medibank
For Better Health

health research at medibank

1 July 2019 – 30 June 2020

Cover – A participant nears the finish line at parkrun Australia. parkruns are free, weekly, community events, providing a welcoming and inclusive experience where there is no time limit and no one finishes last. Medibank has been a proud partner of parkrun since 2016.

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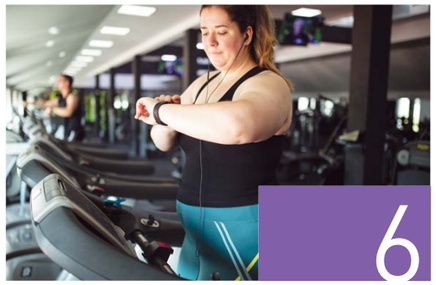

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foreword_

2020 has been a challenging year for our healthcare and medical research industries, and Medibank is grateful for the enormous contribution they have made to keeping Australians safe and well this year.

The coronavirus pandemic has disrupted traditional healthcare delivery in 2020. While it has also interrupted some important research projects, the pandemic has given Australian medical researchers the opportunity to demonstrate the agility, teamwork and incredible scientific knowledge they have; which in my view is second-to-none in the world.

I am proud that Medibank continues to support Australia's research sector and has invested $1.2 million in more than 17 active projects this year. We have focused our research efforts into some of the health issues that have affected our customers most this year, including the impact of the coronavirus pandemic, osteoarthritis and mental health.

In this year's edition of the Health Research at Medibank report, we have highlighted two projects that will have an immediate impact on how COVID-19 cases are handled in hospitals across the country.

While the pandemic became the focus of much health reporting this year, we still face another great challenge given Australia's changing demography. The number of Australians aged 65 and over is set to double within the next 40 years. The ageing population means greater demand on our health system and simultaneously fewer taxpayers to help fund it.

Additionally, one in every two Australians has a chronic disease. This accounts for approximately $45 billion or a quarter of total annual health spending. Unless more is done to prevent and manage chronic disease, growth in these costs will likely swamp the public and private health systems in the years ahead.

This is one of the reasons we continue to support research into osteoarthritis and mental health in particular. We offer our research partners not only financial support but also access to Medibank's expertise and experience, and increasingly we are supporting researchers by promoting their work to our customers who may benefit from participating in relevant studies or trials.

On behalf of all who contribute to health and medical research across Medibank, I am pleased to present the Health Research at Medibank report.

Craig Drummond
Chief Executive Officer

introduction_

The Medibank Better Health Foundation is committed to better health outcomes for all Australians and we fund research into key areas of need for our customers and the broader Australian community.

We also apply the evidence directly to our membership by developing new tools and programs and we leverage research results to advocate for changes in health policy and clinical practice.

The Health Research at Medibank report highlights the impact of the world-class researchers whose work improves the quality of life and health outcomes for Australians every day.

This year, highlights include:

- Partnering with the Australian and New Zealand College of Anaesthetists, the University of Melbourne, Austin Health and the Alfred Hospital to ensure coronavirus screenings and temperature checks for incoming patients were correctly captured in patient records, giving greater confidence to hospital workers and decreasing their exposure risk to COVID-19.
- Collaborating with the Australian National University, the Australian and New Zealand College of Anaesthetists, and public and private hospitals across the country to demonstrate that when community prevalence of COVID-19 is low in Australia, the associated risks to healthcare workers from asymptomatic elective surgery patients are very low.
- Supporting a University of Sydney trial, PARTNER, to give GPs better access to up-to-date osteoarthritis treatment information and providing telehealth support to patients to help improve their knee pain and function.
- Funding work by the Menzies Institute of Medical Research at the University of Tasmania to see if better health outcomes can be achieved for Australians with knee osteoarthritis through simple, cost-effective physical exercise rather than invasive and sometimes debilitating surgery.

This has been a challenging year for clinicians and researchers, and we thank them for their ongoing commitment to continue to improve Australia's excellent healthcare system.

Dr Linda Swan
Chief Medical Officer

key achievements_

INPUTS

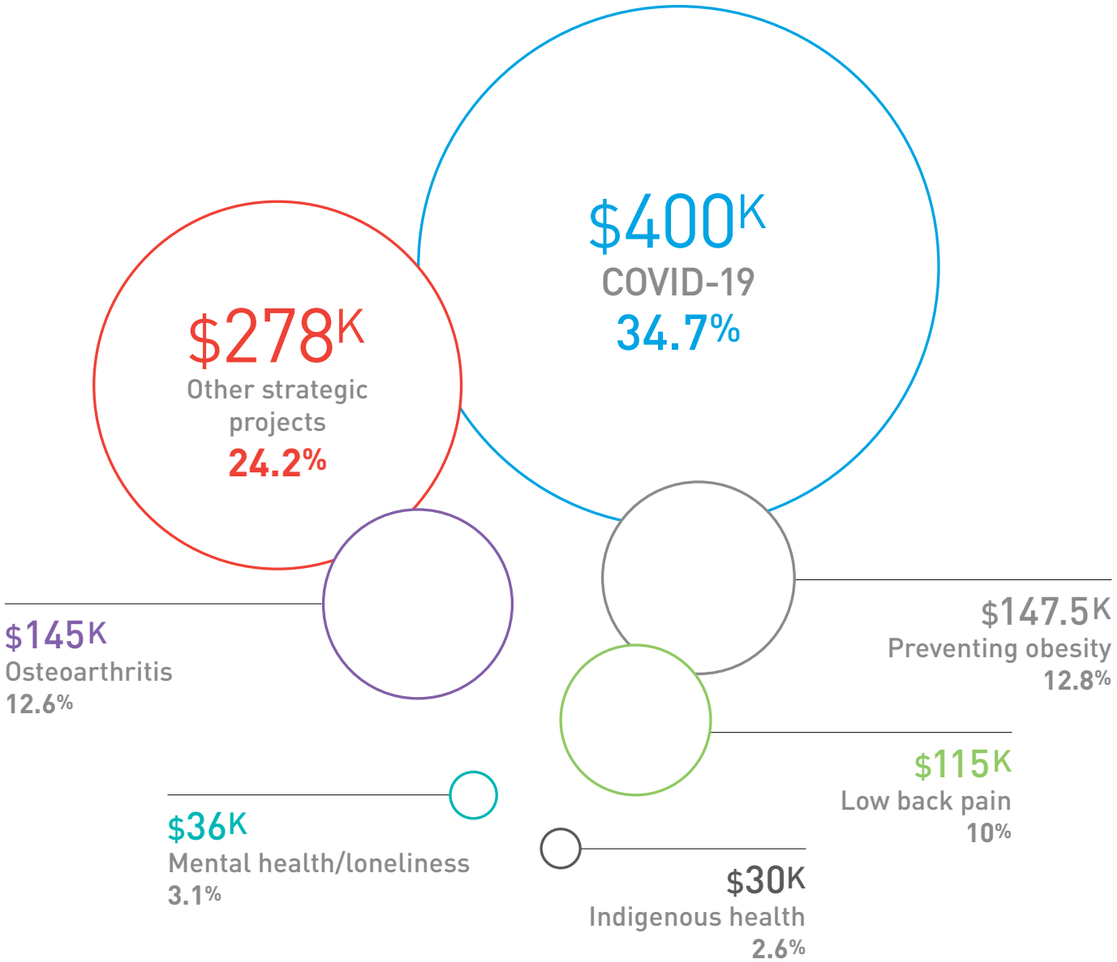
$1.2 million
total allocated to research across Medibank

