



## Dictaphone® Enterprise Speech System

Carolinas Medical Center-Northeast Increases Transcription Staff Capacity while Maintaining Turnaround Requirements

**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 the Dictaphone® Enterprise Speech System from Nuance.**

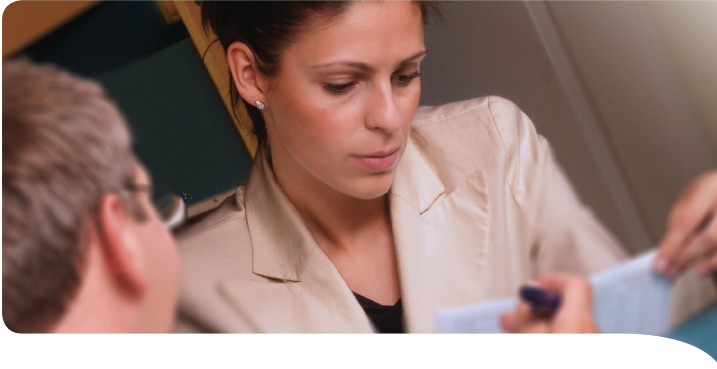
Today, 18 transcriptionists use back-end speech recognition to edit 6.5 million lines annually. With this technology, transcriptionists are able to edit significantly more lines/hour than they can type. More than 300 physicians are leveraging speech recognition technology to generate 90% of their total 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.

### Highlights

- Over 300 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



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

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### **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 Carolinas Medical Center-Northeast, “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 Carolinas Medical Center-Northeast, 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.”

### **Goals Achieved**

The team leaders identified two primary goals that would improve the overall transcription process within the hospital. They 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.

There are currently over 300 physicians enabled with Enterprise Turbo Speech; 90% of the reports generated by these physicians, which include all worktypes, are edited as opposed to typed from scratch.

One benefit of Enterprise Turbo Speech is the transcriptionists’ ability to easily switch from a traditional transcription mode to a speech-driven editing mode. Enterprise Turbo Speech system affords the end-user this seamless transition because editing keystrokes now mirror traditional transcription keystrokes. “The seamless transition between editing and typing is amazing,” said Carolinas Medical Center-Northeast.

SmartReWrite®, a cutting-edge, proprietary technology incorporated into Enterprise Turbo Speech, 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 Carolinas Medical Center-Northeast.

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

As a result of incorporating the cutting-edge features of the new Enterprise Turbo Speech, 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 Enterprise Turbo Speech on such a broad scale.

Carolinas Medical Center-Northeast has implemented a “pay for productivity” model which helps promote 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 new system, average turnaround time was upwards of 40 hours. Carolinas Medical Center-Northeast, 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.

**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 Turbo Speech as part of Nuance’s Beta Site Program – being the first customer to leverage this cutting edge technology.

**Results:** Over 300 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.

### **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. Carolinas Medical Center-Northeast 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 Nuance Healthcare at [www.nuance.com/healthcare](http://www.nuance.com/healthcare) or call 888-350-4836.**

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