

Plain Language Summary

Exploring How and Where the Community Pharmacy Workforce Can Contribute to Osteoarthritis Care



Why is knee OA and care delivery important?

Knee osteoarthritis (OA) is a leading cause of pain and disability, significantly impacting the quality of life of millions worldwide. In Australia, knee OA is the 8th leading cause of disability in adults aged 50 years and over. Clinical guidelines consistently recommend first-line treatments including education, exercise, and weight management, including the [Australian Osteoarthritis of the Knee Clinical Care Standard](#). Despite this established clinical guidance, many people either do not have access to, or do not receive, care aligned with these recommendations. Community pharmacies, with their unique accessibility and frequent patient interactions, have untapped potential to address these care gaps by supporting evidence-based OA management. However, the feasibility of pharmacists delivering care aligned with the Australian Standard and the role of pharmacy assistants that support them remains underexplored.

What did we do?

We conducted a study to evaluate the feasibility of Australian community pharmacies to deliver care aligned with the Australian [Osteoarthritis of the Knee Clinical Care Standard](#). This research involved:

- **National surveys:** 407 pharmacists and 148 pharmacy assistants shared their insights on their knowledge about OA and their motivation, and perceived feasibility to deliver OA care aligned to the quality statements outlined in the Standard.
- **Focus groups:** 13 pharmacy assistants discussed their roles, experiences, and training needs.

The study was approved by Curtin University Human Research Ethics Committee (HREC approval number HRE2023-0410), and participants' confidentiality was safeguarded through informed consent processes.

What did the study find?

The research highlighted several important findings about the motivations, capabilities and opportunities of pharmacy staff:

Pharmacists:

- **Motivation:** Most pharmacists expressed high motivation to contribute to OA care, recognising that OA care, as outlined in the Standard, aligned with their professional scope of practice.
- **Feasibility:** Pharmacists felt confident providing education and medicines advice to patients with knee OA. However, more time-intensive activities, such as patient reviews and helping patients manage their own care, were perceived as less feasible due to workload and time pressures and a lack of specific remuneration to deliver such services.
- **Barriers to care delivery:** Key challenges included insufficient financial support, high workloads, and competing demands, which limited their ability to deliver comprehensive OA care.

Pharmacy assistants:

- **Roles and confidence:** Many pharmacy assistants contributed to OA care by recommending over-the-counter products, providing basic management and product advice, and referring customers to pharmacists. Confidence levels in OA knowledge and skills varied due to limited formal training.
- **Learning on the job:** Pharmacy assistants often relied on informal learning from pharmacists or their personal experiences to guide their actions, highlighting the lack of structured education and training.
- **Training needs:** Participants expressed a strong interest in formal training to enhance their skills and better support their role in OA care.

Why are these findings important?

This study highlights the untapped potential of community pharmacies to address gaps in osteoarthritis (OA) care and to contribute to the national implementation of the [Osteoarthritis of the Knee Clinical Care Standard](#).

- **Pharmacists** are highly motivated and capable of delivering care that follows best practice guidelines. However, systemic barriers, including workload constraints, competing demands, and inadequate financial support limit their ability to provide comprehensive OA care.
- **Pharmacy assistants** are eager to expand their roles, but the lack of formal training and unclear role definitions and scope hinder their ability to provide consistent and safe patient care.

Improving OA care in pharmacies could enhance access to evidence-based treatments, reduce the burden of knee OA, and support Australia's broader healthcare goals by ensuring more equitable care for all Australians.

What happens next?

The research team will disseminate the findings from this research across various channels: publications, scientific meetings and advocacy briefs. This research lays the foundation for several important next steps, requiring collaboration across the healthcare and pharmacy sectors:

- **Training programs:** Pharmacy educators, professional organisations, and training providers could develop structured education programs to enhance pharmacists' and pharmacy assistants' knowledge and confidence in OA care. The recently released [Arthritis Training and UpSkilling \(ATLAS\)](#) platform is one example.

- **Service models:** Researchers and pharmacy stakeholders should co-design innovative service models that embed pharmacies within broader OA care pathways, such as collaborating with general practitioners and other primary care clinicians, providing referrals, and offering ongoing patient education and support.
 - **Policy advocacy:** Policymakers and industry leaders must champion funding reforms to ensure pharmacists and pharmacy assistants are adequately supported in delivering OA care that is consistent with the [Osteoarthritis of the Knee Clinical Care Standard](#). This includes advocating for changes to remuneration models that address the additional workload associated with comprehensive OA care.
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Scientific Report

Executive Summary

Our objective: To evaluate capabilities, opportunities, and motivations of community pharmacists and pharmacy assistants to deliver osteoarthritis (OA) care, aligned with the [Australian Osteoarthritis of the Knee Clinical Care Standard](#).