1 July 2019 to 30 June 2020

17 funded projects

31 active projects

Partnered with **12** organisations



275 days
of in-kind Medibank support

Osteoarthritis	55 days
Back Pain	25 days
Mental health/loneliness	50 days
Preventing obesity	100 days
Chronic disease management	25 days
Transparency	10 days
Indigenous health	10 days

OUTPUTS

$2.75 million
leveraged funding

14
publications and reports

7,200
number of people reached /supported

IMPACTS

All people **undertaking surgery** have been **positively impacted by Safer Care Victoria** changing policy to document screening of COVID-19.

The network includes **41 public and private critical care units** across regional and metropolitan Victoria.

Improved stakeholder perceptions through projects undertaken as we have been approached by the Australian Government, various health institutions and universities to be involved in their work.

osteoarthritis

Two thirds of Australians with osteoarthritis report they are faring badly with their condition[1], and 57 per cent do not receive appropriate care according to current guidelines.[2]

Osteoarthritis is one of the leading causes of chronic pain, disability and lost productivity in Australia, **costing the health system $3.75 billion and the economy around $22 billion annually**,[3] and the burden of the disease is expected to increase exponentially in coming decades due to an ageing and increasingly obese population.

By 2032, three million Australians are expected to be affected by osteoarthritis,[4] but some osteoarthritis is preventable by avoiding excess weight gain and joint injuries.[5,6]

Medibank is proud to **support two new studies**, assessing the impact GPs can have on osteoarthritis care and investigating how important simple physical activity is for alleviating the condition.

1. Arthritis Australia, 2011. The Ignored Majority: The Voice of Arthritis 2011, p2
2. Runciman WB et al., 2012. CareTrack: assessing the appropriateness of health care delivery in Australia. Med J Aust 2012; 197(2): 100-105

3,4. Arthritis Australia March 2014, A Time to Move: Osteoarthritis A national strategy to reduce a costly burden, p2

5. Muthuri SG, Hui M et al., 2011. What if we prevent obesity? Risk reduction in knee osteoarthritis estimated through a meta-analysis of observational studies. Arthritis Care & Research; 63(7): 982-990
6. Hunter DJ, 2011. Lower extremity osteoarthritis management needs a paradigm shift. Br J Sports med 2011; 45:283-288

Up to 70%

of Osteoarthritis is preventable by avoiding excess weight gain and joint injuries[7,8]

7. Muthuri SG, Hui M et al., 2011. What if we prevent obesity? Risk reduction in knee osteoarthritis estimated through a meta-analysis of observational studies. Arthritis Care & Research; 63(7): 982-990
8. Hunter DJ, 2011. Lower extremity osteoarthritis management needs a paradigm shift. Br J Sports med 2011; 45:283-288

Linking GPs to the latest treatment info for osteoarthritis

For 2.2 million Australians[9], osteoarthritis impacts their physical and mental health every day. It hinders their work, hampers their ability to socialise and exercise, and **causes them pain**. It makes them second guess whether they are up to the dozens of little things many Australians take for granted every day, like taking the stairs at work, playing golf, walking to the shops, or playing with a grandchild.

Most GPs report dissatisfaction with the care they are able to provide to people with osteoarthritis[10]

9. Australian Institute of Health & Welfare, 2020. https://www.aihw.gov.au/reports/chronic-musculoskeletal-conditions/osteoarthritis/contents/what-is-osteoarthritis

10. NSW Agency for Clinical Innovation Musculoskeletal Network, 2012. Osteoarthritis Chronic Care Program Model of Care

Osteoarthritis is a highly prevalent, disabling and costly condition that affects

1 in 11 Australians[11]

Osteoarthritis is one of the leading causes of chronic pain, disability and lost productivity in the country. Although there is no cure, there are effective non-surgical treatments for the long-term management of osteoarthritis. So why aren't more people getting the treatment they need?

Osteoarthritis is not always managed well in Australia, so a new study from the University of Sydney is giving GPs better access to up-to-date treatment information and providing telehealth support to patients to help improve their knee pain and function.

Dr Jocelyn Bowden, from the University of Sydney's Institute of Bone and Joint Research, said the PARTNER study is examining the benefits of getting both patients and GPs on the same page, with realistic expectations about how a diet and exercise plan can improve osteoarthritis.

"Pain from knee osteoarthritis is such a big problem for so many people, and they think surgery is their only option, but there are other non-invasive treatment plans they can try first to alleviate their pain and bring back their quality of life," Dr Bowden said.

"Our PARTNER study gives GPs a better understanding of the best management options available for osteoarthritis patients through an easily accessible, online professional development tool.

"We're also giving their patients additional, personalised support and advice through a telehealth allied healthcare support team."

Education and advice on osteoarthritis, exercise and physical activity, and weight management are the best early treatments recommended by current clinical guidelines.

