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Accelerating Emergency Department documentation with AI in Mackay

Nuance Communications

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As Emergency Departments throughout Australia struggle to cope with patient numbers amid severe staff and bed shortages, there is a simple way to increase efficiency and reduce the burden: accelerate documentation with AI. In his award-winning presentation at the Clinical Excellence Showcase 2022, emergency specialist Dr Andrew Brier shared how he's using Dragon Medical One to transform the speed and quality of Emergency Department documentation.

We've all heard about the queues of ambulances outside Emergency Departments (EDs) across the country. It's a worrying sight for patients and clinicians alike, and anyone who works in an ED will recognise the main causes of the problem.

Overwhelmed by patient numbers, wards often don't have room to admit new patients, so people who should be admitted take up a bed in the ED. And with chronic staff shortages caused by burnout and COVID-19 or influenza infections, there are fewer ED staff to process patients, so they often wait for hours or give up and leave without seeing a clinician.

Under these circumstances, it's not surprising that the most recent [Australian Healthcare Index](#) survey found that nearly 40% of respondents who had visited a public hospital ED in the previous six months were dissatisfied with their experience.

It's clear that significant efficiency improvements are needed to increase ED patient throughput. Most patients who present at the ED are discharged rather than admitted to a ward, so using AI to accelerate documentation can have a significant impact on efficiency. When you're seeing more than 81,000 presentations at the ED each year, like Mackay Base Hospital in Queensland, every minute saved per patient adds up to a dramatic impact on efficiency.

We recently looked at how Mackay is using Dragon Medical One—Nuance's conversational AI workflow

assistant and documentation companion—to accelerate Emergency Department documentation and [improve patient flow and safety in the ED](#). At this year's Clinical Excellence Showcase in Queensland, Dr Andrew Brier, an emergency medicine specialist at Mackay, really brought the value of the solution to life. Dr Brier won the Best Presentation Award with his session on [how Dragon Medical One has made a huge difference to his working day](#).

Realising the power of voice

Thousands of clinicians worldwide use [Dragon Medical One](#) to capture the full patient story and automatically create complete, accurate clinical documentation using their voice. It accelerates documentation time significantly, but before Mackay implemented Dragon Medical One last year, Dr Brier was skeptical.

"To be honest, I didn't think this was going to work," he said. "I fancy myself as a reasonable typist—maybe 50 or so words a minute, taking into account corrections. And I thought, 'How is voice-to-text going to work in a busy Emergency Department?' But it does. After a week or two, I seemed to be much more efficient than I used to be. And in a few more weeks, I was totally addicted. I've gone beyond that now—I'm dependent on it."

Faster Emergency Department documentation

Using the clinical speech recognition in Dragon Medical One, Dr Brier has reduced the time he spends on documentation from around 4-5 minutes per patient to 2.5 minutes per patient.

Dr Brier also shared analytics data showing that the average ieMR user in Queensland spends 12 minutes per patient on documentation, compared to his 2.5 minutes with Dragon Medical One. "I'm documenting my patient journey nearly 10 minutes faster than the average," he said. "If we can document their journey quicker, we can get them out and free up those beds, reduce the times in the waiting room, and improve patient satisfaction."

More efficient workflows

Dr Brier is also using voice commands in Dragon Medical One to accelerate the ordering process. He's created voice-activated bundles that enable him to quickly order everything needed for a chest pain pathway, a sepsis patient, and a major trauma. By saying a simple command and then checking a few optional boxes, he can have an order ready to sign off in 10-12 seconds.

"I had a group of clinicians from my department, and I said, 'I want you to order all of these things for a test patient.' The fastest order via their preferred method was 45 seconds," he said. "They were going as slow as 1 minute 20 seconds to order exactly the same thing that I can do in 10-12 seconds."

Better-quality clinical notes

While Dragon Medical One has helped Dr Brier become more efficient, he believes it's also enabled him to enhance the quality of his documentation.

"What's really hard to capture as a metric is quality, and I feel my quality of documentation has improved markedly," he said. "Particularly for circumstances where you want more than just dot points on a page and you want to be more descriptive, like referral letters, complex end-of-life discussions, child safety issues, and domestic violence issues. Getting all that down in a time-efficient manner, with improved quality, is where this really comes into its own."

Saving time and changing lives

Using Dragon Medical One, Mackay Base Hospital is now saving one hour per clinician per shift. And the benefits extend beyond the ED; Dr Brier shared the experience of a colleague who's a mental health clinician and has to create very complex, detailed documentation (she also has dyslexia, which can make typing slow and difficult). By using her voice instead of a keyboard, she's reduced the time it takes to create clinical notes from around three hours per patient to just 45 minutes.

Accelerating documentation time frees clinicians to see more patients and get them the life-changing and life-saving treatment they need faster. But as Dr Brier pointed out, it also has an impact on clinicians' job satisfaction and quality of life. "If we're happier with our work performance, we're going to reduce burnout," he said. "If we're able to free up time to have lunch, to have coffee, to go home on time, it's going to reduce burnout as well."

Extending the power of AI in Emergency Department documentation

In the first year since deploying Dragon Medical One, Mackay Base Hospital has seen some remarkable improvements in documentation speed and quality, and workflow efficiency.

So, with faster documentation, more efficient workflows, and AI-powered best practice advice, ED clinicians can see more patients and have confidence that those patients will continue their journey in the right direction—and achieve better outcomes.

Tags: [Dragon Medical One](#), [Customer success story](#), [Clinical documentation](#), [Emergency medicine](#)

More Information

View the Queensland Clinical Excellence Showcase presentation

Want to learn more about Dr Brier's presentation and the measurable results achieved with Dragon Medical One?

[Learn more](#)