

CHESM 2024 Annual Report

Centre for Health, Exercise and Sports Medicine

Department of
Physiotherapy

Faculty of
Medicine,
Dentistry
and Health
Sciences



THE UNIVERSITY OF
MELBOURNE



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Acknowledgement of Country

The University of Melbourne acknowledges the Traditional Owners of the unceded land on which we work, learn and live: the Wurundjeri Woi Wurrung and Bunurong peoples (Burnley, Fishermans Bend, Parkville, Southbank and Werribee campuses), the Yorta Yorta Nation (Dookie and Shepparton campuses), and the Dja Dja Wurrung people (Creswick campus).

The University also acknowledges and is grateful to the Traditional Owners, Elders and Knowledge Holders of all Indigenous nations and clans who have been instrumental in our reconciliation journey.

We recognise the unique place held by Aboriginal and Torres Strait Islander peoples as the original owners and custodians of the lands and waterways across the Australian continent, with histories of continuous connection dating back more than 60,000 years. We also acknowledge their enduring cultural practices of caring for Country.

We pay respect to Elders past, present and future, and acknowledge the importance of Indigenous knowledge in the Academy. As a community of researchers, teachers, professional staff and students we are privileged to work and learn every day with Indigenous colleagues and partners.

Our areas

Research

This includes post-doctoral training and research higher degree supervision.

Engagement and translation

Ensuring research is informed by and impacts key stakeholders.

Leadership and Service

Is within and external to the University of Melbourne.



2024 CHESM snapshot



35 staff and students



60 research publications



23 awards



15 new grants



14790 registrations for
online resources



63 presentations

CHESM

The Centre for Health, Exercise and Sports Medicine (CHESM) is a multidisciplinary research Centre established by the Department of Physiotherapy, Melbourne School of Health Sciences, Faculty of Medicine, Dentistry and Health Sciences at the University of Melbourne in 2000.

Our main research focus is on the role of non-drug, non-surgical strategies, particularly exercise in prevention and management of musculoskeletal conditions such as osteoarthritis. To do this, a lifespan approach is taken from childhood through to the elderly years and includes implementation research to address evidence-practice gaps.

CHESM is based within the Department of Physiotherapy in the Alan Gilbert Building on the University Parkville campus. CHESM also has a state-of-the-art Human Movement Laboratory located nearby at 202 Berkeley St. This facility houses equipment including a Vicon motion analysis system, force platforms, electromyography systems and muscle strength dynamometer.



Message from the Director



Well, another year has flown by, and I am pleased to present the CHESM 2024 Annual Report. I would like to thank our outstanding CHESM team for their hard work and amazing achievements. CHESM is a wonderful place to work and it's all down to the team. I would also like to thank Professor Fiona Dobson, the Head of the Department of Physiotherapy, as well as the CHESM Advisory Board for their continuing support and input.

In 2024, CHESM comprised a multidisciplinary team of 35 staff and research students with backgrounds in physiotherapy, exercise science, podiatry, osteopathy, biomechanics and biostatistics. We welcomed new team members Dr Maddison Kirk and Dr Zobaida Edib while Dr Travis Haber transitioned from being one of our PhD students to a post doc with us. Dr Rachel Nelligan and Bridget Graham took periods of parental leave and we congratulate them on the births of babies Emily and Eamon respectively. Many staff achieved personal recognition for their achievements. In particular, congratulations to A/Professor Stephanie Filbay who received a 2024 Victorian Young Tall Poppy award, Dr Belinda Lawford who gained a 3-year Faculty CJ Roper Fellowship and Dr Mark Merolli who was promoted to Associate Professor.

In 2024, CHESM underwent another 5-year review that is a requirement of being a formal University Centre. This was an enormous amount of work and I thank all the panel members and CHESM team for their involvement in this process. I am pleased to announce that the University endorsed the continuation of the Centre for another 5-year period.

Our research achievements in 2024 are notable. The team mentored 8 PhD students, including 3 completions: Pei Wei Chi, My-Linh Nguyen and Travis Haber. Three students also completed confirmation seminars: Sam Kayll, Julia Zhu and Emma Searle. Dr Belinda Lawford received a Dame Kate Campbell Fellowship and a number of CHESM staff members were recognised for their years of service and celebrated these milestones at a special University event. CHESM's research was disseminated via 60 contributions to peer reviewed journal articles as well as 63 invited presentations/webinars.

CHESM is committed to conducting impactful research in partnership with end-users and stakeholders. To guide our future efforts, Dr Rachel Nelligan led a team that developed and published a formal CHESM Consumer and Community Involvement Strategy, which has seen a steady increase in consumer involvement in our research during 2024. Our online learning courses for clinicians and digital programs/resources for consumers have been accessed by more than 30,610 people from over 145 countries. Our social media engagement has further expanded with the establishment of a committee dedicated to engaging with our consumers and wider community. The CHESM Knowledge Translation Network providing an avenue for research dissemination grew to over 5,315 clinicians and 9,082 consumers from over 99 countries.

In 2025, CHESM seeks to build on its success with a team culture that embodies the Faculty's values. We want to continue to conduct and translate research that improves outcomes for people at risk of, or living with, musculoskeletal conditions and to nurture the next generation of talented researchers.

A handwritten signature in black ink, appearing to read 'Kim Bennell'.

Kim Bennell, PhD, Director, CHESM

Our team



CHESM Director

- Professor Kim Bennell

Staff

- Dr Kim Allison
- A/Professor Adam Bryant
- Penny Campbell
- Professor Fiona Dobson
- Dr Zobaida Edib
- A/Professor Thorlene Egerton
- A/Professor Stephanie Filbay
- Bridget Graham
- Dr Travis Haber
- Professor Rana Hinman (Deputy Director)
- Alex Kimp

- Dr Maddison Kirk
- Gabby Knox
- Dr Belinda Lawford
- Ben Metcalf
- Dr Mark Merolli
- Dr Rachel Nelligan
- Jesse Pardo
- Sharon Poh
- A/Professor Kade Paterson
- Sam Shearer
- Dr Scott Starkey
- Libby Spiers
- Sarah Stratulate

Biostatisticians

- Dr Anurika De Silva
- A/Professor Karen Lamb
- Peixuan Li
- Fiona McManus

PhD students

- Pei Wei Chi (completed May)
- Travis Haber (completed September)
- Sam Kayll
- My Linh Nguyen Luong (completed June)
- Ayobami Olanrewaju
- Patrick Rowe
- Emma Searle
- Julia Zhu

Advisory board

The CHESM Advisory Board was originally established in 2001 under University auspices. Its role is to provide advice and recommendations on research activities and future direction. CHESM would like to acknowledge and thank the 2024 Board members.

As the Centre is evolving in terms of its multi-disciplinary research focus, it was time to revisit the Terms of Reference, and refresh our Advisory Board. In June 2024, a new Board, with stronger consumer representation and key discipline areas relevant to our research focus, was established. Membership terms are three years. Last year, the board membership included new stakeholder, clinician, and consumer representatives.

CHESM Advisory Board Membership in 2024

Composition	Position	Position
Department of Physiotherapy	Head of Department	Professor Fiona Dobson
CHESM	Director	Professor Kim Bennell
Representative of Faculty external to the Department of Physiotherapy	Acting Deputy Vice-Chancellor (Research)	Professor Mark Hargreaves
Clinician representative(s) of discipline area(s) relevant to CHESM activities and external to the University	Specialist Musculoskeletal Physiotherapist, Director of Waverley Park Physiotherapy Centre and Co-Director of Physioworks Health Group Camberwell	Mr Andrew Dalwood
Clinician representative(s) of discipline area(s) relevant to CHESM activities and external to the University	Clinical Research Coordinator, St Vincent's Hospital, Sports Physiotherapist	Dr Sophie Heywood
Stakeholder representative(s) relevant to CHESM activities	Consultant at Medibank Advisor at Eucalyptus, MoreGoodDays & Ovum AI	Dr Catherine Keating
Stakeholder representative(s) relevant to CHESM activities	Policy Advisor, Australian Physiotherapy Association	Mr Dan Miles
Consumer representative	Chronic musculoskeletal conditions	Mr Neil Bidgood

Governance structure

In 2024, the governance structure of CHESM was changed to reflect the growth of research areas and to involve more senior staff. The location of CHESM within the Department of Physiotherapy, School of Health Sciences, affords it the same support and governance procedures of the Department and School.

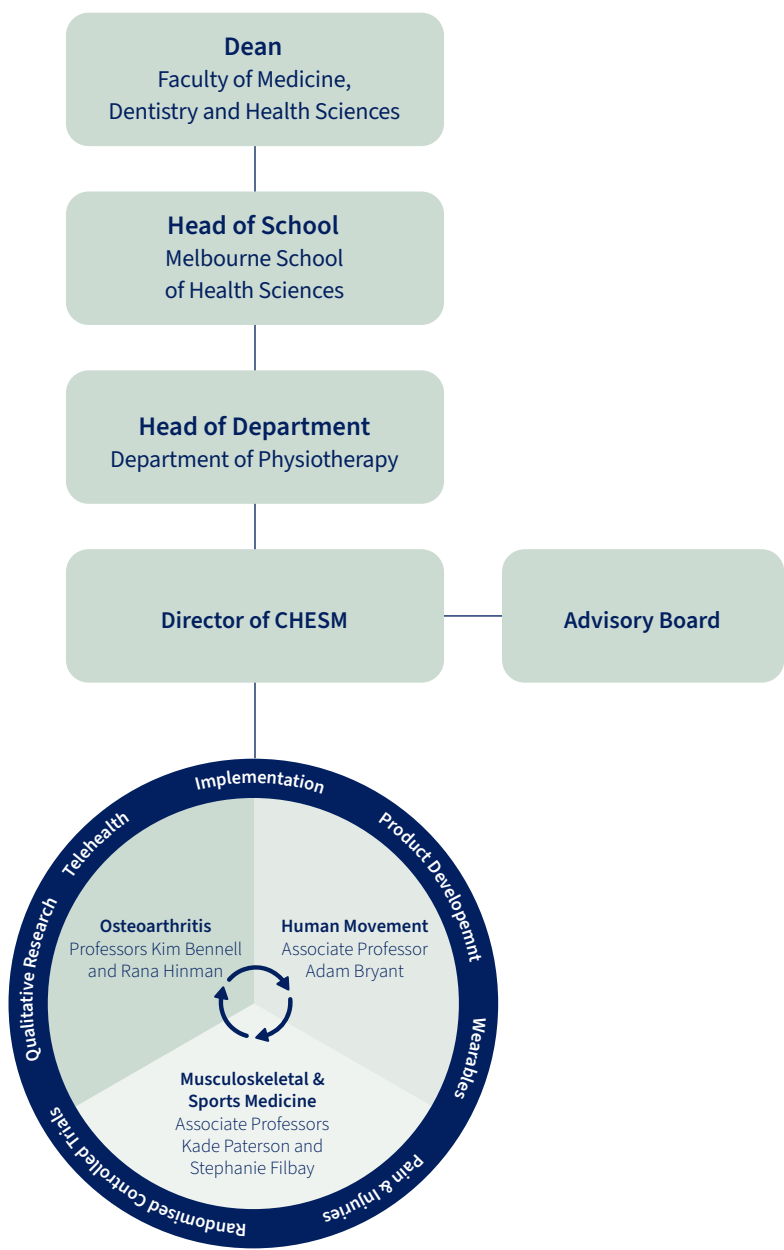
Three research streams were established:

Osteoarthritis led by Professor Kim Bennell (Director) and Professor Rana Hinman (Deputy-Director).

Human Movement and Biomechanics led by A/Professor Adam Bryant (previously Human Movement).

Musculoskeletal & Sports Medicine, led by A/Professor Kade Paterson and A/Professor Stephanie Filbay.

The Centre’s leadership, research and financial management, and long-term strategic planning are the responsibility of the Director, Professor Kim Bennell, and she is supported in this role by the other stream leaders. Administrative support is also provided.



CHESM 5 year review

Every 5 years, research centres within the university are required to undergo an external formal review. In September 2024, CHESM was due for this important milestone. This five-yearly review required detailed preparation of extensive documentation, including an 86-page report outlining all of the achievements and successes of CHESM between 2019-2023. A number of CHESM team members worked tirelessly on compiling the relevant documentation for months prior to the review.

On Wednesday September 18, CHESM hosted the review panel that comprised:

Panel	Composition	Position
Professor Mike McGuckin	Deputy Dean, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne	Chair
Professor Gordon Lynch	Professor, Department of Physiology, University of Melbourne	Panel Member
Ms Louise Hardy	Director of Policy and Advocacy, Arthritis Australia	Panel Member
Professor Michele Sterling	RECOVER Injury Research Centre, University of Queensland	Panel Member
Elizabeth Chlebicka	Executive Assistant to Professor Mike McGuckin, University of Melbourne	Minute taker

The panel spent the day interviewing CHESM staff, students and collaborators to find out more about the centre and to address the CHESM terms of reference.

Direct excerpt from the panel report

“The review panel found that CHESM is a high-performing autonomously-funded research-focused Centre that is addressing important community needs and producing impactful research outcomes. Local, national and international collaboration is strong and the Centre has developed exemplar consumer and stakeholder engagement in their research, and has well developed strategies to optimize knowledge translation. The major research focus has been on osteoarthritis but there are developing Streams in Musculoskeletal and Sports Medicine, and Human Movement that have strong potential. Staff and students enjoy working within the Centre and feel well supported to develop their careers.

In response to a recommendation of the previous review, engagement of CHESM with the Department of Physiotherapy has deepened considerably. The Department is benefiting from CHESM expertise helping develop other research programs and from engagement of CHESM researchers in education. The Department is investing in shared resources and provides opportunities for teaching to CHESM staff and students.

