Emerging Company Spotlight

Abridge 2024

Utilizing Ambient Speech Generative AI to Decrease Documentation Time and Physician Burnout
ABRIDGE

Why This Spotlight?

Ambient speech AI technology is top of mind for many healthcare organizations as they seek ways to improve physician efficiencies and well-being. Using machine learning and large language models, Abridge’s voice-enabled, fully automated generative AI solution generates clinical and patient notes in real-time. The Abridge product aims to increase trust and impact through code transparent auditability for verification and documentation purposes: Ability to highlight any text in the note draft and see the source in the transcript/audio in order to easily trust and verify AI-generated content.

What Does Abridge Do? (as a customer explains)

“Abridge uses AI technology to securely listen to provider and patient encounters. In less than a minute, it takes the dialogue of the patient visit and uses AI to provide a drafted note based on the conversation. The provider can review the draft, make any corrections, and then link the draft directly into the notes in the EHR that is being used.” —Director

Number of Customers Interviewed by KLAS

15 individuals from 6 organizations (Abridge shared a list of 6 unique organizations; the list represents 100% of the customers that were eligible for inclusion in this study at the time of data collection)

Survey Respondents—by Organization Type

<table>
<thead>
<tr>
<th>Large-hospital health system</th>
<th>Academic health system</th>
<th>Small-hospital health system</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

0% 100%

Key Competitors (as reported by Abridge)

Nuance

Top Reasons Selected

Cost, fully automated generative AI technology, innovative and flexible partnership, sales experience, Epic EHR integration

Abridge: Utilizing Ambient Speech Generative AI to Decrease Documentation Time and Physician Burnout

Outcomes Expected by Customers

- Achieved
- Unexpected outcome
- Pending
- Not achieved

- Decreased physician burnout
- Improved same-day closures
- Enhanced workflow
- Better patient experience
- Increased documentation accuracy

Time to See Outcomes

- Immediately
- Within 6 months
- 6-12 months
- No outcomes yet

- Over 12 months

Key Performance Indicators

- Supports integration goals
- Product has needed functionality
- Executive involvement
- Likely to recommend

Adoption of Key Functionality

- Deep integration with Epic: Ability to pull note sections from Abridge directly into the patient record using private APIs
- Fully ambient solution leveraging generative AI: Ability to generate real-time note drafts with no human intervention
- Multilingual support for patient documentation: Ability to record conversations in up to 14 languages and receive a note draft in English
- Structured clinical note drafted in real time: Ability to record conversations on a phone and obtain structured note drafts within minutes, in addition to a complete transcript and audio recording
- Transparent auditability for verification and documentation purposes: Ability to highlight any text in the note draft and see the source in the transcript/audio in order to easily trust and verify AI-generated content

Bottom Line

Customers report Abridge has decreased burnout and documentation time while improving workflows and the patient experience. Respondents appreciate that Abridge listens to users and applies feedback. They also express excitement about Abridge’s innovation, specifically the vendor’s Epic Workshop partnership and ambition to expand past clinical documentation. There is some variation in the depth of EHR integration—some customers are waiting for upcoming enhancements to further deepen connections. There is also a desire for better note detail and higher accuracy for more specialties.

Abridge Customer Experience: An Initial Look

Distribution of Overall Performance Score

Based on individual respondents, not unique organizations

<table>
<thead>
<tr>
<th>Performance Score</th>
<th># of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dissatisfied (0–20)</td>
<td>0</td>
</tr>
<tr>
<td>Satisfied (21–80)</td>
<td>1</td>
</tr>
<tr>
<td>Highly satisfied (81–100)</td>
<td>14</td>
</tr>
</tbody>
</table>

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Strengths

- Physician users report decreased documentation time, leading to other outcomes like decreased burnout and an improved patient experience.
- Innovative focus on pushing product technology to do more than clinical documentation.
- Vendor takes a collaborative approach to customer relationships and applies user feedback to upgrades.

"If it were not for this product, I probably would have left medicine because of the administrative burden I was experiencing previously. Before we had Abridge, my work had inefficiencies, and there was a lack of focus on patient care and more of a focus on metrics and getting tasks done. Abridge has helped me focus more on the actual relationships with the patients. The product allows me not to see my patients without being tethered to the computer the whole time and worrying about what I need to be documenting. It also keeps me organized, especially with complicated patients, in the way that the AI puts out the narrative for the patient. I'm getting my notes done quicker." —Physician

Opportunities

- Some variability in depth of EHR integration; anticipation for expanded integration to allow more work in the EHR rather than Abridge's portal.
- Product could increase impact with improved detail and higher accuracy for specialty notes.

"We are having a little issue with a note-editing feature that is being tested. Soon, it will be embedded in our EHR's mobile solution, so there won't be a secondary step. I want everything to be fully integrated with our EHR so that we can have diagnoses automatically pulled in and sorted. Right now, we have the APIs and whatnot. Things will improve shortly, but we have a lot of things that we could work toward." —Analyst

Points to Ponder

What Does a Customer Need to Do to Be Successful with This Solution?