"Behaviour change is vital, and by working with both GPs and their patients, we can better assess which lifestyle changes the patient thinks they can achieve, what they're actually capable of doing, and how this best fits into their lifestyle," Dr Bowden said.

Study co-author and University of Sydney Professor of Medicine David Hunter highlighted the key to better outcomes is with GPs, as they are the first health professional people see about their osteoarthritis.

"We know a lot of people are receiving inappropriate, low value care, and the PARTNER study is changing that. From a patient's perspective, osteoarthritis is incredibly disabling, and so when a GP refers them to a surgeon, many assume it is the best or only course of treatment available," Professor Hunter said.

> By providing better tools for the GPs to use, we are demonstrating we can modify the outcomes.
>
> **David Hunter**
> **– University of Sydney Professor of Medicine**

Early anecdotal reports from the PARTNER study show a significant improvement in both pain and function, with formal results due to be published early in 2021.

"If we can make a clinically important difference with this type of program to a patient's pain level, function, and quality of life, compared to the usual care pathway, that will be really pleasing," Professor Hunter said.

"The next step is looking at how we can scale and disseminate this program so it's available for everybody. Without the support of Medibank, we could not have done this program, and our ongoing relationship will be vital for making the program more widely available."

11. Arthritis Australia March 2014, A Time to Move: Osteoarthritis A national strategy to reduce a costly burden, p2

The burden of Osteoarthritis is expected to increase exponentially in coming decades due to an ageing and increasingly obese population, with prevalence expected to reach three million Australians by 2032.[12]

Simple physical activity can have a ripple effect for osteoarthritis

Can **better health outcomes be achieved** for Australians with knee osteoarthritis through **simple, cost-effective measures** rather than **invasive and sometimes debilitating surgery?**

Osteoarthritis is one of the leading causes of chronic pain, disability and lost productivity in Australia, costing the health system $3.75 billion and the economy around $22 billion annually.[13]

The current clinical guidelines recommend education and advice on osteoarthritis, exercise and physical activity and weight management as the best ways to manage osteoarthritis.[14,15,116]

But for many Australians, these types of treatments are never offered, or considered too hard.

The University of Tasmania's Associate Professor Dawn Aitken says many patients with knee osteoarthritis feel overwhelmed by the challenge of regular exercise and are apprehensive about the pain new movement might cause.

"Many patients fear an increase in joint pain if they start exercising, when often it is the best remedy to alleviate their pain and improve their knee function," Associate Professor Aitken said.

"We all know physical activity is good and will help with osteoarthritis symptoms but the uptake is not ideal, even when doctors encourage us to exercise. Patients with osteoarthritis of the knee need support, accountability and encouragement to find enjoyable exercise options, which is why parkrun is perfect."

A pilot study by the University's Menzies Institute for Medical Research has examined the feasibility of using parkrun as a positive, community-spirited setting to increase physical activity participation in knee osteoarthritis patients.

Established in the UK in 2004 and Australia in 2011, parkrun has become a global phenomenon with free, weekly 5km walk/run events held in public parks in more than a dozen countries. It addresses many of the most common barriers to physical activity participation as it is free, accessible, requires no specialised skills, training, equipment or clothing, and its philosophy is to encourage physical activity in a socially supportive, positive and inclusive environment.

"We need to support patients to find an activity that they can be guided through and supported to participate in without pain. Time is a barrier too, but because parkrun is the same time every week it's easy to book it in. Group activities are easier to be committed to because there's the social aspect of others to meet, helping to keep people motivated," Associate Professor Aitken said.

The pilot study wasn't advertised as parkrun participation, but rather, framed as a physical activity study to alleviate knee osteoarthritis. When participants were initially interviewed, there was some apprehension on hearing the word 'run', but researchers talked participants through the benefits, coaching them on overcoming their fears, and the options to walk or do a shorter circuit (full parkrun circuits are 5km).

The participants were asked to take part in four parkruns in a row and were interviewed regularly to rate their pain and functionality.

> **One of the big positives of parkrun is that it's free and happens regularly. Anyone can join at one of the hundreds of locations around Australia, including five in southern Tasmania alone.**
>
> **Dawn Aitken**
> **– Associate Professor, University of Tasmania**

"Not everyone is an elite runner; there are families, children, older people, some people walking, some running, and it's not a race. You can choose to track your time each week so you can start to set goals for yourself and your own physical fitness, but it's not a competition," Associate Professor Aitken said.

"The majority of participants were able to complete the course each Saturday, demonstrating that knee osteoarthritis patients are able to take on this kind of activity and stick with it to see results."

Results will be finalised in early 2021 and submitted to the Osteoarthritis Research Society International Conference, but the anecdotal feedback suggests parkrun participation is feasible, safe and suitable for osteoarthritis patients.

As a result of the pilot study, Associate Professor Aitken is developing a randomised controlled trial comparing parkrun to another standardised exercise to show parkrun is either equivalent or superior in alleviating knee osteoarthritis and knee pain symptoms.

"We hope we are able to say to GPs, 'you can prescribe this to patients and there will be a positive impact'," Associate Professor Aitken said.

12,13. Arthritis Australia March 2014, A Time to Move: Osteoarthritis A national strategy to reduce a costly burden, p2

14. National Institute for Health and Care Excellence 2014, Osteoarthritis: care and management in adults. London: NICE.

15. Royal Australian College of General Practitioners. Guideline for the management of knee and hip osteoarthritis. 2018 2nd edn. East Melbourne: RACGP.

16. McAlindon TE, Bannuru RR, Sullivan MC, et al. 2014, OARSI guidelines for the non-surgical management of knee osteoarthritis. Osteoarthritis Cartilage; 22:363–88.

COVID-19

As coronavirus spread across the world in early 2020, the challenges to healthcare workers and hospitals were enormous. In Australia, adequate personal protective equipment supply, managing bed numbers and ventilator availability, and the anxiety of exposure, have been constant concerns for healthcare workers since the new virus strain took hold locally.

The first cases of COVID-19 were reported in late 2019 in Wuhan, China, and rapidly spread to the rest of the world. As of November 2020, **the number of global cases had exceeded 47.4 million**, with more than 1.21 million deaths worldwide[17]. **In Australia, there were more than 27,600 confirmed cases and more than 900 deaths at this time.**[18]

Australian federal and state governments worked closely together, relying on scientific and medical expertise to make swift decisions, protecting the nation from the worst-case scenario that unfolded in many other OECD nations.

