



NHMRC Centre of Research Excellence
**TRANSLATIONAL RESEARCH
IN MUSCULOSKELETAL PAIN**
CLOSING THE EVIDENCE-PRACTICE GAP

**NHMRC CENTRE OF RESEARCH EXCELLENCE -
TRANSLATIONAL RESEARCH IN MUSCULOSKELETAL PAIN**

2015-2016 ANNUAL REPORT



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EXECUTIVE SUMMARY

The National Health and Medical Research Council (NHMRC) Centre of Research Excellence (CRE) in Translational Research in Musculoskeletal Pain began in July 2015. Our official launch event was hosted at The University of Melbourne on Friday 25th September 2015 and launched by the Faculty of Medicine, Dentistry and Health Sciences' Dean, Professor Mark Hargreaves. In 2015, this CRE brought together 62 people and over 17 institutes and industry partners from around the world. Ten chief investigators, 10 associate investigators, 18 research staff and 24 PhD students have contributed to a range of research projects over 2015. Our formal governance structure comprised of four committees have each contributed to and facilitated the research.

In 2015-16 the centre has:

- Commenced at least 5 research projects into the effectiveness of innovative models of care for OA and LBP to address the evidence-practice gaps,
- Published 155 scientific articles in peer-reviewed journals,
- Maintained training & mentoring activities via 9 workshops/seminars
- Maintained community engagement via workshops and through its website

Major achievements for the year included:

- Obtaining NHMRC funding for 'Optimising primary care management of knee osteoarthritis: the PARTNER project' under Stream 1 of the CRE. \$1,155,443.70 awarded from June 2016 – May 2019, which will further enable development of implementation interventions to support GP and patient self-management of OA,
- Commencement of the 'Telecare' RCT to evaluate the clinical- and cost-effectiveness of telephone-delivered exercise advice and behaviour change support by physiotherapists in people with knee OA & subsequent manuscript in preparation for submission to BMJ Open,

Members of the CRE received 2 awards, 12 grants (including 4 NHMRC Grants) and gave 49 presentations.

ABOUT US

The NHMRC CRE in Translational Research in Musculoskeletal Pain is focused on implementation research investigating effective translation of research to change clinician and patient behaviours and address evidence-practice gaps to improve outcomes for people with musculoskeletal conditions, particularly osteoarthritis and low back pain. The CRE involves a multidisciplinary team across Australia and the UK whose skills extend from clinical and basic research related to mechanisms and treatments for musculoskeletal pain, behaviour change, research translation, biostatistics and health economics. Integral to the CRE is active participation of stakeholder groups including consumer and professional organisations, health insurers, industry, clinicians, consumers and government.

The CRE will provide:

- a coordinated, collaborative and inclusive research approach to the problem;
- a structured framework around which training and mentoring in implementation research can occur and for researchers and stakeholders to participate;
- a platform to leverage additional funds and resources;
- a mechanism to drive dissemination of research to change practice and policy.

Ultimately, the CRE will improve outcomes for people with musculoskeletal pain and reduce the health care burden.

Our Objectives

This CRE will conduct implementation research into the effectiveness of innovative models of care for OA and LBP to address the evidence-practice gaps. It will provide a coordinated multidisciplinary research approach to the problem, a more structured framework around which training and mentoring in implementation research can occur and for researchers and stakeholders to collaborate, as well as a platform to leverage additional funds and resources.

The research will be undertaken in collaboration with key stakeholders including consumers, clinicians, advocacy organisations, health insurers, government and industry. The centre will include the three following streams:

OUR RESEARCH

Stream 1: Improving primary care management of osteoarthritis

Specific aims: This program of research has the following aims:

i) Adopt a user-centred participatory action approach and qualitative research methodology to design and develop implementation interventions to support GP and patient self-management of OA including:

- an on-line OA educational module for GPs
- an OA-specific electronic medical record decision support tool for GPs and;
- a resource kit for patients with OA

ii) Conduct a pragmatic multi-site cluster two-arm RCT to evaluate the effectiveness and cost-effectiveness of a novel multifaceted model of care targeting both the GP and patient, compared to usual care in people with hip or knee OA in the primary care setting;

iii) Perform program evaluation of the model of care, using mixed quantitative and qualitative methods, to elucidate the effectiveness of implementing individual components, barriers and enablers to implementation, contextual adaptations and sustainability from the perspective of clinician, consumer and industry stakeholders.

