It’s easy to toss around the term artificial intelligence (AI) as if it’s something we all know and understand so well. When many people hear the term AI, however, they tend to imagine a sci-fi world run by a cyborg-like computer brain.

At Nuance, our vision for AI in healthcare is not as melodramatic—but it’s still pretty incredible. It’s a world where technology amplifies intelligence so that care teams are unburdened from the distractions and complexities that get in the way of helping patients.

For us, AI is about making things simpler across the continuum of care. It’s about deconstructing workflows and automating the mundane so that care teams can spend more time with patients and less on paperwork.

We multiply your collective power to improve patient health on a global scale by amplifying, simplifying, and surfacing the knowledge that your care teams rely on every minute of every day.
“Imaging AI cannot be deployed in a silo—integrating the outputs of AI into the radiologist’s clinical workflow enables it to effectively augment the capabilities of the radiologist, while preserving as well as enhancing efficiency and quality. AI in radiology is rapidly evolving; the challenge is to make it usable and useful.”

Warren B. Gefter, MD
Professor of Radiology, Hospital of the University of Pennsylvania

Surround care teams with intelligence from the first word to the last code

With Ambient Clinical Intelligence (ACI), your entire care team and those who support them are completely surrounded by the assistance and knowledge that can alleviate burdens associated with daily routines.

Providers can focus their attention on their patients and not their keyboards. It means automating clinical rigor to maintain the most accurate medical records. And it means automatically populating reports, surfacing advice, and prioritizing workloads so your teams of doctors, nurses, radiologists, and clinical documentation specialists can spend more time on diagnosis, collaboration, and caregiving.

With AI-powered solutions, it’s as if every person on your care team has their own virtual team surrounding them at all times.

The journey to Ambient Clinical Intelligence
The challenge for organizations today is not finding or buying AI technology, but getting care teams to adopt and rely on that technology as part of their everyday processes, practices, and workflows.

We think of Ambient Clinical Intelligence as a journey in which progressive gains in knowledge and productivity can be achieved through increasing levels of automation that match the burdens you seek to remove for your providers, clinical documentation specialists, and radiologists.

Making Ambient Clinical Intelligence a reality requires that AI be present in all the ways your care teams already work.

<table>
<thead>
<tr>
<th>Transcription</th>
<th>Speech recognition</th>
<th>Voice command and control</th>
<th>Virtual assistants</th>
<th>In-workflow knowledge automation and real-time intelligence</th>
<th>Clinical guidance and decision support</th>
<th>Cloud-based speech recognition, image and data exchange, and analytics</th>
<th>Ambient Clinical Intelligence (ACI)</th>
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For providers
Ambient Clinical Intelligence is about closing the gap between clinical conversation and clinical documentation. ACI alleviates the burnout physicians and nurses experience from the extra time spent documenting visits, navigating patient charts, and following up on documentation details.

The path to ACI begins by shifting documentation to the cloud and making highly accurate medical speech recognition available to all users on all devices—whenever and wherever it’s most convenient. Speech recognition plays a fundamental role in getting information into the electronic health record (EHR) and performing routine tasks, saving the care team precious time and simplifying their day.

It brings knowledge automation to the point of care and delivers advice and guidance directly into the workflow through computer-assisted physician documentation (CAPD). This ultimately improves the care team experience by giving the team the resources they need to do their jobs better, faster, and more efficiently—capturing the right information, the very first time.

As ACI advances in sophistication, increasingly capable virtual assistants that can engage the care team in collaborative conversations are introduced. In this fully automated experience, proactive virtual assistants engage everywhere—with the care team and across assisted workflows—brought together with ambient-sensing hardware to automate workflows and deliver clinical documentation that writes itself.

With AI-powered solutions, providers can:
• Experience less burnout and spend more quality time with patients by working more efficiently, saving time and money, and eliminating 100 million clicks per day.
• Maintain the highest levels of quality and integrity by automating processes that help organizations meet and exceed quality and compliance goals.
• Access in-workflow knowledge to make better decisions at the point of care that lighten the load and ensure less burden downstream.

For clinical documentation specialists
Leveraging AI-powered solutions is about closing the gap between each patient’s unique story and clinical documentation that accurately reflects the patient’s condition and care provided.

