Direct patient pathways for physiotherapy

Australian Physiotherapy Association

11 January 2024

nous

Nous Group acknowledges Aboriginal and Torres Strait Islander peoples as the First Australians and the Traditional Custodians of country throughout Australia. We pay our respect to Elders past, present and emerging, who maintain their culture, country and spiritual connection to the land, sea and community.

This artwork was developed by Marcus Lee Design to reflect Nous Group's Reconciliation Action Plan and our aspirations for respectful and productive engagement with Aboriginal and Torres Strait Islander peoples and communities.

Disclaimer:

*Nous Group (**Nous**) has prepared this report for the benefit of the Australian Physiotherapy Association (the **Client**).*

The report should not be used or relied upon for any purpose other than as an expression of the conclusions and recommendations of Nous to the Client as to the matters within the scope of the report. Nous and its officers and employees expressly disclaim any liability to any person other than the Client who relies or purports to rely on the report for any other purpose.

Nous has prepared the report with care and diligence. The conclusions and recommendations given by Nous in the report are given in good faith and in the reasonable belief that they are correct and not misleading. The report has been prepared by Nous based on information provided by the Client and by other persons. Nous has relied on that information and has not independently verified or audited that information.

Contents

Executive summary

Physiotherapists are highly trained health professionals with expertise in diagnosing, managing, and referring patients with musculoskeletal conditions. Despite this, current policy settings mean that, except in very limited circumstances, patients referred to medical imaging and medical specialists directly from physiotherapists are not able to access Medicare Benefits Schedule (MBS) rebates. Previous studies have found that physiotherapists often refer patients to GPs for the primary purpose of organising a referral that allows MBS rebates to be claimed in circumstances where they are able to safely and effectively assess and determine the course of treatment for patients. This results in avoidable inconvenience to patients and cost to patients and the health system. In the current context of GPs shortages and pressure on health expenditure, this represents avoidable cost and inconvenience for patients and workload for GPs without generating a commensurate health care benefit.

The Australian Physiotherapy Association engaged Nous group to assess the potential benefit of the MBS rebates being payable for direct referrals to Orthopaedic Specialists and medical imaging. Based on a review of literature, a nationwide survey of physiotherapists, and financial analysis, the assessment identified a potential cost reduction of $162.7 million for patients and the healthcare system arising from the proposed policy change. These savings, outlined in Table 1 below, are a result of reduced use of avoidable GPs services, offset by a relatively small increase in the volume of medical imaging and orthopaedic arising consultations as a result of direct physiotherapy referrals.

Table 1 | Breakdown of total cost reductions with policy change for orthopaedic specialist and medical imaging services referrals across remote and urban areas

Category	Cost reduction with policy change – Orthopaedic specialists ($M)	Cost reduction with policy change – Medical imaging services ($M)
MBS costs	32.1	15.3
Out-of-pocket costs	54.1	40.7
Travel costs	12.4	8.1
Total cost reduction	**98.6**	**64.1**

In line with existing evidence that shows that physiotherapists can safely and effectively diagnose, treat, and oversee many musculoskeletal issues, often with higher patient satisfaction when compared to medical care[1]. This report indicates that these cost reductions can be achieved without increasing health risk. For example, the survey results show high degree of confidence in physiotherapists being able to diagnose and manage conditions they are presented with. The survey results were also consistent with research findings indicating that there would not be a significant increase in inappropriate referrals in event of the policy change.

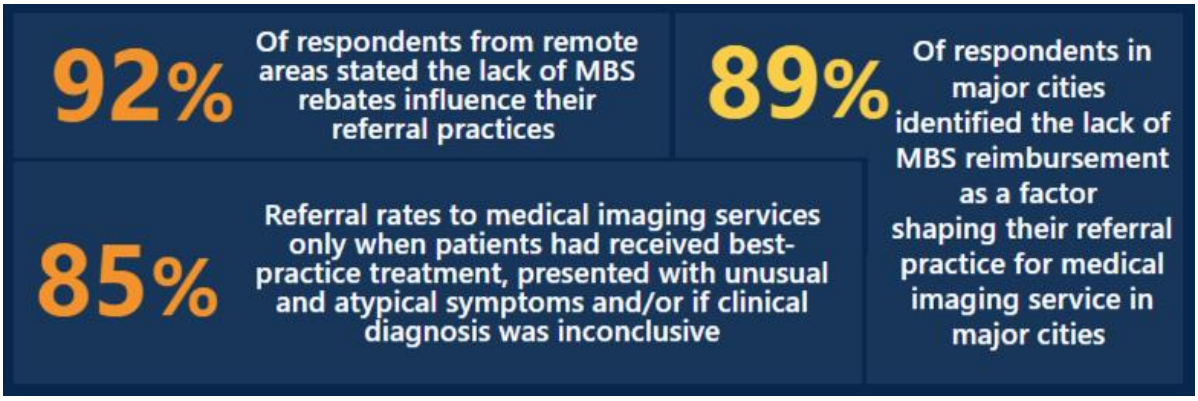
A clear theme emerged from the survey results that restrictions on MBS rebates for medical imaging or orthopaedic specialist referrals directly influenced their referral practices. 85% of respondents indicated that they made referrals only when patients had not responded to alternative forms of treatment, presented with unusual or atypical symptoms and/or if their clinical diagnosis was inconclusive, and about

[1] Marks, D., Comans, T., Bisset, L., & Scuffham, P. A. (2017). Substitution of doctors with physiotherapists in the management of common musculoskeletal disorders: A systematic review. Physiotherapy, 103(4), 341-351. https://doi.org/10.1016/j.physio.2016.11.006

90% indicated that barriers to MBS rebates influenced their referral patterns. These results provide confidence that physiotherapists would take advantage of the proposed change in policy, but would also do so in a way that considered the appropriateness of the referral and after alternative forms of treatment have been tried, and that there would not be a significant increase in inappropriate referrals.

The figure below provides a snapshot of the key statistics from the survey results that informed this report.

Figure 1 | Key findings from nationwide survey conducted by Nous and APA



Glossary and terms

Item	Description
Physiotherapists	Physiotherapists are experts in the structure of the human body and its movement. They are university qualified practitioners and in Australia, are registered with the Australian Health Practitioner Regulation Agency. They work with people of all ages to treat a broad range of health conditions including sports injuries and musculoskeletal conditions as well as chronic health conditions such as diabetes, obesity, osteoarthritis, and stroke. Physiotherapists are involved in the assessment, diagnosis, planning and management of patient care and often work within a multidisciplinary health team to provide specialised support for different patient needs.
APA	The Australian Physiotherapy Association (APA) is the national peak body organisation representing the interests of Australian physiotherapists and their patients.
GP	The General Practitioner is the doctor with core responsibility for providing comprehensive and continuing medical care to individuals, families, and the broader community.
MBS	The Medicare Benefits Schedule (the MBS) is a list of the medical services for which the Australian Government will pay a Medicare rebate, to provide patients with financial assistance towards the costs of their medical services.
Medical Imaging	Medical imaging refers to the use of conventional and sophisticated diagnostic practices. It encompasses diagnostic practices such as general radiography, ultrasound, computed tomography (CT) scan and magnetic resonance imaging (MRI). The medical imaging services referred to in this report only included x-ray, CT scans, ultrasound, and MRI.
Out-of-pocket costs	An out-of-pocket cost is the difference between the amount a doctor charges for a medical service and what Medicare and any private health insurer pays. Out-of-pocket costs are also called gap or patient payments.
Orthopaedic surgeon	An orthopaedic surgeon is a medical doctor who has extensive training in the diagnosis and surgical, as well as non-surgical, treatment of the musculoskeletal system. Orthopaedic surgeons commonly treat problems such as musculoskeletal trauma, sports injuries and degenerative diseases.

Background and context

Physiotherapists are one of the pillars of the Australian healthcare system.

Physiotherapists play an integral role in the management of health worldwide[2] and are an essential part of the Australian healthcare system. With over 41,000 registered physiotherapists[3], physiotherapy ranks as the fourth largest group of registered health professionals in Australia and accounts for nearly 5% of the regulated health practitioner workforce in Australia[4]. Globally, musculoskeletal conditions affect 1.7 billion people and within Australia, these conditions constitute 25% of the non-fatal disease burden[5]. Such musculoskeletal conditions, including common issues like lower back pain, result in significant cost to the Australian healthcare system, amounting to approximately $4.8 billion annually[6]. Assessment, diagnosis and treatment by GPs and physiotherapists are the most frequent service responses.

As the population ages and the number of people living with chronic musculoskeletal conditions grows, demand for services will increase. Australia currently has a shortage of GPs which is expected to worsen over coming years[7], and this, in combination with increasing demand, is likely to result in prolonged wait times and escalating care costs[8]. In this context, making best use of the available workforce will be essential to respond to patient demand.