Progress to date:

1. Work has commenced with Precedence Health Care to develop the electronic medical record template for integration into GP decision support software.
2. Researchers are undertaking a review of existing consumer education resources in osteoarthritis to evaluate the need for renewed content and format for PARTNER specific education resources.
3. Developing better understanding of barriers and facilitators for GP care through qualitative research.
4. Development of methods of recruiting and engaging GP practices for pursuant trial.
5. Defining GP behaviours based on the Behaviour Change Wheel methodology.
6. Meetings with key stakeholders to discuss barriers and facilitators to implementation, through focus groups.
7. Interviewed and recruited a trial coordinator to commence on August 1, 2016.
8. Currently undertaking the process of completing the MIA with both academic institutions and industry collaborators.

Stream 2 – Empowering and supporting consumers

Specific aims: This program of research has the following aims:

- i) Adopt an active participatory approach to develop novel web-based patient decision-support systems for OA and LBP, grounded in multi-criteria decision analysis;
- ii) Investigate the effectiveness of web-based consumer decision support systems on consumer knowledge and decision-making using a mixed methods approach;
- iii) Develop two novel valid and reliable consumer LBP questionnaires, one identifying misconceptions impacting on treatment and outcomes, and the other quantifying the burden of LBP;
- iv) Identify key consumer messages for LBP through international Delphi processes of LBP experts and consumers to inform educational content;
- v) Develop a web-based resource for people with LBP in collaboration with Arthritis Australia using a user-centred design approach and qualitative methodology;
- vi) Investigate the effects of the web resource on consumer decision-making, disability, quality of life and resource use via a pragmatic RCT in people with LBP;
- vii) Perform program evaluation of the LBP web resource, using mixed research methods, to elucidate the effectiveness of individual components as well as barriers and enablers to uptake.

Progress to date:

Stream 3 - Improving uptake and adherence to exercise and physical activity

Specific aims: This program of research has the following aims:

- i) Undertake a RCT to evaluate the clinical- and cost-effectiveness of telephone-delivered exercise advice and behaviour change support by physiotherapists “Phone Physios” in people with knee OA;
- ii) Conduct qualitative studies to explore experiences and perspectives of consumers, physiotherapists and nurses participating in the MHL and “Phone Physios”;
- iii) Use new knowledge generated from the RCT to develop a “Phone Physios” intervention that is condition-specific for people with LBP and evaluate its clinical effectiveness in a subsequent RCT;
- iv) Conduct a systematic review to inform, and then undertake development and testing of, a clinical screening tool for barriers and facilitators to exercise adherence for people with OA/LBP;
- v) Apply the screening tool to determine how barriers and facilitators factors change over time.

Progress to date:

- i) **RCT** – NHMRC funding was obtained and the ‘Telecare’ research trial officially began in March 2016. Eight project physiotherapists were recruited and they underwent training in November 2015 and a pilot phase which ran from Nov 2015 – Feb 2016. Forty participants have been recruited so far across Australia, representing all states/territories. We anticipate recruitment will be complete by July 2017, with the trial to be complete by July 2018. The protocol paper is currently being prepared.
- ii) **Qualitative studies** – a PhD student was recruited and began in March 2015, aiming to be complete by March 2018. Planned studies include: a survey of patients and physios about attitudes to telerehab for OA, qualitative interviews with physios pre and post-training, looking at therapeutic alliance between patients and physiotherapists and a comparison of face-to-face consultations with telephone-delivered care and qualitative study of physio and patient’s experiences with telephone-delivered care.
- iii) **Using knowledge to develop ‘Phone Physios’ intervention** – findings from the Telecare RCT will be considered later in 2018 once the trial has been completed.
- iv) **Development of clinical screening tool** – a PhD student was confirmed in April 2016 and will be completed by April 2018. A scoping review of barriers and facilitators to exercise adherence in OA was conducted and a systematic review of interventions to increase adherence to exercise in LBP/OA has also been completed and submitted.
- v) **Applying screening tool** – the same PhD student has completed analysis of data on on self-reported measures of adherence and outcome from 4 exercise RCTs, is currently running a prospective cohort study with concealed accelerometer in cuff weight to test reliability and validity of self-reported adherence measures, and completed a patient and physio survey about preferences for behaviour change techniques to increase exercise adherence.

