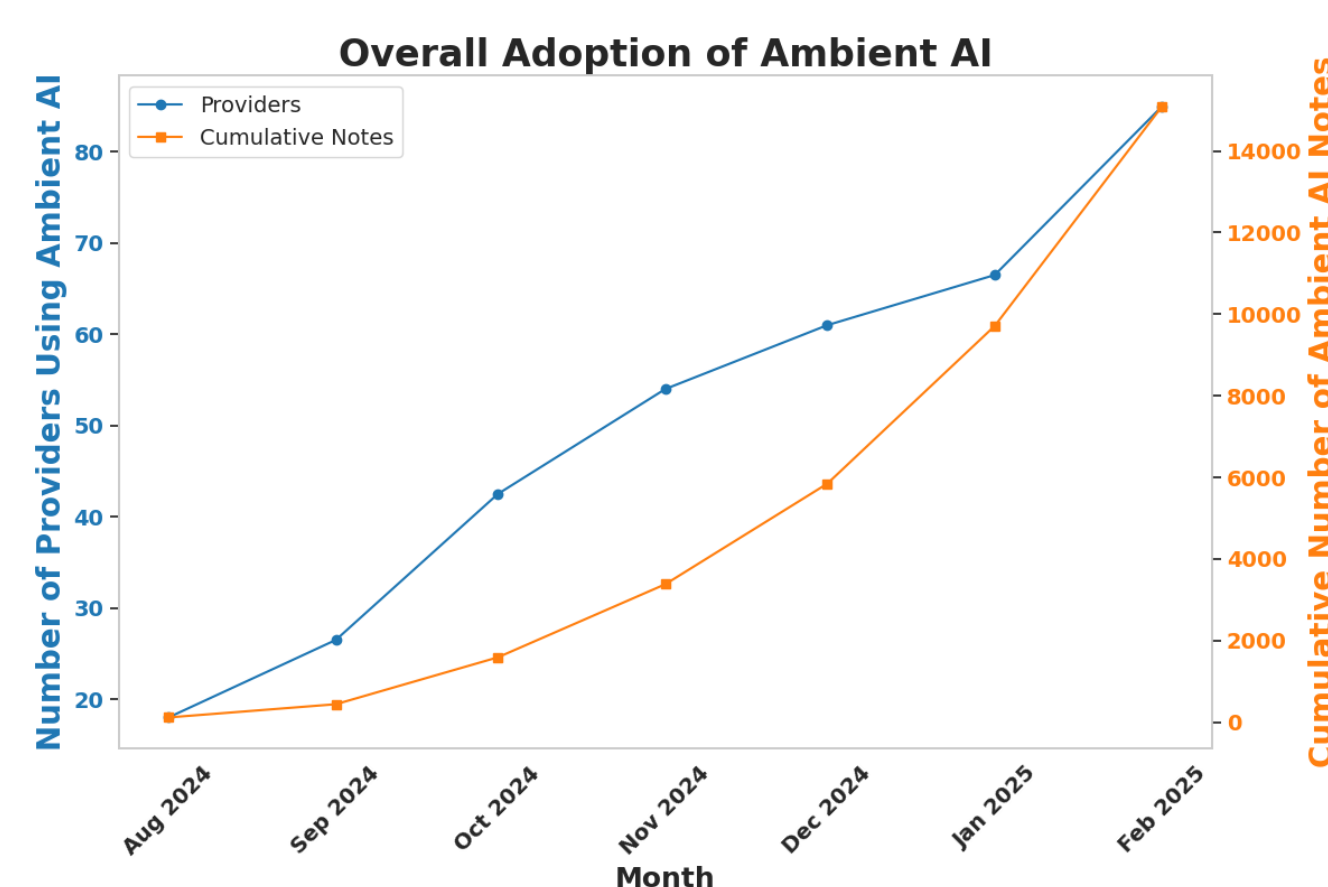
- Ambient artificial intelligence (AI) scribe technology harnesses large language models to transform patient-clinician conversation into structured clinical notes in real-time outpatient settings
- A quality improvement project was performed to evaluate the impact of SUKI AI, an ambient powered voice assistant for healthcare providers, on clinical documentation and provider satisfaction

