

# health research at medibank

1 July 2017 – 30 June 2018

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# foreword



**Medibank is committed to delivering Better Health for Better Lives and our support of health and medical research is one way we are bringing this purpose to life.**

Medibank is working with leading institutions and researchers to improve knowledge, health outcomes and patient experiences for our customers and all Australians. This report outlines our 2017-18 health research program.

The research covers some key health challenges including osteoarthritis, mental health, preventing and managing obesity, back pain, rehabilitation, heart health and chronic disease management. These conditions have a significant impact on the quality of life for millions of Australians and cost the healthcare system billions each year.

Medibank is using this growing knowledge base to influence the way we deliver our health services and will share the findings to inform broader policy and practice.

Our customers have also told us how important it is to invest in health research and I am proud of Medibank's longstanding support of this vital research in Australia and look forward to this current body of work playing a positive role in people's lives.

A stylized, handwritten signature in white ink on a blue background.

**Craig Drummond**  
Chief Executive Officer, Medibank



**Australia has some of the world's best health researchers; and when it comes to the quality and productivity of health research, we punch well above our weight.**

At Medibank we are turning ground-breaking academic work into action by applying it in the real world – we're putting our research into practice.

In this year's report we focus on a selection of partnerships and projects that showcase our ability to bring research to life.

This year Medibank was integral in developing the National Osteoarthritis Strategy, which will be launched at the 2018 Osteoarthritis Summit which will address this challenge and reduce the burden of the condition.

Osteoarthritis is the most common chronic joint disease, affecting over two million Australians, yet 57% of people with the condition are not receiving appropriate care and 70% of osteoarthritis is preventable.

In February this year we established the Medibank Mental Health & Wellbeing Fund to support the 45% of Australians with mental health conditions.

The initial focus is on the wellbeing of former Defence personnel and their families through preventative initiatives, awareness and education. Research has looked to improving adaptive coping skills of returned service personnel with Post Traumatic Stress Disorder.

Medibank and Stephanie Alexander Kitchen Garden Foundation have continued our partnership expanding to work with Melbourne University on a study that is looking at how the program has impacted the eating habits and attitudes to food of young adults who have participated.

We have also showcased some in-house programs based on extensive research with the supervisory support of academics to bring evidence-based programs, like Care First into general practice.

It is exciting times for Medibank and our health research partners with some promising research undertaken and positive outcomes realised. We look forward to another busy year as we work with our partners towards a common goal of Better Health for Better Lives.

A stylized, handwritten signature in black ink on a white background.

**Linda Swan**  
Chief Medical Officer, Medibank

# key achievements

bringing research to life

Mental health  
\$264,254

Chronic disease management  
\$266,993

Back pain  
\$45,000

Osteoarthritis  
\$504,163

Musculoskeletal  
\$155,000



Preventing & managing obesity  
\$475,000

Out of pocket costs  
\$50,500

Heart health  
\$200,000

Violence against women  
\$250,000

Other  
including health technology, patient reported experience  
\$355,000

25%

of Medibank seed funded grants in the musculoskeletal area were successful in obtaining leveraged National Health and Medical Research Council (NHMRC) funding

5 to 1

a leverage of five dollars to each Medibank dollar invested



medibank employees

are credible leaders in chronic disease, osteoarthritis, obesity, low value care, hospital safety & quality reporting and falls prevention.

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chronic disease management rehabilitation health technology post-traumatic stress disorder


**osteoarthritis**

gestational diabetes anxiety falls prevention

**16 conditions researched**

heart health depression maternal health sports injury prevention chronic pain back pain healthy ageing violence against women

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**491** 

days of Medibank  
in kind support

**25** 

publications in peer  
reviewed journals

**9** 

reports  
produced

A photograph of an elderly man with white hair, smiling and talking on a silver mobile phone. He is wearing a blue and white striped button-down shirt. A hand is visible on his right shoulder, suggesting support or affection. The background is slightly blurred, showing a bookshelf and some greenery.

# osteoarthritis

around two million Australians today are affected by the condition, but that figure will rise to about three million in 2032.



**Osteoarthritis is the most common chronic joint disease and a major cause of pain and disability. The impact of the disease on individuals and society is enormous, not only in terms of reduced quality of life, but also in healthcare costs and lost productivity.**

Around 100,000 Australians underwent joint-replacement surgery in 2016 at an estimated cost of more than \$2 billion<sup>1</sup>. Overall, osteoarthritis costs the Australian health system \$3.75 billion and the economy about \$22 billion annually<sup>2</sup>.

But with an ageing and increasingly overweight and obese population, as well as an increase in joint injuries, osteoarthritis rates are projected to soar. Around two million Australians today are affected by the condition, but that figure will rise to about three million in 2032<sup>2</sup>.

This has prompted warnings that the health system will be overwhelmed by the rising number of patients.