OUR PEOPLE

Chief Investigators

Professor Kim Bennell - Director of the CRE

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

Professor David Hunter - Co-Director of the CRE

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Associate Investigators

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Associate Professor (Honorary), Melbourne EpiCentre, University of Melbourne and Melbourne Health,
Adjunct Associate Professor, Department of Preventive Medicine, Monash University

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Professor Andrew Forbes

Head, Research Methodology Division
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Ms Ainslie Cahill

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Founder and Chief Executive Officer of Precedence Health Care
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Associate Professor Andrew Briggs

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Professor Peter Choong

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Director of Orthopaedics, St Vincent's Hospital Melbourne
Chair of the Bone and Soft Tissue Sarcoma Service,
Peter MacCallum Cancer Centre

Senior Research Fellows

A/Prof Manuela Ferreira, University of Sydney

Research Fellows

Dr Renea Johnson, Monash University

Dr. Pria Krishnasamy, University of Sydney

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Dr Susan Slade, Monash University/Cabrini Institute

Dr. Shirley Yu, University of Sydney

Postdoctoral Research Fellows

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Dr Kade Paterson, The University of Melbourne

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Research Assistants

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PhD Students

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Michael Bergin, The University of Queensland

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Brett Doble, Monash University

Kirsty Duncan, Keele University

Jill Eyles, University of Sydney

Jan Gildea, The University of Queensland

Sarah Harrison, Keele University

Luke Heales, University of Queensland

Alisa Higgins, Monash University

Victoria Johnson, University of Sydney

Paul Kirwan, Royal College of Surgeons in Ireland, Dublin

Belinda Lawford, The University of Melbourne

Tracey Liu, University of Sydney

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Daniel Pozzobon, University of Sydney

Jonathan Quicke, Keele University

Edward Riordan, University of Sydney

Trevor Savage, University of Sydney

Janelle Seah, Monash University

Xi Zhang, University of Sydney

Governance Structure

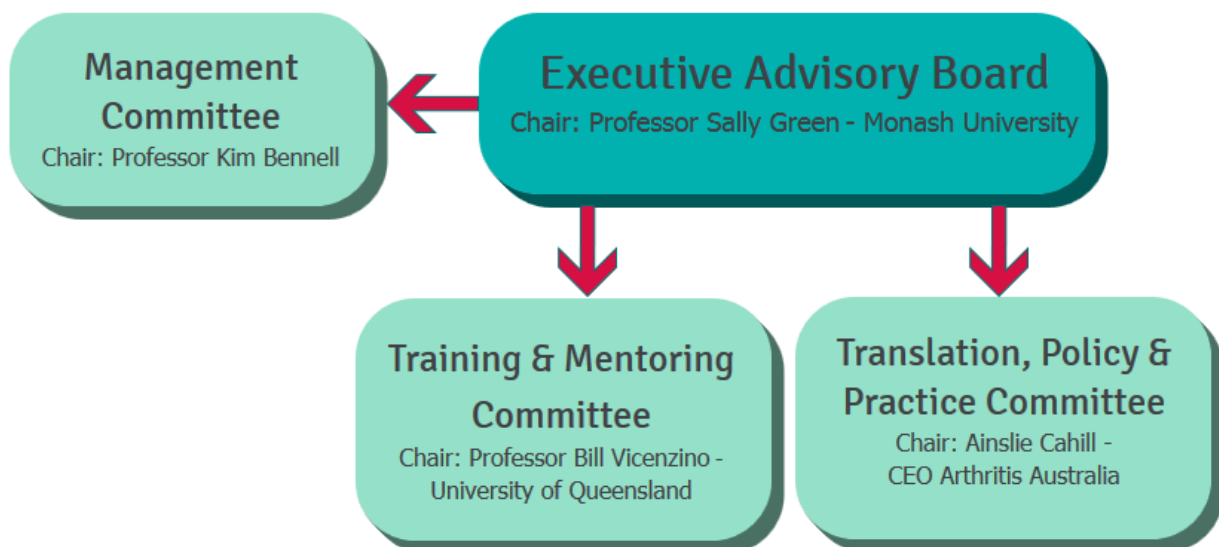
Our formal governance structure comprises of several committees each with specific membership and terms of reference.

The Director and Co-Director are supported in the day-to-day management by a CRE Manager, as well as the CRE Executive Assistant who provides organisational support for CRE management and program activities. This **Management Committee** meets monthly to review progress, budgets and staffing.

The Executive Advisory Board chaired by Professor Sally Green, Monash University comprises the chief investigators of the CRE as well as post-doctoral and consumer representatives. The key purpose of the Executive Advisory Board is to advise and support the CRE to meet its goals.

The Training and Mentoring Committee is responsible for developing competencies in mentoring and training, implementing activities designed to achieve these competencies and recommending the budget allocation for such activities.

The Translation, Policy & Practice Committee is comprised of key stakeholders including consumers, industry, consumer organisations, health agencies and clinicians. Functions of this committee include contributing to the strategic direction of the CRE research program, identifying research questions relevant to stakeholder priorities and providing stakeholder input into CRE research.



