AAFP

Using an AI Assistant To Reduce Documentation Burden in Family Medicine

Evaluating the Suki Assistant

Suki®

AI Assistant for Documentation Burden Phase 2 Lab Report

Executive Summary

Objective:

The American Academy of Family Physicians has launched a series of Innovation Labs to identify and demonstrate innovations essential to optimizing the family medicine experience. Our initial lab provided proof that using an AI Assistant can significantly reduce documentation burden and family physician burnout[1]. Ten clinicians in 3 practices showed that this innovation dramatically reduced documentation time by 62% during clinic, 76% during after-hours, and was called "a breakthrough" by some clinicians. This report is on the second phase of the lab, which included family physicians and primary care clinicians across the country. It studied the adoption, use, and impact of the AI Assistant by primary care clinicians. The goal was to assess whether an AI assistant is essential to and readily adopted by family physicians.

Participants and Methods:

The lab studied the adoption and impact of an AI Assistant used for visit note completion for 30 days by over 132 family physicians and primary care clinicians. Adoption was assessed based on the number of participants agreeing to buy the solution and the impact realized during the lab trial. The effect was evaluated by a quantitative assessment of documentation time (n = 132) and a qualitative participant survey (n = 40).

Results:

The lab participants represented family medicine and other primary care clinicians. Of the 132 studied, 102 completed the trial, 61 participants fully adopted the solution as paying customers after the lab, representing a 60% adoption rate. These adopters saw a 72% reduction in their median documentation time per note. This resulted in a calculated time savings of 3.3 hours per week per clinician. In addition, participants reported improved satisfaction with their workload and overall with their practice.

Conclusion:

An AI Assistant for Documentation significantly reduced documentation time and burden; it provided more time, flexibility, and freedom for adopters. Clinicians were more satisfied with their notes, saying they were more meaningful and professional. Lab participants who did not adopt fell into four categories: (1) they did not have a significant documentation burden at the start, (2) their EMR workflow worked well for them, (3) their EMR did not yet integrate with the solution, or (4) they were too challenged to trial the AI Assistant fully. We conclude that an AI assistant for Documentation is an essential innovation for all family physicians who have documentation burden and experience burnout. It can help optimize their family medicine experience. The Labs will now enter phase 3, where the goal is to educate the membership on the category of solutions: AI Assistants for Documentation. Our webinars and toolkit will help the membership understand who the innovation works for and who it does not and how it works and its best practices.

Using an AI Assistant To Reduce Documentation Burden in Family Medicine

Overview: the AAFP Innovation Labs

The American Academy of Family Physicians (AAFP) is dedicated to optimizing the family medicine experience for patients and their families, and family physicians and their care teams. Toward this goal, the Academy supports family physicians in achieving the Quadruple AIM, enhancing their care for individuals, improving the health of their patient population, reducing the per capita cost of their care while also finding joy in their work[2,3,4,5]. The family medicine experience is based on a deep physician-patient interaction and trust that requires support from technology. Unfortunately, traditional EHRs have greatly eroded the experience rather than enhance it. The vision for the family medicine experience is that family physicians must primarily care for their patients and that IT must work for clinicians not against them. The AAFP sees the innovative use of health information technology (IT) essential to optimizing the family medicine experience. Toward this end, our Innovation Laboratory is partnering with industry to drive innovation with the latest proven advanced technologies: cloud, AI/ML, voice, and mobile technologies, to optimize the family medicine experience.

Family physicians are facing existential threats. Physician burnout based on clerical burden is at epidemic levels for family physicians. Clerical burden requires greater than 50% of the physician's time. At the same time, they must transform their practices to population-based care and alternative payment models. The associated financial risk threatens to burn down their margins and thus their practices.

On top of that, artificial intelligence applied without optimizing the family medicine experience as a design requirement threatens to increase physician burden and sub-optimally impact patients and the specialty. Investments of over $6 billion were made into the AI health sector in 2020 and over $8 billion in 2021[6], and over 350,000 digital health apps are currently available[7]. Unfortunately, many of these solutions are will increase the burden and burnout for physicians rather than improve the experience of care, as we have seen with traditional EHRs. The AAFP believes that family medicine must help drive the development and adoption of essential innovations and change how medicine is best practiced in the future. Luckily, applications exist today that are making a positive impact. There is an opportunity for the AAFP to curate these applications to drive adoption and influence their future roadmap.

The AAFP's role is to prove and promote innovations as essential innovations and best practices to membership. EHR's have taught us all that technology can dramatically affect best practices. The family medicine specialty should consider technology essential to the optimal practice of medicine and the delivery of care. Over the past two decades, the clerical burden on family physicians has grown with increased documentation, reimbursement, and reporting requirements. Family physicians, as with all primary care, make the vast majority of their practice revenues from patient visits and population health. EHRs were designed to address these many requirements with too many stakeholders in mind. For example, visit documentation has been bloated by E&M coding requirements as proxy for the level of complexity of a visit and, therefore the value of the visit. Meaningful Use certification bloated the requirements for EHRs increasing clerical burden and time required of physicians.

The AAFP Innovation Labs' goal is to study solutions that offer not merely incremental improvement but that truly alleviate the underlying problems in family medicine. We define innovations as products that are adoptable and whose business models are sustainable. Innovations are essential when they are deemed just that, "essential," by physicians and actively promoted by physicians to their colleagues. Their value propositions must promise and then deliver such that the solution is effective and adoptable.

