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Healthcare AI, Ambient clinical intelligence

Digital Front Door, Ambient Technology, AI, and The Revenue Cycle

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This has been a transformational year for the healthcare industry. The global pandemic has accelerated the adoption of digital solutions within health system workflows, patient experiences, and healthcare delivery. Healthcare networks are embracing innovation, not just in response to a crisis, but to become and remain resilient amid future disruptions and to introduce better, more engaging care experiences.

The urgency around the factors driving this transformation – physician burnout, patient expectations, and financial resilience – will only grow in 2021. In this blog post, I'll discuss the four key trends to watch and the areas of innovation that healthcare organizations will be investing in throughout the new year and beyond.

The digital front door will burst open

A steady rise in consumerism, the growing need for control of care, and the sooner-than-expected spike in telehealth have each showcased the need for more engaging, meaningful patient experiences and the growing significance of the digital front door in healthcare. Consumer expectations of convenient and productive access to online information, shopping, and personalized customer service have carried over to their healthcare experiences, especially since the start of the pandemic. In a recent survey conducted by Forrester, 49% of 1,500 adults surveyed said they wanted digital healthcare experiences similar to

those they had as consumers, and 28% said they had switched providers because of poor digital experiences. A report by Accenture likewise found that two-thirds of patients unhappy with how a health system handled COVID-19 were likely or highly likely to find another provider. On a more encouraging note, Accenture also reported that organizations that improve the patient experience could increase revenues by 5% to 10% from pre-COVID levels within 12 months.

To meet these pressures in 2021, healthcare systems will continue investing in the technology that can facilitate improved patient engagement and simplified experiences for both patients and providers by using an increased number of patient touchpoints (e.g., voice assistants, chatbots, and SMS messaging), and secure data sharing across provider and payer networks.

Health systems are seeking a unified omnichannel patient engagement virtual assistant platform addressing every voice, web, mobile, and smart speaker/IoT virtual assistant interaction throughout a patient's healthcare journey. Combining conversational AI and cloud-powered capabilities proven in healthcare, financial services, telecommunications, retail and other environments, will enable providers, payers, retail pharmacies, and pharmacy benefit managers to deliver seamless and consistent experiences for a wide array of applications including scheduling, telehealth, visit prep, follow-up, prescription management, bill payments, health and wellness education, and much more.

For example, virtual care adoption has exploded during the pandemic, and the trend doesn't show signs of slowing down. Healthcare systems had to quickly roll out their telehealth practices at the start of the pandemic and continue leveraging that technology throughout the year to support patient needs. As a result, both patients and providers alike have become more familiar with telehealth and its many benefits, but this also has put pressure on health systems to create a more seamless experience using virtual assistant platforms for all the pre and post visit workflows. As the importance of the digital front door continues to increase for patients and providers, we can expect this comfortability to grow —even after the immediate danger of COVID-19 dissipates.

Ambient technology will be the key to fighting clinician burnout

Burnout across healthcare providers remains a big problem today. According to Medscape, 42 percent of physicians reported that they are burned out. With the pressures of COVID-19 rapidly compounding the already present issues, our customers have reported that driving efficiencies and automating tasks are more critical than ever to alleviate burnout and assist providers. The adoption of automation and machine learning technologies will continue to rise, specifically, conversational AI tools and ambient clinical intelligence (ACI).

ACI securely captures, contextualizes, and automatically creates detailed clinical notes from multi-party conversations during on-site and virtual encounters with patient consent. It enables physicians to stay fully engaged with patients without the need to look away to type or dictate while the clinical documentation writes itself. Ambient solutions also improve clinical documentation quality and physician satisfaction by ensuring that the complete patient story is captured.

The positive impacts of ACI are immediate. In a survey at an academic medical center, the number of physicians reporting feelings of burnout and fatigue dropped from 72% before ACI deployment to 17% after using it in clinical practice. Further, 85% said they would recommend ACI to their colleagues, and nearly 60 percent said that ACI improved documentation quality.

In the long term, these tools can truly help eliminate the wedge that excessive administrative requirements have driven between patients and physicians. Over the next year, we can expect the adoption of ACI to continue growing at a rapid pace as healthcare systems realize its potential to meaningfully reduce physician burnout and create the patient exam experience of the future.

