



Children's Hospital provides faster service through speech recognition

Integration of **SpeechMagic™** has eliminated two-week backlog of medical reports.

Customer story

The Children's Hospital at Westmead (CHW) is located in New South Wales, Australia. A teaching hospital of the University of Sydney and the University of Western Sydney, CHW has a bed capacity of 340 and serves more than 25,000 patients annually. This tertiary hospital has launched several activities to improve clinical processes with a focus on managing the waiting list and on keeping the children's stay in hospital as short as possible. Two years ago Philips partner, Project Speech, advised the hospital's radiology and nuclear medicine departments on the benefits of digital dictation and speech recognition in the clinical workflow. When both departments introduced the speech recognition platform SpeechMagic, they went from a two-week backlog of medical reports to same-day reporting.

State-of-the-art technology

With six consultant radiologists and four fellows, the radiology department's services include fluoroscopy, computed tomography (CT) scanning, ultrasound as well as magnetic resonance imaging. "In the last two years, we increased patient examinations in all modalities, with more service hours to expand coverage in all areas," explains Dr. Christopher Wong, Director of Radiology. "Our process improvement activities have shown good results and our ultrasound waiting list has been reduced from six to eight weeks down to three to four weeks." Recently, a 64-Slice CT scanner and state-of-the-art ultrasound machine have been installed.

The department of nuclear medicine employs four nuclear medicine clinicians and two fellows, and provides a comprehensive range of diagnostic and therapeutic radionuclide procedures to paediatric patients. These include bone, renal, gallium, hepatobiliary, gastrointestinal, cardiac, lung, thyroid, and CSF and brain studies. "In conjunction with Westmead hospital, we also perform PET scanning for cancer and neurological conditions," says Prof. Robert Howman-Giles, Department Head of Nuclear Medicine.

Increased efficiency

To manage their clinical data and the information gathered in 55,000 reports per year, the departments of radiology and nuclear medicine use a picture archiving and communication system (PACS) and radiology information system (RIS) provided by Siemens. When both systems were updated in 2005, Project Speech integrated the speech recognition technology SpeechMagic into the departmental RIS. "Our typists were worried that they would lose their jobs," recalls Chief Radiographer, K. C. Fan. "But we still employ all three secretaries. Only the backlog of our medical records has vanished." Before the installation of SpeechMagic, the departments suffered from a backlog of approximately two weeks and sickness or vacation periods would sometimes lead to even longer turnaround times. Now all reports are finalized at the end of the same day on which they were created. "We decided to install SpeechMagic in order to increase our departments' efficiency as well as the accuracy of our reports and we are very pleased with the results," says K. C. Fan. "With same-day reporting, our staff and referring physicians can start or continue treating their patients much sooner because they don't have to wait for the results of our exams. Our investment in speech recognition provides obvious benefits for the health of the children in our care."

Improved performance



“Our investment in speech recognition provides obvious benefits for the health of the children in our care.”

K. C. Fan, Chief Radiographer

CHW is using background speech recognition which means that the clinicians didn't have to change their way of working. They will dictate their report into a dictation microphone and the audio file will be sent to the department's secretaries together with the written text. The secretary no longer needs to type the report but simply reviews and corrects the recognized text. “The system is very user friendly and the recognition rate is outstanding. It's usually 95% when a clinician starts using the system and will go up to 99%,” comments the chief radiographer. As the typists used to have a very stressful job they now benefit from improved working conditions. Additionally, a colleague going on holiday or on sick leave does not pose an issue for their daily tasks any more. The

secretaries can now spend much more time on each report and the quality of their work has improved, as well. When the accuracy of the medical reports increased, the report verification time decreased accordingly. Both departments benefit from a more efficient workflow and save time for the typists as well as for the clinicians. “Without a doubt, speech recognition should be an integral part of any modern PACS and RIS system,” concludes K. C. Fan. “It is a small investment compared to the PACS and RIS infrastructure but it makes an enormous improvement to the performance of a department. At our hospital, other departments have been impressed by our success. They are now investigating how they could benefit from the implementation of speech recognition.”

Did you know...

With more than 8,000 installations worldwide, Philips SpeechMagic has established itself as the leading speech recognition software for document creation and transcription. The Children's Hospital at Westmead has integrated SpeechMagic into its RIS and PACS and has increased workflow efficiency as well as the accuracy of medical reports.



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