Problem: Documentation Burden

The primary focus of the Labs was on EHR burden and specifically documentation burden. In a seminal 2017 article in the Annals of Family Medicine, tethered to the EHR[8], primary care physicians spent over 50% of their workdays on their EHR's which averaged 4.5 hours per day in clinic and 1.5 hours after hours per day at home. Nearly a quarter of that time was on EHR documentation tasks.

With this burden, physicians must modify their workflow, which changes their focus and work during the visit, from care delivery to clerical work. Their personal lives also changed from focusing on family and personal pursuits to tackling more clerical work and care tasks squeezed out of the workday. Our first lab sought to reduce EHR documentation burden and physician burnout dramatically.

Innovation: AI Assistant for Documentation

AI Assistants are a new category of innovative products that intend to reduce documentation burden. These AI Assistants are akin to well-known mainstream solutions such as Alexa or Siri. They use voice recognition, natural language processing, and artificial intelligence to provide physicians with an AI assistant that continually listens, learns, and adapts to a physician's documentation patterns and needs. The vision is for the AI assistant to be similar to a medical assistant or nurse who understands a physician's preferences, anticipates their needs, and completes their charting for them.

AI offers the opportunity to replace more costly human scribes (in-person or virtual) with solutions based on deep learning. Some AI Assistants use a 'human in the loop" to edit and correct the transcription while helping the AI learn. In some specialties, these products are being positioned as virtual scribes to replace more costly human scribes. In family practices where human scribes are often not affordable, these products offer much-needed relief from clerical and documentation burdens.

Voice recognition (VR) or computer dictation solutions have been around for some time. Legacy VR systems did not leverage deep learning to perform the voice to text or have natural language understanding. New VR solutions are now leveraging deep learning to achieve voice to text and include some natural language understanding. AI Assistants are differentiated from legacy voice recognition solutions in their level of natural language understanding and their ability to detect intent (i.e., commands from the user). VR solutions require the user to navigate the EHR interface to denote where the dictation should be placed. AI assistants contain a model of documentation and its role within an EHR. This model allows the AI assistant to know where to place the text that the user is verbally sharing and if there is an embedded command. AI Assistants enable the physician to generate a note without EHR UI navigation or editing.

The AI Assistants for Documentation solution category consists of several innovators such as Suki, Robin, Saykara, Notable, and others. These companies are positioning their AI Assistant products as

being voice and AI-enabled assistants that more than just replace scribes or the need for scribes and as assistants who continually learn how to assist better and anticipate the needs of the physician and their patient. In addition, several AI Assistant companies have focused on selling to specialties that have broadly adopted scribes and have priced their products as a more affordable scribe without the worries of retention and replacement and the associated training time.

Partner: Suki

The AAFP Innovation Lab assessed the companies in this category to find a partner for a lab. Suki was chosen for several reasons. The Suki solution combines proven voice and AI technologies to provide a representative solution of this new category. Suki's reason for being aligned well with the goals of the lab (i.e., helping physicians primarily care for their patients). This brand and physician focus has helped drive innovation and adoption. Suki is actively and successfully selling to family medicine and primary care clinicians. The solution is readily adoptable, software only, not requiring any new hardware. Physicians just download the application and sign up. The version of Suki studied is available on iPhone and Android mobile devices and on the web via the Chrome browser. Suki assists best when integrated with EHRs and is compatible with popular EHRs, including athena, Epic, Cerner, Elation, and eClinicalWorks

www.suki.ai

Methods

Lab Recruitment

The Labs recruited potential phase 2 participants through two programs. First, the Innovation Lab partners (the AAFP and Suki) conducted five monthly webinars from January to May 2021, where family physicians were recruited to participate. The webinar presented an overview of the Innovation Labs, a demonstration of the AI Assistant solution, the results of the phase 1 lab, and an interview with a family physician adopter. The second program was direct recruitment by Suki of family physicians they engaged in their sales process referencing the AAFP Phase 1 Lab and its results. Additional primary care clinicians in engaged practices were recruited.

Study Design

Participants and their organizations were offered a 30 day free trial of the innovation. At 30 days, if the organization wanted to continue using the innovation, they would get an additional three months free and a discounted subscription rate per provider per month. This rate was further discounted for FQHCs.

Users were onboarded using Suki's normal commercial onboarding process (which was modified due to COVID-19). Suki measured metrics on time spent in documentation before and at the end of the 30-day trial and counts of notes completed using Suki. After their trial, each clinician was invited to complete a survey by the AAFP. Both Suki and AAFP then sent follow-up emails to encourage the completion of the survey. The online survey is included in Appendix A. The survey was formulated to generate responses from the user to compare their level of burden, time commitment to documentation, and satisfaction between pre and post-trial. The survey was constructed from the questions asked in interviews from the phase 1 lab. The final metric tracked at the end of the trial was whether the user decided to continue using Suki after the trial. If the user did not, we inquired as to the reason.

<u>Metrics</u>
Adoption
Phase 2 focused on the rate of adoption, time savings, burden and burnout reduction, and professional satisfaction. A participant was defined as a clinician who trialed Suki long enough to create five notes; otherwise, they were considered a non-participant (i.e., not trailed). An adopter was defined as a clinician who personally trialed the solution and then became a paying subscriber of Suki. A non-adopter was someone who trialed the AI Assistant and decided not to become a subscriber. The final category was participants who had completed their 30-day trial, but their organization was still deciding on purchase (i.e., clinic still trialing).

