



Reducing low-value knee arthroscopy: Developing and pilot testing a patient decision aid to support research translation

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Arthroscopic surgery for knee osteoarthritis



- A camera and instruments are inserted into the knee to cut, drill and remove loose tissue
- ‘Low-value’ intervention – no better than placebo surgery
- Common despite guidelines recommending against its use
- Limited evidence-based information available to consumers



Aim

1. To explore consumer and clinician beliefs and information needs about arthroscopy for people with knee osteoarthritis
2. To develop and pilot test a patient decision aid to support research translation



Methods (Aim 1. consumer and clinician beliefs)

- Qualitative semi-structured focus group and individual interviews
- People with knee osteoarthritis (+/- history of arthroscopy), general practitioners, orthopaedic surgeons, rheumatologists and physiotherapists; purposeful sampling
- Audio-recorded and transcribed
- Thematic analysis



Results

- 7 consumers
- 30 clinicians - 13 GPs, 6 rheumatologists, 3 orthopaedic surgeons, 8 physiotherapists
- Focus groups ~ 2 hours
- Interviews ~ 55 minutes



Three consumer themes

**Inaccurate
expectations
are drivers for
seeking
arthroscopy**

**Perception that
imaging is
essential**

**Preferences for
receiving
information**

e.g. accurate and concise
lay language, diagrams
trusted sources
early in knee OA



Four clinician themes

**Patient education
is a priority**

**Drivers for
imaging and
arthroscopy**

**Variable knowledge
about the evidence**

**Preferences for
content/ format
of a decision tool**



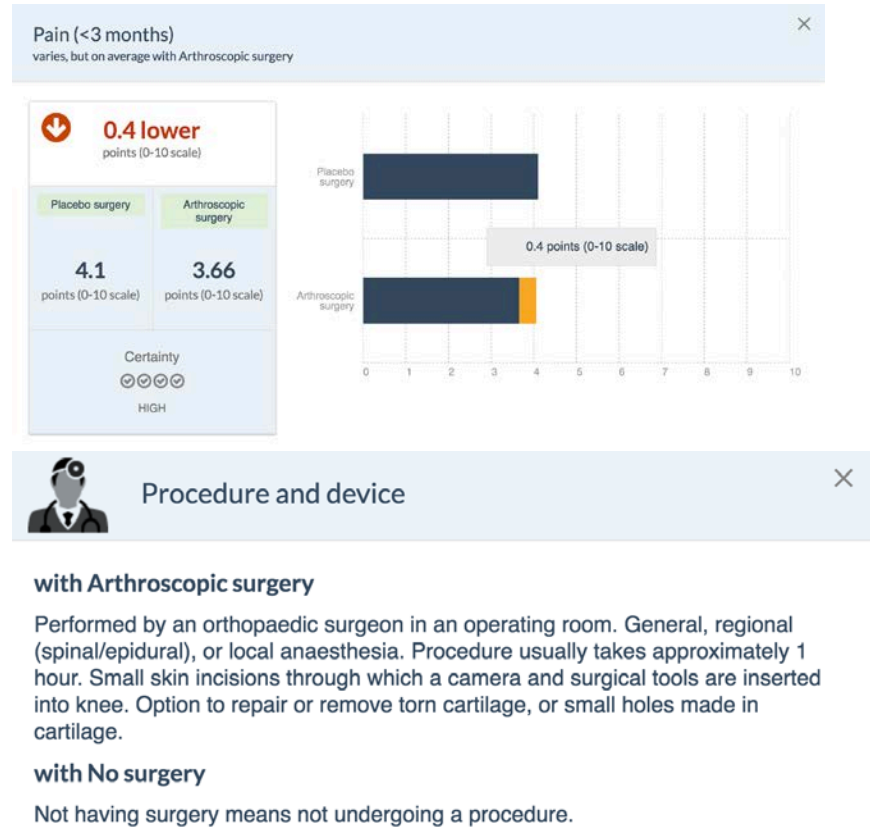
Methods (Aim 2. develop and pilot test)

- Generated prototype patient decision aids in MAGICapp based on rapid review and Cochrane review on arthroscopic surgery for knee OA
- Decision aids are designed to support patient participation in healthcare decision making by describing the *benefits and harms* of treatment options and helping patients *clarify their values* relating to the outcomes and practical issues
- Suitable in this context given lack of available evidence-based consumer information and belief that arthroscopy is effective



Prototype decision aids

- Display estimates of benefits and harms for each option (pictographs)
- Describe practical issues associated with each option, e.g. procedure, recovery time, impact on activity





Prototype decision aids

3 prototype decision aids

Arthroscopy compared with:

1. placebo (incorporating preferences from interviews, written text summarising benefits and harms)
2. placebo (short version, pictographs + practical issues only)
3. conservative management (short version, pictographs + practical issues only)

Consistent with International Patient Decision Aid Standards



Methods (Aim 2. develop and pilot test)