PUBLICATIONS

169 peer reviewed journal articles were published by CRE members in 2015/16 (including 7 systematic reviews).

Refereed journal publications

Aitken, D., Buchbinder, R., Jones, G., Winzenberg, T. (2015) Interventions to improve adherence to exercise for chronic musculoskeletal pain in adults. *Australian Family Physician*, 44(1):39-42.

Allen, K.D, Bierma-Zeinstra, S.M.A, Foster, N.E, Golightly, Y.M, Hawker, G. (2015). Principles for implementation trials of osteoarthritis interventions. Special Themed Issue - OARSI Recommendations for the Conduct of Randomized Clinical Trials in Osteoarthritis. *Osteoarthritis and Cartilage*, 23(5):826-838.

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Bennell, K.L., Buchbinder, R., Hinman, R.S. (2015). Physical therapies in the management of osteoarthritis: Current state of the evidence. *Current Opinion in Rheumatology*, 27(3):304-311.

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Bennell, K.L., Hall, M., Hinman, R.S. (2016). Osteoarthritis year in review 2015: Rehabilitation and outcomes. *Osteoarthritis and Cartilage*, 24(1):58-70.

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Bloeker, K., Wirth, W., Guermazi, A., Hunter, D., Resch, H., Hochreiter, J., Eckstein, F. (2015). Relationship between medial meniscal extrusion and cartilage loss in specific femorotibial subregions: Data from the osteoarthritis initiative. *Arthritis Care and Research*, 67(11), 1545-1552.

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PRESENTATIONS

Note: This list is not exhaustive; however, it includes many of the conference presentations, invited presentations and keynote lectures made by the CRE chief investigators.

PROFESSOR KIM BENNELL

National Presentations:

Keynote lecture: “Knee Osteoarthritis: new approaches for a mismanaged problem”, Australian Pain Society Brisbane, 35th Annual Scientific Meeting. March, 2015

Invited speaker: “OA prevention – international perspectives on health and exercise interventions from three active consortia”, Osteoarthritis Research Society International. Annual Scientific Conference. April, 2016

Invited speaker: Australian Physiotherapy Association, Scientific Congress. Gold Coast, Australia. October 2015

Invited presentation: “New management approaches to that old problem of knee osteoarthritis”, Australian Physiotherapy Association Forum ACT – Canberra. November, 2015

Invited presentation: “New management approaches to that old problem of knee osteoarthritis”, Webinar for Australian Physiotherapy Association. July 2015

International Presentations:

Invited speaker: American Pain Society Meeting, Texas. May, 2016

Invited speaker: “Physiotherapy for management of knee osteoarthritis”, Peking University Osteoarthritis International Forum. Huizhu, China. Sept 11th-12th 2015

Invited speaker: Year in Review – Rehabilitation lecture. Osteoarthritis Research Society International. Annual Scientific Conference. Seattle, USA. May 2015

Invited speaker: Osteoarthritis Research Society International. Pre Conference symposium. Early OA. Seattle, USA. May 2015

Keynote lecture: Osteoarthritis Research Society International. Annual Scientific Meeting. Seattle, USA. April, 2015

PROFESSOR RANA HINMAN

National Presentations:

Invited Speaker: “Non-pharmacological management of OA”. Western Health. Western Hospital, Melbourne. November 5th, 2015

Invited Speaker: “Treatment and management of osteoarthritis”. Arthritis & Osteoporosis Victoria and Victorian Department of Health and Human Services professional development webinar for Victorian healthcare providers, October 24th, 2015

International Presentations:

Invited speaker: Young Investigators Workshop: “Building diversity in research groups”. 2016 Osteoarthritis Research Society International Congress, Amsterdam, Netherlands, March 31st-April 3rd, 2016

PROFESSOR PAUL HODGES

National Presentations:

Invited lecture: Australian Pain Society 36th Annual Scientific Meeting, Perth, March 2016

Keynote lecture: Women’s Health, Australian Physiotherapy Association, Gold Coast, October 2015

Keynote lecture: Journal of Physiotherapy Oration, Australian Physiotherapy Association, Gold Coast, October 2015

Invited lecture: “Inflammatory cytokines and pain – Effects, mechanisms and potential role in persistence of pain”, Australian Pain Society, Brisbane, Australia, March 2015

Keynote lecture: “Neuromodulation through muscle stimulation & role in low back and pelvic pain”, Innovations In Neuromodulation Symposium (IIN), Melbourne, February 2015

International Presentations:

Invited presentation: International Society for the Study of the Lumbar Spine, Singapore, May 2016