AI-powered solutions provide the strategic guidance, workflow management, encounter prioritization, denial support, and advanced analytics that drive clinical documentation excellence.

These integrated solutions not only enable better CDI team performance, but also better performance for coding, quality, and case management teams that rely on high-quality CDI and clinical information.

It begins with establishing an organization’s documentation excellence baseline and providing real-time insights to CDI leaders so they can analyze performance, set standards, measure success, analyze peer comparisons, and pinpoint opportunities for improvement.

Surrounding the CDI team with clinically based intelligence means better documentation quality, a more accurate reflection of patient acuity, appropriate levels of reimbursement, overall improvements in care team productivity, and better care for patients.

With AI-powered solutions, clinical documentation specialists can:
• Improve effectiveness, eliminate rework, and foster better collaboration with physicians, coders, quality managers, and care managers.
• Increase case review rates by 20% and expand coverage as well as focus on more complex cases and quality improvement initiatives.
• Improve CMI and accurate reimbursement, while capturing alternative principal and secondary diagnoses that influence DRG assignment, severity of illness, and risk of mortality.

For radiologists
Leveraging AI-powered solutions is about closing the gap between interpretation, intervention, and follow-up. It’s about reducing the repetitive tasks that lead to burnout and freeing the radiology team from the distractions and delays that get in the way of moving quickly and working smarter.

AI-powered solutions let radiologists stay focused on interpretations and recommendations when worklists are prioritized and balanced, administrative tasks are automated, and clinical guidance and prior studies are readily accessible in their preferred workflow.

Once freed from burdens, radiology will be seen as a value center by enhancing early-stage care, minimizing healthcare costs, reversing lost opportunities from failed follow-ups, and building predictable revenue through expanded coverage of services and efficiency improvements. With Nuance by their side, radiologists have the power to follow through on every detail, for the best outcomes possible.

With AI-powered solutions, radiologists can:
• Deliver optimal effectiveness for better productivity with access to workflow-integrated AI that contributes to better patient care and automates tasks that save up to one hour per day.
• Boost accuracy, minimize rework, and avoid excessive disruptions for faster and better interpretations and recommendations.
• Be confident that recommendations are consistent, reports are high quality, and follow-ups are tracked and managed.
“Nuance has been using machine learning as the core of its technologies since its inception, and it harnesses artificial intelligence in its core platform for not only accurate speech-to-text but also content extraction. That’s going to drive the next revolution, where we begin to have autonomous agents analyzing features and building patient records.”

John Frenzel, MD
CMIO, MD Anderson Cancer Center

Data fuels our AI Learning Loop:

300M patient stories captured annually
3B lines of medical transcription
300M minutes of cloud-based speech annually
300K scribe encounters per year
430M medical images shared every year
350M radiology reports created annually

The Nuance AI platform

Nuance enables the journey to Ambient Clinical Intelligence through its secure, cloud-based platform, which is built on core AI capabilities and combined with a rich clinical knowledge base. To drive adoption, usability, and pervasiveness, the platform remains open to an expansive global developer community and partner ecosystem through conversational AI software development kits (SDKs) and the AI Marketplace for Diagnostic Imaging.

Through this unique platform we offer workflow integrated solutions and deep domain and EHR expertise to optimize the systems our clients use most. And those AI-powered solutions and optimization services are what allow us to deliver unmatched outcomes—improved care team experience, quality and compliance, financial integrity, and patient experience.

What’s more, the wide-scale deployment of these solutions across a large customer base is what gives us the ability to train and teach our AI, so that the technology and solutions continually get better.
Leveraging AI strength across Nuance

What makes Ambient Clinical Intelligence even stronger is the AI expertise leveraged from the thousands of organizations and millions of people that rely on Nuance AI in their cars, throughout financial institutions, and across the world’s leading consumer brands.

We lead innovation in intuitive, award-winning conversational AI that adapts to each business’s needs and every unique situation. Our solutions don’t just hear and speak. They understand, anticipate, reason, and resolve. We don’t just make artificial intelligence—we make artificial intelligence that works the way you want it to.

Nuance AI is used by 85% of Fortune 100 companies and more than 6,500 leading consumer brands.

