



Enterprise Express® Speech System

Carolinas Medical Center-Northeast Achieves Remarkable Results with the New Enterprise Express® Speech System

Carolinas Medical Center-NorthEast, Concord, NC, four-time member of Solucient's 100 Top Hospitals®, has built its outstanding reputation upon the continuous expansion of healthcare services and relentless development of new technologies and treatment innovations. This aggressive strategy has been exemplified in the successful adoption of Dictaphone's® new Enterprise Express Speech System from Nuance®.

Today, 18 transcriptionists use back-end speech recognition to edit 6.5 million lines annually. With this technology, transcriptionists are able to edit significantly more lines/hour than they can type. More than 300 physicians are leveraging speech recognition technology to generate 90% of their total report volume. Report turnaround time standards are now more easily upheld, and select transcriptionists are increasing their output by 100%. Greater transcription capacity has led to the exploration of opportunities to bring outsourced transcription in-house – which could translate to significant cost savings in the future.

Initial Adoption of Speech Recognition Technology

A pioneer in advanced technology, leaders at Carolinas Medical Center-NorthEast realized the value speech recognition could bring to their organization. After final implementation of Dictaphone's EXSpeech® in 2004, a handful of transcriptionists became diligent speech-driven editors, achieving modest productivity gains. Additionally, a select group of physicians, with "good" dictation habits attained high enough speech recognition accuracy rates to have their draft (speech-recognized) documents completed by the editing team.

Thinking Ahead

Although Carolinas Medical Center-NorthEast was certainly reaping the benefits of speech recognition, project leaders at the medical center envisioned a broader adoption of the technology, therefore achieving even more significant

Highlights

- 327 physicians currently using speech recognition
- 18 FTE transcriptionists using speech-editing technology
- 90% of all reports generated via speech recognition
- Transcriptionists are editing 300 lines/hour on average
- Highest performing transcriptionists are editing up to 470 lines/hr compared to industry average of 150
- Significant productivity improvement across all transcriptionists
- Select transcriptionists have increased their output by 100%
- SmartReWrite®, a cutting-edge, proprietary technology is being fully leveraged
- Average turnaround time is 24 hours, an improvement of 16 hours



Sandra Hardin, Transcription Manager, Health Information Management Department, Carolinas Medical Center-NorthEast

gains. By enlisting with Nuance's Beta Site Program, Carolinas Medical Center-NorthEast was able to leverage the new Enterprise Express Speech System before it was available to the general market. Working hand-in-hand with Nuance speech engineers and other professionals, a rollout plan was constructed and executed.

“The transcriptionists [who hadn't used speech recognition in the past] were apprehensive prior to training, but they left the first day of training saying ‘this new system is great; we don't need anymore training!’”

Smooth Transition

In an effort to roll out back-end speech recognition to the whole medical center, the entire transcription team was trained on the upgraded system. According to Sandra Hardin, Transcription Manager, “The transcriptionists [who hadn't used speech recognition in the past] were apprehensive prior to training, but they left the first day of training saying ‘this new system is great; we don't need any more training!’” The number of proficient speech editors on the transcription team soon jumped from 7 to 18. According to Hardin, the benefit of having such a versatile transcription team, all trained as speech editors, is that “they take the speech and typing jobs as they come in, enabling an efficient and effective workflow.”

“The seamless transition between editing and typing is amazing.”

Goals Achieved

Wendy Miller, Senior I.T. Applications Analyst, and Hardin identified two primary goals that would improve the overall transcription process within the hospital. Miller and Hardin strove to increase the number of physicians whose reports are generated through speech recognition while also increasing the speech-driven editing productivity of transcriptionists. Achieving these two goals would ultimately optimize the transcription team's efficiency, minimize report turnaround time, and maximize transcription cost savings.

As part of the initiative, Miller and Hardin identified 88 physicians that were plausible candidates for the new speech recognition software due to their dictation quality. With drastic improvements in the core speech recognition technology, 98% of the identified physicians attained draft status. There are currently 327 physicians dictating through the new Enterprise Express Speech System; 90% of the reports generated by these physicians, which include all worktypes, are edited as opposed to typed from scratch.

One limitation of the previous Enterprise Express Speech version was transcriptionists' ability to easily switch from a traditional transcription mode to a speech-driven editing mode. The new Enterprise Express Speech System affords the end-user this seamless transition because editing keystrokes (Dictaphone Hot Keys) now mirror traditional transcription keystrokes. “The seamless transition between editing and typing is amazing,” said Hardin.

SmartReWrite®, a cutting-edge, proprietary technology incorporated into the new Enterprise Express Speech System,

“We knew it was going to be good, but not this good!”

helps further optimize transcriptionist productivity. This technology learns the structure and style of each physician’s documents and can automatically correct grammar mistakes, handle rephrasing, customize formatting, and learn new medical terminology. “SmartReWrite is extremely helpful; it enables us to standardize report headings which we were never able to do before,” said Hardin.

As a result of incorporating the cutting-edge features of the new Enterprise Express Speech System, the transcription team at Carolinas Medical Center-NorthEast was able to attain significant productivity gains. On average, transcriptionists are editing 300 lines/hour, while highest performers are editing up to 470 lines/hour, which far exceeds industry averages of 150-200 lines/hour for traditional transcription. During December 2007, the transcription team was able to accommodate 20% more lines than they generated in June, 2007, while still adhering to their turnaround time requirement. This is clearly indicative of the increased capacity the transcription team can handle now that they’re fully leveraging the new Enterprise Express System on such a broad scale.

Carolinas Medical Center-NorthEast has implemented a “pay for productivity” model which undoubtedly seems to be promoting even higher levels of output within their transcription team. This pay model will ensure that speech-driven editing productivity will remain strong.

Turnaround time now averages 24 hours, which garners positive response from the Carolinas Medical Center-NorthEast provider community. Prior to implementing the

Challenge: Fully leverage the benefits of back-end speech recognition technology by expanding use to the entire medical center.

Strategy: Upgrade to the new Enterprise Express Speech System as part of Nuance’s Beta Site Program – being the first customer to leverage this cutting edge technology.

Results: 319 physicians and 18 transcriptionists currently use speech recognition technology to generate 6.5 million lines annually, constituting 90% of all reports. Productivity improvement across all transcriptionists using speech-driven editing is extremely significant; the transcription team is averaging 300 edited lines/hour; highest performing transcriptionists are editing up to 470 lines/hr and increasing their output by 100%. Transcriptionists are leveraging SmartReWrite® technology. Turnaround time average is 24 hours, an improvement of 16 hours.

new system, average turnaround time was upwards of 40 hours. Miller indicated that the ability to turn around reports in a timely manner enables the coding process to start sooner, and therefore facilitates faster billing. Consequently, this increased efficiency could also lead to better cash flow.

Toward the Future:

Significant gains within the transcription department have lead to greater transcription capacity. This has facilitated the exploration of opportunities to bring outsourced transcription in-house – which could translate to significant cost savings in the future. Miller concludes, “We knew it was going to be good, but not this good!”

Successfully utilizing Nuance speech recognition within their radiology department as well, Carolinas Medical Center-NorthEast is well poised as a leading medical center, offering outstanding service to providers and patients within its service community.

For product information please visit Dictaphone Healthcare Solutions at www.nuance.com/dictaphone or call 888-350-4836.

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