Recommendations by the panel include a focus on enhancing graduate research student recruitment, refinement of the nascent strategic plan, deepening broader engagement across the university, and ensuring more frequent face-to-face opportunities for all of CHESM to come together.”

The panel strongly endorsed continuation of CHESM as a formal Centre of the University of Melbourne.

Key research projects

The primary focus of research at CHESM is on the role of conservative strategies, particularly exercise, in promoting overall health and wellbeing, and in preventing and managing musculoskeletal conditions in particular osteoarthritis.

In 2024, CHESM conducted the following key research projects:

Athletic footwear for reducing knee loads in girls and women

This study will develop a novel athletic shoe that can reduce harmful knee loads during sport in adolescent girls and young women. The findings will lead to the development of a new ASICS shoe (phase 1) that will be “field-tested” (phase 2) during sporting activity with high anterior cruciate ligament injury risk (netball) to evaluate its effect on tibial shock (in-field surrogate measure of knee load) and player comfort compared to a conventional shoe.

Status of project: in progress

Exercise and diet for people with hip osteoarthritis: a randomised controlled trial (ECHO)

This study is comparing the effects of a weight loss and exercise program to an exercise only program on clinical outcomes (hip pain) at 6 months in people with hip osteoarthritis and overweight or obesity.

Status of project: completed
Awaiting publication



Exercise for people with hip osteoarthritis

The primary aim of this randomised controlled trial was to investigate the effects of two different 9-month exercise programs (strengthening vs aerobic plus strengthening) on pain and physical dysfunction in people with hip osteoarthritis. Participants in both groups were allocated to a physiotherapist for nine sessions over the first three months and asked to perform weekly exercises.

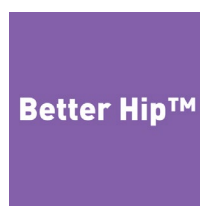
Status of project: completed
Awaiting publication



My Hip Exercise

The primary aim of this study is to develop and compare a combined intervention that includes a website, ‘My Hip Exercise’, containing educational information, guidance to increase physical activity, and the prescription of a 24-week self-directed home-based lower-limb strengthening program in addition to a 24-week behaviour change SMS exercise adherence program to ‘My Hip Education’, an education control website containing osteoarthritis and exercise information only over 24 weeks for people with hip osteoarthritis.

Status of project: in progress



HipHealth – “Better Hip” Trial

Together with Medibank, this study will evaluate the effectiveness of a telehealth-delivered clinician-supported program (Better Hip) which will comprise education, strengthening exercise, physical activity, self-management strategies and if needed, dietary intervention for weight loss, for Medibank members with hip osteoarthritis. We will evaluate the effectiveness of the Better Hip program on pain and physical function, and also conduct a cost-effectiveness analysis of the program.

Status of project: in progress

Reliability of quantitative sensory testing and indicators of inflammation in people with hip osteoarthritis

This study investigates the reliability of pain sensitivity and stability of levels of inflammation measured in the blood. Little is known about how stable these measures are in people whose hip pain is consistent with hip osteoarthritis, making it very difficult to interpret any changes seen in these measures over time.

Status of project: awaiting publication

Cushioned insoles for big toe joint osteoarthritis: the SOLE randomised controlled trial

The primary aim of this study is to determine if cushioned insoles lead to significantly greater reductions in first MTP joint pain on walking compared to sham insoles, when worn daily over 12 weeks, in people with painful first MTP joint osteoarthritis.

Status of project: in progress

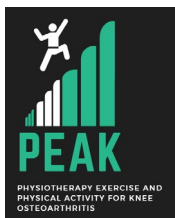


PHOENIX: using brain imaging to reveal the effect of exercise in hip osteoarthritis

The primary aims of this study are to; 1) compare the brain neurobiology of people with hip osteoarthritis to people who do not have hip osteoarthritis, and; 2) explore the effect of a 12-week exercise program on brain neurobiology of people with hip osteoarthritis.

Status of project: completed

Awaiting publication



Physiotherapy Exercise and physical Activity for Knee Osteoarthritis: PEAK Study

This study compares the clinical effectiveness and cost-effectiveness of video consultations with physiotherapists to traditional face-to-face consultations for management of people with knee osteoarthritis and explore the experiences of users and providers of care. This study will help determine whether video consultations are non-inferior to face-to-face consultations for improving knee pain on walking and physical function.

Status of project: completed

Publication: The Lancet



The PEEKO study - Patient Education to Enhance exercise outcomes in people with Knee Osteoarthritis

The primary aim is to investigate if the addition of an e-learning course to verbal osteoarthritis information and a home-based strengthening exercise program prescribed over 2 consultations with a physiotherapist enhances pain and/or physical function outcomes, at 24 weeks in people with knee OA.

Status of project: in progress

The EPIPHA-KNEE Trial: Explaining Pain to target unhelpful pain beliefs to Increase Physical Activity in KNEE osteoarthritis

Led by A/Professor Tasha Stanton at the University of South Australia, this multi-site study aims to evaluate the clinical-and cost-effectiveness of integrating physiotherapist-delivered pain science education, an evidence-based conceptual change intervention targeting unhelpful pain beliefs by increasing pain knowledge, with an individualised walking, strengthening, and general education program.

Status of project: completed

Analysing results

Health Professionals and patient experiences of management for anterior cruciate ligament injury: Informing the patient decision aid

This study explores patients' and clinicians' experiences managing people with ACL injury to understand current practices in Australia, explore beliefs and expectations surrounding ACL management options, barriers and facilitators for making an informed treatment decision, and the perceived positive and negative features of ACL management options. Findings will inform the development of a patient decision aid for the management of ACL injury.

Status of project: in progress

Footwear for self-managing hip osteoarthritis symptoms: SCHIPP trial

The primary aim of this research study is to investigate the effects of two classes of readily available off-the-shelf shoes on hip osteoarthritis symptoms. It is recommended that clinicians provide advice on "appropriate" footwear for people with hip osteoarthritis. However, there is little evidence from clinical trials to determine which shoes are best for self-managing hip osteoarthritis.

Status of project: completed

Awaiting publication



My Joint Tai Chi

This study is comparing the effects of a self-directed 12-week online Tai Chi program plus online education with online education alone on knee osteoarthritis symptoms. Participants will be randomly allocated to one of two groups. All participants will be given access to online educational information about knee osteoarthritis and its management for 12 weeks. Approximately half of participants (randomly determined by the researchers) will also participate in a 12-week Tai Chi exercise program in their own home using videos on the internet, and engage with a Tai Chi exercise support app.

Status of project: in progress



Mobile app for Knee Osteoarthritis (MappKO)

This randomised controlled trial will assess whether a mobile app that contains behaviour change messages and monitoring can help improve adherence to a physiotherapist-delivered home exercise program in people with knee osteoarthritis. The mobile app was adapted from a behaviour change-informed SMS program that CHESM previously developed and shown to improve outcomes.

Status of project: in progress

Taking control of your hip and knee osteoarthritis

The primary aim of this study was to evaluate the effects of a consumer-focused Massive Open Online Course (MOOC) on knowledge about osteoarthritis and its management and pain self-efficacy for people with hip and/or knee osteoarthritis. Participants were allocated to complete a 4-week, 4-module interactive consumer-facing e-Learning course about osteoarthritis and its recommended management or read an electronic pamphlet about osteoarthritis and its recommended management from a reputable consumer organisation.

Status of project: Completed

Awaiting publication

SHoes for Adolescent Patellofemoral pain: the SHAPE randomised clinical trial

The primary aim of this study is to determine if minimalist shoes lead to significantly greater reductions in pain and functional limitations compared to motion control shoes, when worn during planned sport and exercise-based activities over three months, in adolescents with patellofemoral pain.

Status of project: in progress



Home strengthening exercise for knee osteoarthritis: the MULTI-ONE randomised controlled trial

Although we know strengthening exercises are effective for knee osteoarthritis, we don't know the optimal content and dosage of an exercise program to maximise clinical benefits. We also don't know what the ideal amount of exercise is. In this study we will compare two different home-based strengthening programs to determine which is the most effective. To help us understand how effective the exercise programs are, we will also compare the two programs to a control group, who will receive no prescribed exercise. Participants in the exercise groups will complete 3 x video conferencing consultations with a physiotherapist over 6 weeks. All participants will complete re-assessments at 3, and 9 months.

Status of project: in progress

Exercise and Weight loss for Knee Pain (POWER)

This randomised controlled trial is testing the efficacy of a physiotherapist-supervised very low calorie ketogenic diet combined with an exercise program, for people with knee osteoarthritis compared to an exercise program only. This will inform whether physiotherapists can successfully and safely deliver a weight loss program and help inform new models of service delivery.

Status of project: completed

Publication: British Journal of Sports Medicine



The EMBRACE Study

EMBRACE

This randomised controlled trial is investigating treatment options for anterior cruciate ligament injury. The primary aim of this study is to examine individuals with acute ACL rupture, and determine if management with the Cross Bracing Protocol is more clinically effective and cost effective compared to early anterior cruciate ligament reconstruction.

Status of project: in progress



Effectiveness of a physiotherapist-delivered diet program for knee osteoarthritis

The POWER Study

STUDY DESIGN

A randomised
controlled trial



88 participants

> 45 years old
Body Mass Index (BMI) > 27
Knee pain > 3 months

Randomised

Exercise only

- ✓ Exercise program
- ✗ Diet program

The exercises were lower-limb
strengthening exercises

Control group



Diet & Exercise

- ✓ Exercise program
- ✓ Diet program

The diet was a very low calorie diet with meal
replacements, transitioned to healthy eating



6 telehealth sessions with a physiotherapist over 6 months

Exercise only

46

KEY FINDINGS AT 6-MONTHS

Diet & Exercise

42

91% (42/46)

Completed Primary Outcome

90% (38/42)

1% decrease

Change in
Body Weight



PRIMARY OUTCOME

8% decrease

0.7cm increase

Change in
Waist Circumference



5.4cm decrease

12%

Lost > 5% of Body Weight

76%

0%

Lost > 10% of Body Weight

37%

48%

Global Knee Improvement

71%

Nil

Serious Adverse Events

Nil



CONCLUSION

Physiotherapists were able to deliver a very low calorie diet that was safe and led to clinically relevant weight loss in people with knee osteoarthritis.

Exploring the experiences of people with knee osteoarthritis who received a weight loss diet and exercise program from a physiotherapist



Based on participants' experiences in the POWER Study



In the POWER study, 42 participants with knee osteoarthritis received both:



Dietary Program ✓

A weight loss diet, which was transitioned into healthy eating.



GOAL: Lose 5-10% of body weight

both delivered by a physiotherapist, who received training on delivering the diet



Exercise Program ✓

A personalised home exercise program, with strengthening exercises for their knee osteoarthritis.

In this study, these participants were asked about their experience receiving a weight loss diet delivered by a physiotherapist

42

participants

completed questionnaires



22

participants completed semi-structured interviews

KEY FINDINGS

Questionnaire results

71% had confidence their physiotherapist could help them to lose weight

84% were confident their physiotherapist had the required skills

71% would recommend others to see a physiotherapist for this dietary weight loss intervention

Themes that emerged from the interviews



1 One-stop shop for exercise and diet

Convenience of having one clinician for both diet and exercise guidance



2 Physiotherapist-delivered weight loss works

Personal experience of losing weight indicated that it works



3 Depth of physiotherapist knowledge and skills

Most felt that the physiotherapists had adequate skills to deliver the diet, but some disagreed



4 Physiotherapists have a role in weight loss

Physiotherapists could have a role in weight loss, with adequate training



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Further information: Dr Belinda Lawford, belinda.lawford@unimelb.edu.au

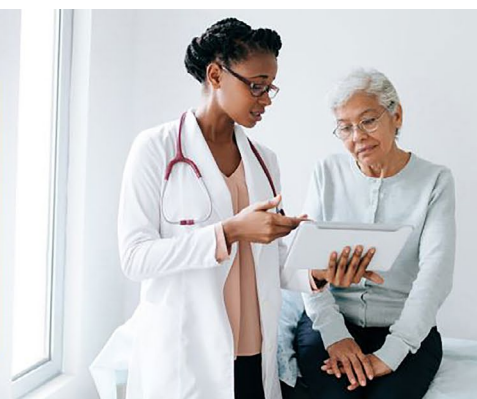
Link to read the publication: <http://doi.org/10.1002/acr.25401>

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Effects of x-ray based diagnosis of knee osteoarthritis on patient beliefs about management: A randomised clinical trial



WHAT WE DID

617 people aged ≥ 45 with and without knee pain were asked to imagine they were **seeing a general practitioner (GP)** for chronic knee pain.



Participants watched a video of the GP providing them with either a:

- 1) **clinical explanation of knee osteoarthritis (no x-rays)**
- 2) **radiographic explanation (not showing x-ray images)**
- 3) **radiographic explanation (showing x-ray images)**

WHAT WE FOUND

RADIOGRAPHIC (showing x-rays) vs CLINICAL explanation

Those who received a radiographic explanation.....



Believed surgery was more necessary



No difference in beliefs about helpfulness of exercise & physical activity



Believed exercise & physical activity was more damaging to their knee



Were more concerned about their knee problem getting worse



Had greater fear of movement



Were more satisfied with the consult & info provided



Were more confident with accuracy of the diagnosis



There were no differences in beliefs between radiographic explanations with (group 3) and without (group 2) showing x-ray images.

