WHITE PAPER

7 Things to Consider When Assessing Ambient Documentation Solutions

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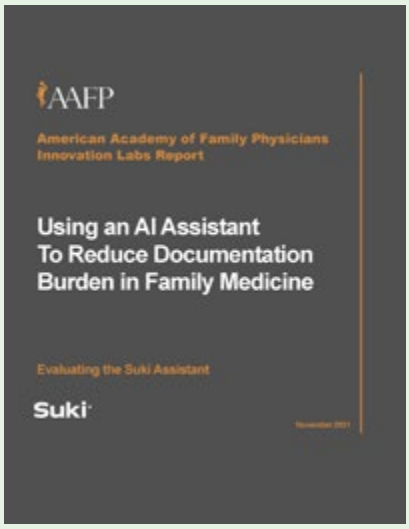
Overview

Clinician burnout has been a pressing issue in healthcare for years. Prior to the Covid-19 pandemic, studies showed that 50%[1] to over 70%[2] of physicians experienced some level of burnout. The pandemic exacerbated the situation, putting clinicians under unprecedented levels of stress. Though the cause of burnout is multifaceted, one of the key contributors is administrative burden[3], with physicians spending an estimated two hours on documentation and other administrative tasks for every one hour of patient care. This situation creates myriad risks for clinicians, patients, and healthcare organizations, from increased rates of medical errors, higher risk of health and psychological issues in clinicians, to reduced productivity and increased levels of clinician attrition.

In the last several years, voice AI has emerged as a promising technology to alleviate administrative burden. AI voice assistants, akin to Siri or Alexa for healthcare, use a combination of dictation and voice commands to help clinicians speed through documentation, coding, and even finding information in the electronic health record (EHR).

A study conducted by the American Academy of Family Physicians (AAFP) showed that clinicians using an AI voice assistant reduced documentation time by an average of 72%, resulting in the AAFP designating the solution an “Essential Innovation.”

Generative AI has transformed the technology landscape across all industries. In healthcare, it has given rise to ambient documentation solutions - tools that can listen to a conversation between a patient and a clinician, then automatically generate a clinical note from the discussion. The benefit of these solutions is obvious: they have the potential to greatly reduce the mental burden and the time associated with clinical documentation. With the proliferation of solutions touting ambient capabilities, what should health systems consider when evaluating these tools?