Time Savings
Time-saving was measured by marking documentation time per note before and after 30 days of use of the AI Assistant. Here is the calculator used:

Time Savings = Baseline Time in Note - (Suki Time in Note + EHR Time in Note)

EHR Time in Note = 10% of Suki Time in Note   (Based on Suki Benchmarking)

Baseline Time in Note is the time the provider spent prior to Suki documenting an average note, as cited in a survey at the time of onboarding. Suki Time in Note is the actual time the provider used Suki from the point of note creation to the point of submission to the EHR or for processing and recording by the application. This time reflects both active and passive time and is based on the median note time for each provider. EHR Time in Note is the time physicians used to complete other portions of the note (if applicable), review and sign the note into the EHR. It was benchmarked at 10% of the Suki Time in Note based on time and motion studies conducted in the Phase 1 Lab and other Suki deployments. The COVID-19 pandemic precluded time and motion evaluations for Phase 2, so this benchmark was used.

In addition to this primary measure of time savings, the qualitative post-survey also evaluates documentation time savings. The survey broke the time savings into three categories: during clinic hours daily, after-hours daily, and weekend hours and asked respondents to estimate their documentation time before the trial and at the end of the trial.

Satisfaction and Burnout
The survey explored the clinician's satisfaction in three domains: overall practice satisfaction, workload satisfaction, and EHR satisfaction. The clinician was able to rate each satisfaction before using Suki and while using Suki. The ratings were on a 10-point Likert scale, with ten being most satisfied. For every lab within the Innovation Labs, we asked participants a standard question to gauge their level of burnout and stress before using the innovation and after. This question is the one-item version of the Maslach Burnout Inventory Emotional Exhaustion scale[9].

Results
<u>Participants</u>
One hundred thirty-two primary care clinicians across 47 clinics and 18 states participated in the AI Assistant for Documentation lab. Thirty-two percent were from enterprises, 53% from practice groups, and 15% from small business practices. Sixty-six percent (n=87) were family physicians in the lab, with

the remainder being physicians of other specialties in primary care (8%) as well as physician assistants (10%) and nurse practitioners (11%) working in the clinics. EHRs used included athenaOne (92%), Epic (5%), and standalone (4%). After the clinician's trial, they were invited to complete a quantitative survey to describe their practice and experience before using the AI assistant and while using the AI assistant. Forty of the 132 completed the survey.

Adoption

There were 132 providers that signed up to participate in the lab. There were 117 participants who trialed Suki by completing at least five notes using the AI assistant. There were 15 participants whose organizations have not finalized their decision or contracting process. Of this remaining 102, 61 providers (60%) decided to continue and become a paying subscriber and 41 (40%) decided not to continue.

	Number of Clinicians	%
Adopted	61	60%
Not Adopted	41	40%
Total	102	

Table 1 - Adoption After Trial

Time Savings

For those that adopted the AI assistant, there was a median documentation time reduction of 72%. For those that decided not to adopt the AI assistant but did successfully trial, the median reduction was 50%.

The following median time savings are for the adoption group on the post qualitative survey. During clinic daily, the median time before using the AI Assistant was 2.0 hrs (standard deviation of 3.2 hrs), and the median while using was 1.6 hrs (standard deviation of 2.1). The median time savings of this
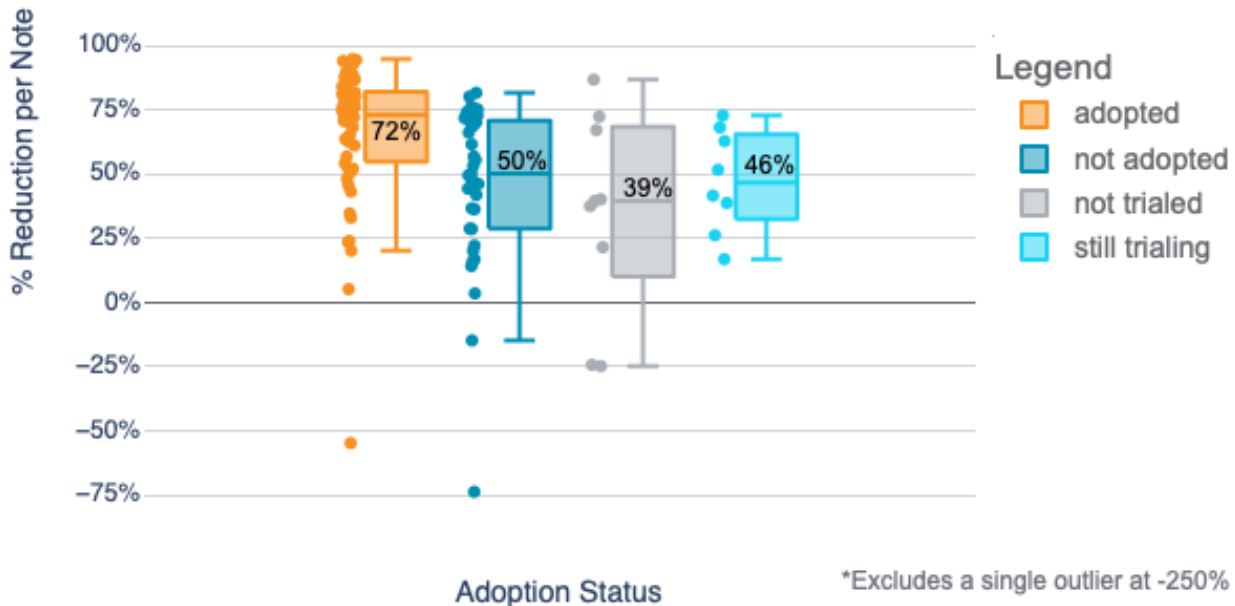
Figure 1 - Reduction in Note Time with AI Assistant

