



Nuance DAX 2021

Improved Patient-Physician Experience
through Ambient Clinical Intelligence



DAX: Improved Patient-Physician Experience through Ambient Clinical Intelligence

Why This Spotlight?

To increase clinical documentation quality and reduce physician burnout, provider organizations look to technology that captures physician notes or scribes who can take notes during patient appointments. Nuance's Dragon Ambient eXperience (DAX) solution uses ambient technology to securely capture and automatically document patient encounters via a mobile app. This report seeks to validate early adopters' experience with the solution and what outcomes they anticipate.

What Does Nuance DAX Do?

(A Customer Explains)

"The solution can hear the conversation between the patient and the physician. Then that conversation goes to Nuance over the web, and a note comes back within a few hours that interprets that conversation. . . . The system does not do just transcription or dictation; it literally thinks and puts in terminology in parts of the notes that matter, so it goes a step further." —CMO

Bottom Line

Customers say Nuance's solution boosts provider satisfaction by streamlining documentation processes. They report that patient-provider relationships unexpectedly improved as providers communicated better and gained the bandwidth to focus on a more diagnostic approach. High ease of use and improved documentation accuracy are also mentioned as benefits. Respondents say the solution is not yet fully automated and that Nuance utilizes human quality reviewers in the background to review AI-generated notes. Customers also indicate that rolling out the product requires a significant lift.

Key Competitors (as reported by Nuance)

3M, Augmedix, Suki

Number of Customers Interviewed by KLAS

13 individuals from 10 unique organizations (out of 23 unique organizations provided to KLAS)

Top Reasons Selected

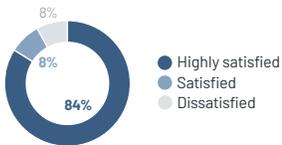
Advanced ambient technology, efficient and accurate documentation, organizational trust

Survey Respondents—by Organization Type (n=10)



Nuance DAX Customer Experience: An Initial Look

Overall Customer Satisfaction (n=13)



Time to See Outcomes (n=9)

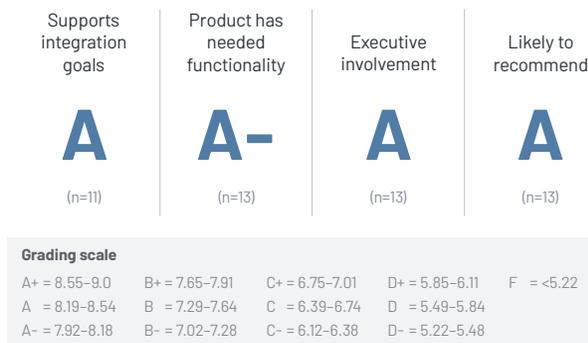


Outcomes Expected by Customers

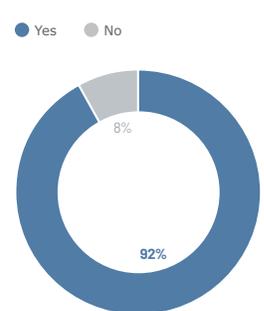
- Achieved
- Improved documentation accuracy
- Reduced documentation time
- Enhanced patient engagement
- Not achieved
- Pending
- Unexpected outcome

- Increased provider satisfaction
- Improved documentation accuracy
- Reduced documentation time
- Enhanced patient engagement

Key Performance Indicators (1-9 scale)



Would you buy again? (n=13)



Grading scale

A+ = 8.55-9.0	B+ = 7.65-7.91	C+ = 6.75-7.01	D+ = 5.85-6.11	F = <5.22
A = 8.19-8.54	B = 7.29-7.64	C = 6.39-6.74	D = 5.49-5.84	
A- = 7.92-8.18	B- = 7.02-7.28	C- = 6.12-6.38	D- = 5.22-5.48	

Adoption of Key Functionality

Percentage of interviewed customers using functionality



Strengths

Reduces workload for providers



"Our primary care providers love the product. The biggest thing is that DAX almost eliminates the cognitive burden of putting in notes and information. As great as EMRs are, they have basically made every provider a data-entry specialist. On top of all their other responsibilities, providers have to sit and put mundane information into a note. DAX has basically eliminated that. The system is a time-saver." —CMIO