Research design: Mixed-methods design. Quantitative data from pharmacists and pharmacy assistants working in Australian community pharmacies were collected via e-surveys between September 2023 and August 2024. A multimodal recruitment strategy was deployed to sample participants from all Australian jurisdictions, enabled through partnerships with industry groups and professional organisations and through creation of databases of community pharmacy contacts for each jurisdiction. Behaviour-change theory-informed survey items measured pharmacists' capabilities, opportunities, and motivations to provide Standard-aligned care. Pharmacy assistants responded to questions about their confidence in OA care and their OA-specific knowledge. They also reflected on their perceived role in OA care through online focus groups.

Results: 407 pharmacists and 148 pharmacy assistants responded. Most pharmacists (>80%) reported high motivations to engage in OA care, with >80% agreeing five of the seven quality statements were within their scope of practice. Across quality statements, median feasibility to deliver Standard-aligned care (measured on 9-point NRS; 1=not at all feasible; 9=highly feasible) varied across 5 dimensions of feasibility, ranging from 6-7 within knowledge, 5-7 within workload, 6-7 within workflow, 8 within pharmacy layout/infrastructure, and 1-5 in absence of additional remuneration. More time-consuming care (e.g., self-management support, patient review) was rated less feasible, especially in terms of workflow, workload and remuneration. Barriers identified to care delivery included inadequate remuneration models, time constraints, and competing priorities within the pharmacy environment. Adjusted linear regression models identified workload and workflow feasibility increased when more pharmacists were on duty ($p<0.001$). 28% and 30% of pharmacy assistants were highly confident in their knowledge and skills, respectively, in OA care. The majority (77-94%) identified their roles in recommending and selling OA-related products, while 42% believed all OA-related queries should be referred to pharmacists. Three themes (with sub-themes) emerged from pharmacy assistants' qualitative data ($n=13$): 1) professional activities related to OA care; 2) capabilities and scope of practice; and 3) managing workflow and alleviating workload pressures.

Conclusion: While pharmacists self-reported high motivation and capabilities to deliver Standard-aligned OA care, implementation feasibility will likely depend on addressing workload, workflow and, particularly, remuneration barriers. Role delineation and training for pharmacy assistants may support better OA care within community pharmacies.

Achievements

This project delivered significant insights into improving OA care through community pharmacies:

- **Engagement:** Successfully engaged 407 pharmacists and 148 pharmacy assistants nationwide, providing a nationally representative understanding of workforce capabilities and systemic barriers.
- **Evidence Base:** Generated new data on pharmacists' motivation and feasibility of delivering Standard-aligned OA care, identifying remuneration and workload as key barriers to implementation at scale in primary care.
- **Role Clarification:** Highlighted the untapped potential of pharmacy assistants to support pharmacists deliver quality OA care. Pharmacy assistants typically rely on informal learning from pharmacists or personal experiences. With clearer role delineation and scope of practice clarification and targeted training there is substantial potential for pharmacy assistants to contribute to Standard-aligned OA care.
- **Policy Influence:** Findings are positioned to inform professional development strategies and workforce policies to optimise community pharmacy contributions to OA care and align with national healthcare priorities.

Implementation research potential: The findings point to the viability of evaluating implementation effectiveness and sustainability of a pharmacy-embedded service model for OA care that addresses systemic barriers such as workload, workflow and remuneration. Through the research process, we have established a knowledgeable and reputable team of Australian and New Zealand researchers and partnerships with industry and professional groups to extend the research. We have also developed detailed contact databases of community pharmacy contact details for each Australian jurisdiction to support further co-creation efforts and research participation.

Dissemination outcomes and plans

The outcomes of this research have been or will be disseminated through the following channels:

- 1. Peer-Reviewed Publications:**
 - Manuscript submitted:
 - "Capabilities, Opportunities, and Motivations within Australian Community Pharmacy to Deliver Clinical Care Standard-Aligned Care for Knee Osteoarthritis: A Mixed-Methods Evaluation" (Submitted to Osteoarthritis and Cartilage, manuscript number OAC15180). Status: Under Review.
 - Planned manuscript:
 - Reflections on community pharmacy engagement in research on pharmacy practice.
- 2. Planned Abstract Submissions:**
 - Two abstracts will be submitted to the Australian Rheumatology Association (ARA) Conference 2025, highlighting key findings on pharmacist and pharmacy assistant contributions to OA care.
- 3. Conference Presentations:**
 - Planned presentation at the ARA Conference 2025.
- 4. Media Outreach:**
 - Simplified findings will be shared via Arthritis Australia's newsletters and social media platforms once the publication is finalised, enabling outreach to both healthcare professionals and the public.
- 5. Stakeholder Collaboration:**

- Insights will be shared with professional organisations (e.g., Pharmacy Guild of Australia, Pharmaceutical Society of Australia) and policymakers to support funding and training initiatives after the publication is finalised.
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Ongoing reporting requirements to Arthritis Australia

- **Publications:** Copies of published manuscripts resulting from this research will be provided to Arthritis Australia.
 - **Presentations:** A summary of intended presentations related to this research has been included in the report.
 - **Ongoing Reporting:** The research team commits to update Arthritis Australia on any further outcomes, such as additional publications, media coverage, or significant impacts of the research, including securing of larger national funding.
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