time category was 0.5 hrs (standard deviation of 1.7). For after-hours, the median time before using the AI Assistant was 1.5 hrs (standard deviation of 1.1 hrs), and the median while using was 1.0 hrs (standard deviation of 0.7). The median time savings of this time category was 0.5 hrs (standard deviation of 0.5). For weekends, the median time before using the AI Assistant was 2.0 hrs (standard deviation of 1.6 hrs), and the median while using was 1.2 hrs (standard deviation of 1.3). The median
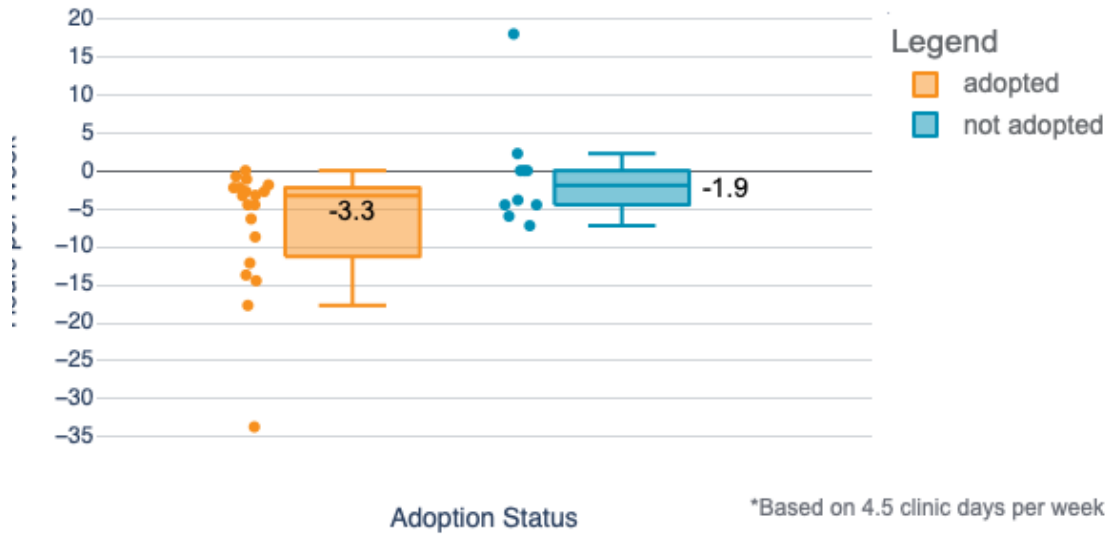
Figure 2 - Relative Documentation Time (hours) per Week

time savings of this time category was 0.2 hrs (standard deviation of 1.0). The total time in the clinic per week varies across family medicine. If we assume 4.5 clinic days per week, the median total documentation time saving based on survey results would be 3.3 hrs (standard deviation 8.3).

Satisfaction
The post survey also measured the clinician's satisfaction before and using the AI assistant for their practice overall, workload, and EHR satisfaction. Satisfaction was measured on a 1 to 10 scale, with ten being the most satisfied. The following are the median values for the adoption group. For overall practice satisfaction, satisfaction before had a mean of 6.4 (standard deviation 1.4) and after of 7.7 (standard deviation 1.5) with a mean difference of 1.2 (standard deviation 1.2) and median of 1.0. For workload
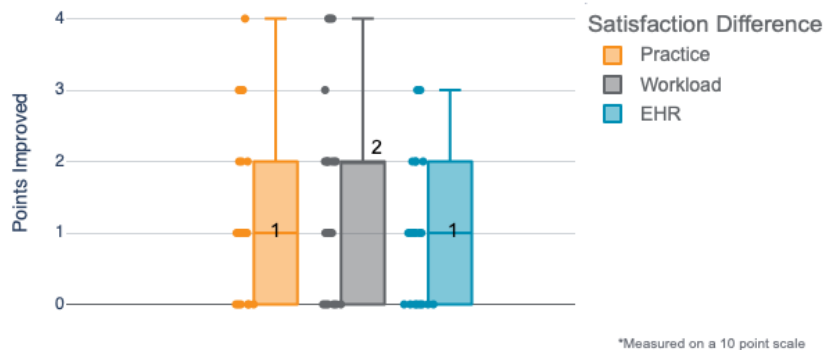
Figure 3 - Improvement in Satisfaction of Adopted

satisfaction, satisfaction before had a mean of 5.3 (standard deviation 2.0) and after of 6.9 (standard deviation 1.7) with a mean difference of 1.5 (standard deviation 1.4) and median of 2.0. For EHR satisfaction, satisfaction before had a mean of 6.4 (standard deviation 1.7) and after of 7.4 (standard deviation 1.6) with a mean difference of 1.0 (standard deviation 1.5) and median of 0.0.