Keynote presentation: Swedish Association for Physical Activity & Sports Medicine, Kalmar, Sweden May 2016

Keynote presentation: Brazilian Society of Physiotherapy in Spine, Fortaleza, Brazil, May 2016

Keynote presentation: Italian Scientific Spine Institute, Madrid, Spain, March 2016

Keynote presentation: APTA Combined Sections Meeting, Anaheim, USA, February 2016

Keynote presentation: Southern Physiotherapy Symposium (SPS7), Queenstown New Zealand, November 2015

Invited presentation: North American Spine Society, Chicago USA, October 2015

Keynote presentation: IPETH Physiotherapy International Conference, Puebla, Mexico September 2015

Invited presentation: 8th Asian Pacific Conference on Biomechanics, Sapporo, Japan, September 2015

Keynote presentation: "Pain and Motor Control". Section on Research, American Physical Therapy Association: Piecing Together the Pain Puzzle: the Biopsychosocial Model, USA August 2015

Invited presentation: "Targeting back pain: Advances informed by biomechanics and neurophysiology". International Society for Biomechanics, Glasgow, Scotland, UK, July 2015

Keynote address: "Lumbopelvic dysfunction & motor adaptations to pain: From theory to practice". Portuguese Physiotherapy Association Conference, Cascais, Portugal 2015

Keynote address: "Challenges for Spinal Pain and Motor Control". Japanese Physical Therapy Association Congress, Tokyo Japan, May 2015

Keynote address: "Neuroplasticity and Patterns of Motor Control". World Chiropractic Conference, Athens, Greece, May 2015.

Invited presentation: "Integrated model of postural control: Physiology of combining the multiple functions of the trunk & trunk muscles". World Congress of Physical Therapy, Singapore

Keynote Lecture: "Plasticity in the motor system & driving change with motor interventions"; "Designing a motor control intervention for patients with low back and pelvic pain"; "Low back pain and motor control: effects and mechanisms", Degenerative Spinal Disorders with Conservative and Surgical Management, Hong Kong, China, January 2015

Keynote lecture: "No pain, no gain" or "Pain, no gain"? - Reconsidering the impact of pain on movement & learning", Qatar International Pain Conference, Doha, Qatar, January 2015

PROFESSOR DAVID HUNTER

National Presentations:

Keynote speaker: "Management of Knee Osteoarthritis", Sydney GP Education Day, August 2015

Keynote speaker: "Non-surgical management of knee osteoarthritis", Kneevolution, Sydney September 2015

Invited Speaker: "Research solution to Chronic Disease Burden in Community: Osteoarthritis", 5th Australia - China Biomedical Research Conference (ACBRC), The University of Melbourne, November

2nd, 2015

Invited speaker: Management of osteoarthritis , GP workshop- coordinated by MJA, December 5th 2015

International Presentations:

Keynote Speaker: “Osteoarthritis Management”, Chinese Rheumatology Meeting, Harbin, July 2015

Keynote Speaker: “The relation between structure and Symptoms, Perspectives On Osteoarthritis Pain”, Stockholm Sweden, September 2015

Invited speaker: “Imaging biomarkers in osteoarthritis”, Arthritis Foundation US, Atlanta, USA. February 25th 2016

Keynote speaker: “research priorities in osteoarthritis”, Reade Centre for rehabilitation and rheumatology, Amsterdam, the Netherlands. March 30th, 2016

Convener and Keynote Speaker: pre-Congress workshop on Management programs in osteoarthritis, OARSI 2016. Amsterdam, the Netherlands. March 31st 2016

Keynote speaker: “advances in osteoarthritis”, Chinese Association for research and advancement of Chinese medicine 2016 OA forum. Shanghai, China. April 16th, 2016

PROFESSOR NADINE FOSTER

National Presentations:

Invited keynote presentation: International Federation of Orthopaedic Manipulative Physical Therapists (IFOMPT) 2016 Conference, SECC, Glasgow, UK. July 4–8th, 2016

Invited speaker: “Becoming a clinical academic leader” and breakout session facilitator ‘Promoting a clinical academic career to your organisation’, HEE/NIHR Integrated Clinical Academic Programme for non-medical healthcare professionals ‘Developing Your Clinical Academic Career’. Manchester, UK. March 16th 2016

Invited speaker: “The management of musculoskeletal problems in general practice” NIHR West Midlands Clinical Research Network Annual GP Research Meeting, Acton Trussell, Staffordshire, UK. March 10th 2016

