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(For immediate release)

Robot-assisted knee surgery a national first for Waitemata DHB

Drainlayer Adam Squire was back at work just two weeks after having the country's first robot-assisted partial knee replacement surgery at Waitemata DHB's North Shore Hospital in Auckland.

The 52-year-old entered the annals of New Zealand medical history when he was wheeled into theatre for the ground-breaking operation at the hospital's Elective Surgery Centre on August 15.

Overseas experience already shows the robot technology is incredibly accurate and consistent – delivering better outcomes for patients, more effectively than ever before.

Adam's case was no different. The father of three was ready to go home the following day and did his first 5km walk at a local park within the fortnight.

"I understand that surgery without the robot usually may mean at least a month off work," he says. "To be back driving a digger in just two weeks was incredible."

The Mako Unicompartmental Knee Replacement (UKR) system was enlisted for Adam's operation – the first of an estimated 60 per year that will be carried out as part of a study designed to compare results with current practice.

The system was first developed in the US by the Mako Surgical Corporation in 2005 and is now owned and manufactured by leading medical technology company Stryker.

More than 300 units exist worldwide and Mako has been used effectively in Australia since 2015.

Waitemata DHB Orthopaedics Clinical Director Matthew Walker performed both operations and is thrilled with the results.

"The robot allows consistently accurate placement of implants which ultimately means better outcomes for patients," he says.

"It reduces the magnitude of the surgery and improves the longevity of the implant, resulting in a shorter stay in hospital, earlier mobilisation, less pain, a greater short to mid-term outcome and increased patient satisfaction".

The human knee consists of three main compartments.

Advanced osteoarthritis is among diseases that can eventually lead to the need for surgery ranging from partial to total replacement.

The Mako UKR system aims to replace just one part of the damaged knee.

The implant is therefore smaller and the surgery less invasive.

Precise implant placement is difficult to achieve consistently without robotic assistance.

Mako UKR is considered a major game changer –enabling significant numbers of patients who would have had total knee replacements to have partial knee replacements instead with an improvement in patient outcomes.

“It enables surgeons to tackle more challenging procedures with a higher comfort level and provides a less painful treatment option for patients with common knee diseases,” Mr Walker says.

“The smaller implant required for a UKR also means the costs of surgery are reduced. That means we have more resource to divert towards other patients.”

Patients involved in the study will receive post-operative checks, six weeks, six months, one year, two years, five years and 10 years after their surgeries.

Results will be measured against an equal number of patients who have had total knee replacements carried out as part of the same trial.

“All patients will have a CT scan done on their knees prior to surgery,” Mr Walker says. “The allocated number of total knee replacements will then be compared with the robot-assisted UKRs to determine the clinical and cost differences between the two.”

Waitemata DHB CEO Dr Dale Bramley says the project is part of an ongoing drive to relieve suffering, reduce inequalities and promote wellness through better use of innovation and technology.

“This kind of technology is predominately only available in the private health sector overseas so we are very happy to be able to offer it to our community as a whole,” he says.

“The Mako system is yet another example of the innovative edge this DHB is actively seeking and developing in order to better patient outcomes in the Waitemata catchment.

“To have a patient on his feet and back at work in such a short time after an operation like this is quite remarkable and a sure sign of our commitment to provide a world-class health service that is second to none.

“It is very pleasing to see our organisational promise of best care for everyone being brought to life in such a meaningful way.

Waitemata DHB’s acquisition of the Mako technology was made possible through the efforts of its fundraising arm, the Well Foundation.

“We are totally focussed on improving health outcomes and patient experience,” Well Foundation CEO Andrew Young says. “This project got a huge tick on both counts.”

Donors include the Ted & Mollie Carr Trust, the Lion Foundation and the Freemasons.

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Caption 1: Adam Squire, back at work and looking forward to a more active life after having the country’s first robot-assisted partial knee replacement surgery at North Shore Hospital

Caption 2: Waitemata DHB Orthopaedics Clinical Director Matthew Walker with the Mako Unicompartmental Knee Replacement (UKR) system

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