At present in Australia, MBS rebates are not available for services directly referred by physiotherapists to orthopaedic surgeons, and there are very limited circumstances in which medical imaging ordered by physiotherapists attract rebates. Accessing an MBS rebate typically necessitates a visit to a GP to organise medical imaging or orthopaedic referrals, even in circumstances where the GP consultation provides no additional clinical benefit for patients. Financially, these GP consultations increase MBS expenses and patient co-payments, lengthening the timeline for a conclusive diagnosis and treatment.

The research reviewed in preparing this report shows that physiotherapists provide clinically and cost-effective assessment, diagnosis and treatment and are safely able to order medical imaging and make referrals appropriately. Often, physiotherapists are the initial professionals that patients with musculoskeletal disorders approach, and research indicates that having a physiotherapist as the primary assessor diminishes wait times, reduces length of treatment and costs, all while maintaining safety and without introducing adverse effects when compared to a GP consultation for the same concern[9]. Additionally, primary care physiotherapists have consistently demonstrated their capability to make safe, efficient, and cost-effective referrals[10].

---

[2] Vos T, Abajobir AA, Abate KH, et al. Global, regional, and national incidence, prevalence, and years lived with disability for 328 diseases and injuries for 195 countries, 1990–2016: a systematic analysis for the global burden of disease study 2016. The Lancet 2017;390:1211–59.

[3] Ahpra. (2023). Physiotherapy Board of Australia – Registrant data. https://www.ahpra.gov.au/documents/default.aspx?record=WD23%2f32762&dbid=AP&chksum=zpyWxD6e7tnIspv3LCZATg%3d%3d

[4] Ahpra & National Boards. (2021). Physiotherapy Workforce Analysis. https://www.ahpra.gov.au/documents/default.aspx?record=WD23%2F32504&dbid=AP&chksum=Zt8pYVO1T5wozSq8yPCK8A%3D%3D

[5] De Luca, K., Briggs, A. M., French, S. D., Ferreira, M. L., Cross, M., Blyth, F., & March, L. (2022). Disability burden due to musculoskeletal conditions and low back pain in Australia: Findings from GBD 2019. Chiropractic & Manual Therapies, 30(1). https://doi.org/10.1186/s12998-022-00434-4

[6] Deloitte Access Economics. The cost of pain in Australia. Painaustralia;2019.

[7] RACGP. (2023, August 22). GP shortage bites despite rising IMG numbers. https://www1.racgp.org.au/newsgp/professional/gp-shortage-bites-despite-rising-img numbers#:~:text=A%20record%20influx%20of%20doctors,GP%20services%20increasing%20by%2058%25

[8] Naiker U, FitzGerald G, Dulhunty JM et al. Time to wait: a systematic review of strategies that affect out-patient waiting times. Aust Health Rev 2018;42:286–93.

[9] Taylor NF, Norman E, Roddy L et al. Primary contact physiotherapy in emergency departments can reduce length of stay for patients with peripheral musculoskeletal injuries compared with secondary contact physiotherapy: a prospective non-randomised controlled trial. Physiotherapy 2011;97:107–14

[10] Peterson, G., PortstrÖm, M., & Frick, J. (2021). Extended roles in primary care when physiotherapist-initiated referral to X-ray can save time and reduce costs. International Journal for Quality in Health Care, 33(3). https://doi.org/10.1093/intqhc/mzab122

Physiotherapists can effectively reduce heavy workload and demand for GPs.

General practice is the backbone of the Australian healthcare system, with GPs playing a role as gatekeepers to many health services. A vast majority of Australians depend on GPs, viewing them as their primary physician, counsellor, advocate, and change catalyst, often extending these roles to their families. Yet, despite their indispensable contributions, GPs frequently find themselves overwhelmed, stressed, and under supported[11].

Between 2016 and 2021, there was a 15% increase in demand for GP services, yet from 2016 to 2021, a mere 4200 full-time GPs joined the workforce which represents approximately 14% of the full-time equivalent (FTE) GP workforce in 2021[12]. Projections made by the Australian Medical Association suggest that there will be a shortfall of over 10,600 GPs by 2031-32[13]. The shortage of GPs, in association with rises in Medicare rebates not keeping pace with inflation, has resulted in GPs increasing fees to maintain financial feasibility of practices and higher out-of-pocket costs for patients. The impact of this is being seen with patients becoming more likely to postpone medical care or using emergency departments[14].

As noted above, evidence demonstrates that physiotherapists can safely and effectively diagnose, treat, and oversee many musculoskeletal issues, often with higher patient satisfaction when compared to medical care[15]. Previous APA reports have also shown that a wide range of physiotherapy treatments ranging from back pain to tennis elbow were clinically effective and delivered net economic benefit with improvements in the quality of life experienced by patients exceeded by the net cost of the treatment[16]. A recent report by the Grattan Institute finds that, despite being highly qualified and experts in musculoskeletal conditions, there is a very significant gap between what the contribution they can make and the role that funding and policy enables for them and recommends to the government that physiotherapists take on greater roles in general practice[17].

Expanding MBS rebates for physiotherapists referrals and ordering within their scope of practice would reduce the need for GPs to see patients for the purpose of referring and ordering of medical imaging. This in turn would reduce pressure on GPs by lowering the number of avoidable services they provide that do not result in additional clinical benefit.

This report aims to quantify the benefits and value of potential policy changes to provide more referral rights for medical imaging and orthopaedic specialists visits for physiotherapists.

This report builds on a similar cost-benefit analysis undertaken in 2013 by the Deeble Institute and Griffith University's Centre for Applied Health Economics, aiming to quantify the benefits and value of a potential policy change. This change would grant increased referral rights through the MBS for medical imaging and orthopaedic specialist visits to physiotherapists. Specifically, the report examines potential reforms and policy changes for a range of codes under the MBS which include the following: 55852, 55875, 55880, 57509, 57703, 58103, 63322, 63340 and 63560. Further details around the included MBS codes can be seen in Appendix A.

[11] RACGP. (2023). What is general practice? https://www.racgp.org.au/education/students/a-career-in-general-practice/what-is-general-practice

[12] RACGP. (2023, February 6). Government spending on general practice falls. https://www1.racgp.org.au/newsgp/professional/government-spending-on-general-practice-falls#:~:text=In%202021%2C%20there%20were%2038%2C357,also%20highlight%20an%20ageing%20workforce

[13] Australian Medical Association. (2022). The general practitioner workforce: why the neglect must end. https://www.ama.com.au/sites/default/files/2023-01/AMA-Research-and-Reform-General-practitioner-workforce-why-the-neglect-must-end-final%20%282%29_0.pdf

[14] Department of Health and Aged Care. (2022). Strengthening Medicare Taskforce Report. https://www.health.gov.au/sites/default/files/2023-02/strengthening-medicare-taskforce-report_0.pdf

[15] Marks, D., Comans, T., Bisset, L., & Scuffham, P. A. (2017). Substitution of doctors with physiotherapists in the management of common musculoskeletal disorders: A systematic review. Physiotherapy, 103(4), 341-351. https://doi.org/10.1016/j.physio.2016.11.006

[16] Australian Physiotherapy Association, & Nous Group. (2020). Value of Physiotherapy in Australia. https://australian.physio/sites/default/files/Report_FA_WEB.pdf

[17] Grattan Institute. (2022). A new Medicare: Strengthening general practice. https://grattan.edu.au/wp-content/uploads/2022/12/A-new-Medicare-strengthening-general-practice-Grattan-Report.pdf

For each pathway, Nous has estimated the cost benefits arising from policy changes that allow physiotherapists to directly provide MBS-rebated referrals, in contrast to the current practice of GP referrals. Additionally, we have estimated the effect for major cities and for areas outside major cities.

Approach and Methodology

An evidence base for cost benefit modelling and analysis was developed following a nationwide survey of physiotherapists and extensive literature review.

The APA has consulted with subject matter experts across a range of physiotherapy areas of expertise and surveyed APA members to develop the scope and MBS codes utilised in this report. Referrals to medical imaging and orthopaedic specialists were chosen because there is a strong evidence base that they represent significant opportunities to safely improve healthcare efficiency and better patient outcomes.

A nationwide survey polled physiotherapists on their current referral volumes, preferences, and ability to directly refer to imaging or orthopaedic services was conducted. The survey asked about current referral and ordering rates, the intent of the referrals and ordering, remoteness of physiotherapists' primary place of work, and physiotherapists' confidence in their diagnostic abilities. To quantify the potential cost savings, the survey results were used to develop four cost models: one for orthopaedic specialist referrals outside major cities, another for those in major cities, a third focusing on medical imaging ordering outside major cities, and a fourth for medical imaging in major cities.

A total of 1604 physiotherapists working across all remoteness regions, responded to the survey. There were 793 complete responses. Only completed responses were included in the analysis and this report. The complete survey, along with its background context, is available in Appendix B.