Invited speaker: “Building AHP Capacity for Research: An example from an NIHR Research Professor” Building AHP Capacity for Research into Complex Interventions. Conference hosted by Sheffield Hallam University, Sheffield Teaching Hospitals NHS Foundation Trust, NIHR CLAHRC Yorkshire and Humber and the University of Sheffield. March 4th, 2016

Invited speaker: “How to generate and evidence the impact of research”, HEE/NIHR Winter School Mentoring event, Missenden Abbey Management Centre, Buckinghamshire, UK. February 1st, 2016

Invited speaker: Leading Academics day on the West Midlands Clinical Academic Careers PhD Preparation Programme, Clinical Research Facility in the Queen Elizabeth Hospital, Birmingham, September 16th, 2015

Invited co-opted member: guideline development group for guideline on Low back pain and sciatica: management of non-specific low back pain and sciatica, National Clinical Guideline Centre, London, UK. July 2015

Invited presentation: “Stratified care for low back pain”, Bristol Community Health Musculoskeletal Conference. Bristol, UK. March 13th-14th 2015

International Presentations:

Invited keynote presentation: Physiotherapy New Zealand conference, Auckland, New Zealand. September 16th – 18th, 2016

Invited speaker: “Stratified care for low back pain and other musculoskeletal pain presentations”, Northern Ireland Pain Society Annual Symposium, Belfast, Northern Ireland. March 11th 2016

Invited speaker: “Acupuncture for back and pelvic pain in pregnancy: the EASE Back pilot trial and considerations for a main trial”, International Scientific Acupuncture and Meridian Symposium (iSAMS), Dunedin, Otago, New Zealand. Sept 30th-Oct 3rd 2015

Invited speaker: “Evidencing and translating stratified care for back pain into primary care”, Centre of Research Excellence in Translation of Research into Improved Outcomes in Musculoskeletal Pain and Health (CRE TRIUMPH), Melbourne, Australia. Sept 25th 2015

Invited presentation: “Target your treatment to the right patients” and panel presentation “Opportunities in Spinal HealthCare: Rules vs. Real Life Practice”, World Federation of Chiropractic (WFC) 13th Biennial meeting, Athens, Greece. May 13-16th 2015

ASSOCIATE PROFESSOR MARIE PIROTTA

National Presentations:

Invited presentation: COSA General management of cancer patients outside the cancer setting – shared care. Hobart, November 2015

GRANTS/FELLOWSHIPS

Years awarded	Title	Investigators	Funding Body	Grant value
2016-2019	A feasibility and pilot trial of the effectiveness of exercise therapy and orthotics in the treatment of plantar heel pain (Treatments of Exercise And Orthotics for plantar heel pain: The TREADON pilot feasibility trial)	Chesterton L, Roddy E, Foster N, Thomas M, Hendry G, Lewis M, Chen Y, Menz H, Mallen C	National Institute for Health Research: Research for Patient Benefit scheme PB-PG-0614-34021.	£231,369.00
2015	A multi-faceted podiatry intervention for the management of foot OA: a pilot RCT	Paterson K, Hinman RS, Bennell KL, Menz H	Podiatry Education Research Fund Arthritis Australia	\$7,767 \$13,000
2015-2016	Comparative Effectiveness of Treatment Options for Subacromial Shoulder Conditions: A Network Meta-Analysis (CETOSS)	Babatunde O, van der Windt D, Artus M, Foster NE, Jordan J, Chesterton L, Ensor J, Roddy E	National School for Primary Care Research. Round 9.	£25,134
2016-2019	Effects of feedback and incentive-based insurance on driving behaviours	Stevenson M, Mortimer M, Harris AH	ARC Linkage grant LP150100680	\$530,000
2016-2019	Hype or Hope? platelet-Rich plasma as a symptom- and disease-modifying Treatment for knee osteoarthritis - the RESTORE trial	Bennell K, Buchbinder R, Wang Y, Forbes A	National Health and Medical Research Council Project Grant	\$1,400,359
2016-2018	Integration of exercise counselling and support into the Musculoskeletal Help Line for knee OA: a mixed-methods study of a novel phone service	Hinman RS, Bennell KL, French S, Forbes A, Harris A, Briggs A, Bunker S, Gale J	National Health and Medical Research Council Partnership Project #1112133 Medibank Health Research Fund	\$437,098 \$75,000
2016-2020	Musculoskeletal pain and disability: improving outcomes through conservative	Hodges PW, Bennell K, Hunter DJ, Vicenzino B	National Health and Medical Research Council Program Grant	\$8,268,140