- Qualitative semi-structured individual interviews
- 10 people with knee osteoarthritis (+/- history of arthroscopy); purposeful sampling
- Presented with 3 prototype decision aids (randomly ordered)
- Observation and cognitive interviewing to assess usability, user experience, functionality
- Field notes, audio-recorded
- Descriptive and thematic analysis

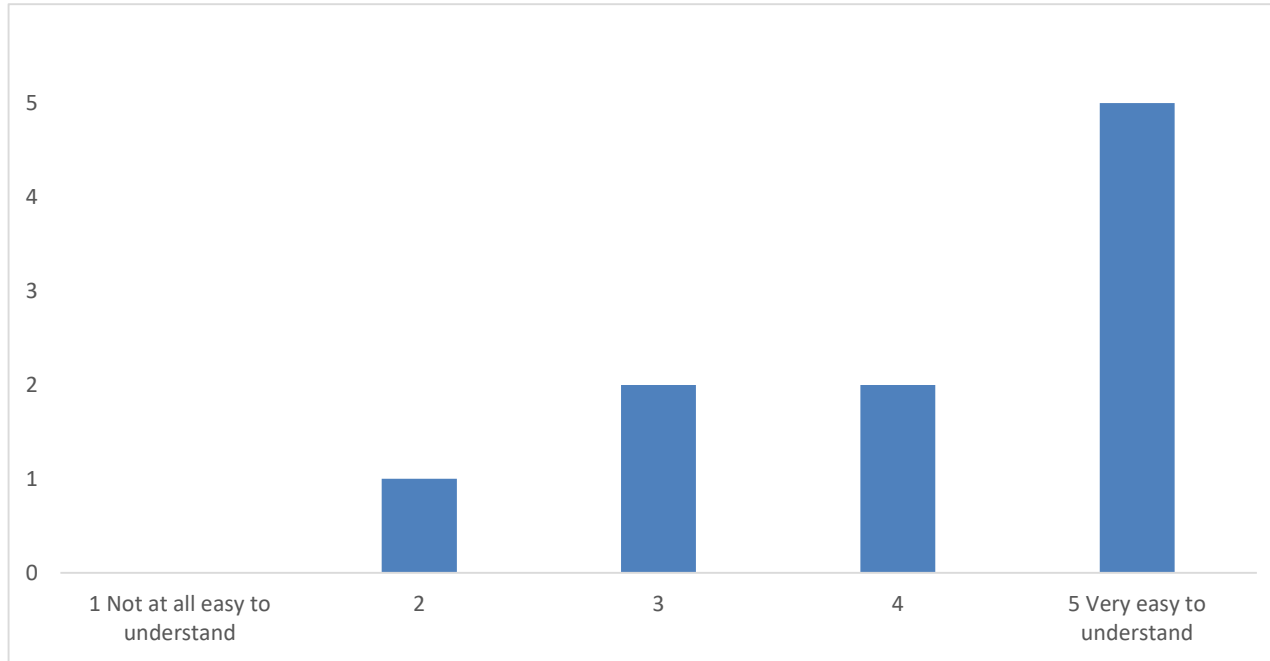


Results

- 8/10 participants considered most information to be new
- All participants said length of each decision aid was ‘just about right’
- 9/10 said information was ‘slanted away from surgery’
 - comments: “because these are the facts”, “the figures speak for themselves”
 - 1/10 said information was ‘completely balanced’
- 9/10 wanted decision aids to be freely available online; All wanted to receive and discuss during a clinical encounter
- All participants wanted printed + online versions available (4 also wanted video/audio to supplement pictographs)



How easy are the tools to understand?