This survey builds on a previous study conducted by the Centre for Applied Health Economics, Griffith University, and the Deeble Institute for the APA in 2013. The results from the study showed the significant financial benefits for patients and the healthcare system across various areas such as MBS costs and patient costs and were generally consistent with the findings in this report.

To complement the survey, we conducted an extensive literature review, looking at the evidence base supporting the clinical safety, effectiveness, and appropriateness of physiotherapist management of musculoskeletal conditions and decision making associated with referrals. This review involved Boolean searches across major databases, including the Physiotherapy Evidence Database (PEDro), Cochrane database, and the CINAHL database. The review covered a broad range of studies, from systematic reviews and randomised controlled trials to qualitative studies focusing on cost-benefit analysis and economic modelling.

Net costs were calculated accounting for travel costs, MBS expenditure, out-of-pocket costs and travel time.

The impact on costs was assessed using MBS rebate rates for the relevant GP, orthopaedic consultation, and medical imaging items within the scope of the study and associated average out-of-pocket costs for patients. Travel time costs were calculated using Australian Transport Assessment and Planning travel time data. Further detail about the approach taken is in Table 2 below.

Table 2 | Cost inputs

Category	GP	Orthopaedic Specialists	Medical Imaging services
MBS Costs	This cost was based on MBS item 23 and at a 100% benefit payable rate of $41.20.	This cost was based on MBS item 105 and at an 85% subsidised rate of $80.85.	This cost was based on the average of the MBS 85% subsidised rate across all the in-scope MBS medical imaging services. The rate included equates to $67.92.
Out-of-pocket costs	This cost was based on quarterly Out-of-Hospital Medicare Statistics for GP non-referred attendances. The value used was $44.39.	This cost was based on quarterly Out-of-Hospital Medicare Statistics for specialists' attendances. The value used was $119.16.	This cost was based on quarterly Out-of-Hospital Medicare Statistics for diagnostic imaging. The value used was $125.96.
Travel costs	Travel costs were calculated for the respective models. The hourly rate, gathered from Australian Transport Assessment and Planning travel time data ($14.99 per hour)[18], was multiplied by the commute time data from other sources (51.75 and 40.875 minutes for urban and non-urban respectively) to ascertain travel costs.		

Survey responses were used to estimate the average number of referrals currently being made from physiotherapists to GPs for the purpose of organising MBS rebatable orthopaedic consultations or medical imaging, as well as the volume of referrals and ordering currently being made directly to specialists and imaging providers. These averages were then applied to the total full time equivalent (FTE) number of privately practicing physiotherapists in Australia to estimate total volumes. A total of 15,286 FTE was used for major cities and 3,632 for other areas based on Australian Health Practitioner Regulation Agency[19] and the Commonwealth Department of Health and Aged care[20] data.

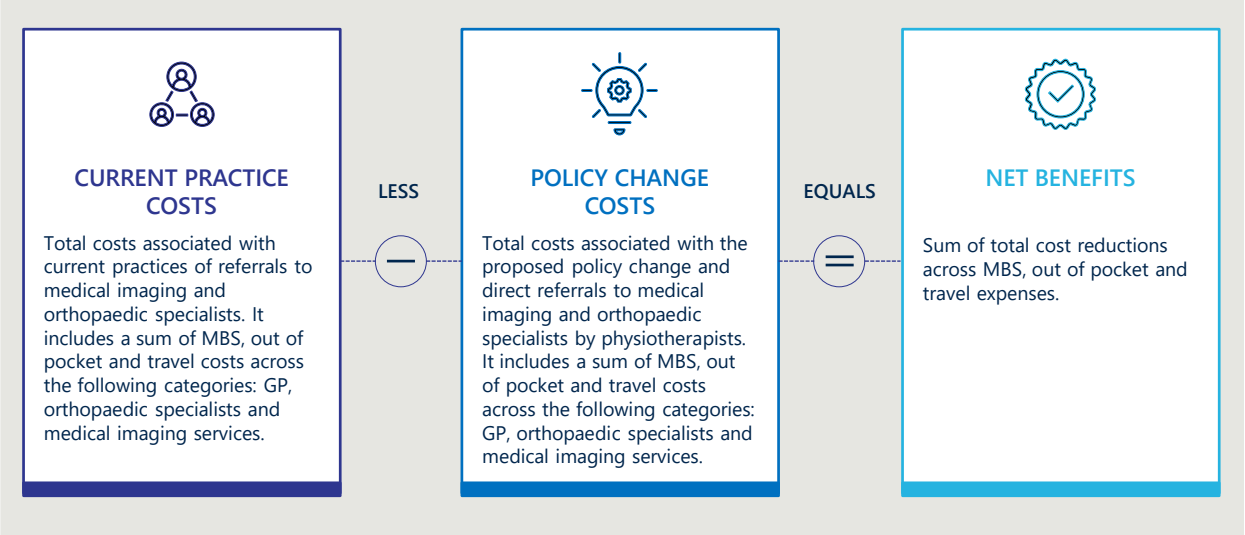
The cost models calculated the costs for the current practice and the costs associated with the policy change of direct physiotherapy referrals with an MBS rebate. The primary difference arising from the policy change was a reduction in the number of GP referrals made by physiotherapists. Survey respondents were asked to estimate the percentage of current referrals that were made for the purpose of organising a specialist referral or medical imaging, and this was used to calculate the reduction in GP consultations associated with the policy change. The estimated percentage reduction was 47% in GP consultations associated with both direct orthopaedic referrals and for medical imaging.

The proposed policy change would allow MBS rebates for specialist referrals or imaging orders made directly by physiotherapists that are currently fully paid for by patients. The effect of this would be to increase MBS expenditure associated with these services and reduce out-of-pocket expenses. Based on the survey responses, it was estimated that there would be a 7% increase in rebatable orthopaedic consultations and a 16% increase in rebatable medical imaging. The cost of these changes was included in the models.

[18] Australian Transport Assessment and Planning. (2013). Travel time. https://www.atap.gov.au/parameter-values/road-transport/3-travel-time
[19] Ahpra. (2023). Statistics. https://www.physiotherapyboard.gov.au/about/statistics.aspx
[20] Department of Health and Aged Care. (2019). 2019 - Physiotherapists. https://hwd.health.gov.au/resources/publications/factsheet-alld-physiotherapists-2019.pdf

The net benefits were then calculated by understanding the differences in costs between the three core components: MBS, out of pocket, and travel expenses. This process is further detailed in the figure below, which visually represents the steps involved in this calculation.

Figure 2 | High level approach for determining net benefit of policy change



Summary of findings

The proposed policy change of direct referrals by physiotherapists with MBS rebates in major cities and other areas result in over $160 million worth of savings for the Australian Health system and patients.

With a policy change of direct referrals by physiotherapists to orthopaedic specialists and medical imaging services with MBS rebates, cost modelling conducted showed a significant decrease in costs across all areas of Australia for MBS expenditure, out-of-pocket costs, and travel costs. The primary driver for this significant reduction is the large decrease in the number of visits to the GP for both orthopaedic specialist and medical imaging service referrals.

The largest decrease in costs were for out-of-pocket costs in the orthopaedic specialist referral pathway. For the orthopaedic specialist referral pathway, the modelled reduction in costs was $44.6 million in major cities and $9.5 million in other areas. This large difference in cost reductions can be attributed to the larger volume of referrals in major cities compared to other areas.

Additionally, the greatest percentage decrease in costs was for travel costs in the orthopaedic specialist referral pathway with an average of 31.5% compared to current practice in major cities and other areas. Further information can be found in Table 3.

Table 3 | Associated costs with current practice and policy change – Orthopaedic Specialists

Category		Current practice (Major cities) – Orthopaedic specialists	Policy change (Major cities) – Orthopaedic specialists (% decrease)	Current practice (Outside major cities) – Orthopaedic specialists	Policy change (Outside major cities) – Orthopaedic specialists (% decrease)
MBS Costs		$148.4M	$123.6M (17%)	$35.5M	$28.2M (21%)
Out-of-pocket costs		$218.5M	$173.9M (20%)	$49.3M	$39.8M (19%)
Travel costs		$33.4M	$23M (31%)	$6.2M	$4.2M (32%)
Total savings	Health system	$24.8M		$7.3M	
	Patients	$55M		$11.5M	

Similarly, for the medical imaging services referral pathways, out-of-pocket costs reductions were the largest compared to other categories. A reduction of $32.2 million and $8.5 million can be seen in major cities and other areas respectively. The greatest percentage difference and reduction was in travel costs for

both major cities and other areas with an average 36.5% reduction Further information can be found in Table 4.

