



PowerScribe®

The Ottawa Hospital Uses PowerScribe® to Decrease Turnaround Time and Significantly Improve Quality of Radiology Reports

The Ottawa Hospital (TOH), the largest teaching hospital in Canada with 1,135 beds, conducts 500,000 diagnostic imaging procedures each year. Challenged with the salient issues of many radiology departments including slow report turnaround time, rising transcription costs, and lengthy medical care wait times, a plan to implement speech recognition was developed. After 9 months, average radiology report turnaround time decreased from upwards of 10 days to about 1-2 days; 80% of radiologists are self-editing their reports, and the quality of radiology reports has significantly improved. Substantial transcription cost savings has also been achieved. The pay back period will likely take 1.3 years; \$500,000 has already been saved in just 9 months.

Imaging Services Challenges

It was clear to management at TOH that adjustments needed to be made to improve their imaging services operation. “The impetus for change was to improve quality of care, and to ensure we provided timely reports for the clinicians,” said Connie Colasante, VP Professional Services. Report turnaround time was often as long as 10 days, which was unacceptable to clinicians who needed to have radiology reports in-hand to continue with the treatment planning for their patients. “During busy time periods, those turnaround time numbers climbed to 12-14 days...We were often the roadblock to the next step in the patient’s journey,” said Colasante. Dr. Chris Carruthers, Chief of Staff, further articulated the need for timely radiology reports, “With cancer and other potentially life-threatening diseases a delay in getting the x-ray report is significant.” Management at TOH considered adding more transcriptionists or outsourcing to quell their turnaround time issues, but this was not a cost effective option. They then turned to speech-driven technology as a viable option.

Highlights

- Largest teaching hospital in Canada with 1,135 beds
- Conducts 500,000 diagnostic imaging procedures annually
- Implemented PowerScribe integrated with McKesson PACS
- 43 attending radiologists and 25 residents are currently using PowerScribe to self-complete the majority of their reports.
- Average speech recognition accuracy is more than 98%.
- Average radiology report turnaround time decreased from upwards of 10 days to about 1-2 days
- 80% of radiologists are self-editing their reports
- Quality of radiology reports has significantly improved.
- Pay back will likely take 1.3 years
- \$500,000 has already been saved in just 9 months
- PowerScribe is advantageous to residents’ training



Connie Colasante, VP Professional Services

Speech Recognition Initiative

Colasante spearheaded a speech recognition initiative at TOH that would address imaging services challenges. Colasante and her team explored plausible speech recognition solutions, choosing PowerScribe® front-end speech recognition from Nuance as the most promising solution. “We already had a relationship with Nuance Healthcare, but we scanned the marketplace. We looked at which companies had a solid track record, who delivered on their technology, what their ROIs were and came to the conclusion that Nuance Healthcare was the vendor of choice,” said Colasante.

Given that TOH had already implemented their McKesson PACS, radiologists were able to view images digitally at reading stations. “PowerScribe would allow us to integrate the PACS and speech recognition application, getting reports to our clinicians in a more timely manner,” said Colasante. “For the radiologist, that meant the opportunity to dictate, review and sign a report in succession, while viewing digital images, resulting in an instantaneous report posted to our clinical information system or EHR,” she noted.

Smooth Implementation

Colasante and her colleagues orchestrated a plan which optimized executive and physician buy-in to the PowerScribe initiative. Seamless roll-out and training plans were developed. Colasante noted that the implementation went extremely well. Resistance from radiologists was expected, but since they were prepared well, the transition was relatively smooth.

Immediate Results

Goals established by TOH were achieved right away. Currently, there are 43 attending radiologists and 25 residents using PowerScribe to self-complete 78% of their reports. Dr. Rebecca Peterson, past Chief of Radiology, indicated that average speech recognition accuracy is upwards of 98%. Average turnaround time has dropped from more than 10 days to 1-2, and STAT reports from the Emergency Room are available within one hour. “We continue to get accolades day in and day out [in terms of improved turnaround time],” said Colasante.

Daily, 1,200 clinicians refer to imaging services at TOH. These clinicians indicate the tremendous impact improved turnaround time has had on their delivery of care to their patients. “Having reports available in a timely fashion facilitates more timely care to their patients and we have exceeded their expectations in terms of what speech recognition would deliver. We have some very happy customers,” stated Colasante. As an added bonus, the quality of reports has significantly improved.

