Priorities for the effective implementation of osteoarthritis management programs: an OARSI international consensus exercise.

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Abstract:

Objective: The Joint Effort Initiative was endorsed by Osteoarthritis Research Society International (OARSI) in 2018 as a collaboration between international researchers and clinicians with an interest in the implementation of osteoarthritis management programs (OAMPs). This study aimed to identify and prioritise activities for future work of the Joint Effort Initiative.

Design: A survey was emailed to delegates of the 2018 OARSI World Congress attending a pre-conference workshop or with a known interest in OAMPs (n=115). Delegates were asked about the most important issues regarding OAMP implementation. The top 20 issues were synthesised into 17 action statements, and respondents were invited to participate in a priority ranking exercise to determine the order of importance of the statements.

Results: Survey respondents (n=51, 44%) were most commonly female (71%), with an allied health background (57%), affiliated with universities (73%) from Oceania (37%), and Europe/UK (45%). The five highest ranked action statements were:

i) Establish guidelines for the implementation of different OAMP models to ensure consistency of delivery and adherence to international best practice.

ii) Develop and assess training and education programs for health care professionals (HCPs) delivering OAMPs.

iii) Develop and evaluate the implementation and outcomes of novel models of OAMPs.

iv) Develop and assess core skill sets and resources for HCPs delivering OA care.

v) Develop a framework for enhancing the quality of care provided by OAMPs.

Conclusion: Prioritising statements will bring focus to the future work of the Joint Effort Initiative in the future and provide a basis for longer-term actions.

Key words: Consensus, osteoarthritis, chronic care, management programs, priority setting
Priorities for the effective implementation of osteoarthritis management programs: an OARSI international consensus exercise.

Introduction

Osteoarthritis (OA) is a leading cause of global disability (1). The prevalence of this disabling condition is projected to rise rapidly in the presence of an aging population and increasing rates of obesity (2). International guidelines make clear, consistent recommendations for evidence-based management of OA (3). There is relative consensus amongst these guidelines that hip and knee OA management should be tailored to the individual and include the following three core effective, non-surgical, non-pharmacological interventions: i) self-management and OA education; ii) exercise; and iii) weight loss for people with hip or knee OA who are overweight or obese (3, 4). Serious discrepancy remains between these recommendations and the actual care received by patients, particularly underutilisation of the three core treatments (5, 6) and over-reliance on pharmacological agents and surgery (7).

In order to address evidence-practice gaps, several specialist osteoarthritis management programs (OAMPs) have been developed and implemented internationally (8). These OAMPs aim to deliver coordinated, evidence-based care for people with OA. We have operationally defined an OAMP as a model of evidence-based, non-surgical OA care that has been implemented in a real-world setting, and comprises the following four components:

i) personalised OA care;

ii) provided as a package of care with longitudinal reassessment and treatment progression;

iii) comprising two or more components of the core, non-surgical, non-pharmacological interventions and,

iv) optional evidence-based adjunctive treatments as required.
The long-term objectives of these programs are to help individuals address their pain, stiffness and loss of function, while improving their quality of life and maintaining independence. Existing OAMP service delivery models have been tailored to local contextual features and hence are all very different (8). However, the core components of OAMPs consistently include education around OA, support for self-management, exercise programs and promotion of increased physical activity (8). These core components are often combined with other evidence-based therapies when indicated such as: weight loss interventions; psychological support; review of analgesics and prescription of assistive devices (8).

The international development of OAMPs is still in its infancy, and there is a pressing need for coordinated, broad-scale strategies to ensure the implementation of high quality, evidence-based programs as these are adapted to meet local needs.

The majority of OAMPs are available at a relatively small-scale, in high-income countries with stable healthcare systems within Europe, North America and Australasia (9-13). A recent review (8) has highlighted the different OAMPs that have been developed over the last few years, and the continued need to develop, implement and evaluate models of service delivery across the spectrum of OA disease. This review also highlighted the dearth of OAMPs in low- and middle-income countries. In response to growing international interest in OAMPs, a group comprised mainly of researchers and clinicians have established the International Osteoarthritis Management Programs ‘Joint Effort’ Initiative which was endorsed by the Osteoarthritis Research Society International (OARSI) in 2018. The Joint Effort Initiative seeks to provide a structure whereby activity related to implementation of OAMPs may be harmonised and standardised, particularly around optimising the quality and delivery of care, health professional training, fostering international research collaborations, and minimising duplication of effort and resources. The Initiative’s mission is to investigate the most effective OAMP models to use, develop long-term strategies for effective implementation in different socioeconomic and cultural environments.
while ensuring the health professional workforce is appropriately skilled to deliver high-quality care and
to help identify research priorities to facilitate best-practice care.