Table 4 | Associated costs with current practice and policy change – Medical Imaging (MI) Services

Category		Current practice (Major cities) – MI services	Policy change (Major cities) – MI services (% decrease)	Current practice (Outside major cities) – MI services	Policy change (Outside major cities) – MI services (% decrease)
MBS Costs		$70.5M	$59.2M (16%)	$19.2M	$15.2M (21%)
Out-of-pocket costs		$136.6M	$104.4M (24%)	$35.0M	$26.5M (24%)
Travel costs		$18.7M	$12.1M (35%)	$4.0M	$2.5M (38%)
Total savings	Health system	$11.3M		$4M	
	Patients	$38.8M		$10M	

Physiotherapists can safely and appropriately refer to medical imaging services or orthopaedic specialists.

In line with existing evidence that direct access to physiotherapy for patients with musculoskeletal disorders is safe, improves care efficiency, and reduces healthcare costs[21], the survey shows high degree of confidence in physiotherapists being able to diagnose conditions. 94% of survey respondents indicated they were confident or strongly confident in diagnosing injuries without needing GP or orthopaedic specialist advice. Additionally, survey respondents indicated that they would continue to refer 38% of patients to GPs rather than directly to orthopaedic specialists and 25% of patients to GPs instead of directly ordering medical imaging. This shows that physiotherapists are well placed to make appropriate decisions about direct referrals to specialists and medical imaging, understand the role of the GP and know where they can best add value to improve efficiency and quality of care for the patient.

In contrast, there is evidence of the use of diagnostic imaging as a first response by GPs for musculoskeletal conditions in variance with evidence-based practice. Research has found that this additional use of testing and medical imaging in Australia does not result in improved patient care or outcomes [22]. Other studies have shown, for example, excessive use of referrals for back imaging and ankle ultrasonography by Australian GPs that does not contribute to improved patient care[23]. A range of factors,

[21] Demont, A., Bourmaud, A., Kechichian, A., & Desmeules, F. (2019). The impact of direct access physiotherapy compared to primary care physician led usual care for patients with musculoskeletal disorders<scp>:</scp> a systematic review of the literature. Disability and Rehabilitation, 43(12), 1637-1648. https://doi.org/10.1080/09638288.2019.1674388

[22] Department of Health and Aged Care. (2022). Reducing overuse of diagnostic imaging: Project report. https://www.health.gov.au/sites/default/files/2023-02/reducing-overuse-of-diagnostic-imaging-project-report.pdf

[23] Britt H, Miller G, Valenti L, et al. Evaluation of imaging ordering by general practitioners in Australia, 2002–03 to 2011–12. Sydney: Sydney University Press 2014. Available at hdl.handle.net/2123/10610 [Accessed 5 January 2016].

including GP workloads are likely influencing these results, but this evidence suggests that current policy settings are associated with a level of inappropriate ordering of medical imaging.

The survey also included questions about the approach to medical imaging as part of overall treatment approaches by GPs. 85% of respondents specified they would refer patients to medical imaging services only if the patient had received best-practice treatment, presented unusual and atypical clinical symptoms, and/or if clinical diagnosis was inconclusive. This finding underscores the physiotherapists' commitment to appropriate and purposeful referrals, aiming to reduce unnecessary costs and patient burden within the healthcare system.

These findings are consistent evidence of the approach that physiotherapists take to medical imaging identified in the literature review. A study conducted in 2015, showed that there were significant reductions in requests for X-Ray, CT scans and ultrasound imaging and length of hospital stay without any identified adverse events or misdiagnoses when patients with minor trauma injuries were managed by primary-contact physiotherapists in emergency departments[24]. Other studies have also showed that physiotherapists are highly proficient in musculoskeletal examination without the need for imaging[25] and that the appropriateness of physiotherapist referrals for imaging such as X-ray being as good as those of physicians with no adverse events, reduced healthcare costs and maintained patient satisfaction[26].

Physiotherapists have also been shown to have the knowledge to discuss non-operative options with patients where clinically relevant and not only refer patients to orthopaedic surgeons. Recent evidence points to physiotherapists' skill and experience in the provision of healthcare to musculoskeletal patients allowing them to take on extended roles, especially in hospital settings, to establish clinical pathways for comprehensive non-surgical assessment and management[27].

[24] Sutton, M., Govier, A., Prince, S., & Morphett, M. (2015). Primary-contact physiotherapists manage a minor trauma caseload in the emergency department without misdiagnoses or adverse events: An observational study. Journal of Physiotherapy, 61(2), 77-80. https://doi.org/10.1016/j.jphys.2015.02.012

[25] Décary, S., Fallaha, M., Pelletier, B., Frémont, P., Martel-Pelletier, J., Pelletier, J., Feldman, D. E., Sylvestre, M., Vendittoli, P., & Desmeules, F. (2017). Diagnostic validity and triage concordance of a physiotherapist compared to physicians' diagnoses for common knee disorders. BMC Musculoskeletal Disorders, 18(1). https://doi.org/10.1186/s12891-017-1799-3

[26] Peterson, G., PortstrÖm, M., & Frick, J. (2021). Extended roles in primary care when physiotherapist-initiated referral to X-ray can save time and reduce costs. International Journal for Quality in Health Care, 33(3). https://doi.org/10.1093/intqhc/mzab122

[27] Vedanayagam, M., Buzak, M., Reid, D., & Saywell, N. (2021). Advanced practice physiotherapists are effective in the management of musculoskeletal disorders: A systematic review of systematic reviews. Physiotherapy, 113, 116-130. https://doi.org/10.1016/j.physio.2021.08.005

Detailed findings

Orthopaedic specialist referral pathway – Major cities

There was an overall cost reduction of **$79.8 million** for the policy change pathway in major cities compared to the current practice for referrals to see an orthopaedic specialist.

This included cost reductions of **$24.8 million**, **$44.6 million,** and **$10.4 million** respectively across MBS, out-of-pocket cost, and travel cost categories.

Survey result findings

On average, physiotherapists in major cities referred approximately 7 patients over a four-week period to GPs for orthopaedic specialist referrals. The survey also asked respondents for their estimation of the proportion of patients who attended GPs and orthopaedic specialist consultations they were referred to. Respondents estimated that 97% of patients referred attended GP consultations, of whom 89% then attended orthopaedic consultations. The number of referrals, adjusted for the reported attendance rate, from the survey, data from the Australian Health Practitioner Regulation Agency (Ahpra)[28] and the Department of Health and Aged Care (DoHAC)[29] were used to calculate the number of GP and specialist orthopaedic consultations patients attended. The modelled numbers were:

- Total MBS visits per year to GPs – 1,310,250
- Total MBS visits per year from GP to orthopaedic specialists – 1,167,150
- Total non-MBS visits per year to orthopaedic specialists – 106,298

Respondents were asked about the influence of access to MBS rebates for their patients on their referral decisions. 91% of participants identified the absence of MBS reimbursement as a critical factor influencing their referral methods. This finding was supported by other responses that showed that respondents were confident in their clinical judgement and ability to make independent referral decisions. This also indicates the role that cost to patients plays in their decision to refer to GPs. Additionally, 72% of respondents indicated they would either maintain or slightly increase their referral rates if they had the authority to refer directly to orthopaedic specialists, emphasising the considered approach to their referrals.

Cost modelling findings

In earlier sections, we highlighted the substantial cost reductions arising from extending coverage of MBS rebates for physiotherapist referrals directly to orthopaedic specialists. Table 5 illustrates the modelled annual cost differences across the different categories when comparing the direct referral with rebate pathway to current policy settings. The reductions are driven by decreased GP visits by patients. The most substantial variances are MBS costs at $33.4 million and out-of-pocket costs at $36 million.

In the modelling, reductions in the MBS cost of GP services are offset to a degree by a rise in costs of orthopaedic specialist visits, specifically in MBS and out-of-pocket costs. Based on the estimated increased payment of MBS rebates for referrals made directly to orthopaedic surgeons, the modelled increase in MBS expenditure for orthopaedic consultations is $8.6 million.

[28] Ahpra. (2023). Registrant data: 31 March 2023. https://www.ahpra.gov.au/documents/default.aspx?record=WD23%2F32763&dbid=AP&chksum=c2zx2ggQPIKecgI6%2FESLjg%3D%3D

[29] Department of Health and Aged Care. (2019). Physiotherapists: 2019 Factsheet. https://hwd.health.gov.au/resources/publications/factsheet-alld-physiotherapists-2019.pdf

Table 5 | Orthopaedic specialist referral pathway (Major cities) – Cost benefit modelling results

Cost categories		Current practice ($M)	Direct referral with rebate policy change ($M)	Difference ($M)
GP visits	MBS	54.0	20.6	33.4
	Out of pocket	58.2	22.2	36
	Travel expense	16.9	6.5	10.4
Orthopaedic specialist visits	MBS	94.4	103.0	8.6
	Out of pocket	160.3	151.7	8.6
	Travel expense	16.5	16.5	0
Total MBS cost		148.4	123.6	24.8
Total out-of-pocket costs		218.5	173.9	44.6
Total travel costs		33.4	23.0	10.4

Orthopaedic specialist referral pathway – Outside major cities

There was an overall cost reduction of **$18.8 million** for the policy change pathway in areas outside of major cities compared to the current practice of visiting the GP for a referral to see an orthopaedic specialist.