To help meet this challenge and reduce the burden of the disease on the next generation, the Medibank Better Health Foundation (MBHF) is collaborating with the University of Sydney to develop a National Osteoarthritis Strategy which will be a roadmap for improving care and treatment across Australia.

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Sources:

1. Australian Institute of Health and Welfare 2017. Admitted patient care 2015–16: Australian hospital statistics. Health services series no.75. Cat. no. HSE 185. Canberra: AIHW. - appeared in AIHW Osteoarthritis Snapshot last updated 24 July 2018
2. [https://arthritisaustralia.com.au/wordpress/wp-content/uploads/2017/09/Final\\_Time\\_to\\_Move\\_Osteoarthritis.pdf](https://arthritisaustralia.com.au/wordpress/wp-content/uploads/2017/09/Final_Time_to_Move_Osteoarthritis.pdf)

# a national osteoarthritis strategy

For a disease that is so prevalent and debilitating, there is a surprising lack of awareness about osteoarthritis. Finding help managing the condition, as well as access to the right treatment, is often difficult with 57% of people with osteoarthritis not receiving appropriate care<sup>3</sup> according to current guidelines and two-thirds of patients report they are faring badly<sup>4</sup>.



*Professor David Hunter, University of Sydney*

**57%**  
of people with  
osteoarthritis are not  
receiving appropriate  
care according to  
current guidelines.<sup>4</sup>

“A large proportion of people who have osteoarthritis do not know that they have it. And a large proportion of those at risk of developing it do not know about the disease,” explains Professor David Hunter, who is leading a University of Sydney project to develop a national osteoarthritis strategy that aims to set out Australia’s approach to dealing with the disease.

“As people get older they might get out of bed and feel aches and pains, or after doing an activity they might have joint-related pain for days and weeks afterwards. They just put that down to ageing and think there’s nothing they can do about it.

“(In fact) there are a whole range of different treatments that are effective and safe for the management of this disease, but unfortunately the majority of patients do not receive them and often receive inappropriate care.”

Osteoarthritis is both preventable and treatable without the need for surgery. That’s why it is important to educate health professionals and everyday Australians about the crucial need for an action plan to improve treatment and care. This plan will bring together the best, evidence-based strategies for preventing and managing the disease and outline how health professionals can use existing resources to implement them.

Professor Hunter says that MBHF’s support for the strategy has been vital. “The material support is incredibly well needed, but it’s not just about funding,” he says. “MBHF has had meaningful input in the process and has also put us in contact with different stakeholder organisations that we may not have thought of.”

Source:

3. WB et al 2012. Caretrack: assessing the appropriateness of health care delivery in Australia. *Med J Aust* 2012;197 (2): 100-105

4. [https://arthritisaustralia.com.au/wordpress/wp-content/uploads/2017/09/Final\\_Time\\_to\\_Move\\_Osteoarthritis.pdf](https://arthritisaustralia.com.au/wordpress/wp-content/uploads/2017/09/Final_Time_to_Move_Osteoarthritis.pdf)

# Lesley's story

When she was first diagnosed with osteoarthritis in her 20s, Lesley was leading an active, sporty life. Ocean racing was a great passion and she was a member of the first all-female crew in the Sydney to Hobart in 1975.

Fast-forward to today, and she has undergone surgery including hip, shoulder and knee replacements, and has osteoarthritis in every joint in her neck.

"The disease is insidious and very nasty. It tends to take over your life" she says. "I'm now 76, so I've lived with osteoarthritis for 50 years or more. It's made me progressively less able to do the things I love. I had to give up sailing in my mid 40s and was forced to retire early, now I'm even unable to swim."

A founder and former CEO of national advocacy body Painaustralia, Lesley is determined to help others living with chronic pain.



There needs to be much more investment in research into the causes of the disease and a greater focus on prevention and early management of osteoarthritis, so that people don't get to the stage where surgery is the only option. ”

# preventing knee injuries in adolescent female footballers

More women than ever are playing football (soccer). And in Australia the so-called beautiful game has overtaken netball as the most popular sport among girls.



FIFA's 11+ program is a complete warm-up that includes specific strengthening exercises and drills that have been shown to reduce knee injuries in female footballers by

**52%.**<sup>6, 7</sup>

Studies show that female footballers are particularly susceptible to knee injuries, especially anterior cruciate ligament (ACL) injuries, which are up to four times more common among female than male players<sup>5</sup>.

ACL injuries commonly occur in sports that require players to stop suddenly, or change direction at speed, and they increase the risk of osteoarthritis later in life.

The higher rate of injury among female footballers is largely due to a combination of physiological and hormonal factors affecting the bones and ligaments in the hips and legs, says Dr Alex Donaldson, who is leading a project by La Trobe University in partnership with the Football Federation of Victoria and MBHF to implement FIFA's 11+ program in Victoria. The aim is to prevent knee injuries in adolescent female footballers.