The first action of the Joint Effort Initiative was to identify and prioritise activities for future work. The
prioritisation exercise was undertaken in two parts. Firstly, we invited delegates at the 2018 OARSI
World Congress in Liverpool UK who had an interest in OAMPs to participate in a survey. We sought
their views on the most important issues surrounding the international implementation of OAMPs, and
to identify potential gaps for further research. Following this broad survey, interested respondents were
further invited to participate in a prioritisation exercise to rank the top priorities for future action. This
paper presents the findings and priorities identified by the survey and discusses the future actions
identified by the Initiative.

Method

An overview of the process is outlined in Figure 1.

Participants

We sent an email invitation to all delegates of the 2018 OARSI World Congress who were attending a
pre-conference workshop or had a known interest in OAMPs (n=115) to complete a survey (Survey 1).
We then invited all consenting respondents to participate in a prioritisation exercise to rank the top
priorities (Survey 2). Ethical approval was granted by the Human Research Ethics Committee of the
University of Sydney (2018/262), and the survey was endorsed by the 2018 OARSI Conference
Organisers. A study information sheet was provided to potential participants, and completion of the
survey was considered indicative of informed consent to participate. Participation was voluntary, and
only completed surveys were included in the analyses.
The surveys

Two custom-designed surveys were developed for this study.

Survey 1

The first survey was designed to seek participants’ views on the most important issues that need to be addressed concerning the international implementation of OAMPs. A link to the survey was emailed to participants attending the OARSI pre-congress meeting two days before the event (24th April, 2018) via REDCap (Research Electronic Data Capture tool) hosted at the University of Sydney, Australia. REDCap is a secure, web-based application designed to support data capture for research studies (14). Following several requests from the OARSI delegates, the survey remained open for 17 days until the 10th May, 2018 to allow participants to complete the survey once they returned home from the congress.

The survey took approximately 10-15 minutes to complete. The first section asked questions about the respondent’s demographics and their prior experience with OAMPs (see Appendix 1). In the second section, participants were given the opportunity to identify three issues they considered important for implementation of OAMPs that should be addressed. This free-text section was presented first so that participant answers were not influenced by the multiple-choice options that came later. The remainder of the survey presented multiple choice questions spanning the three domains drawn from the Donabedian framework for quality assessment in healthcare (15) and a fourth domain focused on research priorities. The domains were defined as:

i) structural and environmental considerations: attributes of the setting or environment in which healthcare occurs, including considerations around material resources, human resources and organisational structure.
ii) process and implementation considerations: covers what is actually being undertaken with regard to giving and receiving care, including both the person seeking care and the health care professional providing care.

iii) outcome considerations: the effects of care and health of the person seeking care, including any increases in knowledge and changes in behaviour.

iv) areas for OA management program implementation research: potential research questions that had been raised at previous OARSI meetings by delegates with an interest in OAMPs.

Finally, an open-ended question asked respondents to identify any considerations or research questions that had not been identified in the survey. Between seven and 13 multiple choice options were offered for each of the four domains above. The options for each domain were developed following discussions amongst participants at an OAMP workshop OARSI pre-congress workshop (Amsterdam, 2016), discussions at an OAMP post-OARSI meeting (Las Vegas, 2017), through literature review and consensus from the authors of this paper. The survey participants were asked to select the three options within each domain that they considered to be the most important issues for implementation of OAMPs. A full list of the survey questions is provided in the supplementary materials.

Survey 2

Using data from survey 1, action statements were developed for the prioritisation exercise conducted in survey 2. We compiled a list of the top 20 options chosen by participants in survey 1. This list was derived from the top three rated options to each of the four domains (12 topics), and then the next eight highest ranked options irrespective of the domain. The free text responses were also examined to draw out any additional topics not covered in the multiple-choice questions. Specific action statements were then developed for each general topic that aligned to the terms of reference of the Initiative and were deliberately broad in scope. They were checked for overlap by the authors, and 17 action
statements were developed and circulated for final prioritisation. Three of the original 20 topics were merged with others as they could be covered by one action statement to avoid redundancy (see Table 2).