Additionally, clinicians are able to discharge patients more quickly now. Prior to implementing PowerScribe, clinicians would call asking for results from a report that was dictated but not transcribed. “That scenario has disappeared because we’re able to provide reports in a more timely fashion,” said Colasante.

Enhancing Radiologists’ Work-Life

According to Colasante, PowerScribe has improved the quality of radiologists’ work-life. Radiologists are able to complete their work more efficiently, so therefore have more time to address other patient care challenges. “With the addition of speech recognition to the PACS, radiologists are able to take the two technologies and in one sitting are able to provide diagnostic results quickly to their referring clinicians and they’ve improved their working relationships with their clinical colleagues. They’re much more valued as contributors to overall quality of care at the hospital,” said Colasante. This results in peace of mind for the radiologists.

“Now, it’s fantastic. I can teach the residents how to make a good report, because the report is onscreen. PowerScribe is a really good teaching tool.”

Improved Resident Workflow

The resident workflow within PowerScribe has been advantageous for TOH as well. According to Guy Morency, Director of Diagnostic Imaging, “Before bringing in speech recognition, the residents would often write down their preliminary findings. They would then go over their notes with an attending radiologist which was very labor intensive. Now, they dictate and send a preliminary report to the radiologist instantly for review, improving the process and saving time. Radiologists are now spending more time on the teaching element.” Past Chief of Radiology Peterson concurs, “Now, it’s fantastic. I can teach the residents how to make a good report, because the report is onscreen. PowerScribe is a really good teaching tool.”

Demonstrated ROI

The implementation of PowerScribe has cut the \$1,000,000 annual transcription bill substantially. The pay back will likely be 1.3 years; \$500,000 has already been saved in just 9 months. TOH has facilitated the investment of this extra money in other clinical services, further promoting quality patient care.

Investment has increased in MRI and CT, so equipment is running longer. Imaging volumes have increased, meaning more work for the radiologists. “But, we’ve been able to increase our service delivery without increasing our transcription pool,” noted Colasante. Valerie Gamache-O’Leary, Director of Information Systems, sums up the experience of TOH with PowerScribe, “The project was an absolute success!”

Challenge: Faced with unacceptably long turnaround times, increasing diagnostic imaging exam volumes, rising transcription costs, and lengthy medical care wait times, TOH needed to find a cost-effective solution.

Strategy: Roll-out PowerScribe front-end speech recognition solution to all attending radiologists and residents throughout the campus integrated with the McKesson PACS.

Results: Nearly 500,000 diagnostic imaging procedures are conducted annually via PowerScribe, 43 attending radiologists and 25 residents are experiencing average speech recognition accuracy rates of 98%. Average radiology report turnaround time decreased from upwards of 10 days to about 1-2 days and quality of radiology reports has significantly improved. Return on investment will likely take 1.3 years, while \$500,000 has been saved in just 9 months. Residents are significantly benefiting from the PowerScribe workflow.

Toward the Future

The successful implementation of speech recognition and PACS within radiology is followed by a plan to implement back-end and front-end speech recognition throughout the entire organization. The Ottawa Hospital is looking to standardize on Nuance Speech Recognition and continue to offer the technology to nearly all physicians across the massive hospital campus.

TOH will explore the option to fully leverage their OACIS EHR by using speech recognition for free-form narrative dictation entry. “We have a lot of clinicians who are asking about speech recognition; they’re eager to adopt the technology because they have seen the success in diagnostic imaging,” said Colasante. Chief of Staff Carruthers offers his full support of the ongoing speech recognition initiative: “The solution administrative directors of radiology have found has been hugely successful.” The future is bright for The Ottawa Hospital.

For product information please visit Nuance Healthcare at www.nuance.com/healthcare or call 800-350-4836.

© 2009 Nuance Communications, Inc. All rights reserved. Nuance, the Nuance logo, and PowerScribe are trademarks and/or registered trademarks of Nuance Communications, Inc., and/or its subsidiaries in the United States and/or other countries. All other trademarks are properties of their respective owners.

The experience speaks for itself™