Customers explain

- When rolling out the product, utilize clinical champions and open up communication with users: "Probably the biggest part of my advice to a customer implementing Abridge would be to have several physician or clinician champions involved early on to essentially pilot the tool in their clinics and then shepherd things to the rest of their colleagues because there is a lack of clarity, and nobody really wants to use yet another tool when dealing with EMRs. Having physician champions build out specialty-specific templates for Abridge is really helpful. Another implementation success tool would be to communicate with the users frequently to see how Abridge best fits into their workflows because a lot of people may already be very efficient and won't want to try a new thing. Really being there on the ground with the users initially is helpful to make the implementation be successful." —Physician
- Ensure users understand how to utilize the product's integration with the EHR: "To be successful with this product, a customer needs to make sure that the physicians are onboarded on how to fully leverage the integration of Abridge with the EHR. That is a big thing." —CEO
- Provide at-the-elbow support for physicians at go-live: "Our best step was that we had people at the go-live to just support providers who were a little less tech savvy to make sure that they had the process down. But those support people spent just a minute or two at the elbow with providers before the providers were off and running because the system was that easy. That really helped us succeed." —Director

Abridge explains

- Assign a strong operations and IT team to be responsible for the rapid deployment of Abridge (can be as quick as 8 days).
- Identify the list of clinicians who will be using Abridge and establish ways to provide initial product training.
- Assign research resources who can work with the Abridge team to identify impact metrics.

Other Relevant Commentary

- "I think the platform is going to change healthcare. It is the most remarkable piece of technology I have ever seen outside of the clinical space. It is the first thing since the onset of EMRs that has removed the EHR as a barrier between a doctor and a patient, and the product is the first thing to effectively take nonessential clinical work from the physicians. Nothing I have seen in my many years of clinical experience has given me as much hope to improve a doctor’s workflow as this piece of technology. The system has so far exceeded my expectations of what it would do. I have had a couple of doctors tell me that the system writes better notes than they ever could. That is a remarkable thing to say. When I see the product live, it makes me feel like I’m watching a Star Trek episode, and I really can’t believe someone made the product and will deliver it at a very reasonable cost for me to be able to use it at scale. I could not be more enthusiastic about the technology." —CEO
- "The Abridge tool works very well. The software is very stable; it has a very intuitive interface. Another strength is the evidence linking. Abridge uses generative AI, and one of the risks of generative AI is that it can sometimes hallucinate or make things up. With Abridge, we can select a section of any output, and the system will take us right back to the transcript where it came up with that sentence. That is a big advantage. Sometimes we will read a note and wonder whether the patient really said what they said. We may not remember, but if we select the text from which the sentence was generated, we can go right back to the transcript to find out." —Physician
- "Abridge captures the audio during a clinic visit, takes the transcripts, and uses generative AI to convert the transcripts into clinical notes embedded in our EMR. Those notes generate discrete data that can be used to add problems to the problem lists, identify CPT codes, and identify levels of billing. That is really cool. We can have one patient speaking in Spanish, another one speaking in French, and the doctor speaking in English, and the note will come out in English." —CEO
Abridge: Company Profile at a Glance

**Founder**
Dr. Shiv Rao

**Year founded**
2018

**Headquarters**
Pittsburgh, PA

**Number of customers**
6 unique organizations eligible for inclusion in this study at the time of data collection, 40+ total customers under contract

**Number of employees**
70

**Funding**
Series B—$30M (Oct 2023); Series C—$150M (Feb 2024); Total raised—$215.5M

**Revenue model**
Abridge works directly with health systems; pricing models can vary from site to site depending on the number of users, complexities of a specific health system, feature set, and required integrations

**Healthcare market**
National (US)

**Target customer**
Large vertically integrated health systems, short-term acute care hospitals, children's hospitals

**Typical decision-makers**
CMIO, CIO

**Healthcare Executive Interview**

**Dr. Shiv Rao,**
CEO & Founder

**What is your background?**
Dr. Shiv Rao is a practicing cardiologist at UPMC and previously led the provider-facing investment portfolio for UPMC where he invested in startups and also helped fund a Machine Learning in Health program at Carnegie Mellon University. He completed his medical education and training at the University of Michigan and the University of Pittsburgh School of Medicine, and he studied at Carnegie Mellon where he programmed virtual synthesizers and skateboarded in IMAX movies.

**Why was Abridge started?**
Abridge was founded in 2018 with the mission of powering deeper understanding in healthcare. The AI-powered platform was purpose-built for medical conversations, improving clinical documentation efficiencies while enabling clinicians to focus on what matters most—their patients.

**What is Abridge's biggest differentiator?**
Powered by Linked Evidence and our auditable AI, Abridge is the only solution that maps AI-generated summaries to grounded truth, helping providers quickly trust and verify the output. As pioneers in generative AI for healthcare, Abridge is setting the industry standards for the responsible deployment of AI across health systems.