Participants who consented to be involved in the prioritisation exercise were sent a link via the 1000minds software (www.1000minds.com). This is a decision-analysis research tool that prioritises statements according to their relative importance to the participant. The survey was circulated in June 2018 and remained open for 2 weeks. The prioritisation exercise used pairwise-ranking which presented the participants with two action statements, and asked “Which of the following two options do you think is the higher priority to address?” Participants repeated this selection process until the program could accurately rank all 17 action statements using the minimum number of presentations.

Data analysis

De-identified individual data were downloaded from REDCap and 1000minds and exported to an Excel file. Descriptive statistics were used to summarise demographic and survey data. Data are presented as frequency data for options of the four domains in survey 1 and ranked according to frequency. The data outputted from survey 2 using 1000minds included mean and median rankings for each action statement. Interquartile ranges were calculated in Excel for each action statement.

Results

Participant Demographics

Of the 115 people invited to participate in survey 1, 51 (44%) of invitees completed responses (Table 1). Of the 40 participants who consented to be contacted further for Survey 2, 26 (65%) participants provided complete responses. There were no major differences observed in the characteristics of
respondents between the surveys because the second survey comprised a subset of the respondents
from survey 1. The majority of respondents were female for surveys 1 and 2 (71% and 65% respectively)
and approximately 50% of participants reported having an allied health background. More than half of
respondents in both surveys were affiliated with a university. There were representatives from 12
countries in survey 1 and nine countries in survey 2. The majority of respondents were from Europe/UK
and Oceania. There were no representatives from the African region, and only one each from Asia and
South America. While just over 30% of respondents stated they were currently a practising clinician, all
reported involvement in some type of research with the majority holding a PhD qualification. The mean
years of experience was 13.6 (SD 8.00) years in survey 1 and 12.5 (SD 8.83) years in survey 2.

Results of Survey 1

Current management programs

Seventy-three percent of participants (n=37) reported working with OAMPs, most frequently in a
research capacity. The settings for these programs were primary care (n=17), embedded within clinical
trials (n=15), community-based settings (n=15), public hospitals (n=9), private hospitals (n=8), private
clinics or university clinics (both n=7) or commercial programs (n=3). Four respondents reported working
in areas outside traditional models of healthcare delivery, including via online platforms, through patient
advocate organisations, and other private health insurance programs. All stages of program
implementation were represented (planning stage 17%, piloting program 36%, established and growing
program 36%, and established and stable program 31%).

Results of multiple-choice questions

Results from survey 1 are presented in Figure 2. The top 3 considerations selected for each domain
were:
i) **Structural / environmental considerations:**

1) operational funding for programs,
2) incorporation of OAMPs into different healthcare systems, and
3) stakeholder engagement.

Reimbursement for participants to undertake OAMPs and increased engagement with health care policy were also seen as important.

ii) **Process and implementation considerations:**

1) the mode of delivery of the programs,
2) development of specialised clinical skill sets for health professions who work with OA programs, and
3) provision of accurate, up-to-date information for OA program consumers.

The next most frequently occurring topics were training for personnel working in OAMPs, keeping everyone up-to-date with current evidence and knowledge (e.g. knowledge translation activities), and developing an overarching framework for implementing OAMPs.

iii) **Outcome considerations:**

1) managing therapeutic effects and ensuring behaviour change,
2) ensuring both healthcare professionals and consumers engaged with the program, and
3) development of self-management capabilities.

The next most important outcome consideration was ensuring programs were cost-effective.

iv) **Research priorities:**

1) comparing clinical outcomes and cost-effectiveness of the programs,
2) training for health care providers who deliver OA programs, and
3) developing and testing novel models for OA management programs.
The next most frequent option chosen for research priorities was improving adherence to international guidelines.
Other considerations raised

Free text fields allowed respondents to identify three issues they considered important for implementation of OAMPs that should be addressed by the Joint Effort Initiative. Additional topics raised in this section included:

- ensuring care delivered is personalised,
- addressing prevention and monitoring disease progression in the programs, and
- marketing and promotion of the programs.

Results of Survey 2

The final ranked list of priority action statements from survey 2 are presented in Table 2. The top five ranked action statements prioritised by the participants were:

i. Establish guidelines for the implementation of different OAMP models to ensure consistency of delivery and adherence to international best practice.

ii. Develop and assess training and education programs for HCPs delivering OAMPs.

iii. Develop and evaluate the implementation and outcomes of novel and innovative models or pathways of OAMPs.

iv. Develop and assess core skill sets and resources for HCPs delivering specialised OA care including those who operate with an extended scope of practice.

v. Develop a framework for enhancing the quality of care provided to people living with OA who engage with OAMPs including measurement of care quality and strategies for improvement.