As the first wave eased, and hospitals returned to a new normal in some states, elective surgery waiting lists needed to be addressed, but many healthcare workers were concerned about the risk of accidental exposure to COVID-19.

Medibank supported two projects to assess how screening questionnaires were being documented in patient records, and whether a polymerase chain reaction (PCR) **swab to detect COVID-19 was necessary before surgery could proceed**.

27,600+

detected cases of COVID-19 in Australia[18]

17. World Health Organisation

18. Australian Government Department of Health as at 5 November 2020

Recording patient COVID-19 screenings – every patient, every time

As the **first wave of COVID-19 subsided in Victoria**, health officials turned their attention to the **burgeoning elective surgery waiting list**. The most urgent categories were resumed, with **new practices and procedures in place to protect** healthcare workers and patients.

Professor David Story, Foundation Chair of Anaesthesia at The University of Melbourne and Australia and New Zealand College of Anaesthetists Council Member, said much was still unknown about COVID-19 when elective surgery first resumed.

"We needed to ensure there was confidence for healthcare workers in the pre-surgery patient screening. Robust screening and appropriate documentation of that provides an important safeguard for healthcare workers," Professor Story said.

"Everyone knew that mandatory screening of patients should take place, testing their temperature and asking questions about symptoms and potential exposure, but the results were often not being recorded in the patient's history.

"Was it happening at the hospital entrance? At the admissions desk? When the patient was admitted to the pre-surgery ward? By nurses, the surgeon or the anaesthetist? We worked with two major public hospitals in Melbourne to track how often this screening was being recorded in a patient's charts.

"Not only does clear documentation provide confidence for healthcare workers, it also helps to ensure patients get the best possible surgical outcome. Patients with COVID-19 have worse surgical outcomes, so their surgery should be delayed if possible."

The proposed minimum outcome was to have 85% of screenings documented on the assumption that all patients were being screened but not recorded, however only 72% of elective surgery screenings and only 38% of emergency surgery screenings were documented.

"While we can be confident that most or all of those screenings did actually occur, it is concerning that they weren't recorded," Professor Story said.

The results helped to inform the procedures that Safer Care Victoria put into place as Melbourne's second wave suspended elective surgeries again.

"Victoria moved to mandatory swabs pre-surgery during the second wave, but the findings of this project will have an impact across Australia. Everyone knows pre-screening must be done, but it also must be recorded in the patient's history. We have champions in the hospital community pushing to improve this as a result," Professor Story said.

> **The two hospitals from the study have COVID-19-status clearly displayed in patient history now, and if not, staff are alert to screen again.**
>
> **Professor David Story**
> **– Australia and New Zealand College of Anaesthetists Council Member**

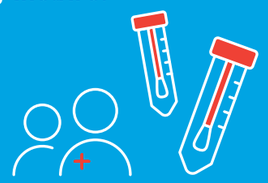
"We've learned that when there are sudden dramatic changes in practice, we cannot just assume everyone will adhere to new guidelines or procedures. We need to ensure we provide ongoing education, champions to promote the changes, and feedback opportunities so we know what is and isn't working.

"This year has been incredibly challenging for healthcare workers across Australia, particularly those in Melbourne; I've never seen so much change so quickly in our sector."

The full results of the joint ANZCA and Medibank study were published in the Australian Health Review in September 2020.

Are pre-surgery swabs necessary to protect healthcare workers?

As **elective surgery** resumed across Australia in June 2020, some clinicians had reasonable concerns about their **potential exposure to coronavirus in the operating theatre**.



But a recent collaborative study involving academics, hospitals, universities, the Federal Government and Medibank, conducted during a period of relatively fewer COVID-19 infections in the community, found no cases of active coronavirus infection among more than 3000 elective surgery patients without fever or respiratory symptoms.

Through the ANZCA Clinical Trials Network, 14 hospitals, public and private, across the east coast of Australia participated in a study which tested 3,037 asymptomatic elective surgery patients upon admission. The study was conducted over five weeks in June and July and overlapped the second wave of cases in Victoria.

Professor Russell Gruen, Dean of the ANU College of Health and Medicine, said polymerase chain reaction (PCR) tests (nasal and oesophageal swabs) were done on the operating table, and serology samples were taken to test antibody levels during canula insertion or pre-operative blood work.

"None were positive on PCR, and five had positive antibody tests, indicating previous exposure to the virus. There were no health worker-associated infections among staff exposed to these patients," Professor Gruen said.

> **Statistically, we are confident that the chance of any of these asymptomatic patients having active COVID-19 infection and a false negative PCR test is less than 1 in 918.**
>
> **Professor Russell Gruen**
> **– Dean of the ANU College of Health and Medicine**

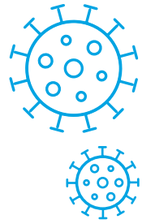
"It is clear when community prevalence was relatively low, as it has been throughout 2020 in Australia compared to other countries, the associated risks to healthcare workers from asymptomatic elective surgery patients were very low.

"The study has implications for whether it is necessary to test every elective surgery patient for COVID-19 during the pandemic.

"The logistics of testing all patients and keeping them isolated prior to surgery has significant costs to both the healthcare system and the patient's mental wellbeing. From the results of this study, mandatory COVID-19 testing and isolation of asymptomatic patients prior to elective surgery is hard to justify.

"Healthcare workers can have confidence that careful screening of symptoms and temperature checks are likely sufficient when community prevalence is low, when the risk of catching COVID-19 from an elective surgery patient is very low.

8.9 million
COVID-19 tests have been conducted in Australia[19]



of those tests
0.3%
returned a positive result[19]

698
the highest number of new COVID-19 cases reported in one day in Australia[20]

"All hospital workers should be taking appropriate precautions with personal protective equipment (PPE) and hand hygiene, but the risks in elective surgery are actually very low. This study should provide some comfort to healthcare workers and guide appropriate distribution of PPE.

"We hope this will also influence policy about the need for pre-operative testing, as this study captured both public and private hospitals, across the eastern seaboard, bringing together the frontline workers who stand to benefit from the research with the best minds and the best facilities in the country.

