There is great promise associated with the use of artificial intelligence in healthcare. Clinicians and other healthcare stakeholders are hopeful AI can transform the status quo in healthcare by changing how patients are managed across the care continuum, clinical data is used and treatment decisions are made. But there are still barriers that stand in the way of widespread implementation of AI across the healthcare industry including technology, data and regulatory hurdles.

In a discussion with Modern Healthcare Custom Media, two industry leaders offered their perspectives on how healthcare leaders can harness the potential of AI for their organization and overcome the challenges to more rapid adoption. They also discuss the potential for AI to decrease costs and improve clinical burnout.

What opportunities are there for artificial intelligence to improve quality of care and patient experience?

**DN:** There are multiple opportunities and a significant need for AI across the patient journey from the digital front door onward. For example, ambient AI automates the creation of clinical documentation so doctors can focus on patients, not paperwork. AI is powering patient engagement, real-time clinical guidance, voice-driven EHR navigation, clinical analytics, tools to maximize the value of diagnostic imaging, and many other advancements.

**TP:** AI is in its infancy regarding potential to improve quality of care and patient experience, but where most potential can be found is with the implementation of the right strategies to accomplish personalized and preventative care.

Currently, the market categorizes patients by population and condition, when really each patient is unique with regards to his or her health state and necessary continuum of care for healing and best outcomes.

The industry still struggles to harness data to use it in an actionable and predictive manner. How can artificial intelligence help healthcare organizations leverage data in a way that enables measurably better outcomes and experiences?

**DN:** The key is to make the right data available at the right time at the point of care. For example, natural language processing (NLP) and ambient AI make it practical to provide relevant clinical data and guidance within everyday workflows. NLP also can convert unstructured speech and text into...
structured data for use cases such as clinical documentation improvement, radiology follow-up compliance, population health and other areas.

**TP:** The industry does not struggle with harnessing data, but rather with the organization of the data in a format and structure capable of supporting a strategy that realizes the potential of personalized and predictive care. Those who wish to attain the data’s potential need to begin by understanding their target strategy and the data sets they will need.

**Burnout from electronic health records is a major concern for providers and AI has been touted as a solution. How should healthcare organizations apply artificial intelligence to reduce administrative burden among clinicians?**

**DN:** Health systems are using Nuance DAX to reduce the clinical documentation burden and reduce burnout. DAX securely captures and contextualizes physician-patient conversations during exams. About 80% of physicians using DAX say it improves documentation quality, and 70% say they feel less burnout and fatigue. More than 80% of patients say physicians are more engaged with them during visits. Physicians also are able to see more patients each day.

**What opportunities are there for artificial intelligence to drive down costs in healthcare?**

**DN:** There are many opportunities for AI to drive down costs. Speech-enabled data entry and retrieval can eliminate scribing and transcription costs, improve documentation quality and reduce retrospective queries and rework. Radiology analytics help ensure timely completion of recommended follow-up imaging where outcomes and costs are more favorable and better healthcare experiences overall reduce costs.

**TP:** There are emerging technologies which will alleviate EHR burnout, such as speech-to-text technology, but they are in the infancy stages and not well applied yet. The key is going to be when the technology is well-integrated between the system, the care team, and patient conditions. That will take not only AI but also the implementation of deep learning systems and even neural networks, both of which are subsets of machine learning.

**The use of AI is still not widespread in the healthcare industry. What barriers exist today for more rapid adoption of AI capabilities and how should the industry go about addressing them?**

**DN:** Cost and integration barriers are falling and there’s a marked change in perception and adoption. Today’s cloud-
enabled solutions work with existing IT infrastructures so upfront and maintenance costs are lower. Health system executives and clinicians also are seeing positive ROI metrics from peers using new AI solutions. Even physicians disappointed by the failed promises of past technologies are becoming converts after using AI systems.

TP: The one barrier in healthcare with regards to the implementation of AI or any other intelligent and related systems is the strict conditions set forth by HIPAA and other specialty and state agencies with regards to patient privacy. I am certain these barriers can be surpassed, but it is the provider who would need to define how.

What advice do you have for healthcare leaders interested in integrating AI into their organization? How should they start?

DN: Involve your administrators, IT staff and especially your clinicians from the start. Define clear goals, integration requirements, and performance and usage metrics prior to the first trial deployment. Capture quantitative and qualitative feedback from your users and industry peers to iterate refinements and prioritize expansion to additional clinical specialties and environments. Patient communication, consent, and feedback also is critical.

TP: For healthcare leaders, I recommend they start with bringing in a system thinking consultant or expert, host brainstorm sessions with stakeholders, and define goals to generate focus. Then clearly develop the path to achieving those goals. Healthcare leaders should also support the goals in place with a robust budget and understand that the development and deployment of these systems is not out-of-box or works immediately after installation.

Where do you see the future of AI in healthcare headed? What opportunities exist going forward?

DN: The pandemic has transformed attitudes toward digital healthcare. Over a fifth of patients we surveyed recently said they now prefer digital and telehealth channels. The majority also cited better experiences overall because of the increased use of AI. Physician satisfaction is also rising as reductions in administrative tasks and improved clinical workflows enable them to reconnect with the joy of practicing medicine and healing people.

TP: AI's future in health is bright, especially for those who are boldly moving towards predictive personalized care. Opportunities will be endless for those who deploy robust teams, systems and intelligence analytics that are both human and artificial. They also will find success by identifying unique new opportunities to increase value and efficiencies, and innovate processes involved in the continuum of care. Further, leaders in the sector will be those who continue pushing forward the vision.