This comprised of **$7.3 million**, **$9.5 million**, and **$2.0 million** cost reductions across MBS, out-of-pocket cost and travel cost categories respectively.

Survey result findings

Compared to the orthopaedic specialist referral pathway results in major cities, each physiotherapist referred a mix of 9 patients over a four-week period to GPs for orthopaedic specialist referrals. However, compared with major cities, estimated attendance rates for patients referred to GPs and orthopaedic specialists were significantly lower, with an estimated 79% attending their GP consultations, of whom 89% attended an orthopaedic consultation. This likely reflects lower numbers of GPs and orthopaedic surgeons practicing outside of major cities and the associated barriers for patients to attend appointments. The modelled numbers of consultations were:

- Total MBS visits per year to GPs – 313,726
- Total MBS visits per year from GP to orthopaedic specialists – 279,003
- Total non-MBS visits per year to orthopaedic specialists – 11,002

Similar to results in major cities, 89% of survey respondents in other areas indicated that the absence of MBS reimbursement as a primary factor influencing their referral patterns, comparable with the 91% reported by survey respondents in major cities. This highlights that GP referrals from physiotherapists are currently heavily influenced by MBS policy settings.

Supply of GPs is lower outside major cities[30] and people living in these areas have poorer health outcomes and access to primary healthcare services[31]. As noted above, the rates of people attending consultations they are referred to is lower outside major cities, and this likely contributes to delayed and potentially poorer access to definitive care. Additionally, in areas of GP undersupply, appointments being made for the purpose of enabling an MBS rebate to be available for an orthopaedic consultation, takes GP time away from providing other services.

Cost modelling findings

Mirroring the orthopaedic specialist referral pathways in major cities, the proposed policy change is associated with significant cost reductions. Table 6 shows the changes across the different modelled cost categories. As with major cities, the reduction in GP attendances is the main driver for the cost reductions. Modelled MBS expenditure shows a reduction of $8.1 million and for out-of-pocket expenses due to GP consultations, $8.7 million.

Conversely, direct referrals via physiotherapists are associated with an increased MBS expenditure of $0.8 million on orthopaedic specialist consultations. Despite this increase, the overall financial impact of the proposed policy change is positive across all cost categories.

[30] RACGP. (2023, March 13). 'More towns without a doctor': Increase in GPs moving from rural areas. https://www1.racgp.org.au/newsgp/professional/more-towns-without-a-doctor-increase-in-gps-moving

[31] Australian Institute of Health and Welfare. (2022, July 7). Rural and remote health. https://www.aihw.gov.au/reports/rural-remote-australians/rural-and-remote-health

Table 6 | Orthopaedic specialist referral pathway (Outside major cities) – Cost benefit modelling results

Cost categories		Current practice ($M)	Direct referral with rebate policy change ($M)	Difference ($M)
GP visits	MBS	12.9	4.8	8.1
	Out of pocket	13.9	5.2	8.7
	Travel expense	3.2	1.2	2.0
Orthopaedic specialist visits	MBS	22.6	23.4	0.8
	Out of pocket	35.4	34.6	0.8
	Travel expense	3.0	3.0	0
Total MBS cost		35.5	28.3	7.3
Total out-of-pocket costs		49.4	39.8	9.5
Total travel costs		6.2	4.2	2

Medical imaging services referral pathway – Major cities

Cost modelling showed a reduced expenditure of **$50.1 million** with the proposed expansion of MBS rebates for direct physiotherapist referrals to medical imaging services in major cities compared to the existing policy settings.

The modelling shows **reduced MBS expenditure of $11.3 million**, out-of-pocket expenses **declining by $32.2 million**, and travel-related expenses **being lower by $6.6 million** when we break down these savings into the different categories of expenditure.

Survey result findings

Similar to survey results around orthopaedic specialist referrals, physiotherapists consistently referred approximately 6 patients to GPs for medical imaging service endorsements in each four-week period in major cities. When compared to referrals to GPs for orthopaedic consultations, respondents' estimated attendance rates at GP and for medical imaging were lower, with an estimated 74% attending GP consultations, of whom 91% then attended and received medical imaging. The total modelled estimates of medical imaging related attendances were:

- Total MBS visits per year to GPs – 683,099
- Total MBS visits per year from GP to MI services – 624,871
- Total non-MBS visits per year to MI services – 142,476

89% of participants in major cities identified the lack of MBS reimbursement as a factor shaping their referral practices, similar to results for orthopaedic referral pathways. A similar picture emerges that the restrictions on MBS-subsidised medical imaging for patients referred by physiotherapists creates additional steps in the pathway for patients and avoidable activity and cost arising from GP consultations, and potential delays in patients receiving definitive care. Physiotherapists are more prepared to make direct referrals to medical imaging services when appropriate and confident with their ability to recognise and provide referrals.

Cost modelling findings

In line with the orthopaedic specialist referral pathway's remodeling results, the proposed policy change shows favorable modelled financial results. As outlined in Table 7, there were modelled savings in MBS and out-of-pocket costs related to GP visits of $21 and $22.6 million respectively. This substantial decrease stemmed from fewer GP visits due to the policy change, with patients proceeding directly to medical imaging services from physiotherapists.

The only category that showed a negative difference with the policy change was the MBS costs associated with medical imaging service visits. Enabling physiotherapists to directly refer to medical imaging under the updated policy translated to an increase of $9.7 million in MBS costs. However, this increase in costs to the MBS is slightly offset by reductions in out-of-pocket costs to patients. The modelled results showed a decrease of $9.6 million for out-of-pocket costs associated with direct referrals to medical imaging services.

Table 7 | Medical imaging services referral pathway (Major cities) – Cost benefit modelling results

Cost categories		Current practice ($M)	Direct referral with rebate policy change ($M)	Difference ($M)
GP visits	MBS	28.1	7.1	21
	Out of pocket	30.3	7.7	22.6
	Travel expense	8.8	2.2	6.6
MI service visits	MBS	42.4	52.1	9.7
	Out of pocket	106.3	96.7	9.6
	Travel expense	9.9	9.9	0
Total MBS cost		70.5	59.2	11.3
Total out-of-pocket costs		136.6	104.4	32.2
Total travel costs		18.7	12.1	6.6

Medical imaging services referral pathway – Outside major cities

Cost modelling showed a **decrease of $14 million** for the proposed policy change for medical imaging services in regions outside of major cities compared with the current policy settings.

MBS expenditure **was lower by $4 million**, out-of-pocket expenses **reduced by $8.5 million**, and travel-related costs **decreased by $1.5 million** when breaking down the savings across the different expense categories.

Survey result findings

Survey feedback from participants in remote regions concerning medical imaging referral pathways closely aligned with data from major cities. Monthly, participants reported referring an average of 8 patients to GPs for further referrals to medical imaging services. However, the estimated rate of attendance at both GPs and medical imaging services in areas outside of major cities was lower than in major cities, with a 71% estimated attendance rate for GP consultations, of whom 85% were estimated to have attended medical imaging. The lower rates of attendance for medical imaging outside major cities mirrors the case for orthopaedic consultations, similarly suggesting that reduced access to GPs, and medical imaging and travel distances are impacting patients' decisions to follow up referrals.

The modelled volumes of GP and medical image services outside of major cities was:

- Total MBS visits annually to GPs – 194,685
- Total MBS visits per year from GP to MI services – 164,686
- Total non-MBS visits each year to MI services – 29,175

Similar to respondents in major cities, 92% of respondents from remote areas cited the lack of MBS rebates as a factor influencing their referral practices. As noted above, this illustrates that current policy settings are generating avoidable activity and cost and potentially delaying clinical decision making.

Cost modelling findings

The analysis from our cost modelling for the referral of patients to imaging services in areas outside of major cities reveals trends analogous to those observed in major cities, albeit with reduced figures. As outlined in Table 8, the only category incurring an increase in costs related to the proposed policy change related to MBS expenditure resulting from imaging ordered directly by physiotherapists attracting an MBS rebate. The modelled increase in MBS costs for medical imaging services is $2.0 million.

Reductions are observed in the MBS and out-of-pocket expenditures linked to GP consultations. Modelled MBS expenditure declined by $6.0 million, and out-of-pocket costs for GP visits decreased by $6.5 million. These reductions arise from reduced numbers of GP consultations.

These savings show the benefits that this policy change can bring to parts of Australia outside of major cities. By reducing the costs in the healthcare system in these areas, money and resources can be used more effectively. Also, by cutting down the number of GP visits needed for imaging referrals, people in rural or remote areas outside of major cities can access imaging services more quickly.