"This was a dream collaboration between academics, clinicians, patients and hospitals and we can do more of this as a nation. This study has shown how smooth it can be when we're all working together on an issue of public importance."

19, 20. Australian Government Department of Health as at 5 November 2020

Yvonne's story

Yvonne Wilson, 67, has had kidney failure for 27 years, so when the opportunity for a kidney transplant arose in July 2020, she was not nervous about having surgery despite the impacts coronavirus was having on the Victorian hospital and healthcare system.

"We had only 24 hours notice of the surgery, but I knew it was a risk I was willing to take, as I felt confident the doctors and nurses would take every precaution to protect me from COVID-19," Mrs Wilson said.

"A kidney transplant is normally a 10 day stay, but the Royal Melbourne Hospital had me home after only five days, as recovery was safer at home during the pandemic, and it was difficult not to be able to have my husband Leigh in hospital with me.

"The nurses were working under extreme pressure, but they're wonderful people and I had complete faith in them. I can only praise the healthcare team for how thorough they were in screening both Leigh and I repeatedly as we entered the hospital, and processing our COVID-19 tests prior to admission as quickly as possible.

"I felt very protected before and after surgery. Despite having surgery in Melbourne at the beginning of the second wave outbreak of coronavirus, I was not nervous at all; I'm so grateful to the hospital and all the staff," Mrs Wilson said.

Danielle's story

One of the greatest challenges during the pandemic for healthcare workers, state and federal governments and the community has been Australians' mental health. Nurse Danielle Gallan has worked for Medibank's telehealth triage service for close to a decade and was part of the team who provided advice and support to the community when coronavirus arrived in Australia.

"When the COVID-19 pandemic began in Australia, the demand for telehealth advice was three to five times the normal call volume. Understandably, it's a new virus and people were looking for the latest health advice from clinical professionals," Ms Gallan said.

Medibank's telehealth professionals and clinicians have handled more than 320,000 COVID-19 related interactions on behalf of its clients between March and November 2020, including telephone nurse triage, mental health counselling, contact tracing, coordinating in-home COVID-19 testing and welfare checks for the elderly and vulnerable.

One of Medibank's clients, Beyond Blue, experienced increased demand for its mental health support services, with the impact of lockdowns on individuals and families. There was a new surge in calls and online chats coming from Victoria during the August-October lockdown.

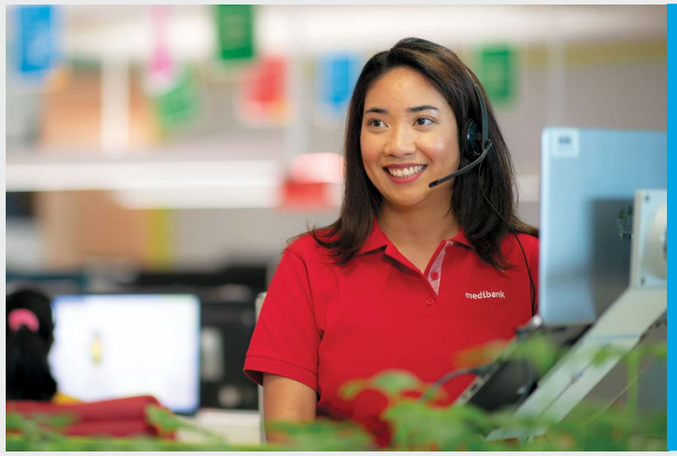
Medibank also supported the Victorian Government with nurses for contact tracing, communicating COVID-19 test results and welfare checks on the elderly and vulnerable. Ms Gallan is the clinical lead who helped to set up Medibank's 'Call to Test' line.

"The Call to Test helpline was set up for those who have a disability, are elderly or isolated, and can't leave home for a COVID-19 test. We arrange for a healthcare worker to be sent to their home," Ms Gallan said.

"Some callers are living with a person who's already COVID-19 positive, and they're worried about leaving the house and infecting others. I've had call from a lady in her nineties, living alone. I ended up speaking to her daily, until she had received her negative test result, which helped with her anxiety. We've organised home testing for the disabled. I've had a young man with a broken leg who couldn't drive."

Ms Gallan said 2020 has proved to be her busiest year in the job.

"Many in our clinical team were already working on existing nurse triage lines during the first outbreak in March. Demand then flattened, before ramping back up again. We learnt a lot before the second wave hit. We're now much more aware of what the community requires, especially helping those who are vulnerable."



320,000

COVID-19 related interactions

Loneliness

Medibank has been working to develop a long-term approach to help address one of Australia's growing but least understood concerns – loneliness. Loneliness has the propensity to impact anyone and doesn't discriminate on age or social status.

1 in 4 Australians
prior to the COVID-19 pandemic were lonely[21]

Lonely Australians
have significantly worse physical and mental health than connected Australians[21]

21. Australian Loneliness Report, Swinburne University

The true impact of the pandemic on loneliness

Clinical Psychologist Dr Michelle Lim has been researching loneliness and it's impacts on physical and mental health for nearly a decade, but when **COVID-19-related social restrictions were introduced across Australia** in late March 2020, she was **interested in the effects on how people perceive their loneliness**.

In 2018 and 2019, prior to the pandemic, Dr Lim's research shows one in four Australians aged between 12 and 89 years old reported problematic levels of loneliness.

A study led by Swinburne University, along with the University of Manchester (UK), the University of Western Australia, and Brigham Young University (USA), aimed to understand the impact of the COVID-19 pandemic on relationships, health, and quality of life. Medibank supported the project by promoting the study to its customers to increase participation in the project.

"In the first wave of infections, 1 in 2 Australian residents reported feeling lonelier since COVID-19, and those who reported feeling more lonely since the start of the pandemic also reported more depression," said Dr Lim, of Swinburne University's Social Health and Wellbeing Laboratory and Chair of the Ending Loneliness Together scientific advisory committee.

> **The COVID-19 pandemic highlights the importance of meaningful social connection, not just any social connection.**
>
> **Dr Michelle Lim**
> **– Swinburne University's Social Health and Wellbeing Laboratory**

One of the findings was that living with family was the most protective against feelings of loneliness.

"Not surprisingly, Australians living alone identified as the most lonely, but interestingly, people living in a share-house/housemate situation were also just as at risk.