"There's also a bunch of what you might call 'learned movement pattern' or neuromuscular reasons. Males tend to have more experience from a young age of playing games that involve jumping, landing, changing direction and rapid acceleration and deceleration – it's these movement patterns which put the knee at risk of injury," he says. "Ten, 15, or 20 years later, and people who have had those injuries are often suffering from osteoarthritis and looking at costly surgery like knee replacements."

## Sources:

5. Gornitzky AL, Lott A, Yellin JL, Fabricant PD, Lawrence JT, Ganley TJ. Sport-Specific Yearly Risk and Incidence of Anterior Cruciate Ligament Tears in High School Athletes A Systematic Review and Meta-analysis. *Am J Sports Medicine*. Published online before print December 11, 2015, doi:10.1177/0363546515617742
6. Soligard T, Myklebust G, Steffen K, et al. Comprehensive warm-up programme to prevent injuries in young female footballers: Cluster randomised controlled trial. *BMJ (Online)*. 2009;338(7686):95–99
7. Soligard T, Nilstad A, Steffen K, et al. Compliance with a comprehensive warm-up programme to prevent injuries in youth football. *Brit J Sports Med*. 2010;44(11):787–793



Dr Alex Donaldson, La Trobe University



Ten years following  
an ACL injury,

**71%**

of people develop  
osteoarthritis.<sup>8</sup>

The 11+ program is a complete warm-up that includes specific strengthening exercises and drills that have been shown to reduce knee injuries in female footballers by 52%<sup>5,6</sup>. Despite its success overseas, La Trobe University researchers were surprised to discover that it wasn't being used by many coaches of young female footballers in Victoria.

"Although it has been around for 20 years and is probably the most well-known and well-resourced knee-injury prevention program in the world, nearly half the coaches in Victoria of young women who play football had never heard of it. And even those who had heard of it didn't have the confidence or the skills to implement it properly," says Dr Donaldson.

"Publishing something in a scientific journal that says, 'If people do this program it works,' doesn't actually get many people to do it. You have to invest in implementing the program." And this is where the support of MBHF made a huge difference, explains Dr Donaldson.

"The satisfaction comes from actually being able to do something in the real world which can make a significant difference. And to do that you need the support of organisations like Medibank."

Ten years following an ACL injury, 71% of people develop osteoarthritis.<sup>8</sup> These cases can be prevented by adopting simple and cost effective injury prevention programs.

Sources:

8. Oiestad BE, Holm I, Engebretsen L, Risberg MA. The association between radiographic knee osteoarthritis and knee symptoms, function and quality of life 10-15 years after anterior cruciate ligament reconstruction. *Br J Sports Med.* 2011;45(7):583-8

A photograph of a man and a young man sitting on a grey couch. The man on the left is bald, has a beard, and wears glasses and a dark t-shirt. He is looking towards the young man. The young man on the right has short dark hair, is smiling, and wears a white t-shirt and blue jeans. They appear to be in a casual conversation. The background is a simple room with a window letting in light.

# mental health

supporting better mental health is a priority for Medibank, which committed \$1 million in 2018 to establish the Mental Health & Wellbeing Fund.

**Almost half (45%) of Australians experience some sort of mental health issue in their lifetime<sup>1</sup>, so chances are we all know someone who is affected.**

Ex-service personnel are particularly at risk of developing mental health conditions such as post-traumatic stress disorder (PTSD), anxiety, panic attacks, depression, and drug and alcohol dependence. Research from the Department of Veteran Affairs shows that nearly half (46%) of people who left the Australian Defence Force (ADF) have experienced a mental health disorder in the past 12 months<sup>2</sup>.

Supporting better mental health is a priority for Medibank, which committed \$1 million in 2018 to establish the Mental Health & Wellbeing Fund. The fund will focus initially on specific programs for veterans and their families. One of the first

organisations to receive funding is the Gallipoli Medical Research Foundation, which develops new and innovative treatments, interventions and educational programs to improve the health and wellbeing of Australia's ex-service community.

Thanks to Medibank's support, the Gallipoli Medical Research Foundation will be trialling two mental health programs for veterans. A crucial feature of both is the participation of partners and family members, who can feel overwhelmed by the changes in their loved one's mood and behaviour and consequently experience mental health issues themselves.



**46%**

**of people who left the Australian Defence Force (ADF) have experienced a mental health disorder in the past 12 months.**



Sources:

1. Australian Bureau of Statistics. (2008). National Survey of Mental Health and Wellbeing: Summary of Results, 2007 (4326.0)
2. Department of Veterans' Affairs. (2018). Mental Health and Wellbeing Transition Study. Key Findings



## compassionate mind training



*Miriam Dwyer, Gallipoli Research Foundation*

PTSD does not only affect those who have seen active service or deployment. While 8% of serving ADF personnel have PTSD, the rate is as high as 17.7% among those who made the transition to civilian life.<sup>3</sup>

Researchers at the Gallipoli Medical Research Foundation are working on improving the adaptive coping skills of ex-Defence personnel with PTSD and believe that partners are a vital part of the recovery process.