Table 8 | Medical imaging services referral pathway (Outside of major cities) – Cost benefit modelling results

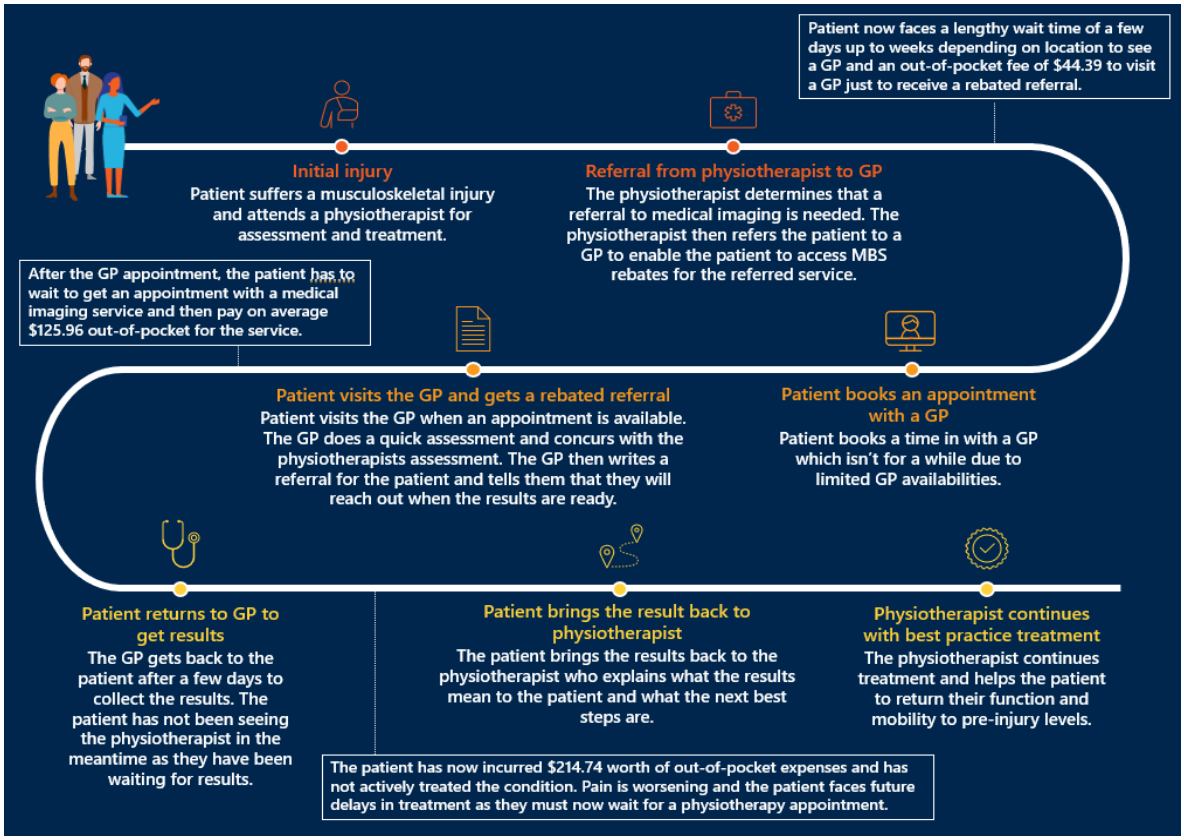
Cost categories		Current practice ($M)	Direct referral with rebate policy change ($M)	Difference ($M)
GP visits	MBS	8.0	2.0	6
	Out of pocket	8.6	2.1	6.5
	Travel expense	2.0	0.5	1.5
MI service visits	MBS	11.2	13.2	2.0
	Out of pocket	26.4	24.4	2.0
	Travel expense	2.0	2.0	0
Total MBS cost		19.2	15.2	4
Total out-of-pocket costs		35.0	26.5	8.5
Total travel costs		4.0	2.5	1.5

Case studies

Patient journey – Medical imaging MBS referrals

Figure 3 shows the typical patient journey when visiting a physiotherapist for a musculoskeletal injury and a referral for medical imaging services under current policy settings. As noted above, having to book an appointment with a GP, wait for the appointment, get assessed again and then returning to get results are steps that are not clinically necessary in many cases, and their frequency can be significantly reduced without compromising patient safety or outcomes.

Figure 3 | Current patient journey for medical imaging MBS rebated referrals



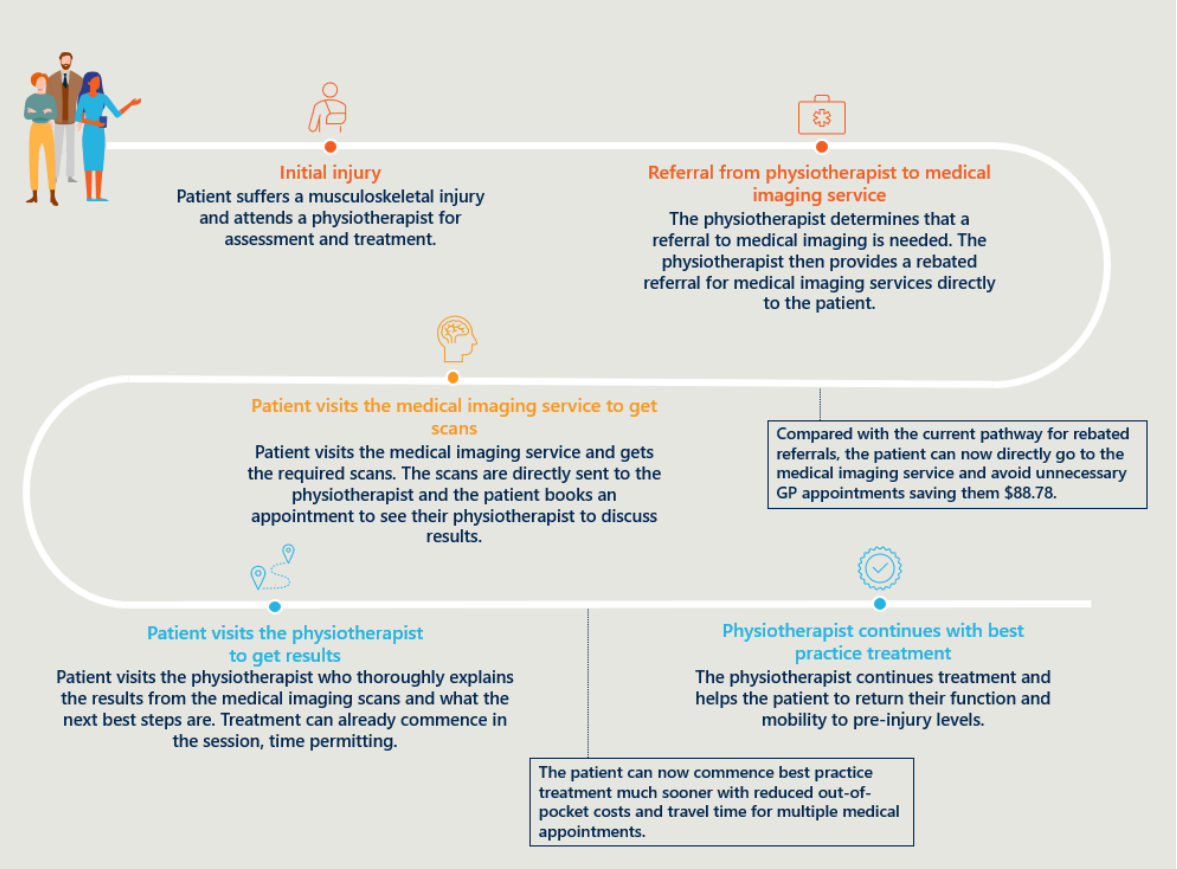
Patient journey – Proposed reform pathway for medical imaging MBS referrals

Figure 4 illustrates the recommended reform pathway for Medical Imaging MBS referrals, detailing a more streamlined process facilitated by direct rebated referrals from the physiotherapist, as elaborated in this report. When compared to Figure 3, this suggested pathway significantly reduces the steps a patient must undertake, eliminating the need for them to schedule and attend a GP appointment and subsequently return to the GP for results before seeking further treatment from the physiotherapist.

This refined process not only presents a smoother, more cost-effective, and time-efficient experience for the patient but also mitigates the necessity for multiple visits to different health professionals. Patients can primarily consult the physiotherapist to address their musculoskeletal injuries, optimising the overall patient journey.

We also note that the current work undertaken by the Government regarding modernising My Health Record, and the mandatory upload of pathology and imaging reports from 2024. This will allow GPs to easily access reports of imaging undertaken by their patients, even when they are not the referring party.

Figure 4 | Patient journey for medical imaging rebated referrals with proposed reform pathway



Distal tibial stress fracture in a 35-year-old jogger

A 35-year-old avid jogger experienced progressively worsening soreness in the right foot and lower tibia. While running, he felt a sharp, debilitating pain in the lower tibial area, prompting them to stop immediately. Suspecting a possible serious injury and noticing that the symptoms did not ease, he consulted a physiotherapist. The physiotherapist performed a comprehensive examination, specifically assessing for potential complications such as compartment syndrome and other causes. After the examination, the physiotherapist suspected that a distal tibial stress fracture had occurred but determined that medical imaging was needed to confirm and provide an accurate diagnosis The physiotherapist then provided some preliminary management advice and sent a referral to a GP for the patient to obtain a referral for rebated medical imaging.