SUMMARY

Using x-rays rather than a clinical approach to diagnose & explain knee osteoarthritis can have **potentially undesirable impacts** on patient beliefs about knee osteoarthritis.



Is exercise effective for knee osteoarthritis? A Cochrane systematic review

WHAT WE DID



Conducted a **systematic review** that aimed to assess the effects of land-based exercise for people with knee osteoarthritis:

- (1) exercise versus attention control or placebo;
- (2) exercise versus no treatment, usual care, or limited education;
- (3) exercise added to another co-intervention versus the co-intervention alone.

WHAT WE FOUND

Points better with exercise (on 0 to 100 point scale [95% confidence interval]):

30 trials (3,065 participants) compared exercise to attention control or placebo	PAIN	8.7 [5.7 to 11.7]
	FUNCTION	11.3 [7.6 to 15.1]
	QUALITY OF LIFE	6.1 [-0.1 to 12.3]
60 trials (4,834 participants) compared exercise with usual care, no intervention, or limited education	PAIN	13.1 [10.4 to 15.9]
	FUNCTION	12.5 [9.7 to 15.3]
	QUALITY OF LIFE	5.4 [3.2 to 7.5]
49 trials (4,569 participants) compared exercise added to another co-intervention versus the co-intervention alone	PAIN	10.4 [8.1 to 12.8]
	FUNCTION	9.7 [7.5 to 12.0]
	QUALITY OF LIFE	4.2 [1.4 to 7.1]

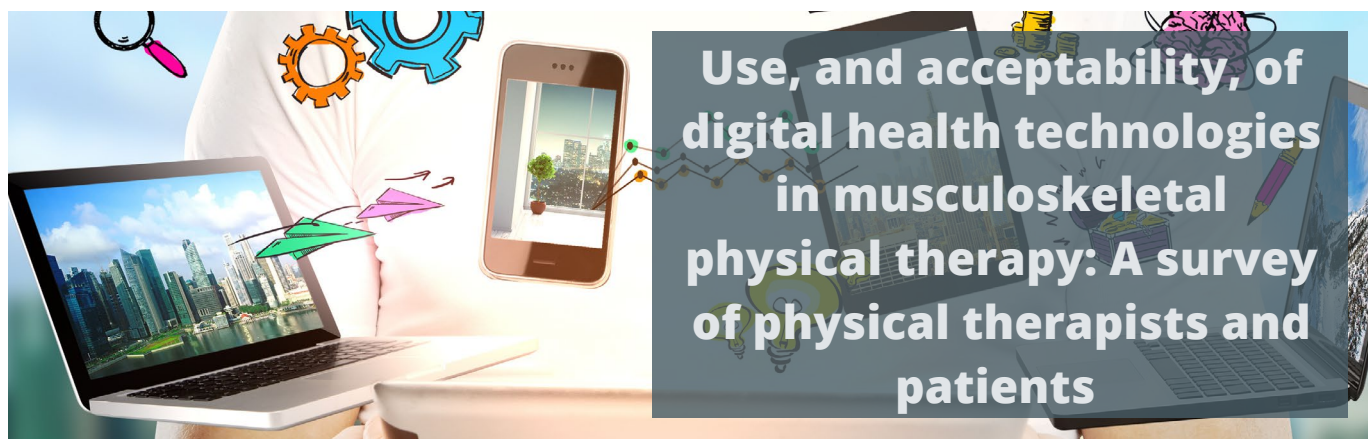
We also conducted subgrouped analyses:

- We did not find any differences in effects between **different types of exercise**.
- We found no relationship between changes in pain or function and **total number of exercise sessions prescribed** or ratio (between exercise group and comparator) of real-time **consultations with a healthcare provider**.

SUMMARY

We found **low to moderate certainty evidence** that exercise probably results in an improvement in pain, function, and quality of life in the short-term. However, based on the thresholds for minimal important differences that we used, these benefits were of **uncertain clinical importance**.





This cross-sectional study aimed to identify the frequency of digital health use to obtain/record clinical information **BEFORE THE COVID-19** pandemic and willingness to use digital technologies among physical therapists and patients with musculoskeletal conditions

102
Physical Therapists

103
Patients

Across
Australia



Physical Therapists mostly used **non-digital methods** to obtain **subjective (96.1%)** and **objective (93.1%)** information

Physical Therapists

Top 3 digital health technologies used:

Photo Based
Image Capture



Accessing information
logged/tracked by
patients into a mobile app



Electronic systems
to capture
subjective
information that
the patient fills in



Willing to use technology for:

1. Receiving diagnostic images
2. Scheduling appointments
3. Capturing diagnostic results



Patients

Top 3 digital health technologies used:

Activity
trackers



Logging/tracking health
information on mobile
apps or websites trackers

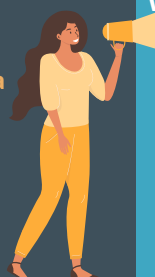


Entering
information on a
computer



Willing to use technology for:

1. Receiving notifications about health results
2. Looking up health information
3. Receiving personalised alerts/reminders



Before the COVID-19 pandemic, physical therapists and patients **infrequently used digital health technologies** to support **musculoskeletal care**. There was willingness to consider their use for **select functions**.



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Publications: <https://onlinelibrary.wiley.com/doi/10.1002/msc.1627>

<https://doi.org/10.1002/msc.1627>

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Does higher compliance with exercise prescription guidelines influence outcomes in knee osteoarthritis?

WHAT WE DID

Aim: Determine **if higher compliance with American College of Sports Medicine exercise prescription guidelines influences exercise outcomes** in knee osteoarthritis.



We did a systematic review of trials evaluating exercise. Interventions were classified as **higher compliance** (meeting $\geq 60\%$ of guideline recommendations) or **lower compliance** (meeting $< 60\%$ of recommendations). Effects on pain and function were evaluated.

WHAT WE FOUND

Standardised mean differences [95% confidence interval]

		LOWER COMPLIANCE	HIGHER COMPLIANCE
Combined resistance and aerobic programs (25 trials, 3,290 participants)	PAIN	-0.31 [-0.45 to -0.16]	-0.38 [-0.59 to -0.17]
	FUNCTION	-0.36 [-0.58 to -0.14]	-0.43 [-0.64 to -0.21]
Resistance programs (66 trials, 5,231 participants)	PAIN	-0.60 [-0.81 to -0.39]	-0.93 [-1.27 to -0.59]
	FUNCTION	-0.85 [-1.20 to -0.49]	-0.64 [-0.83 to -0.44]
Aerobic programs (12 trials, 958 participants)	PAIN	-1.00 [-2.52 to 0.53]	-0.79 [-1.20 to -0.38]
	FUNCTION	-0.76 [-2.02 to 0.50]	-0.83 [-1.36 to -0.27]

SUMMARY

Higher or lower compliance with exercise prescription guidelines **did not influence exercise outcomes**. However, given there was substantial heterogeneity and many publications were at risk of bias, our results should be interpreted with caution.





Why don't some people with knee osteoarthritis improve with exercise?

WHAT WE DID

Recruited **12** people whose pain and function had **IMPROVED** ("responders") & **14** people whose pain and function had **NOT IMPROVED** ("non-responders") to the PEAK exercise program



They were interviewed over the phone

And asked about factors contributing to their outcomes



WHAT WE FOUND

RESPONDERS ONLY

Empowered for self management of knee osteoarthritis



RESPONDERS & NON-RESPONDERS

Identified a range of similar exercise facilitators

Had a nothing to lose attitude

Believed their OA is degenerative

Perceived their health to be good

Felt stronger from exercise



NON-RESPONDERS ONLY

Felt high body weight contributed to OA & lack of response to exercise

Other health conditions & life stressors were barriers, contributing to sub-optimal exercise adherence

Felt study outcomes were not personally relevant

Accepted responsibility for lack of improvement



SUMMARY

There were many shared perceptions & attitudes between responders & non-responders

Non-responders reported more challenges including greater impacts from excess body weight, other health conditions, life stress & events, which affected their adherence to, and outcomes from, the exercise program



Authors: Thorlene Egerton, Kim Bennell, Fiona McManus, Karen Lamb & Rana Hinman

Centre for Health Exercise & Sports Medicine, Department of Physiotherapy,
The University of Melbourne



Which is better for people with painful knee osteoarthritis?

**Education with
disease and
impairment
discourse
[Video A]**

or

**Education with
empowerment
and participatory
discourse
[Video B]**

THE STUDY:

- 589 people with knee pain
- Half watched Video A and half watched Video B
- Both videos were 12-minutes long and contained evidence-based information
- Video B avoided talking about disease and instead focussed on what people can do to live well in spite of having knee OA

THE RESULTS:

Video B led to greater increases in self-efficacy for managing pain and kinesiophobia

People who watched Video B:

- ✓ More confident
- ✓ Less afraid of moving/exercising
- ✓ Understood more about their knee pain
- ✓ Believed physical activity was important and had higher expectation of benefiting
- ✓ Less concerned, more motivated and less likely to believe they would need surgery

Full article:

<https://www.sciencedirect.com/science/article/pii/S1063458422007634>

DOI: 10.1016/j.joca.2022.05.010



Watch Video B here:
<https://vimeo.com/573794719>



Collaborations and partnerships

CHESM benefits from working with other academics, industry, government, community organisations and consumers to help co-design, conduct and disseminate its work. The following is a summary of main partners and collaborators that CHESM worked with throughout 2024.



CHESM’s 2024 publications



369
different authors



38%
included national collaborators



50%
included international collaborators
across 21 countries

External partners included

- | | |
|---|--------------------------------------|
| Aikenhead Centre for Medical Discovery (ACMD) | McKnight Family Foundation |
| Arthritis Australia | Medibank |
| ASICS Oceania | Melbourne Disability Institute |
| Austin Health | Musculoskeletal Australia |
| Australian Diabetes Educators Association | Osteopathy Australia |
| Australian Physiotherapy Association | Orthosport Victoria Institute (OSVi) |
| Australian Podiatry Association | |
| Bauerfeind | |
| Coviu | |
| CSIRO Data 61 | |
| Dietitians Australia | |
| DORSAVI | |
| Epworth Healthcare | |
| Exercise and Sports Science Australia | |
| Formthotics | |
| FutureLearn | |
| Harbison Aged Care | |
| Healthia | |

Early Career Training and Mentoring Program

The Musculoskeletal Early Career Training and Mentoring program was established in 2015 across CHESM and the research groups of Professor David Hunter at the University of Sydney and Professor Paul Hodges and Professor Bill Vicenzino at the University of Queensland as part of a joint NHMRC Program grant and Centre of Research Excellence. Although these grants have concluded, the training and mentoring program has continued as MUSQ:Impact.

It comprises approximately 65 early career researchers, both students and post-doctoral fellows. Activities within this program are coordinated by a Training and Mentoring Committee which comprised 8 members in 2024 ranging from PhD students to research directors. A 3-day retreat in 2024 was held at the Gold Coast and involved over 30 staff and students from across the groups. The attendees heard presentations from middle career and early career researchers as well as worked together on collaborative projects in the areas of osteoarthritis policy, social media and using big data.

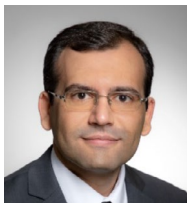


© Unsplash

Visitors to CHESM

CHESM hosts various international visitors throughout the year. Typically, visitors participate in activities such as research seminars, roundtable discussions and mentoring with graduate students, and public lectures. After a number of quiet years following the COVID-19 pandemic, we were fortunate to have an increased number of visitors to CHESM in 2024, from across the globe!

Visiting academics

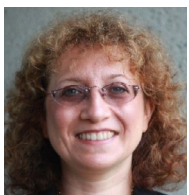


Dr Amir Esrafilian

For one week in May 2024, we hosted post-doctoral researcher, Dr Esrafilian who visited us from the University of Eastern Finland. His research focuses on developing personalized multiscale computational models for neuromusculoskeletal applications.

Professor Stefan Lohmander

Professor Lohmander is a senior Professor in Orthopaedic Surgery at the Department of Clinical Sciences at Lund University, Sweden. He visited Melbourne in November 2024 and spent an afternoon with CHESM as part of the EMCR showcase, with CHESM members in addition to members from La Trobe Sport and Exercise Medicine Research Centre.



Professor Elena Losina

Dr. Losina, Robert W. Lovett Professor of Orthopedic Surgery at Harvard Medical School, is an internationally recognized investigator in the epidemiology and outcomes of musculoskeletal disorders. Dr Losina visited CHESM on Thursday 28th November 2024. During her visit she presented to the team a talk titled “Physical Activity in persons with osteoarthritis: measurement matters”.

Visiting students



Ayo Olanweraju

CHESM were fortunate to have a PhD student who joined us from Manchester, UK and spent the entire year with us. Ayo is a data scientist, working towards becoming an epidemiologist in digital health. She is a PhD candidate enrolled in the Manchester-Melbourne joint award program, who began her PhD at the University of Manchester, but moved to Melbourne at the end of January 2024. Her PhD research is centred on understanding the changes that occur in physical activity of people suffering from knee osteoarthritis before and after knee arthroplasty.



Ziru Wang

For 9 months, CHESM hosted Ziru who comes from Beijing Sport University. Her visit to CHESM was supported by the China Scholarship Council, with the aim of enhancing professional skills and research approach related to her PhD project. Ziru continues to facilitate more collaborations and expand the reach of CHESM’s knowledge translation tools and products to broader Asian populations.



Jonas Ahler

Jonas spent 2.5 months with CHESM from October to December 2024. Jonas is a 3rd year PhD student from The Research and Implementation Unit PROgrez, Department of Physiotherapy and Occupational Therapy, Næstved-Slagelse-Ringsted Hospitals in Denmark. Jonas spent time collaborating with team members, learning about our research and presenting to our team.