Strengthened patient-provider interactions and relationships

"An unintended consequence of the product is that patients are reporting higher satisfaction because they understand what the physician is doing. Physicians must verbalize what they do more than they used to. Patients also like that they don't have to see a physician documenting with the computer." —CIO

High ease of use

"DAX is one of the first products that we have seen that has overcome multigenerational technology issues. The system was very well received across the generations of physicians that we have, no matter if they were very savvy on the keyboard. We didn't expect the older physicians to derive as much benefit as the younger physicians." —Executive

Opportunities

The system is not yet fully automated and relies on human review



"Nuance is taking two courses. There is a process where a recording happens, goes through the vendor's AI algorithm, goes to a human who scrubs the text, and comes back. Nuance is trying to make the process work where a clinic interaction happens, gets recorded, goes to AI, and just comes back." —CMIO

Complete implementation takes time and consistent effort

"I would tell other organizations to expect to spend four to six months getting DAX where they want it to be. The product is only as good as the amount of effort an organization puts into building and correcting it. The artificial intelligence and machine learning functionalities get better and better the more we use DAX." —Executive

Tighter integration could improve the solution's effectiveness

"One thing that we would like to see is more integration with the EMR, specifically in terms of how the AI makes the note and how to directly input that better. That is the feedback we get from providers often. It would be nice to see Nuance work with our EMR vendor and overcome some of those workflow difficulties." —IT analyst

KLAS' Points to Ponder

The Positives: DAX uses ambient speech capabilities to create documentation for physicians, thus reducing physician workloads and improving satisfaction. Users say they no longer have to create documentation from memory after patient encounters, which improves the accuracy and quality of the documentation. DAX is more cost effective than in-person scribes because organizations can rely on virtual scribes or simply the ambient speech technology.

Organizations should consider the following:

The Solution's Long-Term Viability in Healthcare

Many physicians don't like using EMR structured templates to document patient encounters, as they feel these templates fail to accurately describe the patient's true condition. Ambient speech technology will continue to advance as companies like Nuance (Microsoft), Google, Apple, and Amazon push the technology across industries. Over time, organizations will likely move away from scribes and use ambient speech to create documentation in real time without any human intervention. DAX is well positioned to lead this transformation.

Impacts and Trade-Offs of the Underlying Technology

DAX is based on common digital architecture components used in the industry. Security and data encryption use standard protocols for data transactions. The platform is HITRUST certified. The solution also uses AI to learn physician documentation patterns to drive higher levels of documentation accuracy. Nuance acquired one of the advanced ambient speech products, Saykara, which is likely being used to further drive ambient speech capabilities. DAX's weaknesses are a lack of Android support and a lack of development around sophisticated EMR integrations, but Nuance reports more integrations are coming in 2022.



Mike Davis

HCI market research and analysis expert with 40+ years of experience

Ambient Speech as a Component of Physician Documentation Services

Large healthcare networks will be challenged to create one standard physician documentation process. Some physicians are EMR superusers who are comfortable using structured documentation templates. Other physicians like using scribes for their documentation processes. However, scribe functions are expensive to support. As ambient speech technology advances, organizations will pursue the technology to supplement EMR structured template documentation. Ambient speech solutions using sophisticated AI and NLP technologies are likely to supplement EMR documentation capabilities over the next three to five years.

Nuance: Company Profile at a Glance

CEO

Mark Benjamin

Year founded

1992

Headquarters

Burlington, Massachusetts

Number of employees

6,000

Estimated revenue

\$1.25B

Funding

Public company

Revenue model

SaaS

Target customer

DAX supports 30 specialties in IDNs, hospitals, ambulatory practices in health systems, and private clinics that offer clinical services

Healthcare Executive Interview



Diana Nole,
Executive Vice President and General Manager,
Healthcare Division

How would your customers describe your solution?

Nuance Dragon Ambient eXperience (DAX) is an AI-powered, voice-enabled ambient clinical intelligence (ACI) solution that automatically documents patient encounters accurately and efficiently from natural conversation at the point of care. For use in office and telehealth settings, Nuance DAX builds on the benefits of Dragon Medical One and further enhances the quality of care and patient experience, increases provider efficiency and satisfaction, and improves financial outcomes.

What is Nuance DAX's biggest differentiator?