**How would your customers describe your solution?**
Abridge's enterprise-grade technology transforms patient-clinician conversations into structured clinical notes, saving clinicians time and supporting higher well-being. Abridge's AI works in real time, delivering draft notes (across 14 languages and 50+ specialties) that flow into the EHR directly via deep integrations. Abridge Inside, which is planned to go live in Q2 2024, will introduce deeper Epic integration and enable clinicians to capture patient conversations in Haiku and review AI note drafts in Hyperspace.

**Solution Technical Specifications**

<table>
<thead>
<tr>
<th>Cloud environment</th>
<th>Google (but fundamentally cloud agnostic)</th>
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</thead>
<tbody>
<tr>
<td>Development platform</td>
<td>Node.js, Python</td>
</tr>
<tr>
<td>Database environment</td>
<td>Cloud Firestore, PostgreSQL</td>
</tr>
<tr>
<td>Mobile application environment</td>
<td>iOS, Android</td>
</tr>
<tr>
<td>Security platform</td>
<td>HIPAA, SOC 2</td>
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</table>

**Confidentiality**
HIPAA compliance

**Data encryption**
AES-256 using a FIPS 140-2 validated encryption module at rest; data in transit encrypted from client to server and within our network

**Integration approach**
HL7v2, FHIR, proprietary Epic APIs and EHR vendor APIs

**HITRUST certification**
Information not provided

**Data used to create/test models**
Fully consented and de-identified clinical conversation data

**Source of data**
Proprietary algorithms are trained on a combination of third-party data, de-identified production data, and passively collected gold-standard data (i.e., edits made to notes)

**How often are AI models trained to improve accuracy?**
Models are continuously improving; new model candidates are training all the time, and improvements can be shipped in a matter of days
Report Information

Sample Sizes

Unless otherwise noted, sample sizes displayed throughout this report (e.g., n=6) represent the total number of unique customer organizations that responded to a particular question. Some respondents choose not to answer all questions, meaning the sample size may change from question to question.

Sample sizes of 15+ unique organizations are considered fully rated. When the sample size is 6–14, the data is considered limited and marked with an asterisk (*). If the sample size is 3–5, the data is considered emerging and marked a double asterisk (**)—no overall performance score is shown for emerging data. No data of any kind is shown for questions with a sample size of less than 3. Note that data marked as limited or emerging has the potential to change significantly as additional surveys are collected.

Abridge Performance Overview

All standard software performance indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Rating</th>
<th>(1–9 scale)</th>
<th>(n=6)</th>
<th>Sample</th>
<th>Overall score (100-point scale) (n=6)</th>
<th>2024 Best in KLAS software average: 79.6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Culture</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Keeps all promises</td>
<td>Percentage of respondents who answered yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Proactive service</td>
<td>(1–9 scale)</td>
<td>(n=6)</td>
<td>A*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product works as promoted</td>
<td>(1–9 scale)</td>
<td>(n=6)</td>
<td>A+*</td>
<td></td>
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<tr>
<td><strong>Loyalty</strong></td>
<td></td>
<td></td>
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<tr>
<td>Forecasted satisfaction</td>
<td>(1–9 scale)</td>
<td>(n=6)</td>
<td>A*</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Likely to recommend</td>
<td>(1–9 scale)</td>
<td>(n=6)</td>
<td>A+*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall satisfaction</td>
<td>(1–9 scale)</td>
<td>(n=6)</td>
<td>A*</td>
<td></td>
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<tr>
<td>Part of long-term plans</td>
<td>Percentage of respondents who answered yes</td>
<td></td>
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<tr>
<td>Would you buy again</td>
<td>Percentage of respondents who answered yes</td>
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<tr>
<td><strong>Operations</strong></td>
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<tr>
<td>Ease of use</td>
<td>(1–9 scale)</td>
<td>(n=6)</td>
<td>A+*</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Quality of implementation</td>
<td>(1–9 scale)</td>
<td>(n=6)</td>
<td>A*</td>
<td></td>
<td></td>
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<tr>
<td>Quality of training</td>
<td>(1–9 scale)</td>
<td>(n=6)</td>
<td>A*</td>
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<tr>
<td>Software grading scale</td>
<td>(1–9 scale)</td>
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<tr>
<td>A+ = 8.55–9.0</td>
<td>B+ = 7.65–7.91</td>
<td>C+ = 6.75–7.01</td>
<td>D+ = 5.85–6.11</td>
<td>F = &lt;5.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A = 8.19–8.54</td>
<td>B = 7.29–7.64</td>
<td>C = 6.39–6.74</td>
<td>D = 5.49–5.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A = 7.92–8.18</td>
<td>B = 7.02–7.28</td>
<td>C = 6.12–6.38</td>
<td>D = 5.22–5.48</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Limited data **Emerging data

Note: Percentages are calculated based on individual respondent counts, not unique organizations.

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