	interventions		APP1091302	
2015-2017	PARTNER Trial: Optimising primary care management of hip and knee OA	Hunter D, Bennell K, Hinman R, Trevena L, Brand C, Harris A, Pirotta M, Georgeff M, Lawler L, Cahill A	Medibank Health Research Fund	\$320,706
2015-2017	Phone physios: RCT evaluating telephone-delivered exercise advice & behaviour change support by physios for knee OA	Hinman RS, Bennell KL, Briggs A, Gale J	Medibank Health Research Fund	\$75,000
2016	Reliability & validity of self-reported measures of adherence to home strengthening exercise in people with knee osteoarthritis	Nicolson P, Bennell KL, Hinman RS, Wrigley TV, Stratford P	Physio Research Foundation	\$10,000
2016-2020	Senior Principal Research Fellowship	Hodges P	National Health and Medical Research Council APP1102905	\$926,980
2015-2012	Translation of research into improved outcomes for musculoskeletal pain & health (CRE TRIUMPH)	Bennell KL, Hunter DJ, Hodges PW, Buchbinder R, Pirotta M, Hinman RS, Harris A, Foster N, Michie S, Vicenzino B	National Health and Medical Research Council Centre of Research Excellence #1079078	\$2.5 million

TRAINING FUTURE LEADERS

There were a number of early career researcher and PhD students undergoing training under the CRE in 2015. As highlighted in the table below, these positions have been funded from a range of sources, including NHMRC.

PhD Students

Candidate	Supervisor	Topic	Funding Source	Institute
Daniel Bailey	Foster N	Development and testing of a measure of therapeutic exercise adherence for musculoskeletal pain patients		
Michael Bergin	Hodges P			The University of Queensland
Elizabeth Cottrell	Foster N	GPs' attitudes, beliefs and behaviours regarding exercise for chronic knee pain		Keele University
Brett Doble	Harris A	The economics of personalised medicine in cancer		Monash University
Kirsty Duncan	Foster N	Development and testing of a generic musculoskeletal version of the Pain Attitudes and Beliefs Scale		Keele University
Jan Gildea	Hodges P		Australian Ballet/UQ Doctoral Scholarship	The University of Queensland
Sarah Harrison	Foster N	The role of neuropathic pain in patients with back pain related leg pain in primary care		Keele University
Luke Heales	Hodges P			The University of Queensland

Alisa Higgins	Harris A	Cost effectiveness of sepsis intervention		Monash University
Paul Kirwan	Foster N	Eccentric exercise and topical glyceryl trinitrate (GTN) for Achilles tendinopathy: a randomised trial		Royal College of Surgeons in Ireland, Dublin
Belinda Lawford	Hinman R	Remote delivery of exercise advice & counselling for OA	NHMRC CRE PhD stipend	The University of Melbourne
Tatjana McLeod	Harris A	International comparison of drug reimbursement decisions in cancer		Monash University
Sarah Meneses	Hunter D			The University of Sydney
Pippa Nicolson	Hinman R	Improving exercise adherence in knee OA	Medibank Postgraduate Scholarship	The University of Melbourne
Jonathan Quicke	Foster N	Attitudes, beliefs and physical activity in older adults with knee pain		Keele University
Janelle Seah	Harris A	The economics of HIV and chronic disease		Monash University

Early Career Researchers Mentored by CRE CIs

ECR	Supervisor	Institute
Dr Leanne Hall	Hodges P	The University of Queensland
A/Prof Francois Hug	Hodges P	The University of Queensland
Dr Greg James	Hodges P	The University of Queensland
Dr Mandy Nielsen	Hodges P	The University of Queensland
Dr Rachel Park	Hodges P	The University of Queensland
Dr Kade Paterson	Bennell K	The University of Melbourne
Dr Sauro Salomoni	Hodges P	The University of Queensland
Dr Anna Schmid	Hodges P	The University of Queensland
Dr Neil Segal	Hunter D	Kansas University
Dr Ryan Stafford	Hodges P	The University of Queensland
Dr Ans van Ginckel	Bennell K	The University of Melbourne

CI EXTERNAL COMMITTEE PARTICIPATION

American Physical Therapy Association Guidelines for Meniscal Injuries working party (2014-); Kim Bennell

Board of Directors, Osteoarthritis Research Society International (2008-current); Kim Bennell

Department of Health and Human Services, Vic Government Musculoskeletal Review of Best Care for Older People Everywhere Toolkit (2015); Kim Bennell

Expert group for the American Physical Therapy Association (APTA) to revise the clinical guidelines for meniscal and articular cartilage lesions; Rana Hinman

External Expert Advisory Committee for the Victorian Osteoarthritis Model of Care, Department of Health & Human Services; Rana Hinman