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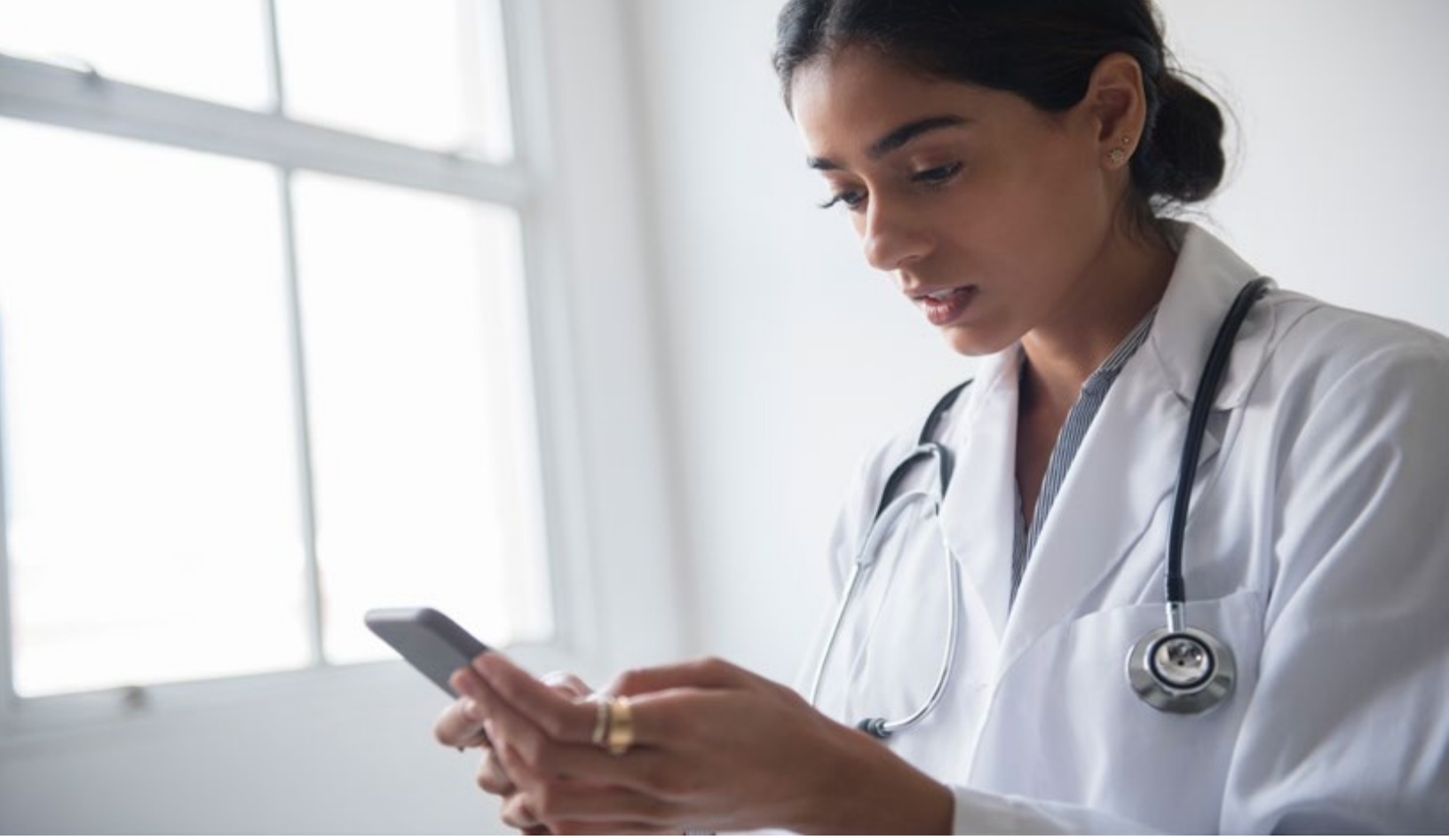


7 Criteria to Consider

Virtually every ambient documentation solution vendor will offer a risk free pilot period to assess the technology in house - but risk free does not equal no cost. Even if there are no fees associated with a pilot, consider the time investment a health system makes to try a new solution. The solution must be evaluated for security and privacy; IT resources may be needed to deploy; and clinician time is required to onboard and use the product. Health systems can consider these seven criteria to assess the likelihood that an ambient documentation solution will be a good fit for their needs before investing resources in a pilot.


Privacy and security
EHR
EHR integration
Ease of editing the AI output
Reliance on humans behind the scenes
Scalability across specialties and workflows
Technology and accuracy
$
Price

1 Privacy and security.

First and foremost, any technology solution must have mechanisms, processes, and policies to ensure security, safety, and privacy of sensitive information.

Where is data stored? Who has access to it? Does the vendor have security and privacy certifications? The security posture of the solution must be compatible with the health system's; otherwise, there will be a significant level of risk in deploying the solution.

Potential Questions to Assess

- Where is user data stored? Is any data stored locally on devices?
- Do you have SOC2 certification? Are you HIPAA compliant?
- What level of encryption is used? Is data encrypted in transit? At rest?
- Who has access to the data? What is done with the data?

2 EHR integration.

Interoperability with key systems, namely the EHR, is critical for user adoption. The most sophisticated solutions will have bi-directional integration with the EHR, so that relevant information can be used to generate the note, and the final note can be pushed back to the correct fields.