Anaëlle Dubien

Anaëlle Dubien is a Masters of Health Engineering student, and she spent 4-months with CHESM on a research internship from Feb-May. Throughout her internship, Anaëlle worked on a thesis topic with another CHESM PhD student. Her report discussed the difference between community netball players and sub-elite netball players in terms of lower limb kinematics and ground reaction force among netball players with chronic ankle instability.

Simon Tao

Simon, a Masters of Sports Science Medicine student spent a 2-week placement with CHESM in July 2024. During that time, he met with team members to broaden his interest areas of osteoarthritis and sports medicine.

Teaching and learning

Whilst research is core business for CHESM, members participated in a range of teaching and learning activities in 2024. Some CHESM team members hold joint positions within the Department of Physiotherapy or School of Health Sciences as teaching and research academics. As such, a key part of their role is dedicated to specific teaching and learning. Professor Kim Bennell shared the Graduate Research Co-ordinator role for the Department of Physiotherapy with A/Professor Kate Hayward.

Other CHESM members who have research-focused positions contribute to specialist teaching in their areas of expertise. Research higher degree students also undertake teaching activities including marking and giving lectures and tutorials in order to gain experience for their future careers. CHESM team members contributed to a range of University of Melbourne programs including the Doctor of Physiotherapy, Masters of Sports Medicine, Masters of Information Systems, Graduate Certificate in Health Informatics and Digital Health, Masters of Clinical Rehabilitation and Masters of Physiotherapy.

We were fortunate to have two students complete placements with CHESM during the year. This included an undergraduate student studying Anatomy/Physiology volunteering from November 2023 to February 2024 to assist with CHESM projects, as well as a Biomed student who completed her placement with CHESM from July-September.

DPT3 Research Module – Penny Campbell, Bridget Graham, Libby Spiers & Sarah Stratulate

In 2024, four CHESM research assistants were responsible for developing and delivering a research module to the DPT3 students as part of their “Integrated Professional Practice-B” subject.

The purpose of this novel module was to work in the space between researchers and emerging DPT3 students to increase direct impact around research findings and to allow a pipeline for further graduate research opportunities.

Sarah, Libby, Penny & Bridget developed a module around the PEAK RCT and 2 of its related qualitative research studies, titled “Research Impact: Telehealth and Knee OA PEAK RCT”. This was certainly a new area of work that enabled these staff members to develop a range of new skills and learn about a variety of new platforms to deliver education to students. The team have been asked to deliver the module again in 2025.

REDCap User Training Day

On October 28 2024, Monash University hosted a REDCap User Day at their St Kilda Road campus. A number of CHESM Research Assistant staff attended. The workshops were streamed into basic and advanced sessions and there were topics on the survey platform that were useful.



CHESM team members Gabby Knox, Libby Spiers and Briget Graham attend the REDCap training day.



CHESM team members Bridget Graham and Penny Campbell engaged in one of the REDCap workshops.

Engagement and impact

Ensuring that research has an impact is a major goal for CHESM and we worked with key stakeholders including consumers, clinicians, health insurers, professional organisations, industry, and consumer organisations to co-design, conduct and disseminate research. We highlight several examples of work in 2024 that demonstrates the link between research, engagement and impact:

Consumer involvement in research at CHESM 2024

In 2023, the Centre for Health, Exercise and Sports Medicine (CHESM) implemented its **Consumer and Community Involvement Strategy**—a comprehensive framework designed to embed meaningful consumer involvement across all research activities. This strategy aligns with recommendations from the National Health and Medical Research Council and is guided by a dedicated **Consumer Involvement Action Group**, led by Early Career Researchers (Dr Rachel Nelligan [Chair], Dr Belinda Lawford, Dr Travis Haber) and two consumer partners with lived experience of osteoarthritis (Mr Neil Bidgood, Mrs Jennie Marlow).

The development of this framework, co-designed by CHESM researchers, students, consumer co-researchers, and the CHESM Advisory Board, is detailed in a peer-reviewed publication (doi.org/10.1002/msc.1806). It provides accessible, practical tools—including guidance documents, checklists, training materials, and consumer resources—to support researchers within and outside CHESM in incorporating consumer voices at every stage of the research process. All materials are freely available on the CHESM website.

Since its implementation, this strategy has been actively adopted across multiple CHESM studies. Consumer participation has ranged from providing feedback on participant materials to full co-researcher roles—where consumers are involved in planning, conducting, and disseminating research, and are named as co-investigators on grants and co-authors on peer-reviewed publications. Dr Nelligan has also shared CHESM's model of consumer engagement with national and international research communities, underscoring its growing impact.

Implementation Highlights in 2024

1. Grant Applications Involving Consumers:

Consumers were named as **Chief Investigators (CI)** or **Associate Investigators (AI)** on several major funding proposals:

- **Successful:**
 - MRFF Clinical Trials Activity Grant – A/Professor Steph Filbay (2 x Consumers as AIs)
- **Submitted (Outcomes Pending):**
 - 2024 MRFF Novel Treatments for Chronic Pain – Professor Rana Hinman (Consumer as CI)
 - MRFF EPCDRI 2024 – A/Professor Kade Paterson (Consumer as CI)
 - MRFF Dementia and Aged Care – Dr Belinda Lawford (Consumer as CI)
 - MRFF Maternal Health – Dr Belinda Lawford (Consumer as CI)
- **Unsuccessful:**
 - MRFF 2023 Clinical Trials Activity – A/Professor Kade Paterson (Consumer as AI)

2. Publications Co-Authored by Consumers:

- *Bennell et al.* – **Better Hip RCT protocol**, *BMC Musculoskeletal Disord* (consumer co-author)
- *Lawford et al.* – **X-ray explanation study**, *PLOS Medicine* (includes consumer co-author)

3. Co-Design Projects and Consumer Roles:

- *KneeCare co-design project* – 3 consumers
- *Osteoarthritis rehabilitation goals qualitative study* – 1 consumer
- *Strength exercise benefit-harm study* – 2 consumers
- *Weekly vs. tri-weekly strengthening RCT* – 1 consumer
- *Osteoarthritis research priority-setting study* – 1 consumer co-author
- *OARSI priority-setting study* – 2 consumers
- *SHAPE adolescent shoe trial* – 677 adolescents surveyed for preferences in trial design

4. Other Consumer Engagement Activities:

- **ANZMUSC e-learning course** – in development with consumer input
- **PEEKO RCT** – involves a consumer co-researcher
- **EMBRACE Trial** – involved a consumer advisory group in addition to 2 consumer co-investigators
- **Osteoarthritis Summit priority-setting project** – includes consumer co-researcher
- **New RCT on weight loss for chronic low back pain** – 3 consumer investigators contributing to trial design.

In 2024, CHESM also conducted a Knowledge Translation Network feedback survey to help shape our future research projects about lower limb osteoarthritis. Participants were asked how much they thought different topics were a problem for people with osteoarthritis and additionally asked on their opinion of 13 different research areas of importance. 66 clinicians and 564 consumers completed the survey.

Consumer involvement levels



Taking Control of your Hip and Knee Osteoarthritis online training modules

We developed an innovative e-Learning course specifically for patients “Taking Control of your Hip and Knee Osteoarthritis” to provide quality and evidence-based information and education about osteoarthritis and its management with an emphasis on exercise and weight management. It was released in July 2022 and by the end of 2024, 3,756 (**2,512 registered in 2024**), an increase from **1,244 people (714 registered in 2023)** had registered for the course across **114 countries (up from 95 in 2023)**. **Ninety nine people from 27 different countries** have enrolled in the Chinese version of the course.

Feedback to date has been excellent:

“This course was evidence- based and provided useful strategies to cope with osteoarthritis without immediately resorting to surgery. I would highly recommend this course.”

“On an easy to understand level, this class explains how to manage osteoarthritis without drugs or surgery. Exercise and weight loss are key. I highly recommend.”

“This course exceeded my expectations as it provided so much valuable information about arthritis through short explanations and longer links to scientific papers. Links to exercise sites have provided practical and effective help, teaching multiple ways to manage arthritis without surgical intervention until absolutely necessary. Thank you for such a well-rounded course.”



Dr Guo-Xin Ni presenting a lecture at The First Affiliated Hospital of Xiamen University, along with a presentation from Ziru Wang, who translated the PEAK program, and Professor Rana Hinman, online, to a crowd of hospital staff.



Taking Control of Your Hip and Knee Osteoarthritis

Learn about hip and knee osteoarthritis and strategies to manage pain, including exercise, healthy weight, and pain relief.

★★★★★ 4.8 (23 reviews) 555 enrolled on this course



ACL Injury Treatment Decision Aid

In 2024, A/Professor Stephanie Filbay released the ACL Injury Treatment Decision aid.

<https://www.aclinjurytreatment.com/>

Decision aids are tools that can help people make informed decisions about their health and treatment options. They provide information on a topic and outline the different treatment options. They also help people understand what is important to them and how this may affect their treatment choice.

This decision aid aims to help people with a complete ACL tear make an informed choice about their treatment that aligns with their values, lifestyle, and preferences. By the end of 2024, 6,768 unique visitors had accessed the ACL decision aid.

The decision aid was put together using existing evidence from the literature, information from two nationwide surveys we conducted of over 1000 people who had sustained an ACL injury and clinicians who treat these injuries as well as two interview studies.

I've torn my anterior cruciate ligament (ACL), what are my treatment options?

This decision aid is an evidence-based tool to inform you about your treatment options and help you choose whether surgery or a non-surgical treatment option is best for you.





Step 1
Get started



Step 2
Learn about treatment options



Step 3
Learn how outcomes compare



Step 4
Weigh up the pros and cons



Step 5
Arrive at a treatment decision

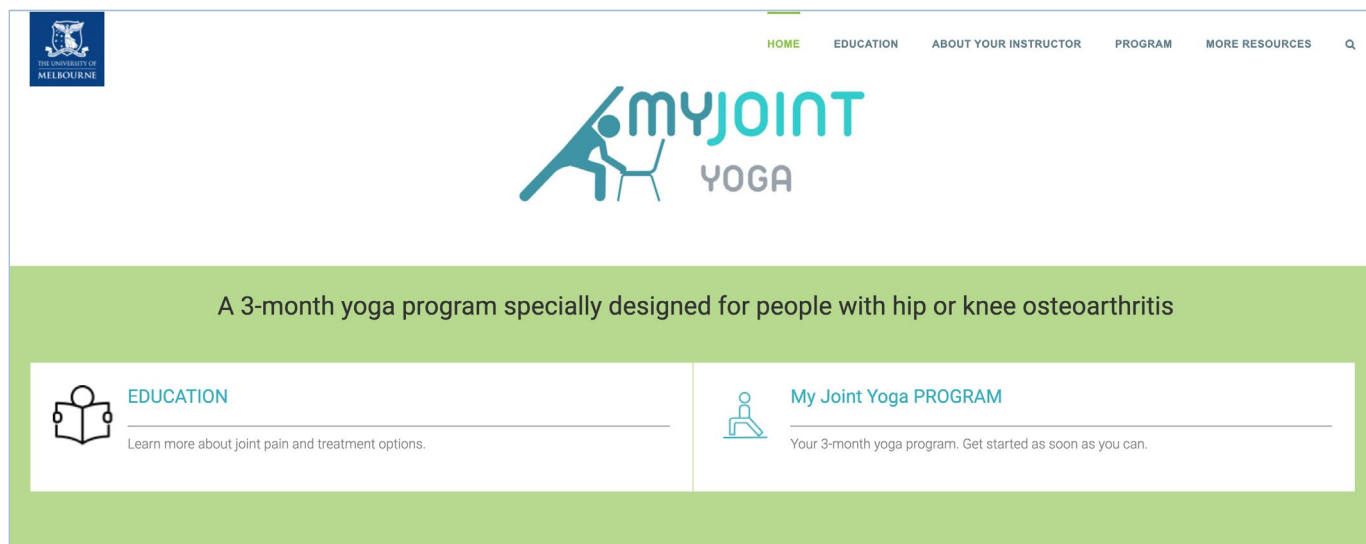


ACL injury treatment decision aid

© A/Prof Stephanie Filbay. All rights reserved
Funded by a National Health and Medical Research Council Investigator Grant (#1194428) and Australian and New Zealand Musculoskeletal Clinical Trials Network Seeding Grant awarded to A/Prof Stephanie Filbay. Updated 19th March 2024.

