

The rate of anterior cruciate ligament reconstruction in Australia is high: a national registry is needed

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Supporting a registry is an investment in the long term health of our nation

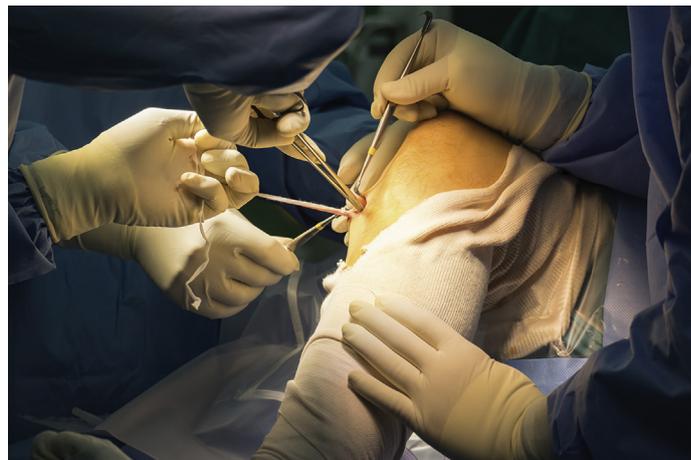


This issue of the *MJA* includes the results of an important study that again indicate the high rate of anterior cruciate ligament (ACL) reconstruction in Australia.¹ It was already known that Australia has relatively high rates of knee ACL injuries, surgical reconstruction,^{2,3} and knee replacement (arthroplasty).⁴ The new data highlight worrying increases in the rates of both primary and revision ACL reconstruction, particularly in adolescents.¹ Many factors could potentially explain an increase in the rate of ACL surgery, including more accurate diagnosis, greater access to surgery, and more people playing sport (factors that would be pleasing), but also an increase in the rate of ACL injuries per exposure (which would be disappointing). It is harder to envisage a positive explanation for an increase in the revision ACL reconstruction rate, but it is important to differentiate between contributors to failure, particularly between surgical factors (ie, techniques associated with a higher failure rate) and rehabilitation factors, such as returning to sport before adequate functional recovery has been achieved.^{5,6}

In order to better answer questions about increases in ACL surgery rates, further information about both the results of surgery and the causes of injury is needed. It is clear from inter-

national experience^{7,8} and local community registries⁹ that ACL registries are a feasible and cost-effective strategy for gathering information about the causes of ACL injury, about non-operative and surgical management, and, ultimately, about long term progression to knee arthroplasty.

Scandinavians have been world leaders in national medical registries, starting with the National Leprosy Registry of Norway in 1856. In 1975, the Swedish knee arthroplasty registry was the first national registry in orthopaedic surgery.¹⁰ The primary



objective of the first arthroplasty registries was the early detection of inferior procedures, a goal achieved from 1995 onwards.¹⁰ Australia and New Zealand were among the first non-Scandinavian countries to establish national arthroplasty registries (in 1999),¹¹ with the Australian registry also successfully identifying poorly performing prostheses.

The Scandinavian countries were also the first to establish national registries of ACL reconstruction surgery,⁷ although New Zealand currently has the only national database of all knee ligament injuries, whether managed surgically or non-surgically.¹² Australia has undertaken a pilot study and established the feasibility of an ACL surgery registry,³ but still has not joined the growing number of countries with national registries, despite having perhaps the world's highest rate of such operations.¹³

If Australia can join the list of countries with an ACL surgical registry, factors can be assessed that might explain the high re-injury rate for young patients after ACL reconstruction and the rapidly increasing rate of revision ACL reconstruction.^{1,14} These factors are also relevant to Australia's high rate of total knee replacement, as patients with a history of ACL injury have a sevenfold greater risk of total knee replacement.¹⁵ ACL registries (including any to be developed in Australia) should ideally also capture injuries that do not lead to surgery, as this would allow both comparison of their outcomes with surgically managed injuries and assessment of preventive factors based on more complete incidence data.

Ultimately, however, we want to prevent ACL injuries. It is known, for example, that certain movement patterns^{14,16} and ground surfaces¹⁷ are modifiable risk factors for ACL injury. There is some evidence that prevention programs can be effective, and they should therefore be encouraged and appropriately monitored.¹⁶ A properly designed ACL injury registry would improve our

understanding of the factors that influence the risk of ACL injury, allowing us to develop effective preventive strategies.

A review of arthroplasty registries concluded that government funding and support is critical for success.¹¹ This support should be seen as an investment in the long term health of our nation; the funding of ACL registries overseas has been justified by the important research findings from the countries that have invested in them. Although there are significant challenges to establishing an ACL registry,³ Australia should aspire to enjoying the same success we have experienced with our highly valuable arthroplasty registry.

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