We're passing the hype stage for AI in imaging

True adoption of AI is coming to diagnostic imaging in 2021. At conversations held during the recent RSNA 2020 conference, we heard time and time again that radiologists are no longer seeing AI as a threat, and instead beginning to see its many benefits come to life. AI in medical imaging can improve productivity and the quality of care. For example, AI can ensure an accurate and thorough imaging process by identifying incidental findings and offering evidence-based follow-up recommendations that help make sure patients are cared for properly, disease gets treated early, and provider organizations do not miss out on appropriate follow-up revenue opportunities. In addition, we see nationwide AI marketplaces and image sharing networks accelerating the move to companion diagnostics where AI can "spot" rare clinical conditions in patients that might otherwise be missed – resulting in better care for patients as the most appropriate clinical intervention is brought to bear early in the disease detection process.

As one example of the power of AI, Dr. Ben Wandtke at the University of Rochester Medical Center has seen firsthand how AI can drive real, impactful change for imaging patients by reducing the incidence of

"failed follow-ups." Nationally, 30% to 70% of radiology follow-up recommendations are never completed. At Rochester, Dr. Wandtke found that 57% of recommendations were not performed. His "backstop" program combines Nuance's PowerScribe Follow-up Manager with existing technology to ensure that vital follow-up recommendations don't fall through the cracks. The program, which has been scaled to six hospitals and five outpatient imaging centers, has resulted in satisfactory follow-up for 91 percent of patients and an 80 percent increase in the ability to close the loop with patients. Dr. Wandtke and his team credit the technology behind the backstop program for helping them save lives through earlier detection and treatment. This is the potential of AI in imaging, and in 2021, we'll see widespread adoption expand.

The revenue cycle will continue to be automated in 2021

As healthcare looks to reduce the crushing overload of administrative requirements, attempts to reduce friction in the payment process, and tries to maintain financial stability, automation of the revenue cycle will accelerate in 2021. As just one example of this friction in the system, a recent American Medical Association survey found that 86 percent of doctors described the burden of prior authorizations – the process by which healthcare providers must obtain advanced approval from a health plan before a specific service is delivered to the patient to qualify for payment coverage – as "high" or "extremely high." Eighty-eight percent said the burden has increased over the last five years. It's going to be incredibly important in 2021 for healthcare systems to automate the revenue cycle as another way to ease physician burden, reduce waste and increase the amount of spending directed at patient care.

Just this year, we partnered with Providence healthcare system to not only develop integrated clinical intelligence solutions, but to also enhance revenue cycle solutions based on the central role clinical documentation plays. Timely and complete reimbursement for patient care relies heavily on the completeness and accuracy of clinical documentation, with the burden falling squarely on physicians and nurses. Instead of being able to focus on patient care, clinicians need to dedicate a significant and growing portion of their day to documenting care during and after clinical hours and answering retrospective queries about data they've already entered just to ensure that they are appropriately compensated for providing care.

The adverse effects of these inefficiencies cascade throughout the healthcare system in the form of increased physician burnout, decreased patient satisfaction, reduced access to care, and less-than-optimal care and financial outcomes. Accordingly, revenue cycle automation is a growing priority for 2021.

All of these predictions are each rooted in the growing attention around fighting clinician burnout, improving patient care and enhancing the financial lifeblood of our nation's healthcare providers. This unusual year provided unexpected challenges, but healthcare systems were able to endure by innovating and integrating advanced technologies into every facet of their organizations —including clinician workflows, patient care, and healthcare delivery. In 2021, we'll see healthcare executives continue to make the decisions and investments needed to achieve the digital transformation the industry is ready for and will be dependent upon.

Tags: Burnout, Forrester, RSNA, Dragon Ambient eXperience, Future of healthcare, Predictions

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About Peter Durlach

Peter Durlach is Executive Vice President and Chief Strategy officer at Nuance Communications, a Microsoft Company. Peter helped establish Nuance's Healthcare business in 2006, most recently serving as senior vice president of healthcare strategy and new business development, where he drove driving significant growth across the organization, helping to lead the business from $8m in revenue to approximately $1b. He is responsible for advancing Nuance's overall strategic direction and the creation and management of new strategic innovations focused on developing disruptive AI powered solutions in areas such as virtual assistants, ambient computing, imaging AI, and patient engagement. Peter also co-leads the overall Microsoft for Healthcare strategy since the Microsoft acquisition in 2022. Prior to Nuance, Peter served as founder and president of Unveil Technologies, Inc., was the vice president of healthcare marketing and business development at Lernout and Hauspie, and was a founder of Articulate Systems. He also served as an entrepreneur in residence at the University of Pittsburgh Medical Center. Peter holds a BS from the University of Vermont in business administration.

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