Methods

- Design:** A pilot to implement SUKI AI for clinical note generation launched in August 2024 across diverse outpatient specialties. Clinicians were onboarded in multiple waves.
- Analysis:** (1) Epic Signal data through Feb 2025, (2) SUKI note counts through Feb 2025, (3) Mid-pilot feedback survey administered to clinicians, (4) Structured interviews with clinicians
 - Pre and post-implementation values were aggregated by clinician for each Signal metric to compare EHR usage
 - Violin plots display the distribution of within-clinician changes (post-pre mean change)
 - Percent change plots show mean percent change by utilization group with Bonferroni-adjusted statistical significance
 - Spaghetti plots visualize clinician-level pre/post trajectories with group-level means
 - Survey responses were analyzed using mean scores for each Likert-based question
 - Interview transcripts were thematically analyzed using Atlas.ti to identify themes
- Setting:** Large academic medical center and two community hospitals in the Midwest US
- Participants:** 216 total participants are enrolled in the pilot to date:
 - 112 participants met the inclusion criteria for EHR usage analysis (required three months of usage data prior to implementation)
 - 41 participants took the mid-pilot survey
 - 6 clinicians were interviewed post-pilot

Results

SUKI Utilization by Clinician



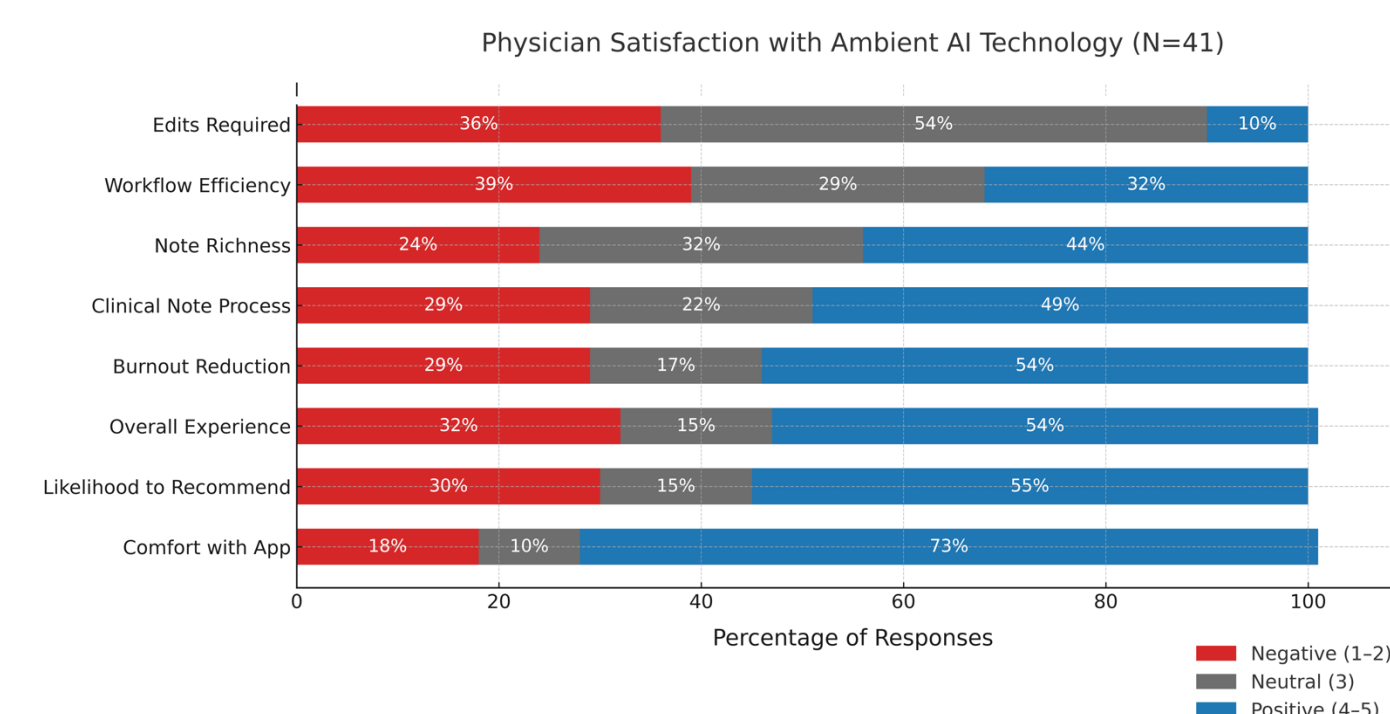
Clinician Feedback

Interview Theme	Subtheme
Satisfaction	Satisfied Dissatisfied Somewhat satisfied
Patient Focus	Improved Engagement
Note Accuracy	Reasonable Accuracy Accuracy Issues
Note Readiness	Mostly Ready Not Ready Revisions
Time Savings	Saves Time Doesn't Save Time
Continuous Learning of Suki	

Selected Representative Quotes from Satisfaction (Satisfied):
"Overall, it is like a huge value add in terms of quality of work life."

