

“Since we launched, we have worked with our vendors to make adjustments in the program to respond to caller requests and comments. It’s something we’ll be doing over the next few months as we work to ensure that Voice Trip Planner is as customer-friendly as possible.”

Greg Bullock, Senior Director of Systems Administration for Customer Services, NYC Transit,

said, “By taking advantage of the efficiencies this technology provides, we’re able to extend the amount of hours callers can obtain travel plans while simultaneously providing our agents with the time to interact with customers that have complex requests that require more attention.”

Government wants “meaningful use” of Electronic Health Records

Nuance survey shows concern in medical community over usability

Starting in 2011, providers deemed to be “meaningful users” of Electronic Health Record (EHR) systems will be eligible to receive \$40,000-\$60,000 in incentive payments. The incentive payments decline over a five-year period, and no incentive payments will be available after 2015, creating a decreasing incentive for late adopters. The funds come from the \$850 billion American Recovery and Reinvestment Act (ARRA), the “stimulus” bill, of which \$51 billion is allocated to the healthcare industry.

To qualify as a “meaningful user,” eligible providers must demonstrate use of a “qualified EHR” in a “meaningful manner.” The bill defers to the secretary of Health and Human Services (HSS) to set specific guidelines for determining what constitutes a “qualified EHR”; however, it does specify that e-prescribing, electronic exchange of medical records, and interoperability of systems will be determining criteria. HSS is expected to have a final report clarifying eligibility by January of 2010, and is expected to issue some preliminary guidelines shortly.

How does this relate to the use of speech recognition in healthcare record creation? Certainly, one can’t achieve any of the goals of a digital healthcare system if medical reports from doctors are only notes on paper, and a recent study sponsored by Nuance has shed some light on concerns by physicians. Nuance is also participating in the **Imaging e-Ordering Coalition**, organized to promote data-driven approaches to medical imaging decisions (more in a later section).

Keith Belton, senior director, product marketing, Nuance Healthcare, noted that EHR vendors make a good case for the effectiveness of the EHR in increasing the effectiveness of healthcare, reducing the costs associated with medical errors, and lowering costs by reducing support personnel or making them more effective. Unfortunately, he notes,

physicians often pay a price in the time required to enter the structured data required by these databases. Previous—sometimes paper-oriented—methods often took less of the physicians’ time, particularly if they simply dictated an unstructured report. Since the physician is the root source of much of the useful data in the EHR, this becomes a critical issue, and the Nuance survey suggests it may be an issue.

Medical speech recognition can be used in two basic ways: (1) “back-end” speech recognition, which creates a draft for the transcriptionist and makes the transcription process more efficient (about half the time with a speech recognition draft and the recorded speech as a reference); and (2) “front-end” recognition, where the physician looks at the result of the speech recognition immediately, makes any corrections necessary, and signs off on the report immediately. As is perhaps evident, front-end recognition is more effective in terms of accuracy of reports and the quick availability of the data. Nuance offers both forms of solution, and Belton indicated that about 40-45% of Nuance users (about 120,000 physicians) are using front-end rather than back-end recognition. (This amounts to about 20% of the 600,000 physicians that could be using the solution.)

Since the EHR is a structured database, if the physician is to enter data directly, they must dictate into specific fields (e.g., “diagnosis”) for the EHR to be most effective. This can be done for some reports by creating a template (e.g., “motor vehicle accident report”), such that the sections of the report are automatically created when the physician says a heading or clicks to that part of the report manually. Nuance provides some templates and has plans to provide more soon, Belton noted. With a structured report, it is easier to automatically transfer the report to a database, and, in any case, it is more likely to contain all the needed information and to be readable.

A more direct approach depends on the physician viewing the EHR and dictating into specific fields (navigating by typical means such as a mouse). Since Nuance's Dragon NaturallySpeaking speech-to-text solution can enter text into almost any Windows program without modification of that program, the physician need not type.

Another initiative is tighter integration between Nuance speech recognition products and EHR software from companies such as **Epic Systems**, **Allscripts**, and **Cerner**. Belton said that this is an on-going effort at Nuance, with some results available.

The EHR Meaningful Use Physician Study

The EHR Meaningful Use Physician Study (www.nuance.com/healthcare/ehr-meaningful-use-study) represents feedback from more than 1,000 physicians throughout the US. When asked about qualifications that the federal government should measure as meaningful use, physicians cited the following as "important" or "very important":

- Access to medical records faster without waiting for records to come out of traditional manual transcription (90%);
- More complete patient reports, with higher levels of detail on the patient's condition and visit (83%);
- Better caregiver-to-caregiver communication based on improved reporting that is more accessible and easily shared (83%);
- Improved documentation by pairing the EHR point-and-click template with physician narrative (79%).

The study also revealed physicians' concerns surrounding existing obstacles to EHR adoption—90% of doctors surveyed said they are either "concerned" or "very concerned" about usability as a leading obstacle to EHR adoption. Following usability, issues related to cost, learning curves of a new system, increased time documenting care, and inability to use dictation to create medical notes were also identified as obstacles that need to be addressed. Two-thirds of doctors surveyed cited as a concern "time associated with reliance on keyboard and mouse to document within an EHR." Productivity tools that would help doctors to better document care within an EHR (beyond the keyboard and mouse) were cited by 75% of the doctors surveyed as an incentive to EHR adoption, higher than the 69% that cited "stimulus money."