Disclaimer

Terms and conditions of use



My Joint Yoga

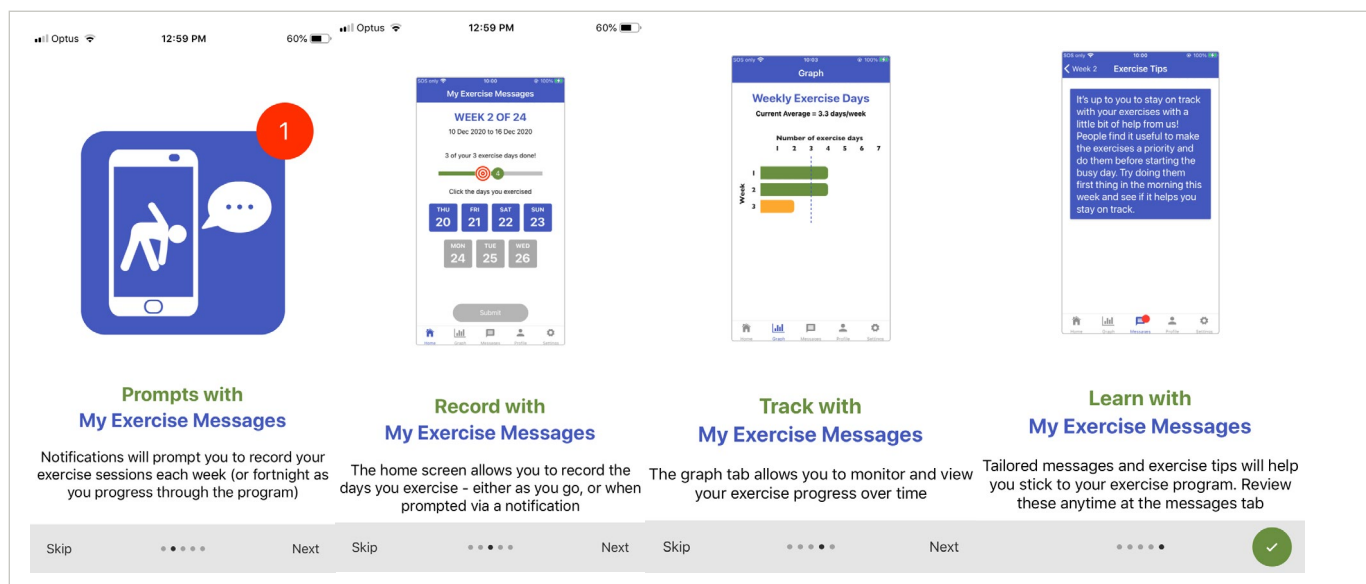
The My Joint Yoga program was designed in conjunction with yoga therapists, researchers, physiotherapists, and people with osteoarthritis. The program was tested in a randomized clinical trial in 212 people from around Australia and shown to have benefits for function, knee stiffness, quality of life and confidence to self-manage. The study was published in Annals of Internal Medicine in October 2022 with the program made freely available. 8,686 people have visited the site to date as of the end of 2024.

<https://myjointyoga.com.au/>

My Exercise Messages App for Knee Osteoarthritis

We adapted our evidence- and theory-informed SMS program into a mobile app called “My Exercise Messages” in collaboration with the University of Melbourne eResearch Group. My Exercise Messages iOS version is currently available in the Apple Store (2021) and the Android version was released in 2022.

My Exercise Messages has been downloaded **by 1,642 people** by the end of 2024. My Exercise Messages is being evaluated for effectiveness through a randomised controlled trial (MappKO) that is currently ongoing.



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[Courses](#)
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Physiotherapy Exercise and Physical Activity for Knee Osteoarthritis (PEAK)

★★★★★ 4.6 (23 reviews)

Explore exercises and strategies for minimising pain and improving mobility of patients with knee osteoarthritis.

[Join course](#)

1,845 enrolled on this course

Duration
4 weeks

Weekly study
2 hours

100% online
[How it works](#)

Unlimited
\$31.67/month
[Learn more](#)

[Overview](#)
[Start dates](#)
[Requirements](#)
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Physiotherapy Exercise and physical Activity for Knee osteoarthritis (PEAK) online training modules

Our online training modules guiding health professionals in how to implement best-practice exercise care to people with knee osteoarthritis were translated and made available in Spanish, Portuguese, and Chinese. CHESM also coordinated PEAK launch webinars with the collaborating translators in the host countries. By the end of 2024, we have had **>14,790 up from >13,600 total registrations in 2023** and with registrants from over 145 different countries.

Available at:

<https://www.futurelearn.com/courses/peak>

<https://www.futurelearn.com/courses/peak-chinese>

<https://www.futurelearn.com/courses/peak-spanish>

<https://www.futurelearn.com/courses/peak-portuguese>

E-learning for health professionals in weight management for patients with chronic diseases

Our online course educating health professionals about weight management for their patients with chronic disease and overweight/obesity continued to gain interest throughout 2024 with **1,736 people accessing the program (456 registered in 2024)** from over 113 different countries.

Available at:

<https://www.futurelearn.com/courses/eduweight>

[Subjects](#)
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EduWeight: Weight Management for Adult Patients with Chronic Disease

Help your patients living with chronic disease to make long-term lifestyle changes related to eating and physical activity.

[Join course](#)

379 enrolled on this course

Duration
6 weeks

Weekly study
6 hours

100% online
[How it works](#)

Unlimited
\$31.67/month
[Learn more](#)

[Overview](#)
[Start dates](#)
[Requirements](#)
[Educators](#)
[More courses](#)

Advocacy work

CHESM is involved in advocacy efforts to help improve care of people with musculoskeletal conditions which continued in 2024.

In June, Professor Rana Hinman joined Arthritis Australia in Sydney to meet with the Commonwealth Secretary of the Department of Health, Blair Comley, to discuss how we can improve care of Australians with osteoarthritis and low back pain.

In August, Professor Kim Bennell and Professor Rana Hinman both attended the first ever Parliamentary Summit on Better Care for Arthritis and Musculoskeletal Conditions, held at Parliament House in Canberra and hosted by Arthritis Australia. The event saw more than 50 researchers and stakeholders from around the country attend. Professor Bennell was on the organising committee.

CHESM AI Chatbot – Concept in development

In November 2024, CHESM began developing a public facing AI-powered chatbot to support osteoarthritis research. Patients/clinicians/researchers/members of the public will be able to ask questions about osteoarthritis, and the AI chatbot will provide answers based on reliable evidence-based sources within the CHESM website.

The AI chatbot will assist visitors in locating reliable information about osteoarthritis. Visitors are permitted to enter free-text questions. The chatbot will then respond with relevant information from reliable evidence-based sources.

CHESM researchers will use the data related to the questions asked by people as evidence of important research topics etc in our grant applications.

This project is being led by Professor Rana Hinman, Professor Kim Bennell, Associate Professor Thorlene Egerton, Dr Rachel Nelligan and Alex Kimp.

CHESM knowledge translation network



**KNOWLEDGE
TRANSLATION
NETWORK**

Do you want to

- ✓ find out about the latest research?
- ✓ collaborate with us on new projects?
- ✓ access evidence-based resources?

Centre for Health, Exercise and Sports Medicine



THE UNIVERSITY OF
MELBOURNE

We **established a network** from around the world in order to:

- **Share research findings**
- Provide opportunities for the **general public and clinicians to volunteer/participate in CHESM studies.**
- **Collaborate with CHESM on research** activities.
- Disseminate **patient and clinician resources developed by CHESM** as a result of our research.

We are excited to now have **>5,310 clinicians** and **>9,080 people** from over **99 different countries** signed up to the network!

<https://healthsciences.unimelb.edu.au/departments/physiotherapy/chesm/join>

Committee membership

CHESM team members are active on numerous committees both within and external to the University, acting in both chair and membership roles.

University

Department of Physiotherapy

Executive Committee
PhD Advisory Committees
CHESM Special Interest Group
CHESM Consumer Involvement Strategy Action Group
Doctor of Physiotherapy Selection Committee
Doctor of Physiotherapy Board of Examiners
Doctor of Physiotherapy First Year Co-ordinator
MUSQImpact Early Career Researcher Training and Mentoring Committee
Research Higher Degree Co-ordinator
Research and Research Higher Degree Committee
Physiotherapy Selection Committee
Chair of Examiners for Research Higher Degrees
Post graduate enrolment applications committee
Honours Committee
CHESM Executive Committee
CHESM Advisory Board

School of Health Sciences

Executive Committee
Triennial Performance Review Panels
Staff Awards Selection Panel
School Research Committee
Early & Mid-Career Academic Association
MSHS Rural Working Group
MSHS First Nations Advisory Group

Faculty of Medicine, Dentistry and Health Sciences

Appointments and Promotions Committee
Levels D and E Promotions Committees
Deans Fellowship Review Committee
Early Career Academic Network
Centre for Digital Transformation of Health, Workforce, and Education
ThinkBIG! Workshop series organising committee
SWiM (Supporting Women in MDHS) Mentor
Peer Support & Mentoring Program for NHMRC Investigator Grants
Faculty MDHS Level C Promotions Committee
Faculty MDHS Town Hall NHMRC Investigator Grants Preparation
Assessment panel for Head of School
Early-Mid Career Academic Association Steering Committee

Central

Human Research Ethics Committee Greater Than Low Risk - STEM
Human Research Ethics Advisor
Academic Board Member
Academic Board Appeals Panels
University of Melbourne Dame Kate Campbell Fellowships Review Committee
University of Melbourne Mid-career Seed Grants peer review
Faculty of Engineering Investigator Grants panel
UoM Early & Mid-Career Researcher grants review
UoM Faculty Trust Fellowships
Academic Staff Reference Group for the university-wide of Research Management System project
Clinical Education Strategy and Risk Committee
MSHS Interview panel
University Clinical Trials Review Committee

External

Council of Physiotherapy Deans Australia & New Zealand

Board member

Australian and New Zealand InterProfessional Collaboration: Challenges for Student and Staff Wellbeing in the Health Professions

Australian Physiotherapy Association

Telehealth Advisory Committee
Physiotherapy Research Foundation Group Strategic Review Panel
Collaborative Australian Physiotherapy Research Initiative
Advisory board
Conference Planning for Musculoskeletal Physiotherapy Australia
Sports & Exercise Physiotherapy National Group Committee

Australia & New Zealand Musculoskeletal Clinical Trials Network (ANZMUSC)

Executive Committee
Osteoarthritis Special Interest Steering Committee - Chair
Early Career Committee - Chair

Australian Foot and Ankle Research Network

Steering Committee
Executive Committee

Australasian Institute of Digital Health

Institute Fellow

Arthritis Australia

Scientific Advisory Board
Impactful Arthritis Research Advisory Group
Exercise and Arthritis Expert Advisory Group

The Florey Institute

Promotions Committee

Exercise and Sports Science Australia

Exercise and Arthritis Expert Advisory Group
Consultant, revision of Exercise & Sports Science Australia's Digital Practice Professional Standards

Graeme Clark Institute for Biomedical Engineering**National Vision Research Institute of the Australian College of Optometry**

Chair of review panel

New Zealand Health Research Council Program

Member of International Advisory Committee

Sports Medicine Australia

Victorian Council
Awards judging committee – SMA National Conference
Member Education Advisory Committee

Australian and New Zealand Society of Biomechanics

Executive Committee
ABC14 Scientific Committee

Sports and Exercise Podiatry Australia

Vice-President
Executive Board

Medibank

“Better Knee, Better Me” Clinical Advisory group

Osteoarthritis Research Society International (OARSI)

Osteoarthritis Management Programs: Joint Effort Initiative Steering Committee and taskforces
Diversity, Equity, and Inclusion Task Force
Exercise & Rehabilitation Discussion Group Committee – Chair
Early Career Researcher Sub-committee
Ethics & Governance Committee
International Foot and Ankle Consortium Steering Committee
Early-stage OA initiative Advisory Committee
Early Career Investigator Committee - Chair
Sport, Exercise, Physical Activity and Prevention of Osteoarthritis - Discussion Group Steering Committee
Asian Alliances Committee - Chair

Royal Australian College of General Practitioners

Handbook of Non-Drug Interventions (HANDI)

Australian Podiatry Association

National sports podiatry certification group
National Conference Organizing Committee
Chair, National Conference Judging committee

Australian Academy of Health and Medical Sciences

Victorian Group Events Committee
Conference Organising Committee
Elected Fellows

‘Alliance For Optimizing Knee Health After Injury’ (OptiKnee)**Australian Clinical Trials Alliance****Vic Gov Dept of Health & Human Services**

“Digital Health Capability Framework for Allied Health Professionals” governance committee

BrainSTEM

Board of Directors

Centre for Arthritis Research, University College Dublin

Steering committee
Steering committee – Patient & Public Involvement Rheumatology Conference

National Arthritis Consortium

Expert Advisory Group member

Journal editorial boards

CHESM team members held positions on the editorial boards of the following journals:

- Chiropractic & Manual Therapies
- Annals of Physical and Rehabilitation Medicine
- Osteoarthritis and Cartilage
- Frontiers in Sports and Active Living
- Frontiers in Pain Research
- Journal of Foot and Ankle Research
- BMC Musculoskeletal Disorders
- Journal of Physiotherapy
- Clinical Journal of Sport Medicine
- Journal of Science and Medicine in Sport

Grant application review

CHESM team members have reviewed grants for the following organisations/funding bodies in 2024:

National

- Australian Institute for Musculoskeletal Science Seed grants
- Australian Research Council Discovery Early Career Researcher Award
- Australian Research Council Early Career Industry Fellowship
- MDHS Early Career Researcher Conference Support Scheme
- National Health and Medical Research Council Centre of Research Excellence
- National Health and Medical Research Council Investigator grants
- National Health and Medical Research Council Ideas grants
- National Health and Medical Research Council peer review of Postgraduate Scholarships
- Medical Research Future Fund
- Arthritis Australia Grants Review Panel member

International

- Canadian Institute of Health Canada Chair grants
- La Caixa Foundation Health Research Grants (Spain)
- Deutsche Forschungsgemeinschaft | German Research Foundation
- Dutch Research Council
- Versus Arthritis UK
- Hong Kong Health and Medical Research Fund
- Organisation for Health Research and Development, The Netherlands
- Bath Institute for Rheumatic Diseases, UK
- Rheumafonds, Netherlands
- National Medical Research Council, Singapore
- New Zealand Health Research Council

Media

CHESM had another year of success in the media. The ACL Cross Bracing protocol generated a large amount of news outlet and social media interest that was reflected in the high Altmetric scores of publications. CHESM investigators were also interviewed and featured across multiple iterations of the Australian Physiotherapy Association's InMotion magazine sent out monthly across its members.