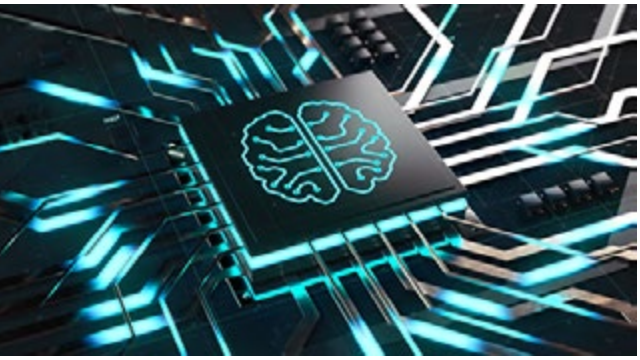
Users benefit from a more personalized experience, as these solutions can use templates and data in the EHR to create notes tailored to the clinician's preferences. In addition, notes get synced back to the system of record without requiring manual work from the users.

Solutions without integration will create documentation that is more generic, requiring users to edit notes to add the desired level of detail. They may also require users to copy and paste finished notes to the EHR, creating friction in the clinician's workflow; alternatively, they may use humans behind the scenes to enter finished notes into the EHR, creating additional security and privacy risks.

Potential Questions to Assess

- Can the solution incorporate clinicians' existing templates when generating notes?
- Can a clinician start a note in the EHR and continue it in the solution?
- Does the solution take into account relevant patient information, such as latest vitals or previous problems, when creating notes?
- How do completed notes get put into the EHR?
- What is the level of integration? Is it bilateral? Does it integrate with discrete fields?

3 Ease of editing the AI output.



Even with the exciting advances in generative AI, notes created by ambient documentation solutions will require some level of editing.

First, clinicians each have their own unique style for documentation, with preferences for content, phrasing, formatting, etc. Second, generative AI solutions can “hallucinate” or insert false information into content that is created. Clinicians should be able to easily accept, edit, or reject generated content to ensure the note meets their expectations and standards. In addition, consider how edits must be made - some solutions require edits be typed in the EHR, while others allow for voice editing within the solution.

Potential Questions to Assess

- Can the generated note be edited? How?
- Can certain portions of the generated note be deleted?
- Will the solution work for various note types/sections of a note?
- Can the solution accommodate templated content that clinicians have created?

4 Reliance on humans behind the scenes.

Nascent ambient documentation solutions may rely on using humans to power certain functionality, with implications on the user experience, privacy, and price.

These solutions may have humans checking the accuracy of the AI output and making necessary edits. As a result, notes will not be immediately available as they require “processing” or “review” time, and note quality will vary based on the reviewer of the note. These reviewers have access to sensitive patient information, a privacy risk to consider. Solutions may also use humans to manually copy and paste finished notes into the EHR. Some telltale signs that a solution relies on humans in the loop are:

- “Processing” or “review” time of several hours before a note is available
- Prices of ~$1000+/user/mo to cover the costs of human labor
- Requesting login credentials to the EHR

Potential Questions to Assess

- Does the solution have a human involved in the workflow for quality assurance?
- How long after the encounter will the note be available?
- What is the price of the solution?
- Does the solution require us to provide EHR login credentials?

5 Scalability across specialties and workflows.

Health systems reap the most benefit when a solution can support a broad population of clinicians, across specialties and workflows.

More advanced ambient solutions have enough data and have trained their models to generate output that meets the documentation parameters of a large number of specialties.

Clinicians are busy and have limited time and energy to learn new tools - solutions that have the highest adoption rates are ones that are easy to learn and use out of the box and can fit into a variety of workflows. Not every clinician documents the same way, and individual clinicians may vary their workflow patient by patient. A clinician may not use an ambient solution with every patient (for example, there may be sensitivities to recording certain types of encounters e.g., sexual health). Does the solution have other options for documentation beyond ambient? Can clinicians use it to dictate to create notes?

Similarly, documentation is just one (though significant) bucket of administrative work clinicians are required to do. Solutions that can tackle a broader set of tasks will deliver more value, improving the likelihood of adoption. Consider whether the solutions can help with tasks beyond documentation, such as coding or finding patient information (medications, allergies, etc.) in the EHR. Can it help with answering inbox messages or writing referral letters, etc.?