HANDI committee at The Royal Australian College of General Practitioners; Marie Pirotta, Kim Bennell

International Society for Electromyography and Kinesiology, President 2014-2016; Paul Hodges

Member of Delphi expert panel “Models of care for musculoskeletal health: development of an evaluation framework” from the Global Alliance for Musculoskeletal Health of the Bone and Joint Decade in association with the World Health Organisation. 2015; Rana Hinman

National Arthritis & Musculoskeletal Monitoring Advisory Group (Advisory Group), Australian Institute of Health & Welfare; Paul Hodges

National Institute for Health Research (NIHR) Academic Training Advocate for Physiotherapy; Nadine Foster

NHMRC Grant review Panel for Centres of Research Excellence; Rana Hinman

Osteoarthritis Research Society Asian Task Force on Arthritis (2012-current); Kim Bennell

Osteoarthritis Research Society International (OARSI); Nadine Foster

Osteoarthritis Research Society International Clinical Trials course planning committee (2015-); Kim Bennell

Primary Care, Community and Preventive Interventions Panel (PCCPI) Topic Identification, Development and Evaluation (TIDE) Panel, NIHR Health Technology Assessment (HTA) Programme; Nadine Foster

Society of back pain research, President elect; Nadine Foster

Steering committee for the Osteoarthritis Research Society International, Guidelines for the design of OA clinical trials (2014-2015); Kim Bennell

Working Group informing development of the Exercise and Movement Position Statement by the Australian Physiotherapy Association; Rana Hinman

TRAINING ACTIVITIES/WORKSHOPS

The Training & Mentoring Committee in conjunction with the program grant ECR committee hosted a range of in-service web-based seminars throughout 2016. These monthly sessions are intended to provide educational opportunities for all researchers from each centre included on the CRE and Program grants. The workshops are run across various sites including The University of Melbourne, The University of Sydney, and The University of Queensland.

Seminar Title	Date	No. of attendees across all sites
'A brief introduction to the qualitative world of research' - Dr Victoria Palmer, The University of Melbourne	February 2016	38
'An Introduction to Translational Research' - Dr Simon French, Queens University	March 2016	25
"Participant recruitment strategies – benefits and pitfalls" – David Klyne, University of Queensland	May 2016	31
"An introduction to using REDCap" - Luciano Santos de Melo & Jillian Eyles, The University of Sydney	May 2016	33
"Writing a manuscript" – Professor David Hunter, The University of Sydney	June 2016	28

Other seminars/workshops -

Dr Lou Atkins, "Designing interventions using the Behaviour Change Wheel", 1 day workshop, The University of Melbourne, July 2015 (30 attendees) & February 2016 (18 attendees)

Professor Nadine Foster, 'Matching Low Back Pain Patients to Treatment', Centre of Research Excellence Launch, The University of Melbourne, September 2015 (80 attendees)

Professor Paul Hodges, 2-day workshops for clinicians hosted in 10 countries 2015-2016

Professor Ewa Roos, "Doctor, what is best for my knee? Exercise or surgery?", The University of Melbourne, November 2015 (40 attendees)

RECOGNITION AND INDICATORS OF ESTEEM

Professor Nadine Foster:

- 2016 NIHR Senior Investigator award (NF-SI-0515-10095) for 4 years: 1st April 2016 to 31st March 2020
- 2016 Outstanding Best Practice Award from the British Society of Rheumatology, for the work of the Musculoskeletal Research Facilitation group (CAT group), a partnership between Allied Health Professionals in the West Midlands and the Research Institute of Primary Care & Health Sciences, Keele University
http://www.rheumatology.org.uk/publications/best_practice/staffordshire_and_stoke_on_trent_partnership_nhs_trust.aspx



Professor Nadine Foster presenting at the CRE official Launch, September 2015

OTHER KNOWLEDGE TRANSLATION/DISSEMINATION INITIATIVES

Translation of research into policy/practice:

Chief Investigator	Research/Translation Details	Year
Professor Kim Bennell	Member of an expert Delphi panel 'Models of care for musculoskeletal health: development of an evaluation framework' from the Global Alliance for Musculoskeletal Health of the Bone and Joint Decade in association with the World Health Organisation.	2015
Professor Kim Bennell	Critical Thinking and Connecting (CTC) seminar Research and Evidence	2016
Professor Rana Hinman	Expertise based on >15 years of research into non-drug management strategies for knee OA, including RCTs of physiotherapy, exercise, insoles and footwear. Practice- Revised content of osteoarthritis section of painHEALTH website, for the Department of Health, WA, Australia.	2015