DAX delivers impressive results. In a Nuance survey, DAX providers reported time savings of 7 minutes per encounter, reducing documentation time by 50%, which many organizations are using to see 3-5 more patients on average per day. And 70% reported a reduction in feelings of burnout and fatigue. In a patient survey, 83% said their physician is more personable and conversational with DAX.

The thing that makes this possible is our unique domain-specific data that fuels our AI intelligence and deep partnerships with EHR companies as we continue to progress down the path of fully automated AI notes in real time.

Is your solution integrated into a core system or is it a standalone?

Nuance DAX can be integrated with EHRs via an API or an HL7 interface. It can also be used as a standalone solution with any EHR and extends the proven power of Dragon Medical One.

Why was Nuance started?

Founded over 20 years ago, Nuance amplifies our customers' ability to help others with technology that is designed to empower the excellence of those we serve to deliver superior outcomes. From one of the first voice recognition systems to the most advanced ACI solution ever introduced, Nuance has played a foundational role in the emergence of conversational AI.

Solution Technical Specifications (provided by Nuance)

Cloud environment

Azure

Development platform

Python, Java, Kotlin, Swift (iOS),
Node.js, C++

Database environment

MySQL, Cosmos DB, MongoDB

Mobile application environment

iOS

Security platform

HITRUST, HIPAA, OWASP, CIS, NIST SP
800-53 v5, ISO 27001

Confidentiality

HIPAA compliant

Data encryption

HITRUST compliant end-to-end encryption, at rest and in motion, including AES 256

Integration approach

HL7 2.X, FHIR, APIs

HITRUST certification

Yes

Report Information

Reader Responsibility

KLAS data and reports are a compilation of research gathered from websites, healthcare industry reports, interviews with healthcare, payer, and employer organization executives and managers, and interviews with vendor and consultant organizations. Data gathered from these sources includes strong opinions (which should not be interpreted as actual facts) reflecting the emotion of exceptional success and, at times, failure. The information is intended solely as a catalyst for a more meaningful and effective investigation on your organization's part and is not intended, nor should it be used, to replace your organization's due diligence.

KLAS data and reports represent the combined candid opinions of actual people from healthcare, payer, and employer organizations regarding how their vendors, products, and/or services perform against their organization's objectives and expectations. The findings presented are not meant to be conclusive data for an entire client base. Significant variables—including a respondent's role within their organization as well as the organization's type (rural, teaching, specialty, etc.), size, objectives, depth/breadth of software use, software version, and system infrastructure/network—impact opinions and preclude an exact apples-to-apples comparison or a finely tuned statistical analysis.

KLAS makes significant effort to identify all organizations within a vendor's customer base so that KLAS scores are based on a representative random sample. However, since not all vendors share complete customer lists and some customers decline to participate, KLAS cannot claim a random representative sample for each solution. Therefore, while KLAS scores should be interpreted as KLAS's best effort to quantify the customer experience for each solution measured, they may contain both quantifiable and unidentifiable variation.

We encourage our clients, friends, and partners using KLAS research data to take into account these variables as they include KLAS data with their own due diligence. For frequently asked questions about KLAS methodology, please refer to klasresearch.com/faq.

Copyright Infringement Warning

This report and its contents are copyright-protected works and are intended solely for your organization. Any other organization, consultant, investment company, or vendor enabling or obtaining unauthorized access to this report will be liable for all damages associated with copyright infringement, which may include the full price of the report and/or attorney fees. For information regarding your specific obligations, please refer to klasresearch.com/data-use-policy.

Note

Performance scores may change significantly when additional organizations are interviewed, especially when the existing sample size is limited, as in an emerging market with a small number of live clients.



LEAD AUTHOR
Boyd Stewart

boyd.stewart@KLASresearch.com



CO-AUTHOR
Joseph Ybarra

joseph.ybarra@KLASresearch.com



CO-AUTHOR
Braden Taylor

braden.taylor@KLASresearch.com



Our Mission

Improving the world's healthcare through collaboration, insights, and transparency.

365 S. Garden Grove Lane, Suite 300
Pleasant Grove, UT 84062

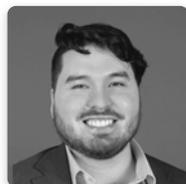
Ph: (800) 920-4109

For more information about
KLAS, please visit our website:

www.KLASresearch.com



DESIGNER
Natalie Jamison



PROJECT MANAGER
Joel Sanchez

Cover image: © sepy / Adobe Stock