With support from Medibank's Mental Health & Wellbeing Fund the researchers are conducting a pilot study of a skills-building group therapy called Compassionate Mind Training for veterans with PTSD and their partners.

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Sources:

3. Department of Veterans' Affairs. (2018). Mental Health and Wellbeing Transition Study. P23



The study – one of the first of its kind to involve veterans' partners – will investigate whether psychological distress symptoms, as well as quality of life and relationship satisfaction, improve as a result of participating in the sessions.

“Previous studies have shown that compassion helps to alleviate symptoms associated with PTSD,” says Gallipoli Medical Research Foundation CEO Miriam Dwyer. “In this study the focus will be on learning strategies to approach the symptoms with more compassion for themselves and each other, and less guilt.”



# mental health first aid training for veterans' families

Depression, anxiety, drug and alcohol abuse and PTSD are just some of the mental health conditions common among ex-service personnel. These issues, which in some cases lead to aggressive or even suicidal behaviour, take a heavy toll on partners and children, who may have to take on the role of carer.



Mental Health First Aid is an Australian-developed training program designed to give people the knowledge to help someone with a mental health condition. Gallipoli Medical Research Foundation CEO Miriam Dwyer says that groups including emergency workers and farmers have benefited from the training. It has also been used by the US and Australian defence force. Until now, however, there have been no studies investigating its efficacy for family members of veterans with a mental health condition.

The Gallipoli Medical Research Foundation is measuring whether the training improves family members' understanding of mental health issues and whether it reduces stigmatising attitudes around mental health, as well as carer distress and burnout.



A lot of people talk about the importance of supporting mental health, but actually investing, as Medibank has done, in psychosocial research that delivers empirical evidence and data on much-needed mental health programs is going to make a huge difference to people's lives.





## Tim's story

In 2010 Tim left the Australian special forces after serving in Afghanistan and East Timor. Although he didn't know it at the time, he was suffering from PTSD.

"The symptoms of my undiagnosed PTSD were taking a massive toll on pretty much everything and everyone I cared about," he says. "You just think it's normal that you're feeling really blue for half the month; that you put your fist through a wall or get road rage. That's what we tell ourselves anyway. Then the symptoms increase by degrees."

Getting help and even admitting there's a problem in the first place can be particularly difficult for veterans, says Tim, who is President of a Defence Men's group called the Demilitarized Men's Zone.

"It's hard for a military person to accept help, and even harder to ask for it, because in our minds that means we're weak," he says. "If we're weak, we're letting the team down. And we'd rather die than let the team down."

It's also tough admitting to being the cause of their families' suffering. "As military people, we fix problems," Tim says. "So how can we be a source of pain to the people we love?"

“If I had my way,  
they'd be giving out  
medals on ANZAC  
Day to the families.”



# preventing & managing obesity—

about two-thirds of Australian adults and a quarter  
of children are overweight or obese.



**Australia has one of the highest obesity prevalence rates in the world, and the situation is getting worse. In 2014-15, 63% of Australian adults were overweight or obese, up from 57% in 1995<sup>1</sup>.**

People who are overweight or obese have a much greater risk of developing chronic health conditions including type 2 diabetes, cardiovascular disease, osteoarthritis and certain cancers. But it's not just about the health consequences for individuals, the obesity crisis has far-reaching social and economic implications. The total cost of obesity in Australia in 2011-12 was an estimated \$8.6 billion<sup>3</sup>.

Perhaps most worrying of all is the rise in number of children with a body mass index (BMI) above the healthy range. About a quarter of Australian children and adolescents are overweight or obese<sup>4</sup>. This will mean additional strain on the healthcare system and healthcare costs in the coming decades.

The Medibank Better Health Foundation (MBHF) is supporting initiatives aimed at establishing healthy lifestyle habits with the long-term goal of preventing obesity.

It is partnering with Monash University to develop a lifestyle intervention program to target preconception, pregnant and postpartum women, who are at particularly high risk of gaining excess weight.

Medibank is also supporting the Stephanie Alexander Kitchen Garden Foundation's work which encourages primary school children across Australia to develop healthy eating habits through the hands-on experience of growing, harvesting and cooking fresh food.

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Sources:

1. ABS (Australian Bureau of Statistics) 2015. National Health Survey: First results, 2014-2015. ABS cat. no. 4364.0.55.001. Canberra: ABS. Viewed 20 September 2016, HYPERLINK "<http://www.abs.gov.au/ausstats/abs@.nsf/mf/4364.0.55.001>"<http://www.abs.gov.au/ausstats/abs@.nsf/mf/4364.0.55.001>External link, opens in a new window
2. ABS 2009. National Health Survey: Summary of results, 2007-2008 (Reissue). ABS cat no. 4364.0. Canberra: ABS. Viewed 20 September 2016, <http://www.abs.gov.au/AUSSTATS/abs@.nsf/mf/4364.0>
3. Australian Institute of Health and Welfare 2017. A picture of overweight and obesity in Australia 2017. Cat. no.PHE 216. Canberra: AIHW. pp 31
4. [www.aihw.gov.au/overweight-and-obesity/](http://www.aihw.gov.au/overweight-and-obesity/)

# preventing weight gain before, after and during pregnancy

An increasing proportion of Australian women are overweight (30%) or obese (20%) at the time they become pregnant<sup>5</sup>. During pregnancy many women exceed the recommended weight gain meaning they can struggle to get back to their feeling their best after birth.