250 million automobiles have shipped with Nuance AI. The same technology that adapts to wind and road noise makes our speech recognition accurate in even the noisiest emergency room.

400 million consumer voiceprints are powered by Nuance AI. The same technology securely identifies healthcare conversations to automatically document patient encounters.

Nuance AI powers 600 million virtual and live chats per year. The same technology makes it possible for care teams to conversationally interact with the EHR.

Nuance AI delivers text-to-speech with 125 unique voices in more than 50 languages. The same technology makes our healthcare virtual assistant sound like an extension of the care team.
Delivering better outcomes from bedside to boardroom

Nuance, with its unique approach to Ambient Clinical Intelligence, surrounds your care teams with levels of automation that assist their workflows, automate high-value clinical tasks, and automate knowledge for better decision making. This leads to care teams that are happier, more productive, and able to provide better quality care for the best clinical, financial, and patient outcomes.

The future of medicine is a fusion of clinical practice and technology, and Nuance offered a vendor-agnostic platform that allowed me to unify documentation on an enterprise level across facilities and doctors. The primary reason we chose Nuance over competing vendors was quality. When considering reliability, accuracy, functionality, convenience, mobility, and strong healthcare IT partnerships—each time the nod went directly to Nuance.”

Manuel Sacapano, MD
CMIO, Prospect Medical Holdings

“The way that we communicate with our referring physicians is through our reporting. And now, through artificial intelligence, we are changing our report from just being a description of what we are seeing to a more robust, informative, and interactive document that brings the radiologist out of that reading room to become a true part of the patient care process.”

Jonathan Messinger, MD
Medical Director of Imaging, Baptist Health South Florida, and Chief of Radiology, South Miami Hospital

Improved care team experience

<table>
<thead>
<tr>
<th>2 hrs</th>
<th>45%</th>
<th>87%</th>
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<tbody>
<tr>
<td>freed up per clinician per shift as a result of automated administrative tasks</td>
<td>reduction in time spent on documentation and 40% less time spent on retrospective queries</td>
<td>fewer radiology phone call interruptions</td>
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Optimized and utilized EHR

<table>
<thead>
<tr>
<th>100 million</th>
<th>98%</th>
<th>85%</th>
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<tbody>
<tr>
<td>fewer clicks per day means more time for patients</td>
<td>of physicians agree that EHR optimization is beneficial</td>
<td>first-call resolution for clinical service desk support</td>
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### Quality integrity

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>63%</td>
<td>Improvement in mortality ratings and up to 28% decrease in O/E mortality ratio</td>
</tr>
<tr>
<td>36%</td>
<td>Increase in capture of extreme severity of illness, and 24% increase in capture of extreme risk of mortality</td>
</tr>
<tr>
<td>95%</td>
<td>Critical-findings message closure compliance and 82% increase in follow-up tracking</td>
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### Improved patient experience

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
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<tbody>
<tr>
<td>74%</td>
<td>Reduction in diagnostic imaging time to intervention</td>
</tr>
<tr>
<td>40%</td>
<td>Reduction in duplicate imaging and unnecessary repeat scans</td>
</tr>
<tr>
<td>95%</td>
<td>First-call resolution for patient portal service desk</td>
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### Financial integrity

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>$1B</td>
<td></td>
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<tr>
<td>54%</td>
<td></td>
</tr>
<tr>
<td>70%</td>
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For more than 500,000 clinicians, 2 out of 3 radiologists, 90% of U.S. hospitals, and 10,000 healthcare organizations around the world, Nuance is the partner of choice for those moments when technology must work flawlessly for patient care to move forward.
To learn more about how Nuance can improve your clinician satisfaction, financial integrity, quality, compliance, and patient care, please call 877-805-5902 or visit nuance.com/healthcare.

About Nuance Communications, Inc.

Nuance Communications, Inc., is a leading provider of voice and language solutions for businesses and consumers around the world. Its technologies, applications, and services make the user experience more compelling by transforming the way people interact with devices and systems. Every day, millions of users and thousands of businesses experience Nuance’s proven applications. For more information, visit www.nuance.com/healthcare or call 1-877-805-5902. Connect with us through the healthcare blog, What’s next, Twitter, LinkedIn, and Facebook.