"Loneliness is an indicator of the quality of relationships that you have, and who you live with and whether you get along become particularly important during a social distancing lockdown. If you're living with your family, you're more likely to have positive meaningful connections, but relationships are complex so it's not the only thing.

"My previous work showed Australians weren't very good at connecting with their neighbours, so being restricted to our neighbourhoods means we were forced to build community cohesion."

The study was conducted in Australia, the USA and the UK, and despite participants reporting similar stress levels, Australians reported having the least severe depression scores and had a higher quality of life compared with people in the US and UK.

"I think we will see the true impact of social distancing restrictions in Victoria in the second period of surveying, as a result of the harsher Victorian lockdown through August and September," Dr Lim said.

"Across all three countries surveyed, loneliness was associated with more mental health symptoms, less social contact, and more physical health concerns, so we will be further exploring that and what has a positive impact on how lonely people feel. We are investigating what is best to buffer the impact of the pandemic on loneliness – is it family, physical health, exercise?"

The researchers have analysed the data from the first wave of the pandemic and are awaiting the latest data from the extended Victorian lockdown.

"Then we can start to understand the situation better, and make recommendations on how to alleviate loneliness because this pandemic will be around for a while," Dr Lim said.

Physiotherapy

Physiotherapy is focused on movement and function, often following injury or surgery, or when dealing with a physical disability.

A physio uses massage, exercise, stretching and hands-on manipulation to treat pain or dysfunction and to improve mobility and flexibility.

35,000+

registered physiotherapists in Australia[22]

23 million

physiotherapy consultations per year in the Australian private sector alone[23]

22. Physiotherapy Board of Australia as at 31 January 2020
23. Australian Physiotherapists Association

Effective treatment key to Australians' reliance on physiotherapy

Since the **Choosing Wisely** movement began in 2012, more than **100 societies worldwide** have published recommendations for patients and clinicians about **eliminating low value care** and **improving patient outcomes**.

The Australian Physiotherapy Association (APA) published its Choosing Wisely guidelines in 2016, with six types of tests and treatments that should be avoided, including unnecessary imaging for non-specific back pain and ankle sprains without worrying signs, neck imaging for trauma patients without prior screening, incentive spirometry following upper abdominal or thoracic surgery, electrotherapy and ultrasound for back pain, and ongoing manual therapy for frozen shoulder.

A 2019 review by Dr Joshua Zadro at the University of Sydney's Institute for Musculoskeletal Health demonstrated that 2 in 3 physiotherapists worldwide provided treatments that are recommended, but 27% provided treatments that weren't based on evidence and which guidelines recommended against.[24]

This led him to launch his latest study, analysing Australian physiotherapists' views on the APA's Choosing Wisely guidelines, and whether the wording of the guidelines was helping or hindering the cause.

> **Replacing low-value physiotherapy with high-value physiotherapy could reduce healthcare costs and improve outcomes for millions of Australians.**
>
> **Dr Joshua Zadro**
> **– University of Sydney Institute for Musculoskeletal Health**

"Physiotherapists commonly treat people with musculoskeletal conditions – the leading cause of disability in Australia[25] – but some physiotherapists don't adhere to guidelines"[26,27] Dr Zadro said.

"This study is looking at the strategies that can be used to improve the uptake or adherence to evidenced-based care, because there are a lot of different drivers to some physios providing unnecessary care. Many physiotherapists will rely on their experience rather than what is evidence-based, but some conditions will improve on their own, so the course of treatment the physio undertakes with a patient isn't related to the improvement, it's just coincidental.

"Some younger physiotherapists told us they feel pressure from senior staff to provide non-evidence-based care; they feel pressure to treat patients in the same way as senior physios, and this was occurring in both hospital settings and in private practice. There is pressure to conform to whatever treatment paradigm the boss is using.

"Sometimes we found the language of the APA's Choosing Wisely recommendations was considered too restrictive and was actually pushing some to do the opposite.

"Physiotherapists have a lot to offer patients with musculoskeletal conditions, but it's important they don't dilute appropriate care with what we now know is low-value care. Sticking to clinical practice guidelines can increase the efficiency of physiotherapy services and ensure patients only receive care that is truly necessary," Dr Zadro said.

The results of the study are expected to be published in 2021.

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Jessica's story

With nearly a decade in the profession, HealthStrong physiotherapist Jessica Montgomery says physiotherapy is moving away from passive treatment and engaging patents in more active treatment.

"We're engaging more with our patients, educating them about their body and its range of movement, and encouraging self-management in conjunction with physiotherapy treatment. We're using manual therapy as a treatment to improve mobility, rather than as an end unto itself," Ms Montgomery said.

"I am focused on giving patients a sense of how strong they are, and what their body is capable of, rather than how weak or damaged they are at the moment they come in for treatment.

"Physiotherapists can constantly improve how we engage with patients and give them more cause to stick to their treatment plan. We can pace their exercise and improvement gradually, and they will have a positive outcome from that."

Ms Montgomery says the Australian Physiotherapy Association's Choosing Wisely guidelines are important for the industry, and GPs need to engage more with physiotherapists to ensure the right treatment is being received.

"For example, with back pain, we know it generally gets better in 4-6 weeks, and that physiotherapy treatment and support can improve that pathway. But many patients or GPs have an expectation that an MRI, ultrasound or CT scan are needed, and often a referral to a surgeon," Ms Montgomery said.

"Scans can't necessarily tell us what is causing the back pain; it's often caused by a number of different stressors, many of which aren't related to a physical injury or damage, like work or financial stress, a sedentary lifestyle or poor sleep or diet."

overview of research projects funded in FY20_

Partner: University of Sydney

E-health to empower patients with Musculoskeletal Pain in Rural Australia: The EMPoweR Project

FY20 funding: $40K

Low back pain and knee osteoarthritis are leading causes of disability worldwide. Together these conditions affect 7.2 million people in Australia.[28,29] Although patients in rural and remote communities suffer from more severe levels of these conditions compared to those in urban areas, their access to health services is significantly limited, and due to their occupations, reliance on healthy physical function is essential for their livelihood.

This research project aims to determine the effectiveness of an e-health intervention involving a tailored physical activity, progressive resistance strength program, and pain coping skills training program compared to usual care, for people with chronic low back pain and/or knee osteoarthritis in rural and remote Australia.

