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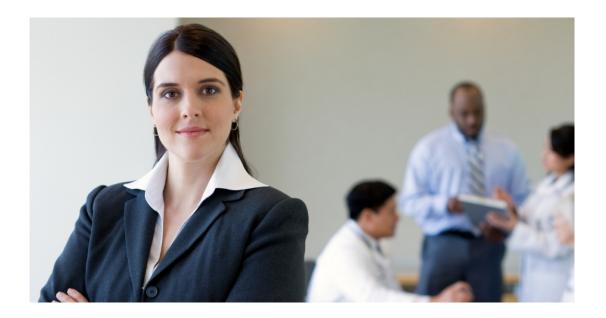
Healthcare AI, Ambient clinical intelligence

WellSpan Health expands access to care with Nuance DAX

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WellSpan Health and Nuance collaborated on a study to evaluate the impact of Nuance's Dragon Ambient eXperience (DAX) on healthcare. The findings of the study are significant and wide-ranging— including increases in access to care fueled by additional throughput, reductions in clinician burnout and cognitive load, and improvements in the patient experience.

With rising healthcare costs, staffing shortages, and increased demand for services fueled by the growing aging population, patients' ability to access care at the right time has been challenged.

By 2025, the U.S. Department of Health and Human Services predicts that there will be a nationwide shortage of 90,000 physicians. Burnout, COVID, retirement, and limits on medical school and residency programs are the main reasons for the shortage. Compounding the problem is an aging population and aging physicians. The number of people aged 65 and older is expected to reach 83.7 million in 2050, according to the U.S. Census Bureau, up from about 44 million today.

To offset these challenges, WellSpan Health sought a technology solution to address physician burnout and cognitive load, with the goal of increasing access to high-quality care for its patient population.

In June 2020, WellSpan implemented the Nuance Dragon Ambient eXperience (DAX). DAX is an AI-powered, voice-enabled solution that automatically documents clinician-patient conversations during in-person and telehealth visits, freeing the clinician to focus on the patient rather than the computer.

About WellSpan Health and its DAX program: A chance to free physicians from documentation burden

WellSpan Health is an integrated health system with eight hospitals and more than 220 facilities that serve communities in central Pennsylvania and northern Maryland. By using sophisticated clinical information technology, team members at WellSpan Health are transforming healthcare services with innovative models that enable them to provide high-quality, exceptional patient experiences.

WellSpan chose DAX to free its physicians from medical documentation burdens that were key contributors to burnout, job dissatisfaction, and staff turnover.

The goals were to evaluate:

1. **Potential financial and operational efficiencies including time savings and physician productivity**
2. **Quality of patient experiences**
3. **Physician experiences and the impact on burnout and turnover**

The initial results with the first group of WellSpan physicians who tried DAX in June 2020 were overwhelmingly positive.

94% of physicians who responded to a satisfaction survey report that DAX improves the quality of the patient-physician interaction.

88% of WellSpan patients who responded to a satisfaction survey said they were extremely satisfied with their visit compared to their prior visit when their physician was not using DAX.

About the study: How we tested the effectiveness of DAX

Purpose and goals

The study investigated how the implementation of DAX benefited WellSpan's primary care service line. By analyzing both tangible and intangible benefits, the paper seeks to provide a comprehensive view of the impact of DAX. Additionally, it examines the strategies WellSpan used to ensure a successful rollout of the technology and provides an assessment of the return on investment that DAX offers.

Methodology

Researchers measured the number of Completed Appointments per Available Hour (CAAH) over a three-month period in 2022 and compared this data to the same time frame in 2021. 51 primary care physicians participated in this study.

The findings: DAX helps physicians save time, minimize stress, and reduce their cognitive load

The following are key results and trends that emerged from this data analysis.

1. On average, physicians who used DAX for over 60% of their encounters saw an additional nine patients per month. This covers the cost of DAX subscriptions with a 25% return on investment from seeing additional patients.

Clinicians who rely on DAX for over 60% of their patient encounters are experiencing notable benefits. They're able to see an average of **nine more patients each month,** compared to a group of clinicians who did not use DAX, without needing to extend clinic hours. This covers the cost of DAX subscriptions with a 25% return on investment from seeing additional patients. Revenue estimates are derived from additional patient visits in WellSpan's primary care practice and downstream revenue from incremental services from those visits.

2. When well used, DAX can pay for itself from increased throughput. As physicians use DAX more frequently, access to care improves accordingly.

DAX enables WellSpan physicians to be more efficient by reducing the amount of time they spend on documentation and enabling them to see more patients if they desire. This increase in efficiency allows for shorter appointment times—often 15 minutes instead of 30 minutes—as well as the ability to take walk-ins.

3. DAX helps reduce physician burnout by minimizing stress and cognitive load, resulting in improved work-life balance.

According to surveys and interviews of WellSpan physicians, they reported feeling less overwhelmed and stressed, with a better overall balance between their work and personal lives.

- 85% of respondents said they are experiencing better work/life balance as a result of DAX.
- 64% of respondents said DAX reduced cognitive load.
- 59% of respondents said DAX reduced burnout and fatigue.

4. DAX enhances the overall patient experience.

The introduction of DAX has a significant impact on the patient experience. In a WellSpan survey, an impressive 97% of the 75 respondents reported improvements in how focused, personable, and engaged their physicians were during the care interaction.

Conclusion: Happier physicians, greater capacity, and expanded access to care

The challenges facing healthcare systems today are vast. Shrinking bottom lines, operational inefficiencies, physician dissatisfaction, physician shortages, and poor patient experiences are negatively impacting health and care.

DAX helps address these challenges with time savings—specifically reductions in time spent documenting care. As a result, healthcare organizations like WellSpan Health can operate more efficiently by optimizing appointments and increasing throughput to expand access to care.

Physicians using DAX are consistently happier because they have a better work-life balance and can fully interact with patients instead of documenting care during visits. They no longer feel stressed that they will miss something the patient said, they don't need to rush to get to their next patient, and they no longer dread the end of the clinic day knowing they have hours of documentation to complete before they can leave.

The result: Improved physician and patient satisfaction, increased access to care, and improved throughput.

> *"The antithesis to burnout is resiliency. When we give time back to providers, they are more resilient, and as a result, we find they are more accommodating to the needs of patients."*

> *— Dr. Hal Baker, Senior Vice President & Chief Digital & Chief Information Officer, WellSpan Health*

To learn more about this study and how DAX can benefit you, download the report now.

Tags: Dragon Ambient eXperience, Customer success story, Return on investment

About Kenneth Harper

Kenneth Harper is the Vice President and General Manager of Nuance's Healthcare Virtual Assistants and Ambient Clinical Intelligence business. Kenn has been working in the conversational AI industry for 15+ years, helping to shape virtual assistant solutions across mobile phones, TV's, cars, wearables, robotics, and most recently healthcare systems. Kenneth leads Nuance's Healthcare Virtual Assistant business, which leverages an advanced suite of technologies combined with purpose-built hardware to streamline interactions with the EHR and creation of clinical documentation, allowing physicians to remain 100% focused on the patient without technology getting in the way. Kenn holds a B.S. in human factors engineering from Cornell University and a M.S. in human factors from Bentley University.

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