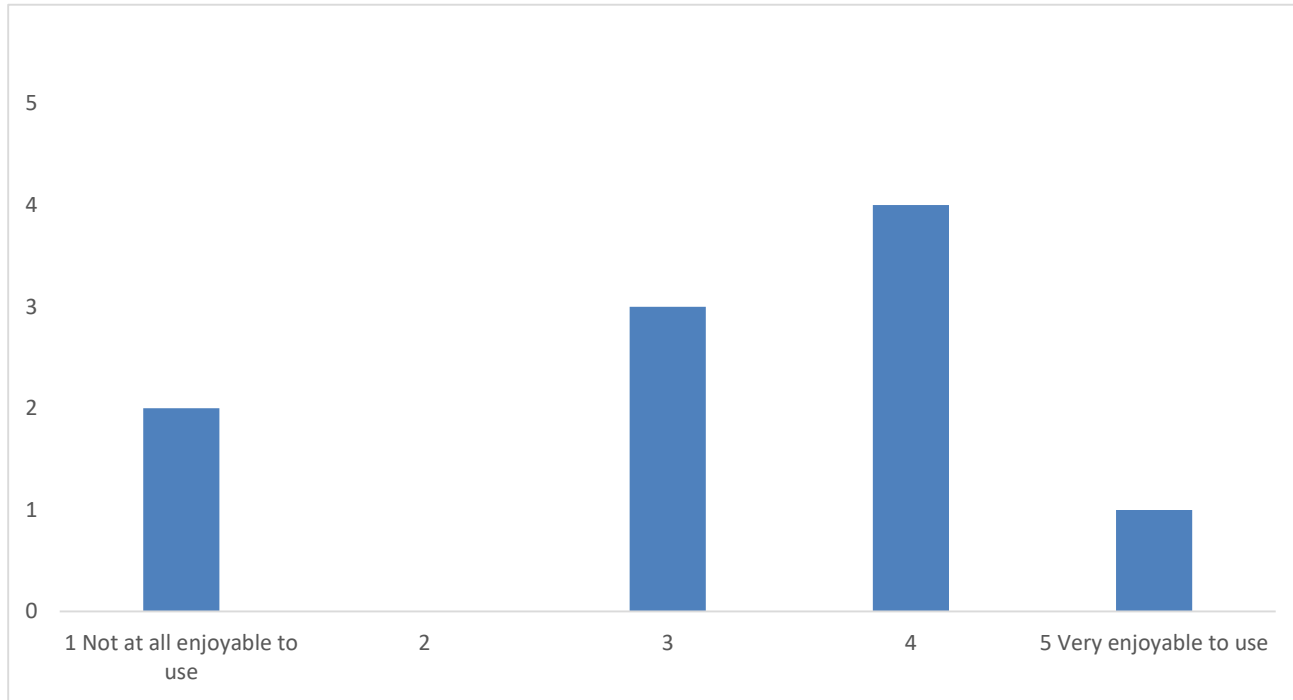


*“Graphs very good but
no introduction”*

*“I really like the
graphs”*



How appealing are the tools to use?





Suggestions for improving clarity and appeal

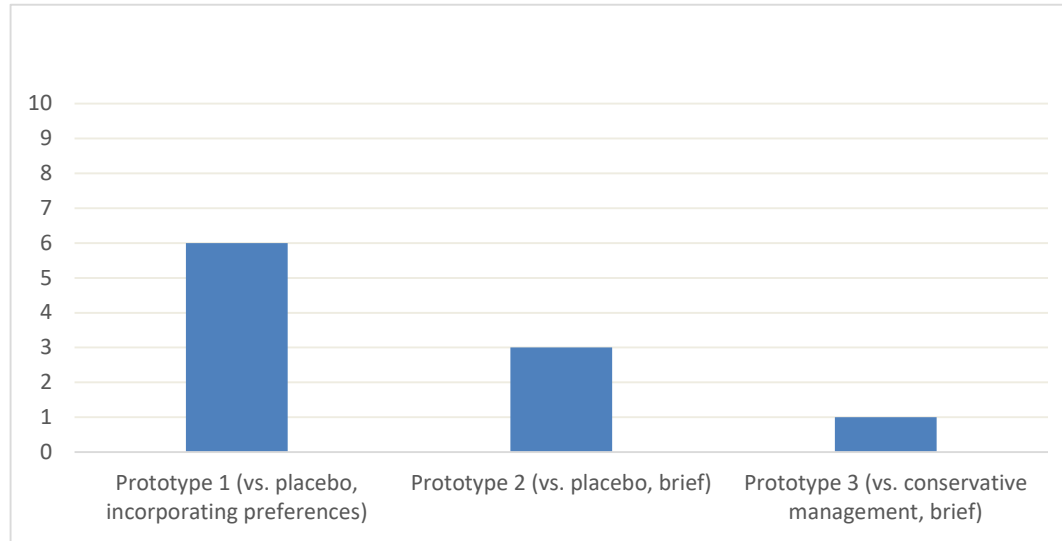
- Explain key terms e.g. placebo-surgery, conservative management, adverse events
- Simplify language, reduce text (prototype 1)
- Use more colour and images/ make visually appealing to engage reader
- Include effect estimates for longer term outcomes (e.g. function at 12 months) (prototypes 1&2)
- Make scales consistent across continuous outcomes (e.g. 0-100 for pain and function) (prototypes 1&2)
- Add information about studies on which results are based (prototypes 2&3)
- Include information about evidence-based conservative treatment options (prototypes 2&3)

Functionality

- 9/10 participants said they were 'likely' or 'very likely' to discuss the benefits and harms of arthroscopy with a health professional after reviewing the decision aids
- 7/10 considered arthroscopy to be 'not at all effective' for knee OA
- All participants said they were 'not at all likely' to have arthroscopy in the next few years



Which prototype do you prefer and why?



“The extra information makes it better.. helps you interpret the data”

*“Pictures are self-explanatory”
“It’s shorter and to-the-point”*

“Because it compares surgery to treatments I can alternatively consider”



Next steps

- Refine decision aid based on consumer testing and pilot test with clinicians
- Plan a randomised controlled trial of a refined decision aid
- Explore options to integrate a decision aid in Australian primary care pathways and management software e.g. link in Health Pathways

Conclusion

- Empowering people to make informed decisions about arthroscopy through use of a patient decision aid that addresses consumer and clinician beliefs and information needs is likely to lead to:
 - fewer Australians with knee osteoarthritis receiving this low-value intervention
 - cost savings for the Australian health system that can be redirected toward effective, evidence-based interventions



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