Waitemata
District Health Board

Best Care for Everyone

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For immediate release

Predictive medicine project gives stroke patients a better idea of how to plan for their future

You've just had a stroke. It's very early days and you're hospitalised - asking yourself: what does the future hold?

Clinical testing begins this month at Waitemata District Health Board to see whether a computer might be able to give patients and their families a clearer answer to that question - putting them in a better position to plan for longer-term living and care arrangements.

It's part of the global "big data" phenomenon that sees masses of patient information analysed by computers and data scientists to predict outcomes for patients – giving physicians far greater insight into individual cases and how they might progress.

Big data and machine learning technology is being developed by multiple specialties worldwide for a variety of purposes, including the screening of people for a range of health issues likely to affect them due to a broad range of factors including lifestyle and age.

But the stroke project being worked on by the DHB is specifically designed to address the uncertainty faced by new patients and their families after the event. About 800 Waitemata residents experience stroke each year and outcomes for each vary widely.

"Doctors have to give families some expectations," Waitemata DHB Institute of Innovation and Improvement Head of Analytics Delwyn Armstrong says. "But often they are basing their prognosis on their own clinical experiences, which may be limited, or literature that might not be applicable to a specific patient. Local data, when you have enough of it, is an important way of tailoring information to particular individuals."

Delwyn says the predictive tool about to be trialled by Waitemata DHB produces percentage-based rankings to help clinicians estimate whether patients will need rehabilitation; how long they could be in hospital; and what their living arrangements might be one month after a stroke.

"It could be that the patients will most likely be in a rest home or private hospital; they may also be at home with support – or even at home and living independently.

The tool is being developed through the Precision Driven Healthcare Partnership -$37.8 million collaboration between the University of Auckland, Orion Healthcare and Waitemata District Health Board to explore smarter use of health information and analytics. It makes good use of a stroke register maintained by the DHB over the last five years to capture valuable anonymous information about stroke severity, type and time of onset.

Waitemata DHB Stroke physician and neurologist Dr Nicholas Child says computer-generated outcomes have potential to be hugely useful. "This tool will give our teams guidance from a very early stage around the likely trajectory of the patient. It's important that patients and their families do have an idea of the seriousness of their situation so that they can think about the long term and start to plan ahead."

Ends

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