Excessive gestational weight gain increases the risk of a woman remaining overweight or obese and of having pregnancy and labour complications, risking the ongoing health of the mother and child.

Dr Cheryce Harrison, a research fellow at Monash Centre for Health Research and Implementation, is collaborating with MBHF on a project to improve maternal and infant health.

Dr Harrison and her team are developing an intervention – which will take the form of a healthy lifestyle program delivered partly via a smartphone app – specifically for women who are thinking about having a baby, as well as those who are already pregnant or postpartum.

“Preconception is a critical window of opportunity,” says Dr Harrison.

“Motivation is optimal at this time because women tend to want to do everything they can to ensure their baby will be healthy and they are very receptive to information. Whereas trying to capture women postpartum – when they’re sleep deprived and all their attention is on their new baby – can be really difficult.”



*Dr Cheryce Harrison, Monash University*

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#### Sources:

5. Harrison CL, Skouteris H, Boyle J & Teede HJ. Preventing obesity across the preconception, pregnancy and postpartum cycle: implementing research into practice. *Midwifery*, 2016 [In Press]



An increasing proportion of Australian women are overweight (30%) or obese (20%) at the time they become pregnant. During pregnancy many women exceed the recommended weight gain meaning they can struggle to get back to their feeling their best after birth.

“Preconception women are a very diverse population,” says Dr Harrison. “They’re not usually engaged with the healthcare system, so until they become pregnant it’s very hard to

ensure they have all the important health information. Most of them are not even aware they’re at high risk of excess weight gain.

“We want to reach out to women with a program to help them control their weight so they can stay in a healthy weight range” she explains.

The hope is that further down the track the changes these women make to their lifestyles will also have a broader impact on the health of themselves and their families.



**By the time a woman is finished having children she may have gone from a healthy weight to being overweight or obese.**



# The Stephanie Alexander Kitchen Garden Foundation: forming healthy habits for life

While there are a number of reasons for weight gain in children, the most common causes of childhood obesity include unhealthy food choices, a lack of physical activity and family eating habits.



Medibank has supported the Foundation since 2012 and its Kitchen Garden Program is now running in about 1,600 schools and early learning centres across Australia.

Cook, restaurateur and food writer Stephanie Alexander AO established her Kitchen Garden Program in 2001 in an inner-city Melbourne primary school with the aim of helping children form healthy eating habits for life.

In weekly or fortnightly classes at school, students aged eight to 12 learn to grow, harvest, cook and share fresh, seasonal food.

"A fundamental element of the program is that the students sit down together in a dining space, set with cutlery, crockery and vases of flowers from the garden, to share the food they have prepared," says Josephene Duffy, CEO of the Stephanie Alexander Kitchen Garden Foundation.

Medibank has supported the Foundation since 2012, with the Kitchen Garden Program now running in about 1,600 schools and early learning centres across Australia.

The first evaluation of the program took place a decade ago. It found children who took part in the kitchen garden classes had improved their cooking and gardening knowledge, skills and confidence and were more willing to try new foods.



*Josephene Duffy,  
Stephanie Alexander Kitchen Garden Foundation*

Those children are now aged from 18 to 23; and researchers at the University of Melbourne's Jack Brockhoff Child Health & Wellbeing Program are recruiting them for a new evaluation to find out whether the positive attitude and behaviour have stuck with them into adulthood. "This study will look at whether the program has had an impact on the current eating habits and attitudes to food of the young adults who participated in the program at primary school," says Ms Duffy.

The new research – made possible by Medibank funding – could also increase understanding of how to promote lasting healthy lifestyle habits.



## Emma's story

Aged nine, Emma Cook took part in the Stephanie Alexander Kitchen Garden Program at Whitehorse Primary School in Melbourne.

Ten years later, she's an aspiring chef who has competed in culinary competitions in Australia and India, and recently in Singapore as part of the Australian Youth Team for the 2018 Gourmet Team Challenge.

"The Stephanie Alexander Kitchen Garden program is a really big eye opener for lots of young kids and it's definitely a big part of where I am today," Emma says.



*Emma Cook*

# low back pain



about half the total annual health expenditure for back problems in Australia is spent on hospital admissions.



**Back pain is the leading cause of disability worldwide. It affects nearly all of us at some point in our lifetime, and around 25% of Australians suffer from it on any given day<sup>1</sup>.**

It can be caused by a problem in the muscles, ligaments, discs, nerves or bones. In rare cases, back pain can be a symptom of serious conditions like arthritis, cancer or infection.