Australian Physiotherapy Association – InMotion

- Physios can help with weight loss and management – 30 October 2024 – Professor Kim Bennell and A/Professor Kim Allison

The Conversation & ABC News – “Do you have knee pain from osteoarthritis? You might not need surgery. Here's what to try instead” Dr Belinda Lawford, Professor Rana Himan - 25 Aug 2024

Channel 7 News – televised interview May 2024 – Cross Bracing Protocol

ABC News “The ACL Cross Bracing Protocol healed my torn ligament. This is how it works” May 2024

2SM News radio Sydney, radio interview 29/04/2024

6PR Perth, Live radio interview 29/04/2024

Australian Government, Department of Health and Aged Care: interview with People, Communication and Parliamentary Division, March 2024

Nine News - Televised interview by March 2024

ABC News - Televised interview March 2024 with accompanying print article (300,000 reads on day 1)

RRR - Einstein A Go-Go

- 7 July 2024 featured PhD Candidate Julia Zhu discussing Tai Chi and osteoarthritis
- 4 February 2024 featured A/Professor Stephanie Filbay discussing ACL injuries

University of Melbourne – Pursuit “The biomechanics of going really, really fast” A/Professor Adam Bryant, Dr Scott Starkey

News articles

Pediatric News “What Does Natural Healing of ACL Ruptures Mean for Long-Term Outcomes?” 15 May 2024

Medscape, Nouvelles du monde, “One Third of ACL Ruptures Heal Naturally; Outcomes Uncertain” 14 May 2024

Foreign Affairs New Zealand, The Conversation, MedicalXpress, “Surgery is the default treatment for ACL injuries, but it's not the only way” 06 May 2024

Mirage News, ‘Australia's ACL Injuries: Surgery Not Sole Solution’ 06 May 2024

Big News Network, News story from Big News Network on Sunday 05 May 2024

The Epoch Times, “A Torn Knee Ligament Can Heal Without Surgery, Study Shows” 04 Feb 2024

The Age, Sydney Morning Herald, MSN, Brisbane Times, WA Today, Galaxy Concerns “The revolutionary procedure that could salvage Sam Kerr's Olympic dream” 09 Jan 2024

Podcasts

Physio Network – Physio Discussed

- A/Professor Stephanie Filbay – “An in-depth discussion on non-operative ACL Rehab”

The Shoulder Physio Podcast – hosted by Jared Powell

- Professor Kim Bennell – “Should physiotherapists provide dietary advice to individuals with knee osteoarthritis”

JOSPT Insights

- Dr Belinda Lawford – “Adding telerehabilitation to your clinical practice”

IGNITE Physiotherapy Conference – Conference Conversations Podcast Series

- A/Professor Stephanie Filbay – “ACL uncovered: navigating choices in injury management”

The BODY Movement

- A/Professor Stephanie Filbay - ACL Cross Brace Lead Author

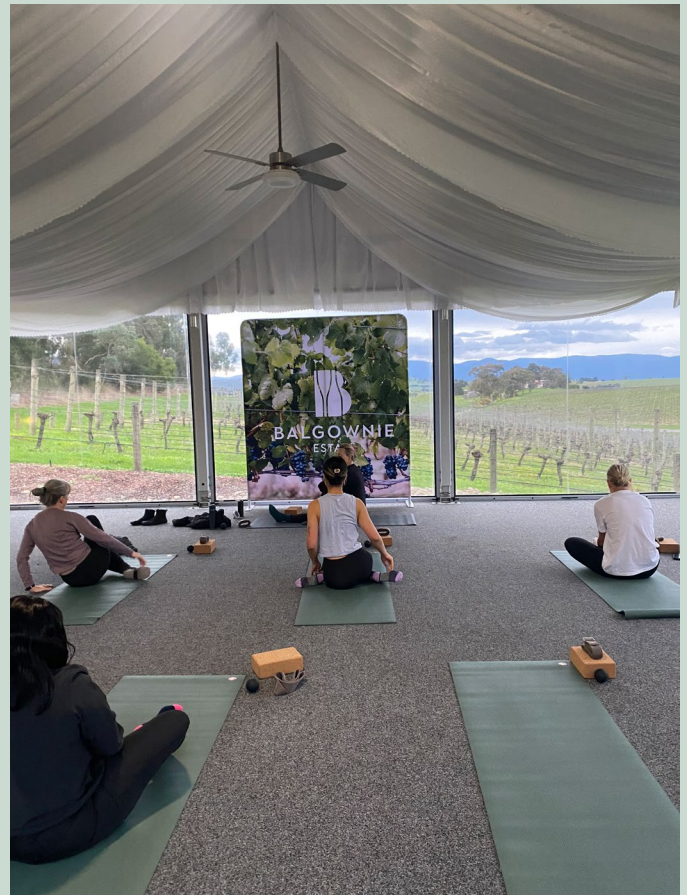
Jimmy McKay's PT Pintcast

- Professor Rana Hinman - invited speaker to discuss 2024 Physiotherapy Evidence Database (PEDro) Podcast for PEDro Top 25 Trials, “Hinman RS et al. Telerehabilitation consultations with a physiotherapist for chronic knee pain are not inferior to traditional in-person care: the PEAK non-inferiority randomised controlled trial. The Lancet 2024; 403(10433): 1267-78.”

CHESM Annual Research Retreat

Balgownie Estate 2024

On 24-25th July, the CHESM team attended a 2-day research retreat at the beautiful Balgownie Estate in the Yarra Valley. A primary focus of this retreat was to develop a centre-wide strategic plan for the next 5 years, which aligned with Faculty, School and Department priorities. Doing so presented the opportunity to come together as a team and reflect on progress against our 2019 CHESM Strategic Plan and discuss future directions for the years ahead. Actionable strategies were developed for four key areas of interest: 1) Attracting high quality graduate and honours researchers and enhancing their learning experience, 2) Effectively engaging with consumers and end users to improve quality and impact of CHESM research, 3) Conducting and translating high quality musculoskeletal research that addresses important knowledge gaps and improves the health and wellbeing of the community, and 4) Nurturing career development across all staff in CHESM. The resulting strategic plan was used to inform the forthcoming 5-year review which CHESM would undergo in September 2024. We were fortunate to also have time for some team building activities, which included outdoor group activities (segway riding, laser clay shooting, and archery), sharing delicious meals, trivia, and sunrise yoga.



Postgraduate research students

During 2024, CHESM staff supervised 8 research higher degree (PhD) students

Current Students

Name	Title	Supervisors
My-Linh Nguyen (PhD)	Using behavioural economics and health behaviour theory to improve participation in physical activity <i>Completion seminar: 5 December 2022</i>	Prof Rana Hinman Prof Kim Bennell Prof Anthony Harris Dr Michelle Hall Dr Amanda Rebar
Sam Kayll (PhD)	The effects of foot-based interventions on patellofemoral joint loads in people with and without patellofemoral disorders <i>Confirmation seminar: 2 February 2023</i>	A/Prof Kade Paterson A/Prof Adam Bryant Prof Kim Bennell Prof Rana Hinman
Patrick Rowe (PhD)	The prevention and management of ankle sprains and chronic ankle instability in netball	A/Prof Kade Paterson A/Prof Adam Bryant Prof Rana Hinman
Emma Searle (PhD)	A digital health intervention to increase physical activity participation in individuals with knee osteoarthritis <i>Confirmation seminar: 30 August 2023</i>	A/Prof Stephanie Filbay Prof Kim Bennell Dr Mark Merolli
Travis Haber (PhD)	Factors informing the conservative management of middle-aged and older adults with chronic hip pain	Prof Rana Hinman A/Prof Fiona Dobson Dr Michelle Hall
Pei Wei Chi (PhD)	Effect of modifiable athletic footwear features on knee joint contact forces in healthy young females and older adults with knee osteoarthritis	A/Prof Adam Bryant Prof Rana Hinman A/Prof Kade Paterson Dr Wen Wu
Julia Zhu (PhD)	Development of implementation strategies and more impactful physiotherapy for individuals with knee osteoarthritis <i>Confirmation seminar: November 2023</i>	Prof Kim Bennell Prof Rana Hinman
Ayobami Olanrewaju (PhD)	Patterns of physical activity pre- and post- total knee replacement, assessed through the linkage of NHS and consumer health and fitness tracker data	A/Prof Stephanie Filbay Prof Will Dixon Dr David Wong Dr Sabine van der Veer Prof Kim Bennell

Graduations

Dr My-Linh Nguyen and Dr Pei Wei Chi attended their graduation ceremonies in 2024.

Research grants

New grants awarded in 2024 (CHESM Researchers are indicated in bold)

Granting body	Investigators	Project title	Duration	Total grant
NHMRC Investigator Fellowship L3	Bennell K	Optimising lifestyle care to reduce the burden of knee and hip osteoarthritis	2026-2030	\$2,981,630
NHMRC CRE	Crossley K Hinman RS Culvenor A Emery C Choong P Smith A Barton C Henne K Dowsey M McPhail S	HERknee CRE: Preventing knee injury and osteoarthritis burden for women and girls	2025-2029	\$3,000,000
NHMRC Investigator Grant Leadership 2	Hinman RS	Increasing lifestyle management of hip & knee osteoarthritis to improve health outcomes	2024-2028	\$2,847,000
United States Department of Defence	Hall M (co-PI) Klyne D (co-PI) Rhon D Capaldi VF Hinman RS Hodges PW Humphries M	Comparative effectiveness of exercise, cognitive behavioural therapy, and their combination for people with chronic musculoskeletal pain and poor sleep	2024-2028	\$USD1,523,052
MRFF Clinical Trials Activity Grant	Filbay S (CIA) Bennell K Hunter D Harris I Culvenor A Hinman R Foster N Tran-Duy A De Silva A	A novel non-surgical intervention to improve outcomes after ACL injury: A multicentre RCT	2024-2027	\$1,725,343
Research Grants Council Hong Kong	Or K Bennell K Cheung M Fu A Komura T Wong E Yam L	Development and randomized controlled trial of an AI-powered Technological Surrogate Physiotherapist dedicated to quality enhancement and cost reduction in knee osteoarthritis exercise rehabilitation	2024-2026	\$132,977
Australian Podiatry Education and Research Foundation Grant	Paterson K	Neuropathic pain in people with and without midfoot osteoarthritis: a matched cross-sectional observational study	2024-2025	\$9,478.16
Medibank Better Health Foundation	Mok S Hunter D Bennell K	Update of RACGP Clinical guideline for knee and hip osteoarthritis	2024	\$70,000
Uni of Melbourne MDHS Catalyst Grant	Lawford BJ Nelligan R Bennell K Hinman RS Stell A Vaughan C Davies E	Developing a novel physical activity mobile app ('JointMotion') to enhance access to evidence-based care for people with lower limb osteoarthritis	2024	\$40,000

Continuing grants in 2024

Granting body	Investigators	Project title	Duration	Total grant
Uni of Melbourne MDHS Innovation Seed Grant	Hayward K Lannin N Fini N Dalton E Kramer S Christie L Hinman R Churilov L	Standardising Competency in Outcomes of REcovery post-Stroke (SCORES).	2024	\$40,000
Australian Physiotherapy Association - Pat Cosh Trust Strategic grants	McGrath R Allison K Hastings-Ison T Lamblin M Donald K	Co-design, Delivery, and Evaluation of a Blended Learning Approach to Support Mental Ill-Health Awareness and Literacy in Physiotherapy Students	2024	\$30,000
Arthritis Australia Grant-in-Aid	Watkins K Briggs A Slater H Hinman RS Sim TF Bennell KL Darlow B Chua J	Closing gaps in osteoarthritis care through community pharmacy	2024	\$20,000
Faculty GR Development Grants	Cavallaro M Parry S Klaic M McDonald C Lawford B Short C Paxino J Zhu J Fehlberg Z Graham M Whish-Wilson G	Designing Together: Co-Design Methodologies for Health, Well-being and Societal Impact.	2024	\$15,000
Faculty MDHS LTI seed grant	Dobson F	Planetary Health Education, Co-designing an e-learning package for health professionals	2024	\$10,000
Faculty MDHS LTI seed grant	Dobson F	Development of an online learning module to improve student awareness of risks and enhance student safety on clinical placement – occupational violence, aggression, bullying and harassment	2024	\$10,000
Medical Research Future Fund (Effective treatments and therapies)	Hunter D Callahan L Bennell K Eyles J Stamatakis E Hinman R Losina E Barton C Vicenzino B Rankin N Duong V Aitken D Kobayashi S White D	Walk with Ease Australia	2023-2026	\$591,279

