

Case Study

Nambour General Hospital

Sunshine Coast



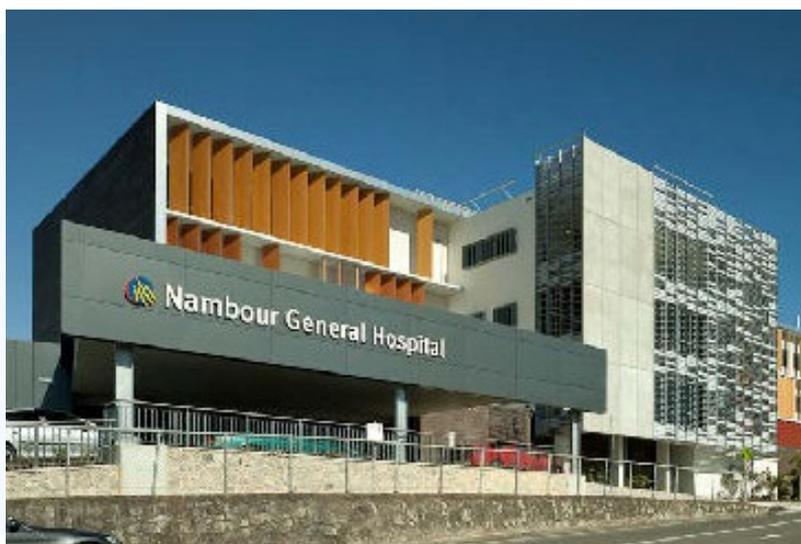
RADIOLOGY
REPORTING IN
AN EPR
ENVIRONMENT



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WORKFLOW
FOR YOUR
EXISTING RIS



“Clinicians referring patients for an MRI, Ultrasound or CT are now able to view the report on their system within one or two hours on average.”
Dr Troy Stapleton, Director of Radiology

In many parts of the world, radiologists are a scarce “resource”. Australia makes no exception. Outsourcing the interpretation of radiology images helps tackle staff shortage in radiology, but providers need to make sure to return their findings quickly. By using speech recognition, Nambour Hospital in Queensland, Australia has reduced turn-around time for radiology reports from 33 to 5 hours – a drop of 85%.



“Public radiology in Queensland is plagued by a shortage of radiologists to do the reporting”, explains David Ward, Director - Medical Imaging Services, Southern Cluster, Sunshine Coast - Wide Bay Health Service District. “They therefore outsource the reporting function to private radiology firms and they pay a lot of money for that. Or, they decrease the value of the input from radiologists and do not report on plain-film studies.”

Some hospitals might only report on half of the studies they do and before speech recognition, Nambour Hospital itself reported on about 80% of the performed studies, Ward tells us. “For a plain-film study we would not produce a report, but only add a note saying that if a clinician or referrer needs more detail they should contact the radiologist”.

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The radiologists are only one side of the coin. On the other side is the audio typist who transcribes the dictations and produces the reports. Needless to say, that Nambour Hospital was experiencing the transcription backlogs common for the healthcare industry. *"Some reports took 6-7 days to be produced"*, David says.

Nambour turned to Soliton IT, a Nuance integration partner, to evaluate the potential of a technology "many people tried 10 years ago with dissatisfactory results": speech recognition.

A DECADE LATER – A WORLD AWAY

Speech recognition technology of today is different from what it was ten years ago. The first programs didn't deliver on their promise. Today, they do. In many European countries for example, more than 50% of radiologists are working with speech recognition – so do two out of three in North America. Speech recognition can support the radiology workflow, especially with regards to faster turnaround-times for reports – but it isn't the answer to all challenges. David comments:

"Some people think it is the answer to all the problems, but it is not. We don't have any misconception that speech recognition will replace audio typists. But it makes them happier people - previously the transcriptionists were constantly fighting against a backlog of tapes and later audio files waiting to be typed. They never had a sense of achievement. They left Friday evening, knowing that Monday morning the piles will have increased. It was demoralising".

CREATING SYSTEM UNITY

Soliton IT Workflow Manager with Nuance speech recognition has been implemented for 15 radiologists at Nambour. Centrally installed and managed, the system was expanded into Caloundra Hospital and Gympie Hospital, so that more than 100 doctors are working with Soliton Workflow Manager powered by the Nuance speech technology. A key benefit is the HL7 interface to the Radiology Information System (RIS) and the desktop integration with the Picture Archiving and Communications System (PACS) which eliminates what David Ward says once was "the number one big issue for potential inaccuracy": the possibility of a medical secretary typing the wrong report for the wrong patient. *"Thanks to the [Soliton's] desktop integration with the PACS and RIS, image, report and patient file are one single unit and it is virtually impossible to mix them up."* David underlines.

Radiologists are given the choice between digital dictation and front-end speech recognition. Latter provides great relief during weekend-shifts, as instant report creation by the doctor is possible. *"We have fairly young radiologists accustomed to operating a mouse. They are heavy users of the speech recognition system and encourage other to come on board. We didn't have any acceptance problems,"* says David.



FACTUAL DECISION SUPPORT

“Over the last 30 years the job of radiologist was to dictate reports. I wasn’t involved in dealing with the patient conditions before,” says Ward. Today, they have multi-disciplinary team meetings in which radiologists get together with surgeons, technologists or medical students to discuss a patient and decide on treatment options.

“If there is a report on the system from 10 am, it can be discussed in the team meeting that same day,” says David Ward. CT reports for example, are always prioritised. “CT reports are often used for clinical decision making – more so than plain films. With CT, but also Ultrasound, clinicians are more dependent on radiology knowledge – the interpretation is essential”.

Thanks to speech recognition, all Ultrasounds dictated up to 3pm have reports attached on the same day. “The system is working fantastically well, the features and the improved integration is making everyone's life so much easier” concludes Ward.

REPORTING+ - KEY BENEFITS

- Proven integration with Carestream PACS
- Flexible, modular and adaptable to individual user and site requirements
- Optimised for remote reporting
- Configurable workflows via live dashboards
- Intuitive and easy to learn
- Interactive graphical statistical analysis
- Mobile application
- Full audit trail
- Support for larger environments



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