Physiotherapy Research Foundation

Grant Case Study

Researcher Name: Ilana Ackerman

Grant Type & Year: Seeding Grant, 2009

Research Title Equitable treatment of severe osteoarthritis: a population-based assessment of burden and barriers

Research Background

Knee and hip osteoarthritis is associated with significant pain and reductions in quality of life. According to the Australian Orthopaedic Association National Joint Replacement Registry, 48,449 hip replacement and 61,954 knee replacement surgeries were performed in Australia in 2020.[1] The estimated cost of hip or knee replacement surgery in Australia is between $AUD19,000 and $AUD30,000 per person, with $1.2 billion spent on hospital admissions annually.[2]

With the number of hip and knee joint replacements increasing, and a revision burden of 8% for hip and knee replacements,[3] the cost to the Australian healthcare system is significant.

About the Grant Recipient

Associate Professor Ilana Ackerman is a leading musculoskeletal epidemiologist and orthopaedic physiotherapist specialising in the impact of hip and knee osteoarthritis. She is Deputy Director (Research) of the CCRET in the School of Public Health and Preventive Medicine, Monash University, Chair of the Editorial Board of the Journal of Physiotherapy and sits on the National Advisory Council of the Australian Physiotherapy Association.

Widely published, Ilana has produced over 100 peer reviewed publications which have been cited more than 31,000 times.[4] She has received many awards for her work, supervises PhD students and has held expert advisory roles at state, national and international level. She is the Principal Advisor to the Australian Orthopaedic Association National Joint Replacement Registry for their national patient-reported outcomes program.

The Impact on Knowledge Production and Further Funding

Associate Professor Ackerman was awarded an NHMRC Public Health Early Career Fellowship (2008-2015) to support her research into the impact of severe hip and knee osteoarthritis in Australia. The PRF grant contributed to this program, providing funding necessary to conduct the first national survey of hip and knee osteoarthritis in Australia.

The outcome from the project "Comparison of Health-Related Quality of Life, work status and health care utilization and costs according to hip and knee joint disease severity: Results from a national Australian study" was one of the first national studies on hip and knee osteoarthritis in Australia. It was published in Physical Therapy in 2013 and has been cited 48 times.

This project informed Ilana's future work, shifting her focus from clinical research to epidemiological studies investigating the broader societal and health system impacts of osteoarthritis and joint replacement surgery in Australia. She has gone on to attract over $5 million in funding for research from various sources including the NHMRC, Victorian Government, HCF, Arthritis Australia and Musculoskeletal Australia.

Associate Professor Ackerman believes that the main benefits of the PRF grant program is that it helps researchers build their track record for future grant applications and provides funds for discrete elements of projects that would not normally be funded from other pools. Given the competitive nature of fellowship funding, and how difficult it is for physiotherapists to access, Ilana would support the introduction of PRF fellowships to early career researchers to further build researcher capacity.

Looking to the Future: Health System Benefits

With the cost and incidence of knee and hip joint replacement surgery increasing in Australia, Associate Professor Ackerman recently published a paper that estimates the annual burden of primary total knee and hip replacement surgery for osteoarthritis in Australia will increase by 276% and 208% respectively by 2030, at a cost of over $5 billion to the Australian healthcare system.[5] She is currently working on Victorian Government funded research into ways of monitoring the burden of revision joint replacements, as well as investigating ways to reduce inappropriate joint replacement surgery through the implementation of effective non-surgical programs.

Associate Professor Ackerman is also a strong advocate for improving the quality of care for people with osteoarthritis and hopes to raise community awareness that osteoarthritis is a chronic condition that affects younger as well as older individuals with broad impacts on wellbeing and quality of life, beyond pain and stiffness.

1. Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR) https://aoanjrr.sahmri.com/hips Accessed 21/04/21
2. Ackerman, I.N., Bohensky, M.A., Zomer, E. *et al.* The projected burden of primary total knee and hip replacement for osteoarthritis in Australia to the year 2030. *BMC Musculoskeletal Disord* **20,** 90 (2019). https://bmcmusculoskeletdisord.biomedcentral.com/articles/10.1186/s12891-019-2411-9#citeas Accessed 22/04/21
3. AOANJRR Annual Report 2020 https://aoanjrr.sahmri.com/documents/10180/689619/Hip%2C+Knee+%26+Shoulder+Arthroplasty+New/6a07a3b8-8767-06cf-9069-d165dc9baca7 Accessed 21/04/21
4. https://scholar.google.com.au/citations?user=IfJL9aAAAAAJ&hl=en
5. Ackerman, I.N., Bohensky, M.A., Zomer, E. *et al.* The projected burden of primary total knee and hip replacement for osteoarthritis in Australia to the year 2030. *BMC Musculoskeletal Disorder* **20,** 90 (2019). https://doi.org/10.1186/s12891-019-2411-9