SUcceSS Trial – Surgery for spinal stenosis: a randomised placebo – controlled trial

FY20 funding: $75K

Surgery for central lumbar spinal canal stenosis has increased approximately 40% in the last decade, costing over $136 million per year (estimates based on NSW data in 2013).[30] However, the specific treatment benefits of decompression surgery for lumbar spinal stenosis are still debatable and have not yet been tested. This is because we currently lack level 1 evidence for the efficacy of surgery for spinal stenosis, and to date no randomised trials have attempted to establish its effects beyond those of placebo, strongly associated with invasive medical procedures. This is problematic, given the high reoperation rates and adverse events associated with decompressive surgery, increasing costs and the strong placebo effects commonly associated with invasive approaches such as this.

SUcceSS will be the first randomised placebo-controlled trial to evaluate the efficacy and cost-effectiveness of decompressive surgery for spinal canal stenosis and represents a highly significant advance in knowledge in this field. This trial will provide definitive evidence about the true effect of decompressive surgery and have immediate impact on policy – if surgery is shown to be superior to placebo, it provides the grounds needed for its endorsement. If shown not to be superior, it offers strong argument for stopping/reconsidering its use and funding.

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Partner: University of Melbourne

Closing the evidence-practice gap in total knee replacement: optimising evidence-based decision making through a multi-dimensional surgeon feedback intervention

FY20 funding: $100K

The evidence-to-practice gap for the surgical management of advanced osteoarthritis (OA) of the knee is costly and potentially harmful. This proposal will improve the uptake of evidence-based criteria by implementing and evaluating a novel surgeon feedback intervention for those performing total knee joint replacement. Total knee joint replacement (TKR) is the only proven effective surgical procedure for managing advanced knee OA[31]. While TKR has revolutionised the treatment of patients crippled by knee OA, there is growing concern related to cost, demand and dissatisfaction that compels a reassessment of how this procedure should be best deployed. In 2015 57,000 Australians received TKRs, representing an increase of 77% since 2003[32,33]. However, an estimated 25% of TKRs are performed in inappropriate candidates according to evidence-based criteria[34] and a similar proportion do not report a clinically meaningful response to surgery. Validated appropriateness criteria for TKR exists. Innovative strategies to optimise service delivery are needed to overcome barriers to uptake of this evidence, using an implementation science approach.

This research project aims to improve uptake of evidence-based criteria for TKR[35] by implementing and evaluating an interactive multi-dimensional surgeon feedback intervention into the hospital orthopaedic setting.

Better Knee Better Me (BKBM) – linking Australians with specialised knee osteoarthritis treatment and support across the osteoarthritis trajectory – a randomised control trial evaluating two remotely delivered scalable health services tested in the private health insurance setting

FY20 funding: $105K

This project aims to undertake a randomised control trial to assess the effectiveness of two osteoarthritis care service models which aim to improve function and decrease knee pain in trial participants in the short-term and prevent the need for future TKJR surgery in the long-term.

The BKBM project has three goals:

1. Individuals with knee OA should be provided with appropriate non-surgical care earlier in their disease trajectory;
2. Arthroscopy for knee OA should not be recommended as a primary treatment;
3. TKR should be reserved for patients who have exhausted all non-surgical care options and where there is a good probability of success.

BKBM will be delivered remotely using a scalable health service delivery model. The patient experience will include: 6 x 1:1 skype/teleconference (TC) physiotherapy consults, 6 x skype/TC dietician consults, very low calorie diet (VLCD) meal replacements for 12 weeks to support weight loss, physiotherapy aids and educational resources posted to member's homes and provision of an activity tracker (Fitbit). BKBM will be evaluated using a robust randomised control trial methodology.

The impact of price transparency on price variation and out of pocket costs

FY20 funding: $100K

The Australian healthcare system has come under intense pressure due to increasing demand and rising healthcare costs. Concerns have been raised by high and unexpected out of pocket (OOP) fees charged by specialists and private hospitals. This in turn has resulted in consumers not seeking or delaying treatment, joining the queue for treatment in the public system, or using crowdfunding to reduce costs. Initiatives to improve price transparency (PT) have been proposed by government and industry bodies to reduce pricing uncertainty and 'bill shocks' faced by consumers. PT has been proposed as a mechanism to reduce healthcare costs via two pathways. On the demand side, PT allows consumers to engage in more cost-conscious care by selecting lower cost providers. On the supply side, PT can increase the ability of insurers to negotiate with providers for lower OOP prices. The proposed research aims to investigate the source of variation in OOP costs and fees and examine the impact of PT on consumer and provider behaviour including the impact of current PT initiatives to reduce OOP costs on providers and patients.

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Partner: Australia and New Zealand College of Anaesthetists (ANZCA)

Developing a predictive risk model of unplanned critical care utilisation following elective hip and knee arthroplasty

FY20 funding: $49.95K

Use of extensive data collected in three Melbourne public hospitals over a seven year period up to 2019 on patients who have undergone hip and knee replacements, to find patient factors, types of anaesthesia and types of surgery which have lead to unplanned intensive care need.

The outcome of this project will inform clinical practice and resource allocation with an Australian urban context for one of the most common surgical groups. It will also help reduce waiting list times for patients requiring hip and knee replacements, reduce avoidable healthcare costs and minimise patient risk.

Responses to COVID-19 screening before surgery; a Quality Assurance project (COVID Screen)

FY20 funding: $50K

Compared to comparable countries Australia has a very low incidence of SARS-CoV-2 infection and COVID-19 disease. Surgery has been cut back to non-elective and the most urgent elective patients. Hospitals have initiated evidence-based screening tools (questionnaires and measuring temperature) to screen for COVID-19 for patients before surgery. The current rate of negative versus positive screening is unknown. One aspect of escalating surgical care is assurance that the risk of SARS-CoV-2 being brought in to hospital is minimal. We anticipate that:

1. all surgical patients are screened;
2. very few surgical patients have a positive COVID-19 screen; and
3. no patients screening negative have undetected SARS-CoV-2 infection at the time of surgery.