Most back problems can be prevented or managed. Only a very small proportion of patients need surgery, yet rates of spinal surgical procedures are on the rise, putting an increasing financial burden on health funders.

About half the total annual health expenditure for back problems in Australia is spent on hospital admissions<sup>2</sup>. This is despite a lack of evidence supporting the effectiveness of common surgical procedures for low back pain, such as disc replacement and spinal decompression and fusion.

The Medibank Better Health Foundation is collaborating with the University of Sydney on two innovative projects investigating methods to empower patients to manage their condition, which could potentially reduce

unnecessary surgical procedures and associated healthcare expenditure.

A pilot study is being conducted to determine whether a telecare coaching service in primary care improves patient outcomes. It is being carried out, in partnership with Medibank, by Manuela Ferreira, associate professor and principal research fellow at the Kolling Institute, the University of Sydney.

Another project is being led by Paulo Ferreira, who is also an associate professor and head of the Spinal Research Group at the University of Sydney's Faculty of Health Sciences. This study is looking into the feasibility of rolling out a program that uses video conferencing to help people living in rural and remote areas of Australia to manage low back pain and knee osteoarthritis.

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Sources:

1. [www.thelancet.com/series/low-back-pain](http://www.thelancet.com/series/low-back-pain)

2. [www.aihw.gov.au/getmedia/9018da61-cdf0-4e3a-bd98-2508f515290d/19839.pdf.aspx?inline=true](http://www.aihw.gov.au/getmedia/9018da61-cdf0-4e3a-bd98-2508f515290d/19839.pdf.aspx?inline=true)

# the telecare health coaching initiative

Rates of posterior lumbar decompression and fusion surgery – performed to relieve pain and pressure on the spine and nerves in the lower back – are rising rapidly. This increase is happening despite uncertainty about the procedure’s effectiveness and a significant risk of post-surgical complications leading to worse outcomes.

There is concern that low back pain patients are progressing too quickly or unnecessarily to surgery because they are not being given enough help to manage their condition in primary care. Australian research found that less than 50% of patients visiting their GP for low back pain have a physical examination and only one-fifth receive advice and education. However, more than 25% are referred for imaging, even though most people with back pain do not need an X-ray, CT or MRI scan<sup>3</sup>.



**Clinical practice guidelines recommend conservative care first... A lot of patients are not getting this before they consider surgery.**



Associate Professor Manuela Ferreira, whose research at the University of Sydney focuses on the management of spinal pain, says GPs are usually too busy. “(Managing low back pain) can be a long, hard and literally painful process. Previous research tells us that putting the extra burden on GPs doesn’t work – think of how many patients walk into a GP practice each day.”

Associate Professor Ferreira is leading a Medibank-supported initiative, called CONNECT, that shifts the task of supporting low back pain patients to a health coach – a physiotherapist, or perhaps a nurse – who works in collaboration with the GP.



*Associate Professor Manuela Ferreira & Associate Professor Paulo Ferreira, University of Sydney*

The intervention involves the health coach speaking regularly to the patient on the phone, or video calling on Skype or FaceTime, to help them achieve goals for exercise and pain management and - when needed - weight loss and sleep quality.

“The clinical practice guidelines recommend conservative care first, such as advice and exercise. A lot of patients are not getting this before they consider surgery, so that’s where CONNECT comes in,” says Associate Professor Ferreira.

“We hope that as a result of health coaching there will be fewer patients who end up having unnecessary surgery, and those who do have surgery will be fitter and more empowered to manage their condition and pain post surgery. This will mean rates of complication, reoperation and hospital stays will decrease, and so will costs. It’s a win-win situation.”

#### Sources:

3. Williams C, Maher C, Hancock M, et al. Low back pain and best practice care. A survey of general practice physicians. *Arch Intern Med* 2010;70:271-77
4. Ramanathan S, Hibbert P, Maher C, et al. Care Track Australia – How appropriate is low back pain care in Australia? Australian Physiotherapy Association Conference, New Moves; 2013; Melbourne, Australia: Australian Physiotherapy Association
5. Runciman WB, Hunt TD, Hannaford NA, et al. CareTrack: assessing the appropriateness of health care delivery in Australia. *The Medical journal of Australia* 2012;197:100-5

# how e-health is empowering patients in rural or remote areas

People living in rural and remote Australia suffer disproportionately from low back pain and knee osteoarthritis compared to people living in suburban areas.



“They have to rely on self-management more than people in cities, and they’re not receiving the right information and support to do this.”

This is not because these conditions are more common in rural and remote communities, rather they have usually reached a more advanced stage before any intervention is made, partly because access to healthcare services can be more limited. There are only 50 registered physiotherapists per 100,000 people in remote areas of Australia, compared to 117 per 100,000 people in major cities<sup>6</sup>.