Continuing grants in 2024

Granting body	Investigators	Project title	Duration	Total grant
Rheumatology Research Foundation USA (FY2024 Innovative Research Award)	Vina ER Kwoh CK Bennell K Villamil Grest C	Mobilizing Hispanics with knee osteoarthritis through live video consultations: a dyad-based approach	2023-2025	\$622,000
The University of Melbourne MDHS Innovation Seed Grant	Lawford BJ Nelligan R Hinman RS Bennell KL Stell A Vaughan C Davies E	Co-designing a physical activity mobile app for people with lower limb osteoarthritis	2023-2024	\$40,000
Arthritis Australia Fellowship	Lawford BJ	Co-designing a physical activity mobile app for people with knee osteoarthritis	2023-2024	\$30,000
Physiotherapy Research Foundation	Da Silva A Fini N Merolli M Granger C Parry S	Co-designing a web-based toolkit for intensive care unit survivors	2023-2024	\$12,000
The University of Melbourne Dyason Fellowship	Lawford BJ	International visit to Lund University	2023-2024	\$5,000
Royal Australian College of General Practitioners (in kind support)	Paterson K Hinman R Bryant A Bennell K Lamb K Manski-Nankervis J	Force-reducing minimalist footwear for adolescents with chronic knee pain: a randomised clinical trial	2022-2027	\$50,000
Australian Physiotherapy Association (in kind support)	Paterson K Hinman R Bryant A Bennell K Lamb K Manski-Nankervis J	Force-reducing minimalist footwear for adolescents with chronic knee pain: a randomised clinical trial	2022-2027	\$50,000
Australian Podiatry Association (in kind support)	Paterson K Hinman R Bryant A Bennell K Lamb K Manski-Nankervis J	Force-reducing minimalist footwear for adolescents with chronic knee pain: a randomised clinical trial	2022-2027	\$50,000
Asics Oceania (in kind support)	Paterson K Hinman R Bryant A Bennell K Lamb K Manski-Nankervis J	Force-reducing minimalist footwear for adolescents with chronic knee pain: a randomised clinical trial	2022-2027	\$196,330
Sports Medicine Australia (in kind support)	Paterson K Hinman R Bryant A Bennell K Lamb K Manski-Nankervis J	Force-reducing minimalist footwear for adolescents with chronic knee pain: a randomised clinical trial	2022-2027	\$50,000
National Health and Medical Research Council Centre of Research Excellence (CRE)	Buchbinder R Maher C March L Day R Hinman RS Harris I Ferreira M Glasziou P Green S Billot L	Australia & New Zealand Musculoskeletal (ANZMUSC) Clinical Trials Network	2018-2022 <i>Extended 2022-2027</i>	\$2,500,000

Continuing grants in 2024

Granting body	Investigators	Project title	Duration	Total grant
Medical Research Future Fund - 2021 Chronic Musculoskeletal Conditions in Children and Adolescents Grant Opportunity scheme	Paterson K Hinman R Bryant A Bennell K Lamb K Manski-Nankervis J	Force-reducing minimalist footwear for adolescents with chronic knee pain: a randomised clinical trial	2022 - 2026	\$994,740
Medical Research Future Fund	Bennell K Hinman R Hall M Lawford B Francis J Simpson J Sumithran P	HipHealth – a pilot-tested telehealth program that incorporates education, exercise, and weight loss programs	2021 - 2026	\$1,120,000
Medibank Better Health Foundation (cash support)	Bennell KL Hinman RS Sumithran K Keating C Simpson J Harris A Francis J Hall M Lawford B	HipHealth: an exercise and weight loss telehealth program to improve outcomes for Australians living with hip osteoarthritis	2021-2026	\$292,322
National Health and Medical Research Council Emerging Leader Fellowship	Filbay SR	NHMRC Emerging Leadership Fellow	2021-2025	\$645,205
NHMRC Investigator Grant	Bennell K	Improving outcomes for people with knee osteoarthritis: overcoming patient and clinician barriers	2020-2024	\$2,848,640
MRFF Preventive and Public Health Research Initiative	Daly R Bennell KL Scott D Ebeling P Maier A Giangregorio L Hinman RS Watts J Koorts H McNaughton S	TeleFFIT-A personalized, telehealth exercise and lifestyle risk factor management program to reduce falls and fracture risk in older adults: A 12-month hybrid effectiveness-implementation trial	2020-2024	\$1,393,000
Department of Health Public Health & Chronic Disease Program Arthritis - Health Professional Education and Training	Consortium lead: Arthritis Australia (Mills A) Consortium members: Hunter DJ Hinman RS Bennell KL Forlano R Briggs A Buchbinder R Hill C Whittle S	Building health Professional knowledge and skills in arthritis diagnosis, management and care.	2020-2024	\$2,000,000
National Health and Medical Research Council – Emerging Leader Level 1 Investigator Grant	Paterson K	Closing the evidence gaps to boost clinical outcomes for people living with disabling foot osteoarthritis	2020-2024	\$632,475.41
NHMRC Project Grant	Hinman RS Russell T Foster N Kasza J Harris A	Technology vs tradition: a non-inferiority trial comparing video to face-to-face consultations with a physiotherapist for people with knee osteoarthritis	2019-2024	\$1,240,000

Award highlights

Internal Awards

School of Medicine, Dentistry and Health Sciences Discovery Award for Research Achievement

- A/Professor Stephanie Filbay was awarded the Mid-career researcher discovery award for excellence in innovative research that is shifting the paradigm in the management of ACL injury.
- Dr Belinda Lawford was awarded the Early-career researcher discovery award for her excellence in redefining delivery of healthcare for people with chronic pain and disability.

Dame Kate Campbell Fellowship

- Dr Belinda Lawford was announced as a recipient of a 2025 Dame Kate Campbell Fellowship.
- Professor Kim Bennell also had her Dame Kate Campbell Fellowship renewed.

CJ Roper Scholarship

Dr Belinda Lawford was awarded the very prestigious faculty 3-year CJ Roper Fellowship that includes some project funding.

School of Medicine, Dentistry and Health Sciences Recognition of Staff Years of Service

A number of CHESM staff were recognised for their years of service and celebrated these milestones at a special event held on Tuesday 3rd December, 2024.

10+ years	20+ years	25+ years
Kade Paterson	Ben Metcalf	Kim Bennell
Penny Campbell	Rana Hinman	
Libby Spiers	Adam Bryant	



CHESM staff: Ben Metcalf, A/Professor Kade Paterson, Professor Rana Hinman, Professor Kim Bennell, Penny Campbell, Libby Spiers and A/Professor Adam Bryant at the staff years of service event.

Dean’s Award for Excellence in Graduate Research

PhD candidate, Sam Kayll received the Dean’s Award for Excellence for his work on footwear for adolescents with knee pain. The Faculty of Medicine Dentistry and Health Sciences Dean’s Award for Excellence in Graduate Research, valued at \$1000, recognises outstanding achievements by Graduate Researchers across the Faculty.

Global, Place and Community Excellence Awards

Award for Excellence in Building and Strengthening Student Diversity went to the Safer Spaces Team – Ms Jessica Lees, Dr Free Coulston, Dr Rachel Toovey, **Dr Kim Allison**, Dr Kath Sellick, Associate Professor Selina Parry, Professor Catherine Granger, Dr Megan Sharp Faculty of Medicine, Dentistry and Health Sciences.

Teaching Excellence Awards, Faculty of Medicine, Dentistry and Health Sciences

Award for Excellence and Innovation in Indigenous Higher Education First Nations, Health Promotion & Equity Teaching Team – Ellie White, Sarah Large, Nikkei Simon, Dr Rachel Toovey, Molly Kennedy, Dr Brooke Conley, Sarah Maley, Jessica Lees, Dr Free Coulston, Dr David Kelly, **Dr Kim Allison**.

School of Medicine, Dentistry and Health Sciences Education Awards

The award for program innovation went to - Jess Lees, Free Coulston, Rachel Toovey, Kim Allison, Selina Parry, Kath Sellick, Catherine Granger, Megan Sharp.

Academic Promotions

- Dr Mark Merolli was promoted to A/Professor in December 2024.
- Head of Department A/Professor Fiona Dobson was promoted to Professor (effective Jan 1st, 2025).

External Awards

Australian Institute of Policy and Science 2024 Victorian Young Tall Poppy

A/Professor Stephanie Filbay received a Young Tall Poppy Science award. These annual awards are an initiative of the Australian Institute of Policy and Science, aimed at recognising and celebrating achievements and excellence in research made by early career scientists in Australia who promote science across teaching and learning and spread this enthusiasm to the broader community.



A/Professor Stephanie Filbay at the Australian Institute of Policy and Science 2024 Victorian Young Tall Poppy awards.

Health Services Research Association of Australia and New Zealand (HSRAANZ)

The PEAK RCT led by Professor Rana Hinman was awarded the Health Services & Policy Research Best Overall Paper for 2024.

PEDro Top 25 Trials

The PEAK trial led by Professor Rana Hinman was awarded the Physiotherapy Evidence Database's (PEDro) top 5 most important randomised controlled trials in physiotherapy published between July 2019-August 2024. PEDro Top 25 trials ever published are ground-breaking trials that mark important milestones in the evolution of physiotherapy treatment.

Research.com Best Female Scientists in Australia 2024 Ranking

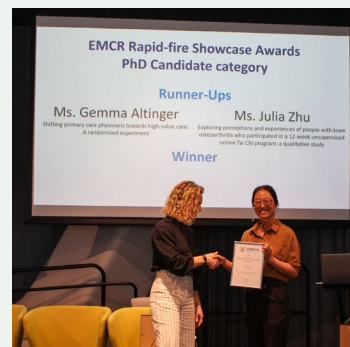
Professor Kim Bennell was ranked 12th as a part of the 3rd edition of Research.com ranking of top female scientists in Australia based on data collected from a wide range of bibliometric sources.

Sports Medicine Australia and Australasian College of Sport and Exercise Physicians Conference

Meike van Haeringen won the ASICS Best Poster in Clinical Sports Medicine at Sports Medicine Australia and Australasian College of Sport and Exercise Physicians Conference. Meike's winning poster is titled "Healing of acute Anterior Cruciate Ligament rupture on 3-month MRI in 235 people managed with the cross-bracing protocol."

Australia and NZ Musculoskeletal Clinical Trials Network (ANZMUSC)

- PhD candidate Julia Zhu received the runner-up award at the Rapid-fire Research Showcase for her Tai-Chi program and was awarded a 2024 ANZMUSC travel scholarship.
- PhD candidate Travis Haber received the 2024 ANZMUSC Osteoarthritis Paper of the Year for 'Effects of Hip Pain Diagnostic Labels and Their Explanations on Beliefs About Hip Pain and How to Manage It: An Online RCT'.



Julia Zhu receives ANZMUSC runner-up award.



Professor Rana Hinman - 2024 Reviewer of the Year for OAC.

2024 International Ankle Symposium

PhD Candidate Patrick Rowe received a Best Abstract Founder Award.

Osteoarthritis Research Society International (OARSI)

- PhD candidate Travis Haber was awarded a 2024 OARSI travel scholarship.
- PhD candidate Travis Haber received the Rehabilitation Discussion Group's Paper of the Year Award for his paper: 'Effects of Hip Pain Diagnostic Labels and Their Explanations on Beliefs About Hip Pain and How to Manage It: An Online RCT'.

Osteoarthritis & Cartilage

Reviewer of the Year Award was presented to Professor Rana Hinman for outstanding work as reviewer.

Annals of Internal Medicine

Professor Rana Hinman received the Outstanding Reviewer recognition for her work in 2024.

General Administration of Sport China

Visiting PhD student Ziru Wang was awarded a National Scientific Fitness Guidance Model Award.

Invited presentations

A summary of the presentations given by CHESM team members are shown below.

Conference presentations

International

December 14-15, 2024 Fujian Province Advances in Sports and Health Symposium and the Xiamen City Sports and Health Annual Conference, Xiamen, China. **Professor Rana Hinman** - invited speaker: "Technology versus tradition: Physiotherapy video consultations for managing knee osteoarthritis. The PEAK non-inferiority randomised controlled trial".

November 28-30, 2024 4th Saudi Conference for Physiotherapy, Saudi Arabian Physiotherapy Society, Riyadh, Saudi Arabia.

A/Professor Mark Merolli - invited keynote- "The Future of Physiotherapy: Innovation and Digital Integration".

November 15-19, 2024 Hong Kong Hospital Authority, Institute of Advanced Allied Health Studies, Kowloon Hospital. **Professor Rana Hinman** and **Professor Bennell** were invited to develop & deliver training for the Interpreting Allied Health Reports and Understanding Outcome Driven Service Training Series, consisting of:

- Visit to Yan Chai Hospital (3 hours for viewing & feedback on telehealth services- physiotherapy, occupational therapy, dietetics)
- Seminar (1.5 days, 12 talks by **Professor Rana Hinman** and **Professor Kim Bennell**) "Telehealth: Harnessing Technology to Deliver Allied Health Care"- 180 participants
- Workshop 1 (3.5 hrs, 4 talks by **Professor Rana Hinman** and **Professor Kim Bennell**) "Telehealth delivered physiotherapy program for knee OA"- 40 participants
- Workshop 2 (3.5 hrs, 5 talks by **Professor Rana Hinman** and **Professor Kim Bennell**) "Telehealth for chronic disease management"- 40 participants
- Workshop 3 (2 hrs, consultation and feedback provided on 4 different projects) "Telehealth projects in Hospital Authority"- 15 participants

November 2024, 7th Meeting of Experts in Physiotherapy, Orthopedics & Rheumatology, Poznań, Poland. **A/Professor Steph Filbay** - International keynote (funded).

October 2024, New Zealand Knee Society Annual Meeting, New Zealand. **A/Professor Steph Filbay** - invited keynote - "Can a ruptured ACL heal without surgery? An overview of the latest evidence".



Professors Bennell and Hinman with Priscilla Poon, Chief Manager Allied Health, Hong Kong Hospital Authority and dignitaries.

October 3, 2024 Physiotherapy Evidence Database (PEDro) World-Wide Journal Club. **Professor Rana Hinman** - Invited panellist to discuss "Hinman RS et al. Telerehabilitation consultations with a physiotherapist for chronic knee pain are not inferior to traditional in-person care: the PEAK non-inferiority randomised controlled trial. The Lancet 2024; 403(10433): 1267-78."

August 2024, Queenstown NZ. **A/Professor Kade Paterson** - "Linking foot function to knee pathology: The role of the foot biomechanics and treatments for common knee complaints".

May 2024, Isokinetic Conference, Madrid, Spain. **A/Professor Steph Filbay** - invited international keynote - "debate: surgery vs. non-surgical management of ACL injury".