Exploring patient outcomes with private health insurer data and informatics

FY20 funding: $49.4K

Much of the high quality data on important outcomes, including complications and mortality after surgery, comes from high quality ANZCA clinical trials. The majority of this research comes from patient participants in public hospitals, however, half of all elective surgery in Australia occurs in the private sector. This collaboration is an opportunity to examine perioperative medicine outcomes for patients in the private sector.

We wish to explore two specific areas of uncertainty using Medibank's database for research and quality assurance.

1. The first area of uncertainty is the ability to estimate the incidence of adverse outcomes such as mortality, prolonged length of hospital stays, critical care admissions, and duration of any hospital readmission, and relate these to patient and surgical risk factors.
2. The second area is to explore the linking of private insurance databases with other databases, while ensuring data integrity and individual patient privacy.

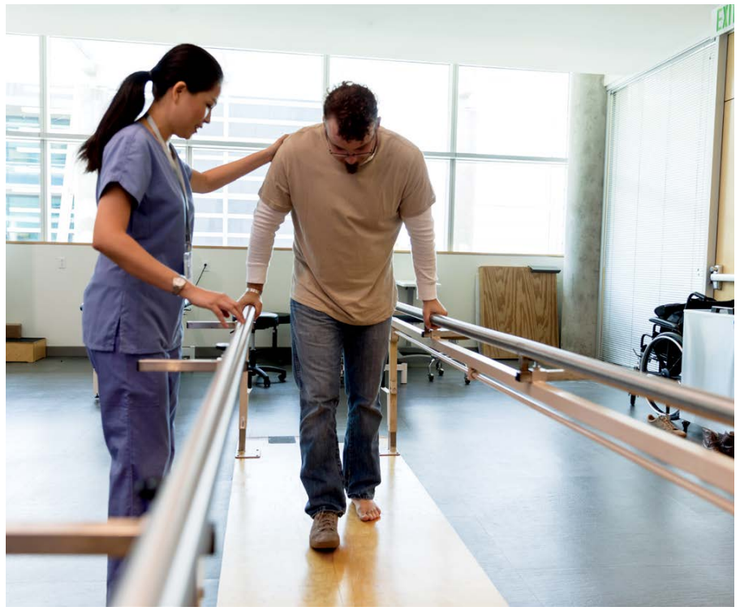
Extending data linkage across the public and private sectors is a national priority for both informatics researchers and government because of the important associations that can be revealed, particularly socioeconomic and health associations.

Partner: ## Deakin University

Developing and piloting a framework to evaluate health apps to enable the promotion of a curated set of evidence-based health apps to consumers in the Australian setting

FY20 funding: $76.5K

Digital health applications have proliferated in recent years, but with no guidance on their usability, reliability and effectiveness consumers are overwhelmed by choice and at risk of potential adverse consequences. There is a role for health bodies to recommend health apps for specific conditions. This project will develop and test a comprehensive framework to be used for the rapid review and recommendation of mobile health apps for consumers by health organisations in Australia. The initial testing for the framework will be in a high priority area for evidence-based consumer engagement, to be identified in consultation with Medibank.



Partner: ## University of Newcastle

Understanding awareness, barriers and enablers that affect rehabilitation decisions to support equitable access to rehabilitative care

FY20 funding: $52.18K

Very little is currently known about factors underpinning decisions that connect patients with different rehabilitation pathways. Available evidence suggests that patient rehabilitation decisions are influenced from a variety of sources, including their health providers, family and friends. As it stands, however, how important each of these sources are, and patient awareness of the available options, is currently unknown. Similarly, our understanding about how healthcare professionals make their decision to refer patients to hospital or community-based rehabilitation services is limited. Collectively, this means we have little to no understanding of the factors that promote access to rehabilitation.

While we remain blind to these critical factors, patients will continue to receive information of varying quality, and may be denied access to services critical to their recovery.

We will conduct focus groups with patients, surgeons, rehabilitation specialists and healthcare providers in both the public and private sectors, to explore decisions about rehabilitation pathways. Our initial focus will be on rehabilitation following knee replacement surgery, and will include in-patient and home-based rehabilitation, and the use of (or referral to) community services. The framework developed for this project will facilitate a similar exploration of rehabilitation pathways from other conditions. This understanding can identify gaps in knowledge that can be targeted with improved communication, and development of patient and clinical guidelines, as well as identify potential interventions to shift current rehabilitation practice.

Partner:
Australian National University

Prevalence of asymptomatic SARS – CoV-2 infection in elective surgical patients in Australia: A prospective study

FY20 funding: $75K

The aim of this study is to determine the prevalence of SARS – CoV-2 infection among elective surgical patients without fever or respiratory symptoms. Primary hypothesis is that elective surgery patients without fever or respiratory symptoms have a very low prevalence (less than 1 in 1,000) of SARS – CoV-2 infection. The secondary hypothesis is that healthcare workers exposed to elective surgery patients have an extremely low risk (less than 1 in 10,000-person exposures) of SARS – CoV-2 infection.

If the hypothesis/es are correct and the preference of active and past SARS – CoV-2 infection in elective surgical patients is reassuringly low, there will be strong support to increase the amount of elective surgery across Australia.

Partner:
Royal Australasian College of Surgeons

RACS COVID-19 Rapid Review – Surgery Triage Report

FY20 funding: $25K

The objective of this project was to develop an evidence base to demonstrate and promote best practice for return to elective surgeries during COVID-19.

Partner:
Menzies School of Health Research

Menzies VET on Country: Strengthening Education and Employment Opportunities for Indigenous Australians living in the Northern Territory

FY20 funding: $30K

Prior to COVID-19, Menzies School of Health Research delivered the Certificate II in Community Health Research (Cert II) as a first important step to provide those living in remote communities with the skills and knowledge required to participate as equals in research that impacted on their communities. The course also provided the graduate Aboriginal and Torres Strait Islander community-based researchers with a nationally accredited award that provided a pathway to further education and increased employment opportunities.

Due to COVID-19, the ability to travel to communities to deliver Cert II has been compromised. This disruption is now an opportunity to develop more sustainable models of online training delivery, as well as introducing those being trained in additional skills, including digital technologies.

Delivery of the course to remote areas requires adaption to support the translation of former face-to-face learning material into online modules via electronic learning platforms, Zoom and other appropriate programs.

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