After relaying the symptoms and physiotherapist's advice to the GP, the patient was provided a referral for an x-ray without any further evaluation by the GP. The x-ray results confirmed a stress fracture. The jogger returned to the GP to obtain the results and subsequently went back to the physiotherapist for continuing treatment, management, and rehabilitation.

Key takeaways:

- The physiotherapist's thorough assessment and knowledge of musculoskeletal conditions enabled the accurate diagnosis and clinical management of the condition in a safe manner.
- The GP had confidence in the physiotherapist's ability and did not do further evaluation of the condition as a result.
- The patient faced extra wait times, travel and out-of-pocket costs and appointments due to the current practice of rebated medical imaging referrals from GPs which was completely avoidable and added to the risk of the patient injuring themselves in-between appointments.

Outcomes:

- Correct diagnosis of injury.
- Significant out-of-pocket costs and lost time due to current practice and lack of rebated medical imaging referrals by physiotherapists.
- Unnecessary Medicare rebate costs to the Australian Healthcare system.

ACL rupture in a 32-year-old indoor soccer player

In 2022, a 32-year-old suffered a contact injury during an indoor soccer match in Brisbane. To help reduce pain and swelling, he iced the knee in the evening following the match but suspected that he had sustained a significant injury in his knee based on previous experiences of a contralateral meniscus knee injury. The next day, he visited a central Brisbane physiotherapist for an initial assessment. Access to the physiotherapist was much easier compared to accessing general practitioner medical services.

The physiotherapist conducted a thorough subjective and objective assessment. The physiotherapist believed that the assessment clearly indicated an ACL tear and whilst the physiotherapist could have referred the patient for confirmatory MRI scans and an orthopaedic specialist referral, they informed the patient that obtaining the same referrals from a GP referral would be covered by MBS rebates, and therefore have lower out-of-pocket costs for the patient. Based on this advice, the patient quickly consulted a GP, who did not bulk bill. The GP undertook similar but less comprehensive testing and agreed with the physiotherapist's diagnosis. The GP then provided an MRI referral for the patient. The patient returned to the GP to receive the MRI results which confirmed an ACL tear. After discussing options, the GP provided the patient with another referral to see an orthopaedic specialist.

The patient then consulted with the orthopaedic specialist who provided ACL reconstruction surgery along with pre and post physiotherapy rehabilitation. Despite the surgeon offering in-house physiotherapy, the patient chose to go with a local physiotherapist who specialised in ACL rehabilitation. The surgery was a success and the rehabilitation contributed to better post-surgical outcomes such as increase muscle strength. The patient then underwent 3 months of rehabilitation where the physiotherapists thoroughly assessed the MRI scans and prescribed exercises and other effective treatments. Resultantly, the patient was able to return to post-injury levels of function. Throughout this process, the patient felt that the physiotherapist's exercises and advice provided him with peace of mind and that the physiotherapist's management helped to reduce the emotional toll that the injury took on him.

Key takeaways:

- The physiotherapist played a critical role throughout the patient's journey, both in terms of physical rehabilitation and emotional support.
- The GP consultation felt repetitive and added to the patient's expenses, as both professionals identified the same issue, but the GP's visit was essential for specific MBS rebated referrals.
- The physiotherapist's insights, based on the MRI scans, were instrumental in tailoring treatment and rehabilitation for either conservative or operative care.
- Access to MBS rebates would have reduced costs and time if the patient had directly proceeded from the physiotherapist to advanced diagnostics and then to the surgeon.
- The patient had the means to afford the multiple medical appointments and if not, might have resorted to going to an emergency department.

Outcomes:

- Full functional recovery following an ACL tear.
- Significant out-of-pocket costs and expenses due to multiple appointments with different medical practitioners.
- Significant travel time loss to attend the various appointments.

Meniscus tear in a 26-year-old soccer player

A 26-year-old soccer player experienced a knee injury during a match. While kicking the ball with her right leg, she twisted her left knee, heard a loud pop, and felt sharp pain in the affected knee. Having previously endured a meniscus tear in the right leg followed by surgery, she suspected a similar injury and was concerned about a possible ACL rupture. She left the pitch and rested, but the severe pain and reduced mobility persisted. When the pain subsided slightly, she consulted a physiotherapist for an assessment.

Given the diminished pain, the physiotherapist could perform several best practice tests and concluded that an ACL rupture was highly unlikely, but a meniscus injury had occurred. The patient, anxious about an ACL rupture, sought more conclusive evidence. The empathetic physiotherapist reassured her about the efficacy of the tests but suggested seeing a GP for a rebated referral for further investigation. The patient did so, and an orthopaedic specialist, subsequently, mandated an MRI scan. Due to the specialist's tight schedule, the patient could only discuss the results the following week, which affirmed the physiotherapist's initial diagnosis of a meniscus tear.

The specialist presented the options of elective surgery or continuing conservative treatment with the physiotherapist. Opting for the latter, the patient underwent evidence-based exercises and treatments, experiencing significant symptom relief and rapid mobility recovery, nearing her pre-injury state. She's still on the road to recovery and remarked on the costly and cumbersome process, almost foregoing initial physiotherapy due to referral constraints. However, her prior positive experience with physiotherapy outweighed the referral limitations.

Key takeaways:

- Early and accurate diagnosis with reduced wait times for treatment can expedite recovery.
- Patient undertook an unnecessary MRI scan as physiotherapist had already accurately diagnosed the patient.
- Physiotherapy played a crucial role in the soccer player's recovery.
- The current process is cumbersome for patients and often leads to reduced outcomes and access to treatment.
- The need to visit multiple health professionals leads to significant costs and time waste for the patient.

Outcomes:

- Quick recovery following the initial injury
- Avoidance of surgery through best practice physiotherapy conversative treatment
- Significant out-of-pocket costs, expenses, and time loss due for the patient due to visiting multiple health practitioners, extended wait times and difficulty booking in appointments.

Lateral epicondylitis (commonly known as tennis elbow) in a 45-year-old developer

A 45-year-old developer and labourer struggled with pain around the outside of his left elbow and soreness in his forearm muscles, which intensified with prolonged, repetitive activities like using power tools. The patient, having only seen a physiotherapist years ago for a different injury, was aware that he wouldn't receive a rebated referral for a scan to confirm the diagnosis.

Opting to consult his GP for the persistent elbow pain, he faced delays due to his GP's full schedule. Eventually, he secured an appointment, received a referral for an ultrasound, and underwent a further round of appointments to obtain and discuss the results. During this period, his pain escalated; interim recommendations like rest and load reduction offered only minimal relief. The results confirmed suspected lateral epicondylitis, leading the GP to suggest physiotherapy or a corticosteroid injection for pain alleviation. Preferring not to undergo an injection, the patient chose physiotherapy.

The physiotherapist performed a series of tests and a thorough subjective examination, aligning with the scan results and identifying additional contributing factors like posture, other injuries, and work-related stress. The patient received evidence-based treatments, including isometric holds, which significantly alleviated his pain. Following several sessions and a detailed exercise regimen, he fully recovered, resuming his pre-injury work levels without any complications.

Key takeaways:

- Extended wait times for medical appointments due to GP unavailability led to worse outcomes for the patient.
- Physiotherapy helped the patient return to pre-injury levels of activity.
- The current process of rebated referrals via GP places extra strain on GPs and reduced their availabilities.

Outcomes:

- Full return to pre-injury levels of activity
- Unnecessary MBS costs with visits to the GP
- Significant out-of-pocket costs, lost time, and productivity at work due to lengthy wait times for the GP and unnecessary medical appointments

Appendix A - MBS item numbers

Listed in the table below are the utilised MBS item numbers broken down by diagnostic image type utilised for cost-benefit modelling and analysis.

Table 9 | MBS codes by diagnostic image type

Ultrasound	MRI	X-Ray
55852	63322	57509
55854	63325	57506
55856	63328	57515
55857	63331	57512
55858	63334	57521
55859	63337	57518
55860	63340	57523
55861	63560	57522
55862	63513	57527
55863	63516	57524
55864		57703
55865		57700
55866		57709
55867		57706
55868		57712
55869		57715
55870		57721
55871		58100
55872		58103
55873		58106
55874		58108
55875		58115
55876		58120
55877		58121
55878		58112
55879		58521
55880		58524

55881		58527
55882		
55883		
55884		
55885		
55886		
55887		
55888		
55889		
55890		
55891		
55892		
55893		
55894		
55895		

Appendix B - APA Member survey (Physiotherapists referrals to orthopaedic surgeons and digital imaging)

Background

The APA, on behalf of its members, wants to work with the Government to expand access to Medicare Benefits Schedule (MBS) rebates, specifically for medical imaging orders and referrals to orthopaedic surgeons made by physiotherapists.