Burnout
Surveyed participants were asked to best rank their level of burnout/stress on a 5 item scale (1) I enjoy my work. I have no symptoms of burnout, (2) I am under stress. But I don't feel burned out, (3) I am
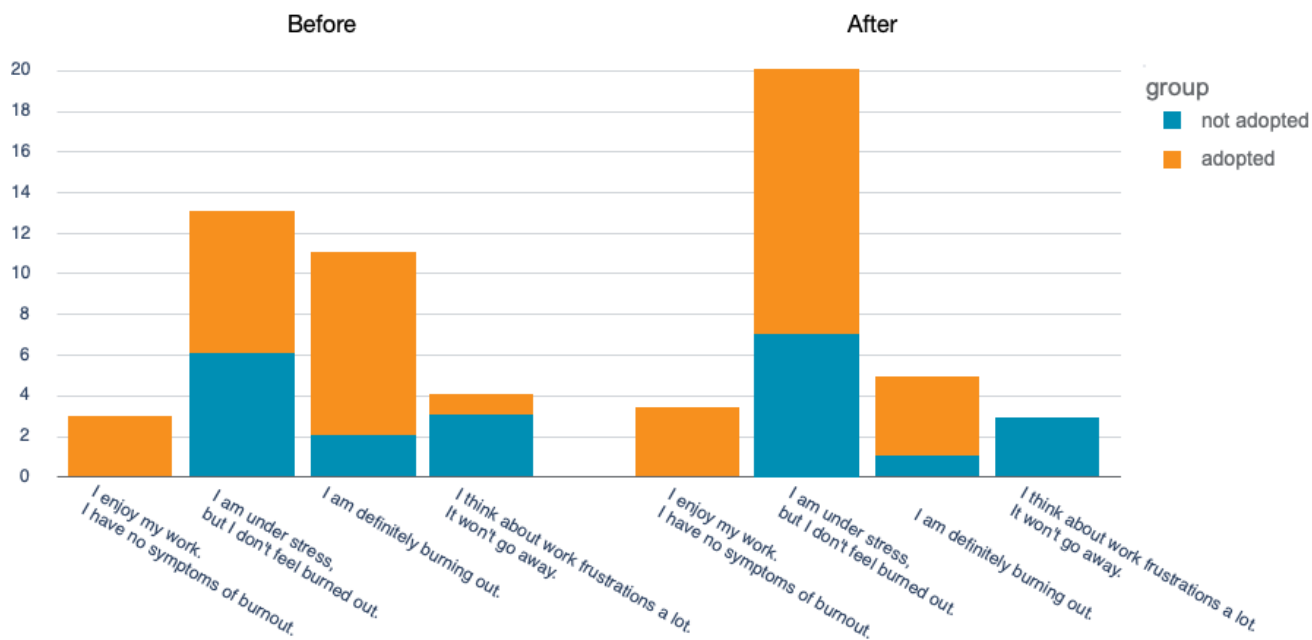
Figure 4 - Change in Distribution of Burnout/Stress

definitely burning out, (4) I think about work frustrations a lot. It won't go away, or (5) I feel completely burned out. I may need to seek help. They were asked to best rank their level before starting the trial and at the end of the trial. Participants ranked their burnout/stress level across all but the "I feel completely burned out. I may need to seek help." category. Before trialing the AI Assistant, the majority of participants ranked the middle to levels as the best rank. After trialing, the majority were still within the middle two ranks, but they skewed lower with more in the second to the lowest rank of burnout/ stress. We did not see an increase in folks ranking their burnout/stress level to the lowest available rank.

Discussion
A key tenet of the Labs is to closely resemble the adoption process in the market such that we have a better understanding of how the innovation will be adopted across family medicine. Given the need to accelerate the adoption process of newer innovations, the Suki product was provided with an extended

trial period. Future other labs will also likely have this feature of a decreased initial cost for those that participate in the Labs. Yet, the lab participant must agree to a commercial relationship with the lab partner to be a customer after the lab. The lab participants have the ability to terminate that relationship at the end of the lab without penalty.

The adoption process was driven by collaborative communication campaigns with both the lab partner, Suki, messaging the family medicine community and the AAFP messaging its membership about upcoming webinars. The regularity of the messages in email and social media and the cadence of the monthly webinars combined to build the number of touchpoints, attract attendees, and qualify for strong interest. Adoption within organizations that were trialing was a major source of adopters. For example, at PrimeCare, an FQHC in Chicago, the adoption went from 3 initial participants to a total of 23 in Phase 2. At Central Valley Family Physicians, adoption grew from 4 to 14. This, of course, reinforces the effect of "hearing from physicians like you in practices like yours." It is the Labs' goal to optimize this word-of-mouth driver with solid data-driven proof points from representative initial adopters.

We believe the AI Assistant was the right innovation at the right time to help family physicians dramatically reduce their documentation burden. The timing of this lab coincided with new CMS E/M documentation and coding guidelines for office visits effective January 1, 2021. These fundamental changes were also intended to reduce administrative burden and increase the amount of time physicians spend caring for patients. At the core of changes was that the complexity of visit would no longer be based on specific elements of documentation in the history and physical. It would now be determined based on the total time physician spent caring for the patient and in the expression of medical decision making. These changes decreased the value of elaborate EHR template functionality designed to assure E&M coding requirements. Physicians were free to express their clinical findings as they saw fit to describe their medical decision making for clinical practice, professional liability reasons, and quality measurement. Now, they could use their AI Assistant untethered to the EHR to more rapidly document their notes, eliminating much of the point and clicking in their EHR and the resulting note bloat. They could focus their efforts on freely expressing their decision making in the assessment and plan.

For the 60% of participants who fully adopted and became ongoing customers of the AI Assistant, they saw a big reduction in time per note and time savings per week. This appears to be the major driver of improved satisfaction across the board - in the practice, with their workload, and their EHR. They described being less rushed, more flexible, and having more freedom. They described being more proud of their notes as being more meaningful and professional. Overall, the AI Assistant decreased documentation burden and burnout and improved their professional satisfaction. While the data on burnout/stress reduction is not dramatic, we believe the impact of the AI Assistant was significant given that the causes of burnout/stress among physicians are more than just documentation burden, especially since this lab occurred during the COVID-19 pandemic.