Perhaps as expected, 91% of physicians surveyed either "agree" or "strongly agree" that EHRs are only

as valuable as the data that is captured and made available in them. Much of the most valuable data that EHRs can retain—the data that can reduce costs and measure outcomes of treatments—must originate with physicians. A computer doesn't know if an entry makes sense, is complete, or instead was hurriedly placed there to fill up a required field. If speech recognition can help a physician use the time available to make a more complete entry, the EHR will have more value. Further, if the alternative is human transcription, some of the benefits of having the report available quickly are lost, increasing the risk of medical errors, which add both cost and suffering to the healthcare system. Peter Durlach, senior vice president of marketing and product strategy, Nuance Healthcare, summarized, "Utilization, actually getting physicians and healthcare provider organizations not just to deploy an EHR system, but to effectively use it for clinical documentation, remains a leading and often overlooked hurdle to national EHR adoption."

The healthcare segment at Nuance is healthy

In its second fiscal quarter ended March 31, Nuance reported non-GAAP revenues for Nuance's healthcare and dictation solutions were \$105.2 million, up 32% from the same quarter last year, and representing 44% of its \$238.8 million total non-GAAP revenues for the quarter (SSN, June 2009, p. 47). Nuance's healthcare portfolio of speech-enabled clinical documentation and communication solutions are intended to enable healthcare provider organizations to improve financial performance, enhance patient care, and increase patient safety. Nuance cites more than 3,000 healthcare customers worldwide.

Million-dollar-plus in savings

Nuance's eScription is its on-demand, enterprise-wide medical transcription platform that offers background speech recognition solution designed to make medical transcriptionists more effective by letting them edit text of a report rather than creating it from scratch from the dictated audio. At its annual eScription user meeting in May, Nuance gave special recognition to its 2009 eScription customer "Million Dollar Award" recipients. Twenty healthcare organizations from across the U.S. were acknowledged for saving at least one million dollars in transcription costs as a result of implementing the eScription platform for computer aided medical transcription. **Brigham and Women's Hospital**

(Boston, MA) saved \$10 million. Also at the event, two organizations received the annual productivity award, which is presented to eScripton customers with in-house medical transcriptionists (MTs) that achieved an average productivity gain over the past year of more than 125%.

John Shagoury, president, Nuance Healthcare, said, "This year, our customers reached remarkable new levels of productivity gains and cost savings, bringing the eScripton Million Dollar Club to surpass \$93 million in total savings for the healthcare industry."

Imaging e-Ordering Coalition

Nuance's healthcare portfolio includes radiology management solutions that improve the diagnostic imaging workflow by adding radiology decision support (RadPort) to enable data driven, real-time e-Ordering, speech recognition reporting (PowerScribe and RadWhere), critical test result management and communication (Veriphy), and a business intelligence solution (RadCube) for utilization management, patient and outcomes analysis, as well as clinical and operational trending.

In June, an alliance of leading healthcare providers, technology companies, and diagnostic imaging organizations joined forces to form the Imaging e-Ordering Coalition. This national initiative will promote Health Information Technology (HIT) enabled decision-support (e-

Ordering) as a solution to assure that all patients receive the most medically appropriate diagnostic imaging test for their specific condition. Members of the Coalition are devoting their energies to help educate policy makers and healthcare providers about the patient-centered efficiencies of e-Ordering, as well as recommending to lawmakers that the efforts to build incentives for prescribing medications electronically (e-Prescribing) should be broadened to include diagnostic imaging e-Ordering solutions.

Scott Cowsill, chair of the Imaging e-Ordering Coalition, and senior product manager of the diagnostic imaging team, Nuance Healthcare, observed, "Over the past decade, the healthcare industry has seen an astounding growth in high-tech diagnostic imaging utilization. The Imaging e-Ordering Coalition's mission is to help control this growth by ensuring that only medically necessary imaging procedures are ordered. Imaging e-Ordering provides physicians with highly valuable clinical information at the time they are ordering a patient's exam. By arming physicians with data to reinforce their clinical decisions, patient care can be improved and physician processes streamlined. Furthermore, the healthcare industry can significantly cut costs associated with unnecessary imaging procedures, which is by some projected to be as high as \$10 billion annually."

Nortel announces enhancements to its communications solutions

Support for latest IBM and Nuance speech engines and VoiceXML

Nortel Networks historically has had a major presence in call center solutions, but has been struggling under the pressure of Chapter 11 bankruptcy proceedings. The just-announced sale of some networking lines, LTE and CDMA assets, to **Nokia Siemens Networks** may provide more room to support its enterprise products, and enhancing those products may also make them more attractive to a purchaser, with **Avaya** rumored as a possible acquirer. Perhaps as a sign of this objective, on June 9, the company announced enhancements to its Agile Communication Environment ACE and Media Processing Server (MPS) and the upcoming global availability of Contact Center 7.0. The new releases increase integration options with **Microsoft** and **IBM** server environments.

Nortel introduced Release v3.5 of MPS, a Web-centric IVR self-service system. This release signals

an ongoing commitment to the Nortel MPS self-service platform. Release v3.5 supports the latest **IBM** and **Nuance** speech engines; applications written in VoiceXML; and expanded third-party integration support for Avaya Application Enablement Services (AES). MPS supports TDM or IP networks without re-engineering of existing data and telephony infrastructure. MPS v3.5 can be installed in current MPS 3.0 environments with a software upgrade.

In addition to the ACE and MPS enhancements, Nortel also announced the global availability of Contact Center 7.0 on June 30, with enhanced security and redundancy features. Florida-based **Palm Coast Data** has been trialing Contact Center 7.0 and using it to address stringent data protection requirements associated with Payment Card Industry