“When people who live in remote areas complain about pain, their disease is often at a more severe stage,” explains Associate Professor Paulo Ferreira, who is collaborating with the Medibank Better Health Foundation on a study looking at the use of e-health technology for people in rural and remote Australia suffering from low back pain and knee osteoarthritis.

“The other major limitation is they need to travel hundreds, sometimes thousands of kilometres to access their initial point of contact for care. So because of that they have to rely on self-management more than people in cities, and they’re not receiving the right information and support to do this,” he says.

“People with musculoskeletal pain in rural settings tend to be on more medication than people in urban areas, and rates of surgery tend to be higher as well, which is an outcome we want to avoid.”

Research shows that physical activity, progressive resistance strength training and pain coping skills improve outcomes for patients with low back pain and knee osteoarthritis,

and Associate Professor Ferreira wants this evidence-based approach to be available to people in rural and remote Australia.

The EMPoweR study will look at the feasibility of using e-health technology to connect clinicians with patients remotely so that they are empowered to manage their condition at home instead of having to travel long distances for treatment.

“We need to reach out to these people at an earlier stage before their symptoms severely limit their physical function and stop them working.” says Associate Professor Ferreira.

Sources:

6. AIHW National Health Workforce Data Set 2014



## Jane's story

When she was in her forties, Jane suffered an acute episode of low back pain. Three decades on, Jane has osteoarthritis and her back still flares up badly occasionally, although most days the 72-year old is able to take her dog for a short walk and do some light housework.

"There are only a few days when I feel so sore that I'm unable to walk," she says. "The deterioration of my joints has crept up on me over the last 30 years. It's something I have had to learn to live with."

Over the years, Jane has tried nearly everything – from physiotherapy to Pilates to personal training – to manage her condition, but she says that in the long term walking has helped most.

"People say to me, 'Pilates is fantastic' or 'Why don't you swim?'. Sometimes I get despondent because I have tried them all. I can do these activities for a while but then I go back into chronic pain."

She says that one aspect of low back pain that's often overlooked is its impact on mood and state of mind. "The physical side is easier to understand because people can see you're uncomfortable and that you're unable to do the things you like to do.

"But it also affects you emotionally and psychologically: when you wake up and your first thought is, 'How is my back going to be today?'; and when you worry that if you do a certain activity you're going to make it worse."



other health  
challenges\_



**Medibank has been funding a variety of important and potentially ground-breaking research that will be used to inform policy and improve clinical practice.**

These exciting projects include CareFirst, a primary healthcare intervention that involves lifestyle behaviour coaching for people living with chronic diseases; a new tool for measuring outcomes in heart disease patients with the aim of improving quality of care; and a review of rehabilitation options after hip and knee replacement surgery.

# CareFirst program: a better way to manage chronic conditions

A growing number of Australians are living with chronic diseases like osteoarthritis, heart disease, type 2 diabetes and cancer. Primary healthcare programs designed to help patients manage these chronic diseases are central to tackling this enormous health challenge. However, there are many barriers to delivering them.

Medibank's CareFirst program supports GP practices to deliver evidence-based best practice management of chronic diseases. This involves creating a six-month plan for patients focused on changing lifestyle behaviour and improving management of their condition. The plan is developed by a practice nurse, under the guidance of a GP, and could potentially include other health professionals like dietitians and exercise physiologists.

Medibank trialled CareFirst in six primary care clinics in southeast Queensland between 2014 and 2016 to see whether it improved patients' health and management of their condition. The results were encouraging. "People felt more confident about managing their condition and that their quality of life had improved," says Dr Rebecca Tinning, who developed CareFirst with a team from Medibank with support from UNSW academics. "There were also positive changes in clinical indicators, blood pressure in particular, but also an

increase in physical activity and weight loss. Importantly, the participants felt confident that they could maintain those changes."

The evaluation also revealed that the program was well-received by patients, and that practice nurses had implemented it properly. In addition, it was accepted by GPs as a feasible model of care. Medibank began expanding CareFirst nationally in 2016, with more than 3,500 patients enrolled to date. In the long term, it is hoped that the program could help people living with chronic diseases avoid the need for hospital treatment. "Medibank is investing in these preventative strategies to reduce the risk of people with chronic conditions needing to go to hospital and that reduces costs on the healthcare system," explains Dr Tinning.

Dr Tinning's thesis for CareFirst was completed in March 2018.



*Dr Rebecca Tinning PhD Candidate, Medibank*

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#### Sources:

1. Australian Commission for Safety and Quality in Healthcare. Prioritised list of clinical domains for clinical quality registry development. Sydney, NSW: Australian Commission on Safety and Quality in Health Care, 2016

# improving patient care post PCI

**What truly matters to patients? This was a question that a team from Monash University set out to answer when they collaborated with the Medibank Better Health Foundation to develop a new tool to measure outcomes in people recovering from percutaneous coronary interventions (PCI).**

PCI – also known as angioplasty or stenting – is a non-surgical procedure that involves inserting a stent to open up blood vessels that have been narrowed or blocked by a build-up of plaque. Following the procedure, patients may suffer from pain, sleep problems and a lack of energy. Many also require ongoing medications which may cause side-effects.