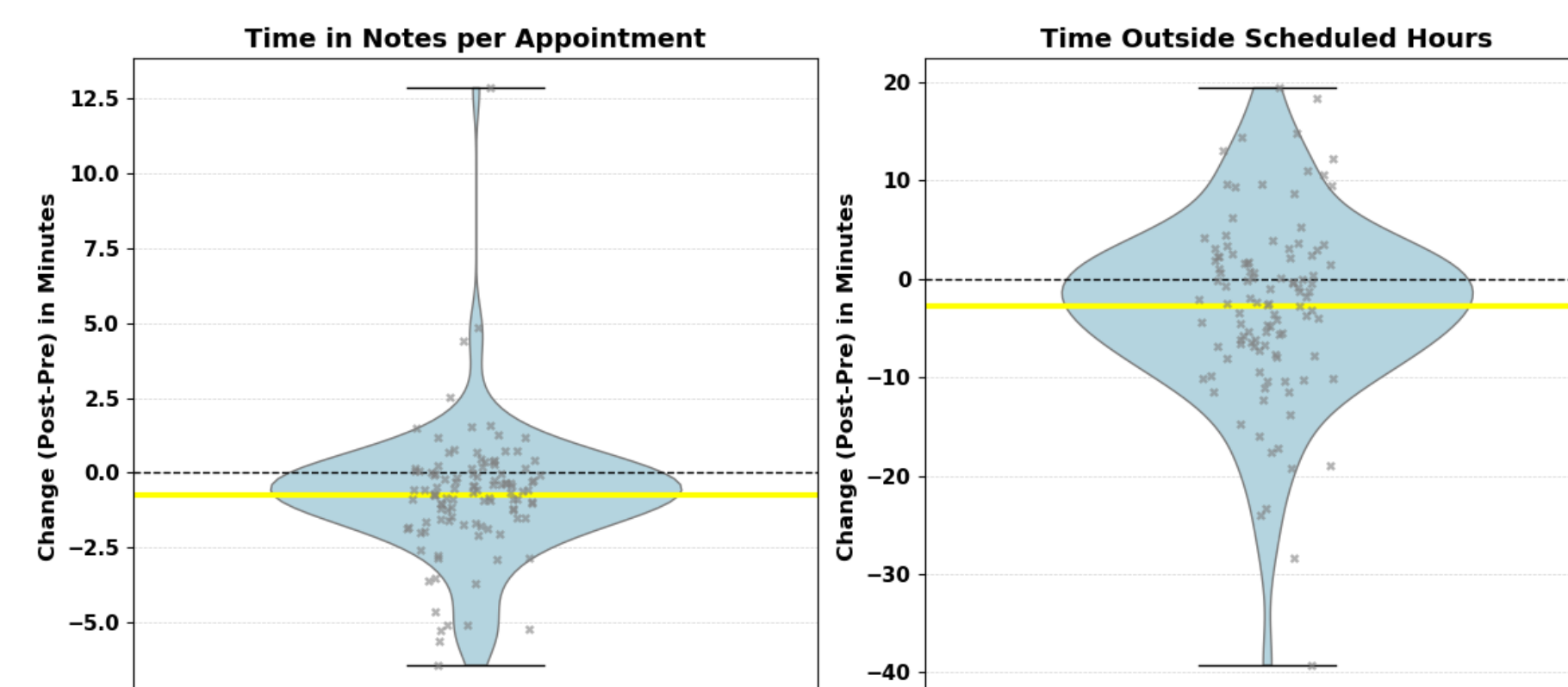
"It's significantly reduced my completing notes on the weekends/at night - that is very positive. It has reduced my stress about having to write a note. Because seeing the patients, interacting with them, examining them, and making clinical decisions is fun. But sitting down and writing the note is less [fun]."

Selected Representative Quotes from Note Readiness (Not Ready):
"I have to change a lot of it. Sometimes an assessment and plan it breaks out problems that should be combined and combines some problems that should be broken out."