April 2024, American Medical Society for Sports Medicine Annual Scientific Meeting, Baltimore, USA. **Professor Kim Bennell** - invited keynote: for physicians. 'Managing pain in the non-operative patient.'

Netherlands Consortium of Osteoarthritis 2024. **Dr Belinda Lawford** - "Year in Review Rehabilitation".

BREAKING BARRIERS
THROUGH MULTI-DISCIPLINARY RESEARCH

OARSI 2024

WORLD CONGRESS ON OSTEOARTHRITIS

VIENNA, AUSTRIA, **APRIL 18-21, 2024**
MESSE WIEN EXHIBITION & CONGRESS CENTER

OARSI OSTEOARTHRITIS
RESEARCH SOCIETY
INTERNATIONAL
congress.oarsi.org



April 18-21, 2024 Osteoarthritis Research Society International Congress, Vienna Austria.

- **Professor Kim Bennell** – invited speaker: Osteoarthritis Research Society International Joint Effort Initiative.
- **Professor Rana Hinman** – invited mentor: “Meet the Professor Young Investigator Mentorship Session”.
- **Professor Rana Hinman** – Health Professional Workshop on Recommended Osteoarthritis Management – invited speaker: Physical activity and exercise”.
- **A/Professor Steph Filbay** – invited international speaker – “ACL healing with rehabilitation alone and implications for osteoarthritis”.
- **A/Professor Steph Filbay** – Podium presentation: “ACL continuity on MRI 11 years after acute ACL rupture: an exploratory analysis of the KANON trial”.
- **Dr Belinda Lawford** – Plenary “Year in Review: Rehabilitation and Outcomes”.
- **Dr Belinda Lawford** – “Consumer-involved research”.
- **A/Professor Kade Paterson** – Clinical classification criteria for foot and ankle osteoarthritis: Scoping review. Foot and Ankle Osteoarthritis Consortium workshop.



Professor Kim Bennell and Professor Marius Henriksen present on exercise and weight loss for #osteoarthritis at the OARSI2024 pre-congress workshop.



Dr Belinda Lawford 'Year in Review' session - review of rehabilitation and outcomes studies.

National/State

October 21, 2024 ANZMUSC Public Lecture Evening, Adelaide:

- **Professor Rana Hinman** – invited speaker: Recent high impact musculoskeletal trials. “Video consultations for knee osteoarthritis: the PEAK non-inferiority trial”.
- **A/Professor Steph Filbay** - invited podium presentation: “ANZMUSC Delphi on clinical trial learning needs”.

October 10, 2024 Musculoskeletal Health Australia Koadlow Lecture, Livestream. **Professor Rana Hinman** - keynote speaker: “Lifestyle choices that can impact musculoskeletal health”.

October 2024, Sports Medicine Australia National Conference, Melbourne. **A/Professor Steph Filbay**:

- Podium presentation – “ACL injury treatment decision making”.
- Symposium presentation – “ACL healing”

July 30, 2024 Austin ResearchFest Physiotherapy Symposium, Melbourne. **Professor Rana Hinman** - Sue Berney Research Lecture. Keynote speaker: “Technology versus tradition: Physiotherapy video consultations for managing knee osteoarthritis. The PEAK non-inferiority randomised controlled trial”.

May 2024, Australian Academy of Health and Medical Sciences, Life as a Clinician-Scientist Allied Health Symposium. **A/Professor Kade Paterson** – keynote speaker.

March 2024, Sports Medicine Australia - Running Symposium, Melbourne. **A/Professor Mark Merolli** - Invited Keynote. titled “Tech Strides: Embracing Digital Innovation and Technology in Running Performance and Injury Management”.

2024, University of Melbourne School of Biomedical Science Research Retreat, Melbourne, Australia. **Dr Belinda Lawford** - “Landscape of Australian Health and Medical Research”.

Invited presentations to stakeholders, clinicians and institutes

Dec 2024, GLA:D Australia – **A/Professor Steph Filbay**, invited presentation to >200 GLA:D trained physiotherapists.

Dec 2024, Erasmus University, Rotterdam, Netherlands – **A/Professor Steph Filbay**, visiting research presentation.

August 2024, Careers in Sports Medicine and Science - **A/Professor Kade Paterson**, keynote speaker for Sports Medicine Australia National webinar.

June 2024, SHS Invited speaker: **Professor Rana Hinman**, “Planning from the outset to get your study in a high impact journal: a recent trials experience”.

June 2024, Department of Physiotherapy 30 years of Physiotherapy Graduates Alumni Event- **Professor Rana Hinman**, keynote speaker “Technology versus tradition: Physiotherapy video consultations for managing knee osteoarthritis”.

June 17 2024, Faculty MDHS Town Hall NHMRC Investigator Grants Preparation - **Professor Rana Hinman**, invited panellist.

May 2024, Life as a Clinician-Scientist Allied Health Symposium, Australian Academy of Health and Medical Sciences - **A/Professor Kade Paterson**, Keynote speaker.

April 2024, Sports Medicine Fellowship Residency, The Jewish Hospital Cincinnati Sports Medicine & Orthopaedic Center/Bon Secours Mercy Health, Cincinnati, USA. **A/Professor Steph Filbay**, invited international visiting Professor.

Webinars (International/National)

2024 September

Masterclass Webinar for FullPhysio (France): Physiotherapy management of knee osteoarthritis – Professor Kim Bennell.

2024 August

Careers in Sports Medicine and Science, Keynote speaker for Sports Medicine Australia National webinar – A/Professor Kade Paterson.

2024 March

Webinar for Thurston Arthritis Research Center, Uni of North Carolina Chapel Hill. Optimising lifestyle management of osteoarthritis – Professor Kim Bennell.

2024

Sensors MDPI Journal special webinar, title ‘Embracing Digital Innovation and Technology in Running Performance and Injury Management’ – A/Professor Mark Merolli.



Professors Hinman and Bennell present Research Impact seminar, June 2024.

CHESM Webinars/Seminars

29th February 2024 – CHESM ran a free webinar for consumers and clinicians. Presented by Dr Rachel Nelligan, the webinar was titled “Osteoarthritis Update: Taking Control of your Osteoarthritis”.

June 2024 – Melbourne School of Health Sciences hosted a Research Seminar presented by Professor Kim Bennell & Professor Rana Hinman titled “Research Impact”. This presentation included a discussion of planning a high-quality research project that prepares at the outset of the study so that the work has potential to be published in a top tier cross-disciplinary journal such as the Lancet.

Centre for Health, Exercise
and Sports Medicine

Register:
<https://go.unimelb.edu.au/2xa8>

Osteoarthritis Update

TAKING CONTROL OF YOUR OSTEOARTHRITIS

Free Webinar

 **12pm – 1pm AEDT**
Thurs 29th Feb 2024



Presentation by: Dr Rachel Nelligan

Join osteoarthritis researcher Dr Rachel Nelligan as she discusses osteoarthritis and key messages about how it can be managed. Dr Nelligan is part of a team of researchers at the multidisciplinary Centre for Health, Exercise and Sports Medicine at the University of Melbourne. During her talk she will provide practical tips and access to free resources that you can use in your daily life.

 **Centre for Health, Exercise and Sports Medicine**
Department of Physiotherapy, The University of Melbourne

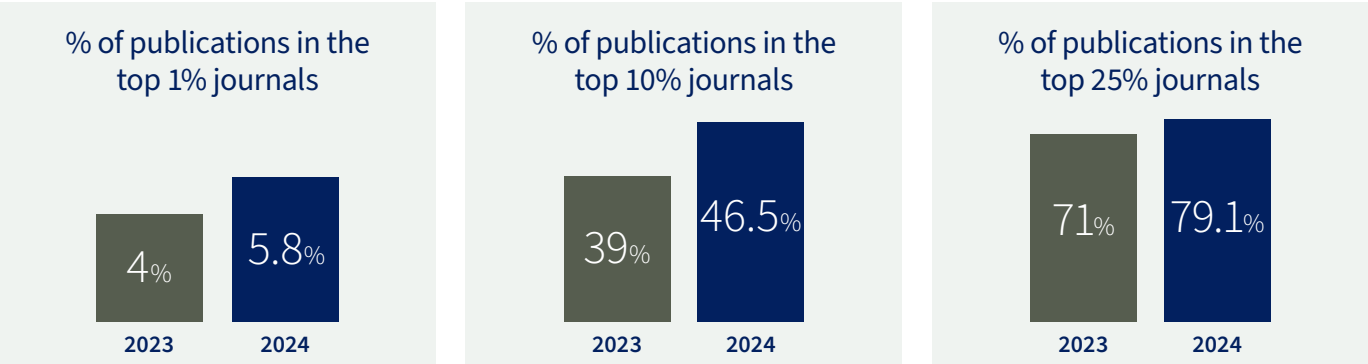
Publications

CHESM had a very productive 2024 with 60 publications. Of these, 29 (48%) had a CHESM team member as first or last-named author. The quality of the journals in which CHESM team members publish in is excellent, as outlined below.

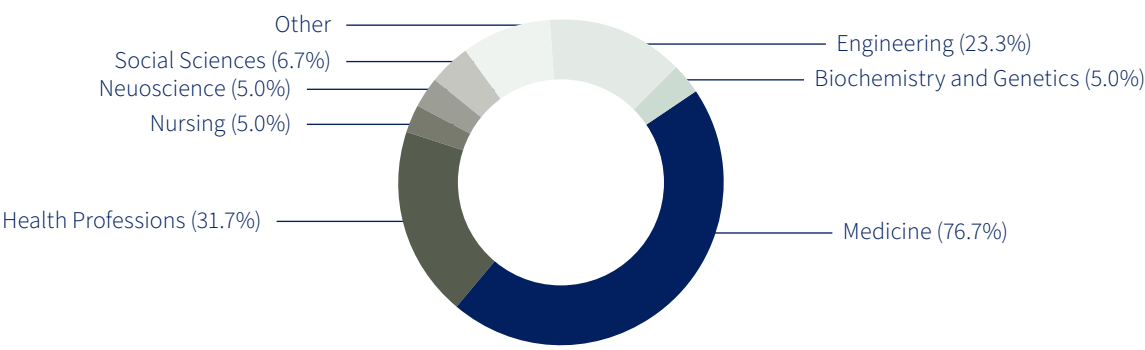
Common journals in which CHESM team members published their work in 2024

Journal name	Publication number
Musculoskeletal Care	1
Arthritis Care and Research	5
Cochrane Database of Systematic Reviews	1
Journal of Physiotherapy	1
Osteoarthritis and Cartilage	7
BMC Musculoskeletal Disorders	1
Journal of Orthopaedic and Sports Physical Therapy	2
Journal of Science and Medicine in Sport	3
BMC Medical Education	3
British Journal of Sports Medicine	2
Studies in Health Technology and Informatics	4
BMJ	1
Osteoarthritis and Cartilage Open	2
The Lancet	1

Percentage of Publications



Publication shares per subject area



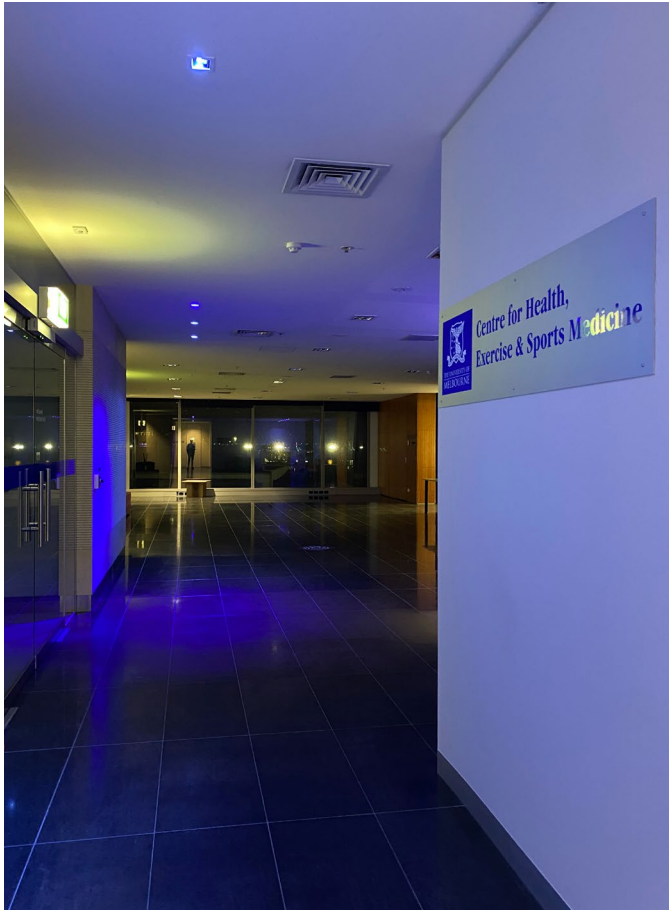
Refereed journal articles (CHESM Authors are indicated in bold)

1. **Allison, K**, Jones, S, **Hinman, RS**, **Pardo, J**, Li, P, DeSilva, A, Quicke, JG, Sumithran, P, Prendergast, J, George, E, Holden, MA, Foster, NE, & **Bennell, KL**. (2024). Alternative models to support weight loss in chronic musculoskeletal conditions: effectiveness of a physiotherapist-delivered intensive diet programme for knee osteoarthritis, the POWER randomised controlled trial. *British Journal of Sports Medicine*, 58(10), 538-547. doi:10.1136/bjsports-2023-107793
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Top left: The CHESM Centre.
 Top right and bottom left: The CHESM Christmas Party.
 Bottom right: CHESM social lunch.



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RFQ13466