In assessing the 40% of participants who chose not to adopt, there appear to be three major factors. First, many reported little or no significant initial documentation burden or had an EHR workflow that worked well for them. In short, they did not have the compelling problem the AI Assistant was designed to solve. The second major group had an EHR that was not yet integrated with Suki, but they decided to try and use it on a standalone basis. This lack of integration undercuts much of the AI Assistant's value in incorporating templates, existing patient chart data, and previous documentation. The last

factor was the inertia associated with being too challenged to be able to even trial or try to adopt a new solution of any kind.

The vast majority of participants were on the athenahealth platform because their open APIs and business model offered Suki and Lab participant organizations the path of least resistance. We see athenahealth as a leading example of an EHR Innovation Platform. Traditional EHRs have stymied innovation with their restrictive interoperability and vendor-lock business models. To address its key practice challenges, family medicine needs open, agile, and collaborative platforms to take advantage of new technologies.

This lab highlighted the value of an innovation platform in support of the adoption of new innovations. Of the lab participants, 92% were on athenahealth's EHR. Suki as a member of athena's MDP marketplace was poised to quickly implement new users. Suki reports that they did most of the work to integrate a new client and user. It takes Suki less than five days to stand up a new organization because they "flip a switch" to integrate with athena's single instance without site-specific domains or requiring retesting. For physicians on the athenaOne EHR, getting up and running on Suki was quick and easy, just like installing a new app on their smartphones. Physicians and their organizations could purchase and deploy Suki off the shelf on a rapid timeline in contrast to most other IT or enterprise projects that require much more time and effort.

In contrast, the traditional EHRs required from 8 to 10 weeks of time and effort. Traditional EHRs may provide access to their interfaces, but their architecture and testing processes required much more time and coordination between Suki, the EHR vendor, and the client team. In these cases, Suki had to integrate with each specific EHR instance, whether it was hosted or on-premises, concept map to their different domains, deal with site-specific access, and test constraints creating obstacles to adoption. As an example, with one traditional EHR, Suki didn't have access to a client sandbox and couldn't test the integration themselves. Testing required the client's team to perform the testing as an IT project with an increased burden of complexity, coordination, and cost. A key learning from these two lab phases with Suki is that innovations that are packaged for consumer application adoption are more adoptable.

Integration can be at different levels of sophistication, from simply dropping completed notes into the EHR to the creation of EHR native notes that work in the EHR, just like notes created in the EHR. Another level of integration above that is where discrete data elements can flow from the EHR to drive functionality in the AI assistant or can flow into the EHR to populate data fields outside the note like the problem list, care plan, flowsheets, and for electronic quality measurement. In our experience working with multiple innovators, Suki included, the rate-limiting factor in integration is the EHR company's willingness and infrastructure to support integrating 3rd party applications, not on the innovators' lack of interest or capability. Of course, the heterogeneity of data structures and APIs across EHRs does limit an innovator's ability to quickly integrate with many EHRs. EHR Innovation Platforms that not only support but drive integration may be essential to support broad adoption of innovations and will be the focus of a future AAFP Innovation Lab.

Both adopters and non-adopters alike gave feedback and requested new functionality be added to Suki's roadmap. The most requested functionality included:

- Access and ability to pull in even more discrete data into notes

- Push data elements from the documentation into the problem list and charge capture

- Enter orders using Suki and while documenting them into the plan section of the note

The ability to "write" orders and data into the EHR requires a deeper commitment, by EHR partners, to interoperability than allowing read access. Traditional EHRs, as noted above, are not accustomed to allowing access to these richer APIs and providing all the requisite testing and tooling. EHRs that offer Innovation Platforms should meet these API, testing, and tool requirements.

Finally, it is important to emphasize the impact of the Suki brand and physician focus on the adoption and impact of this innovation. The CEO of Suki founded the company after observing a family physician in practice. He noted that the physician was the most distracted person in the room. He set out a vision for the company to develop an AI Assistant where every pixel and every line of code was in service to the physician. The company brought a wealth of experience in the world of consumer technology innovation together with the physician as the consumer. The result is empathy for family physicians that is clearly evident across their products and services.

Conclusion

A majority (60%) of lab participants who tried the AI Assistant for Documentation adopted the solution while realizing a dramatic (72%) reduction in their documentation time per note. There were time savings per day and on weekends that decreased provider workload and improved their overall satisfaction. In addition to significantly reducing documentation time and burden, AI Assistant for Documentation lowered burnout and stress levels; it provided more time, flexibility, and freedom for adopters. Clinicians were more satisfied with their notes saying they were more meaningful and professional.

The minority of participants who did not adopt fell into four categories; they did not have a significant documentation burden, their EMR workflow worked well for them, their EMR did not yet integrate with the solution, or they were too challenged to even fully trial the AI Assistant.

Our conclusion is that an AI assistant for Documentation is an essential innovation for all family physicians who have documentation burden and experience burnout. It can help optimize their family medicine experience. We believe the key features of an AI assistant for documentation in family medicine include; a mobile option, integration with the EHR, solution committed to family medicine, and being very affordable without significant capital investment. Obviously, adoption of this category will be faster and broader if its adoption is easy, fast, and seamless as seen in this lab, similar to what physicians experience with their smartphone and personal laptop apps. Additionally, the current CMS E&M documentation rule changes bolster the value proposition with their focus on documentation of medical decision making instead of history and physical bullet points.

The Labs will now enter Phase 3, where the goal is to educate the membership on this essential category of innovation; AI Assistants for Documentation. Our webinars and toolkit will help the membership understand who the innovation works for, who it does not, how it can work for them and its best practices.