There are also organizational benefits when solutions scale broadly. Managing multiple solutions with the same purpose creates complexity and cost for health systems. Harmonizing solutions to the minimum number needed reduces resources needed for training, maintenance, vendor management, etc. and gives health systems leverage to negotiate more favorable pricing.

Potential Questions to Assess

- **How many specialties does the solution support? How many clinicians are using it today?**
- **How much time does it take, on average, for a clinician to learn how to use the solution?**
- **What are the options for creating a note if a clinician doesn't want to use ambient?**
- **Can the solution also be used for dictation?**
- **Can the solution do more than documentation? Can it help clinicians complete other administrative tasks?**
- **Which of our current solutions can be replaced with yours?**

6 Technology and accuracy.

Ambient documentation vendors span small startups to behemoth corporations. Understanding their philosophy and approach to AI can help health systems assess the likelihood of a successful vendor partnership, both in the short term and long term.

The approach a vendor takes to measure and improve accuracy can be an important consideration, given generative AI's potential for hallucinations. Does the vendor have a thoughtful approach to measure accuracy of generated output and limit the occurrence of errors? Is their technology infrastructure in line with these objectives?

As evidenced in recent months, AI is evolving at a rapid pace and will obviously impact the solutions that use it. The offerings today are primarily focused on note generation; as the technology matures, they could tackle a more comprehensive set of administrative tasks including orders, billing, inbox, and more. Understanding a vendor's innovation roadmap and how it aligns with the health system's goals can be another important factor to consider.

Potential Questions to Assess

- How does the solution measure accuracy? Will the solution get more accurate with use? If so, how?
- How does the solution handle hallucinations? Will it learn to prevent further hallucinations in the future?
- Is the solution reliant on a single third party LLM? If so, how are outage risks minimized?
- What are the key areas on your product roadmap? Are they dependent on the LLM? If so, what is the confidence in the LLM being able to support these key areas?

7 Price.

Price is an obvious consideration for any solution; for health systems where investments must show a positive ROI quickly, it's especially important.

Beyond the sticker price, it's also helpful to understand any additional costs that may be required. For example, does the solution require an investment in hardware? If so, there is cost in purchasing the hardware, and also in installing and maintaining it. Similarly, training and providing support for a solution has associated costs - some vendors provide this service while others rely on the health system to do so.

Potential Questions to Assess

- How much does the solution cost? Does it require any investments in hardware? If so, how much does that cost? Who will install and maintain the hardware? What if there are issues?

- How does your solution demonstrate ROI? How quickly is a positive ROI achieved? What specific metrics can we expect improvement on?

- Do you provide training and ongoing support? If so, what is the availability of your support team? How quickly can we expect a response?

Conclusion

It is an exciting time for AI in healthcare - with the rise of generative AI, ambient documentation solutions have proliferated in the marketplace. It's clear that these solutions have caught the attention of health systems, with a recent survey that shows 72% of health system executives are considering using conversational AI in their organizations. The criteria to consider outlined in this paper are meant to help health systems assess these solutions thoughtfully to find which are most appropriate for their needs.

References

- AAFP Family Physician Burnout, Well-Being, and Professional Satisfaction (Position Paper)
- The Physicians Foundation 2018 Survey of America's Physicians.
- American Medical Association, What is physician burnout?

About Suki

Suki is a leading technology company that provides AI-powered voice solutions for healthcare. Its mission is to reimagine the healthcare tech stack, making it invisible and assistive to lift the administrative burden from physicians. Its flagship product is Suki Assistant, an AI-powered voice assistant that helps physicians complete documentation and other administrative tasks 72% faster on average. Suki also offers its proprietary voice platform, Suki Speech Platform (SSP), to partners who want to create a best-in-class voice experience for their solutions. SSP uses the latest in natural language processing and machine learning to provide industry-leading accuracy and a natural and fast voice experience. Suki is backed by investors including Venrock, First Round, Flare Capital Partners, March Capital, and Breyer Capital.

To learn more, visit suki.ai

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