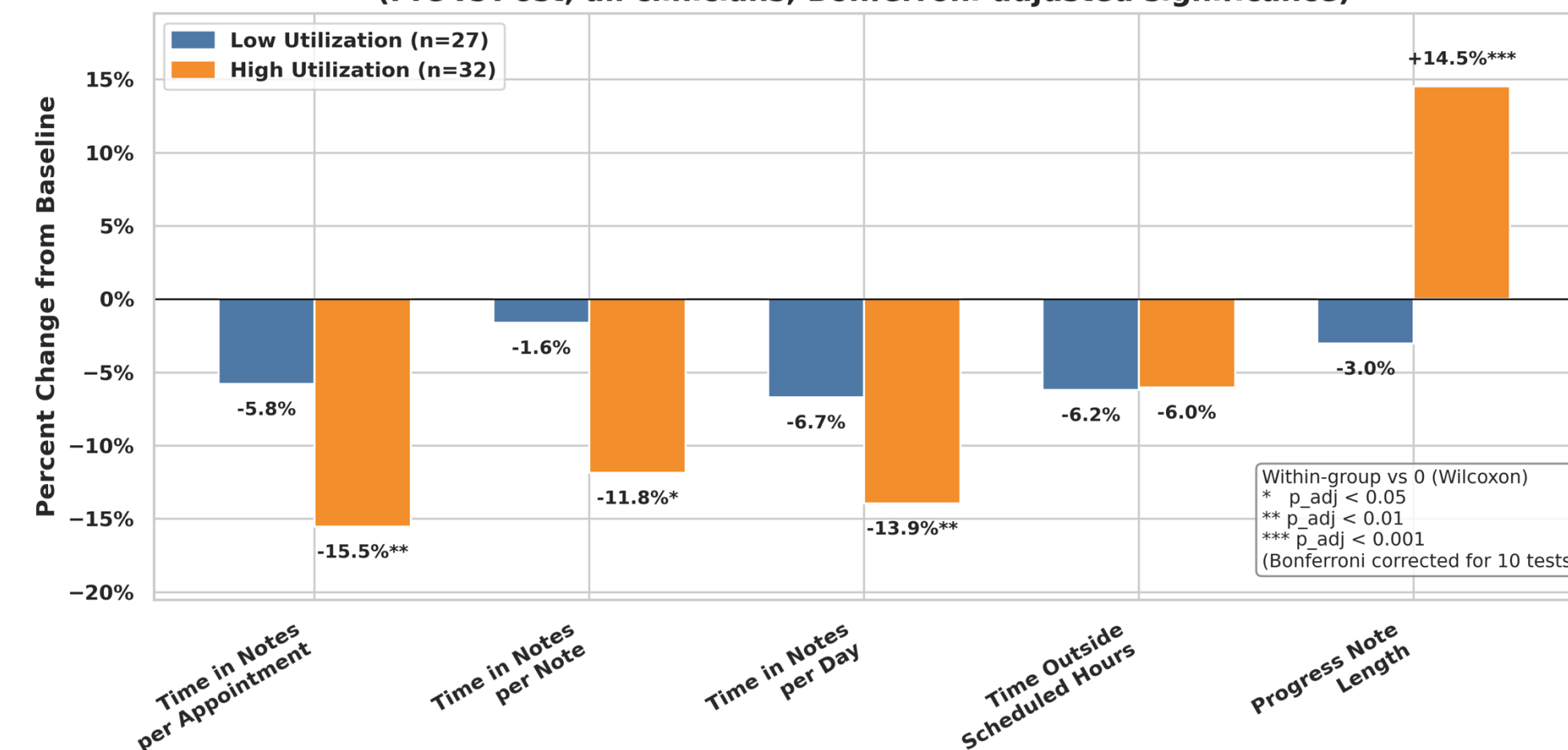
EHR Signal Data: Pre- and Post-SUKI Implementation

Distribution of Clinician Level Changes (Baseline vs. Post Intervention)