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Appendix A – Physician Survey

AI Assistant for Documentation

About Your Practice
Please enter your name below

[   ]

Please enter the name of your practice below

[   ]

What is your role with your practice? Please select all that apply:

☐ **Owner**

☐ **Partner**

☐ **Employee**

☐ **Physician's Assistant**

☐ **Nurse Practitioner**

What care do you provide? Please select all that apply:

☐ **Primary Care**

☐ **Pediatrics**

☐ **OB Gyn**

☐ **Geriatrics**

How many practitioners do you have in your practice?

[   ]

What EHR do you use?

☐ **athenaHealth**

☐ **Cerner**

☐ **Epic**

☐ **Other**: [   ]

Have you ever used a scribe?

○ **Yes**

○ **No**

Would you have used a scribe if the option was affordable?

○ **Yes**

○ **No**

○ **Maybe**

○ **Not Sure**

Your Satisfaction

How satisfied are you with your overall practice?

	Extremely Unsatisfied 1	2	3	4	5	6	7	8	9	Extremely Satisfied 10
BEFORE SUKI:	○	○	○	○	○	○	○	○	○	○
USING SUKI:	○	○	○	○	○	○	○	○	○	○

How satisfied are you with your EHR?

	Extremely Unsatisfied 1	2	3	4	5	6	7	8	9	Extremely Satisfied 10
BEFORE SUKI:	○	○	○	○	○	○	○	○	○	○
USING SUKI:	○	○	○	○	○	○	○	○	○	○

How satisfied are you with your after-hours workload?

	Extremely Unsatisfied 1	2	3	4	5	6	7	8	9	Extremely Satisfied 10
BEFORE SUKI:	○	○	○	○	○	○	○	○	○	○
USING SUKI:	○	○	○	○	○	○	○	○	○	○

How satisfied are you with your documentation?

	Extremely Unsatisfied 1	2	3	4	5	6	7	8	9	Extremely Satisfied 10
BEFORE SUKI:	○	○	○	○	○	○	○	○	○	○
USING SUKI:	○	○	○	○	○	○	○	○	○	○

How likely are you to recommend SUKI to a friend or colleague?

Not at all Likely   **Extremely Likely**

○ 0   ○ 1   ○ 2   ○ 3   ○ 4   ○ 5   ○ 6   ○ 7   ○ 8   ○ 9   ○ 10

Documentation

Please estimate the time you spend documenting during clinic hours daily.

BEFORE SUKI: [   ]

USING SUKI: [   ]

Please estimate the time you spend documenting before or after (outside of) clinic hours daily.

BEFORE SUKI: [   ]

USING SUKI: [   ]

Please estimate the time you spend documenting on the weekend.

BEFORE SUKI: [   ]

USING SUKI: [   ]

Burdens and Burnout

Which of the items below described you best?

	"I enjoy my work. I have no symptoms of burnout."	"I am under stress, but I don't feel burned out."	"I am definitely burning out."	"I think about work frustrations a lot. It won't go away."	"I feel completely burned out. I may need to seek help."
BEFORE SUKI:	○	○	○	○	○

USING SUKI:	○	○	○	○	○

What percentage of your patient visits felt rushed? (pick the closest answer)

	0%	10%	25%	50%	75%	90%	100%
BEFORE SUKI	○	○	○	○	○	○	○
USING SUKI:	○	○	○	○	○	○	○

What percentage of your notes were completed before the next patient? (pick the closest answer)

	0%	10%	25%	50%	75%	90%	100%
BEFORE SUKI	○	○	○	○	○	○	○
USING SUKI:	○	○	○	○	○	○	○

The EHR adds to the frustration of my day

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
BEFORE SUKI:	○	○	○	○	○
USING SUKI:	○	○	○	○	○

How would you describe the time you have to complete your documentation in the flow of your practice?

	Poor	Marginal	Satisfactory	Good	Optimal
BEFORE SUKI:	○	○	○	○	○
USING SUKI:	○	○	○	○	○

How would you describe the amount of time you spend documenting at home?

	Excessive	Moderately High	Satisfactory	Modest	Minimal/none
BEFORE SUKI:	○	○	○	○	○
USING SUKI:	○	○	○	○	○

Thank You!

Thank you for responding to this survey. Your response is very important to us.

Appendix B – Survey Results

1. Role within Practice

Value		Percent	Responses
Owner		15.9%	7
Partner		13.6%	6
Employee		63.6%	28
Physician's Assistant		9.1%	4
Nurse Practitioner		2.3%	1

2. EHR Used

Value		Percent	Responses
athenaHealth		90.9%	40
Epic		4.5%	2
Other		4.5%	2

3. Scribe used?

Value		Percent	Responses
Yes		13.6%	6
No		86.4%	38

Totals: 44

4. Would you use a scribe if it was affordable?

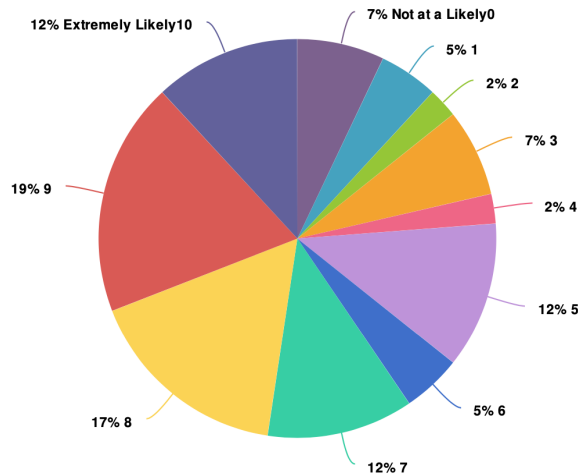| Value		Percent	Responses
Yes		36.8%	14
No		15.8%	6
Maybe		39.5%	15
Not Sure		7.9%	3