In the existing system, for a physiotherapist to organise most medical imaging and orthopaedic surgery referrals, and enable patients to receive a Medicare rebate, a patient needs to attend a GP appointment. This results in unnecessary delays, service duplication, and avoidable costs for patients and government.

To provide further evidence to support the proposed changes, the APA has engaged Nous Group, an internationally recognised consultancy company, to undertake a study to identify the impact of the changes, including the opportunity to improve patient experiences, and reduce costs to the health system and patients. The study will also involve an economic analysis.

The purpose of this survey is to address the data gap around the volume of avoidable GP appointments for medical imaging orders and referrals to orthopaedic surgeons made by physiotherapists. This data is critical for the economic analysis part of the study. The survey is also looking at physiotherapists' attitude towards medical imaging and referrals to orthopaedic surgeons.

This survey is lengthy (approx. 7 min) but is a unique opportunity for you to play a pivotal role in contributing shaping our advocacy to improve patient experiences and enhance clinical outcomes. We encourage your participation to strengthen the evidence that the APA can use to make the case to government.

We hope that this study can be a catalyst for positive change and thank you in advance for sharing your insight and experience.

Questions

This set of questions relates to your experience as a clinician and providing referrals to orthopaedic specialists and GPs.

Q1. Please select your category. If you hold a Title or Specialist title from the APA, please provide the name of the specialty in the box provided
   a. Titled physiotherapist
   b. Specialist physiotherapist as awarded by the Australian College of Physiotherapists
   c. General physiotherapist
   d. Name of speciality

Q2. Approximately how many hours a week do you spend in direct clinical care?

Q3. On average, how many patients would you see in a week?

Q4. On average, what would you say was the proportion of new patients compared to ongoing patients in a week?

Q5. What percentage of new or recurring patients that attend following a GP consultation, and after physiotherapist assessment require follow up consultations with orthopaedic specialists?

Q6. Over the past four weeks, have you had any patients that in your opinion required consultation by an orthopaedic specialist?
   a. Yes

b. No

Q7. Approximately how many recommendations to seek an orthopaedic specialist opinion did you provide over that four-week period?

Q8. What percentage of those recommendations were due to patients' requests?

Q9. Did you provide referrals to a GP or directly to the orthopaedic specialist?
   a. All GP
   b. All direct to orthopaedic specialist
   c. A mix of GP and orthopaedic specialist

Q10. What is the estimated number of referrals you provided to a GP over the past 4 weeks?

Q11. What percentage of those who you provided referrals to see a GP or orthopaedic specialist do you think attended their referral appointment?
   a. From you to GP
   b. From you direct to orthopaedic specialist

Q12. What percentage of those who you referred to the GP in order to obtain a referral to an orthopaedic specialist attended their referral to the orthopaedic specialist? Please leave this question blank if you are unsure of the percentage.

Q13. Currently if the patient is to receive a reimbursement from a specialist, they are required to have a referral from a GP. Does this influence the proportion of those patients who you refer to a GP instead of directly to the specialist?
   a. Yes
   b. No

Q14. If you were able to directly refer to orthopaedic specialists, would you refer more patients?
   a. No - about the same
   b. Yes - a little more
   c. Yes - a lot more

Q15. What proportion of GP referred patients do not return to their GP for the presenting condition following consultations and treatments with you?

Q16. You previously stated that you made [question('value'), id='39'] referrals over the past 4 weeks to a GP. Of those referrals to GPs what proportion would you refer directly to a specialist if it had no impact on a patient's eligibility to receive a rebate from Medicare?

This next set of questions relates to referrals to medical imaging by physiotherapists. Medical imaging by physiotherapists is limited to musculoskeletal conditions under Schedule 5 of the Medical Benefits Scheme (MBS) and specifically, for the shoulder, elbow, wrist, hip, knee, and ankle injuries for both adults and children. This includes the following MBS items: 57712, 57714, 57715, 57717, 58100 to 58106 (inclusive), 58109, 58111, 58112, 58117, 58120, 58121, 58123, 58126 and 58127. If you would like further information on these items, please refer to http://www.mbsonline.gov.au/

Q17. How often does a new or recurring patient attend following a GP consultation, and after physiotherapist assessment require follow up with imaging?
   a. Never
   b. Sometimes
   c. Very often

Q18. Over the past four weeks, have you had any patients that in your opinion required medical imaging?
   a. Yes
   b. No

Q19. Approximately how many recommendations for medical imaging did you provide over that four-week period?

Q20. What percentage of those recommendations were due to patients' requests?

Q21. Did you provide referrals to a GP or directly to the relevant medical imaging services?
   a. All GP
   b. All direct to medical imaging service
   c. A mix of GP and medical imaging service

Q22. What is the estimated number of referrals you provided to a GP over the past 4 weeks?

Q23. Of those patients to whom you provided referrals, what proportion do you think attended their referral?
   a. From you to GP
   b. From you direct to medical imaging service

Q24. What percentage of those who you referred to the GP to obtain a referral for medical imaging attended their referral to medical imaging? Please leave this question blank if you are unsure of the percentage.

Q25. Currently if the patient is to receive a reimbursement for medical imaging, they are required to have a referral from a GP. Does this influence the proportion of those patients who you refer to a GP instead of directly to medical imaging?
   a. Yes
   b. No

Q26. If you were able to directly refer to medical imaging, would you refer more patients?
   a. No - about the same
   b. Yes - a little more
   c. Yes - a lot more

Q27. You previously stated that you made [question('value'), id='40'] referrals over the past 4 weeks to a GP. Of those referrals to GPs what proportion would you refer directly to medical imaging if it had no impact on a patient's eligibility to receive a rebate from Medicare?

This next set of questions relates to your confidence in diagnostic abilities.

Q28. How confident are you with being able to diagnose injuries without GP or orthopaedic specialist advice?

a. Not strongly confident
b. Not confident
c. Neutral
d. Confident
e. Strongly confident

Q29. What is the main purpose of you referring patients to medical imaging services?

a. I refer to imaging just to confirm my diagnosis
b. I refer to imaging when I'm unsure of the condition or injury
c. I refer to imaging for unusual and atypical clinical presentations
d. I refer to imaging when clinical diagnosis and reasoning is not conclusive
e. I refer to imaging after the patient has undergone best practice and clinically logical treatment but is showing no signs of improvement
f. Other – Please specify

This next set of questions ask you about yourself, your practice and experience.

Q30. What is your age?

Q31. What year did you become registered as a physiotherapist?

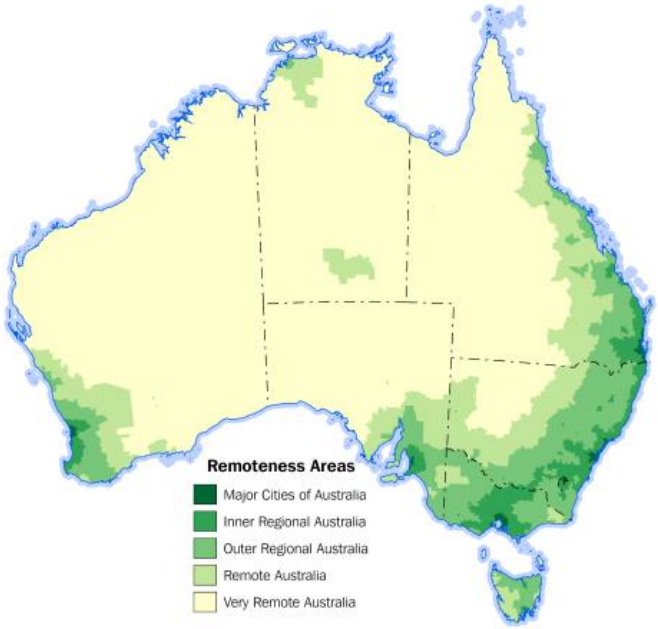
Q32. Have you completed any additional education or qualifications? Tick all that apply

a. Post Grad Cert
b. Post Grad Diploma
c. Coursework Masters
d. Research Masters
e. Ph.D.
f. Fellowship of the Australian College of Physiotherapists
g. Other - please specify

Q33. What type of practice do you predominately work in?

a. Private practice owned by self
b. Private practice owned by others
c. Public Hospital
d. Private Hospital
e. Aboriginal Community Controlled Health Service
f. Community Service (e.g. Bluecare, Spiritus)
g. Residential Care Facility
h. Other - please specify

Q34. Please select one of the five options below that represents the area in which you practice most often and refer to the image for guidance if needed.



a. Major cities of Australia
b. Inner Regional Australia
c. Outer Regional Australia
d. Remote Australia
e. Very Remote Australia