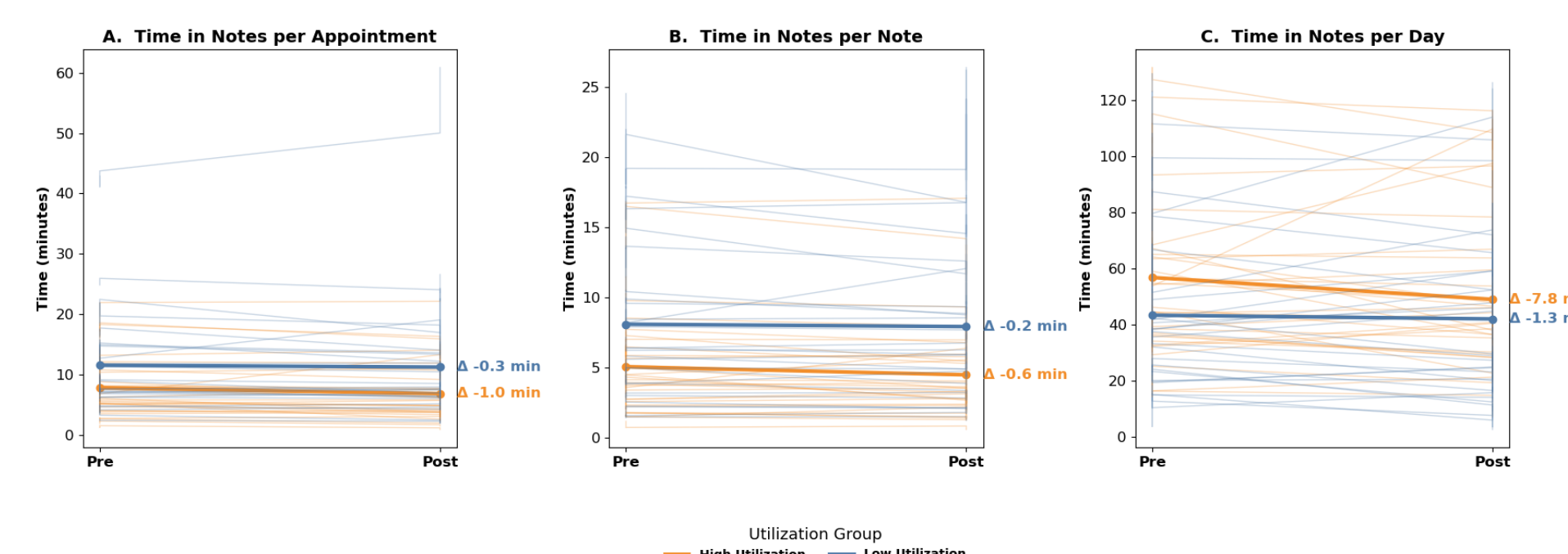
Violin = distribution of clinician changes (Post-Pre). Jittered dots = individual values
Yellow line = mean change per metric
Time in Notes per Appointment: Mean Δ = -0.7 min (N=109)
Time Outside Scheduled Hours: Mean Δ = -2.7 min (N=109)

Percent Change in Documentation Metrics (Pre vs Post, all clinicians; Bonferroni-adjusted significance)



Bars show mean percent change per clinician using all available Pre (<0 days) and Post (≥0 days) data.

Pre-Post Documentation Time Trajectories by Utilization Intensity



Discussion

- Over 17,000 ambient AI clinical notes were written among clinicians in the first 7 months of the pilot
- Clinicians' EHR usage comparing baseline habits to ambient AI usage shows significant changes in documentation metrics among high versus low utilization users
 - High utilizers spent 7.8 minutes less in notes per day compared to 1.3 minutes for low utilizers
 - Progress note length went up by 996 characters for high utilizers and went down by 172 characters for low utilizers
- Mid-pilot survey results for the ambient documentation technology revealed that overall experience, ability to improve burnout, and clinical note satisfaction were slightly positive. Usage was somewhat inefficient and required editing. Overall likelihood to recommend was slightly positive (3.2)
- Interviews revealed that several clinicians are satisfied with SUKI AI's ambient scribe technology for clinical note generation. Some felt it helps them focus on patients and chart maintenance. Most endorsed still needing to heavily edit notes due to excess wordiness or insufficient detail in the assessment and plan.

Conclusion

- For high utilizers, the implementation of SUKI AI's ambient scribe technology showed modest reductions in daily documentation time. While after-hours documentation time decreased significantly from a statistical standpoint, the real-world impact may be less significant.
- Clinicians have mixed satisfaction with SUKI AI.
 - Some report improved work-life quality and reduced stress from less clinical documentation time.
 - Some find stress in inconsistencies; others feel it boosts patient engagement.