A team from Monash's Department of Epidemiology and Preventive Medicine, which is a national leader in measuring the quality of hospital care, conducted a systematic review of existing cardiac patient-reported outcome measures (PROMs). These are questionnaires that ask patients how medical interventions have affected their wellbeing, daily functioning and quality of life, as well as other aspects of their recovery. Somewhat surprisingly, they found that only a handful of cardiac PROMs had been developed with significant input from patients.

"The term 'patient-reported outcome measures' is used a lot in practice and in research" explains Dr Darshini Ayton, a research fellow and lecturer at Monash who is leading the project. "However, it's often applied to tools that haven't actually been developed with patients, which is really interesting when you think that the whole aim of

these tools is to capture the perspective of the patient on the quality of care and their recovery."

The team conducted extensive interviews and focus groups and surveyed 400 PCI patients which resulted in a PROM consisting of five questions. In doing so, they found that what mattered most to patients was not necessarily a priority for health professionals. The results were surprising. Doctors had thought issues such as shortness of breath, pain or discomfort would be the biggest concerns to patients. But the questionnaire revealed otherwise.

"Interestingly, the question that consistently came out as most important was whether or not the patients were happy. This was followed up with whether or not the patients felt confident doing their daily activities," says Dr Ayton, adding that these factors were not always considered as important by clinicians or researchers.

The new PROM aims to help health professionals advise and monitor patients preparing for or recovering from PCI. The team is currently working on combining the PROM with objective clinical measures to provide an overall picture of the quality of care, which could be used as a benchmarking tool for hospitals.



*Dr Darshini Ayton, Monash University*

# knee and hip replacements: reviewing rehabilitation

Knee and hip replacements cost the Australian health system more than any other procedure. As the population ages, rates of arthroplasty are expected to continue to rise rapidly.



Professor Guy Maddern,  
Royal Australasian College of Surgeons

Knee replacements are expected to increase by up to 26% and hip replacements are expected to increase by 66% by 2046<sup>2</sup>. Rehabilitation in hospital is a major contributor to the high cost of these procedures, the majority of which are carried out in the private sector. It is more common for private patients to stay in hospital for their rehabilitation rather than leaving hospital and attending physiotherapy as an outpatient.

The Medibank Better Health Foundation has worked with the Royal Australasian College of Surgeons (RACS) to review the evidence of how patients fared following hospital or home-based rehabilitation. It found a similar outcome for both models of rehabilitation, with the exception of older patients, those with limited support at home and those with existing comorbid conditions. Patients in these groups clearly benefited from rehab within a hospital. Professor Guy Maddern, Surgical Director of Research and Evaluation at RACS, who led the study, says that while surgeons usually refer their private patients to in hospital rehabilitation, the RACS report tells us the international trend, based on the best clinical evidence, is that more and more care is being delivered in the home.

“There’s a wide variation in practice both within public and private hospitals, but particularly in private hospitals, where there seems to be a significant trend towards having patients undergo rehabilitation in hospital as opposed to tapping into the resources that can be delivered to people at home,” says Professor Maddern. “Medibank’s

support has enabled us to look at a really big issue in our society, a big piece of healthcare expenditure, where there’s a lack of clarity about the best approach,” he says. This information will now be provided to every orthopaedic surgeon in Australia.



**We should be trying to deliver a high-quality, efficient service. Keeping people in hospital, when there is good evidence not to, doesn’t make sense.**



Sources:

2. Inacio MCS, Graves SE, Pratt NL, Roughead EE, Nemes S. Increase in Total Joint Arthroplasty Projected from 2014 to 2046 in Australia: A Conservative Local Model With International Implications. *Clinical Orthopaedics and Related Research*© 2017: 1-8

## partner organisations

Arthritis Australia  
Australian Catholic University  
Australian Kookaburra Kids Foundation  
Australian & New Zealand College of Anaesthetists (ANZCA)  
Australian & New Zealand Musculoskeletal Clinical Trials Network (ANZMUSC)  
Australian Orthopaedic Association (AOA)  
Australian Orthopaedic Association National Joint Registry  
Banksia Project  
Beyond Blue  
Consumer's Health Forum  
Deakin University  
Gallipoli Medical Research Foundation  
Grattan Institute  
La Trobe University  
Monash University

- Centre for Health Economics
- Department of Epidemiology and Preventative Medicine

Musculoskeletal Australia (formerly MOVE, muscle bone & joint health)  
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Royal Australasian College of Surgeons (RACS)  
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Swinburne University of Technology  
University of Melbourne

- Melbourne Institute of Applied Economic & Social Research
- Centre for Health Exercise & Sports Medicine
- Melbourne School of Population and Global Health

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