Totals: 38

5. How satisfied are you with your overall practice?

	Extremely Unsatisfied 1	2	3	4	5	6	7	8	9	Extremely Satisfied 10	Responses
BEFORE SUKI: Count Row %	0 0.0%	0 0.0%	5 11.9%	3 7.1%	7 16.7%	7 16.7%	13 31.0%	5 11.9%	2 4.8%	0 0.0%	42
USING SUKI: Count Row %	0 0.0%	1 2.4%	2 4.8%	4 9.5%	4 9.5%	2 4.8%	14 33.3%	8 19.0%	5 11.9%	2 4.8%	42

6. How satisfied are you with your EHR?

	Extremely Unsatisfied 1	2	3	4	5	6	7	8	9	Extremely Satisfied 10	Responses
BEFORE SUKI: Count Row %	0 0.0%	2 4.8%	5 11.9%	1 2.4%	4 9.5%	8 19.0%	8 19.0%	11 26.2%	3 7.1%	0 0.0%	42
USING SUKI: Count Row %	0 0.0%	2 4.8%	4 9.5%	2 4.8%	3 7.1%	2 4.8%	11 26.2%	9 21.4%	8 19.0%	1 2.4%	42

7. How satisfied are you with your after hours workload?

	Extremely Unsatisfied 1	2	3	4	5	6	7	8	9	Extremely Satisfied 10	Responses
BEFORE SUKI: Count Row %	1 2.4%	2 4.8%	7 16.7%	5 11.9%	7 16.7%	6 14.3%	6 14.3%	7 16.7%	0 0.0%	1 2.4%	42
USING SUKI: Count Row %	1 2.4%	0 0.0%	4 9.5%	5 11.9%	4 9.5%	4 9.5%	8 19.0%	12 28.6%	2 4.8%	2 4.8%	42

8. How satisfied are you with your documentation?

	Extremely Unsatisfied 1	2	3	4	5	6	7	8	9	Extremely Satisfied 10	Responses
BEFORE SUKI: Count Row %	1 2.4%	1 2.4%	3 7.1%	5 11.9%	4 9.5%	6 14.3%	13 31.0%	6 14.3%	1 2.4%	2 4.8%	42
USING SUKI: Count Row %	1 2.4%	2 4.8%	2 4.8%	2 4.8%	3 7.1%	4 9.5%	8 19.0%	8 19.0%	7 16.7%	5 11.9%	42

9. How likely are you to recommend SUKI to a friend or colleague?

- 7% Not at a Likely0
- 5% 1
- 2% 2
- 7% 3
- 2% 4
- 12% 5
- 5% 6
- 12% 7
- 17% 8
- 19% 9
- 12% Extremely Likely10

10. Which of the items below describes you best?

	"I enjoy my work. I have no symptoms of burnout."	"I am under stress, but I don't feel burned out."	"I am definitely burning out."	"I think about work frustrations a lot. It won't go away."	"I feel completely burned out. I may need to seek help."	Responses
BEFORE SUKI: Count Row %	5 12.5%	15 37.5%	15 37.5%	5 12.5%	0 0.0%	40
USING SUKI: Count Row %	5 12.5%	24 60.0%	7 17.5%	4 10.0%	0 0.0%	40

11. What percentage of your patient visits felt rushed?

	0%	10%	25%	50%	75%	90%	100%	Responses
BEFORE SUKI Count Row %	2 5.0%	6 15.0%	11 27.5%	9 22.5%	5 12.5%	5 12.5%	2 5.0%	40
USING SUKI: Count Row %	4 10.0%	10 25.0%	8 20.0%	8 20.0%	6 15.0%	3 7.5%	1 2.5%	40

12. What percentage of your notes were completed before the next patient?

	0%	10%	25%	50%	75%	90%	100%	Responses
BEFORE SUKI Count	10	6	10	4	8	2	0	40
Row %	25.0%	15.0%	25.0%	10.0%	20.0%	5.0%	0.0%	
USING SUKI: Count	6	4	12	10	2	6	0	40
Row %	15.0%	10.0%	30.0%	25.0%	5.0%	15.0%	0.0%	

13. The EHR adds to the frustration of my day

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Responses
BEFORE SUKI: Count	12	13	6	8	1	40
Row %	30.0%	32.5%	15.0%	20.0%	2.5%	
USING SUKI: Count	8	11	12	7	2	40
Row %	20.0%	27.5%	30.0%	17.5%	5.0%	

14. How would you describe the time you have to complete your documentation in the flow of your practice?

	Poor	Marginal	Satisfactory	Good	Optimal	Responses
BEFORE SUKI: Count	8	15	15	2	0	40
Row %	20.0%	37.5%	37.5%	5.0%	0.0%	
USING SUKI: Count	4	17	12	6	1	40
Row %	10.0%	42.5%	30.0%	15.0%	2.5%	

15. How would you describe the amount of time you spend documenting at home?

	Excessive	Moderately High	Satisfactory	Modest	Minimal/none	Responses
BEFORE SUKI: Count	8	11	6	7	8	40
Row %	20.0%	27.5%	15.0%	17.5%	20.0%	
USING SUKI: Count	3	8	9	8	12	40
Row %	7.5%	20.0%	22.5%	20.0%	30.0%	