The next highest-ranked priorities covered the themes of encouraging engagement of both consumers and HCP with the programs, evaluation of the cost of running OAMPs, and how they operate within local policy and healthcare environments. Securing operational funding for programs did not feature in the top 10 priorities, even though it received a lot of support in the initial survey.
Discussion

As part of a coordinated response to the global rise in the burden of chronic disease, the World Health Organization (WHO) has released a global strategy to promote the implementation of integrated, people-centred health services. This strategy requires a fundamental paradigm shift in the funding, management and delivery of healthcare services (16). This strategy requires the establishment of guidelines as to how these new, complex models of care may be implemented. Models of care for musculoskeletal health take the recommendations for evidence-based care (the ‘what’) and provide the ‘how’ regarding implementation of these recommendations. The model of care has been described as providing the right care, at the right time, in the right place, with the right team, using the right resources (17). The highest ranked action statement as identified by participants in this study was to ‘establish guidelines for the implementation of different OAMP models to ensure consistency of delivery and adherence to international best practice models of care’. The participants also felt that further work is required to assist international groups to achieve the changes to health service delivery necessary to establish OAMPs by providing guidance regarding not only the content, but also the processes that support the implementation of these programs.

An essential attribute of these major changes to health service delivery is the need to reorient and educate the health workforce (18). This, coupled with the knowledge that health outcomes are largely dependent on the quality of training and capabilities of health care professionals are important drivers for the need to build workforce capacity to support models of care such as OAMPs (18). Deficiencies have been identified in the current and emerging global health care workforces regarding the capacity and capability to manage coordinated/integrated services such as OAMPs. There are chronic shortages
of HCPs responsible for managing musculoskeletal disorders across all professions, particularly across low- and middle-income countries and in regional/rural areas (19, 20).

There is growing evidence of a clear deficit in professional capabilities that limits the implementation of optimal evidence-based OA care in healthcare (21). Several major barriers to the implementation of evidence-based OA care have been identified (21, 22). Important common themes include that clinicians feel under-prepared in terms of knowledge and skills to deliver treatments recommended by OA management guidelines, and clinicians report doubts about the effectiveness of treatments for OA. Given this evidence, it is unsurprising that the second most highly ranked action identified was the development of training and education programs for healthcare professionals delivering care in OAMPs.

The fourth highest ranked priority was closely related, and concerned the skills, confidence and training (including core competencies) of health professionals delivering OAMPs.

Some work has been done to address the perceived lack of training, knowledge and skills for health practitioners in general. A systematic review in 2010 identified that there was sparse literature available at the time regarding the effectiveness of educational strategies used to improved professional behaviours in the implementation of guidelines for OA management (23). Since this review there have been several studies that have tested different strategies to improve the expertise of HCPs to deliver recommended OA care. A Canadian observational study of the Getting a Grip on Arthritis® program followed 553 HCPs in primary care for six months following inter-professional education workshops and found significant improvements in best practice scores for knee OA cases (24). Two Dutch randomised controlled trials tested the effectiveness of an interactive workshop approach to educating HPCs about implementation of the Dutch physiotherapy guideline for hip and knee OA. The interactive workshop was found to improve HCP guideline knowledge and adherence (25, 26).
The Management of OsteoArthritis In Consultations (MOSAICS) study in the United Kingdom tested the clinical and cost-effectiveness of a model OA consultation (MOAC) that implemented the National Institute for Health and Care Excellence (NICE) guidelines for OA management in primary care (11). A key component of this trial was to develop and evaluate a training package for management of OA by GPs and practice nurses. The MOAC was developed in consultation with GPs and patients using a Delphi consensus exercise (27, 28) following which the practice nurse training program to support the MOAC was developed and tested (29). The MOAC was tested in a cluster randomised controlled trial in 10 general practices and demonstrated improvement in the implementation of the core NICE guidelines for OA care in the intervention group compared with controls (30). Given the accumulated evidence regarding the use of educational interventions to improve the implementation of OA management guidelines, it is logical to consider the combined findings of this body of evidence and focus future efforts on harmonising rather than replicating the development of training and education programs for HCPs delivering care in OAMPs. Identifying the core capabilities required of health professionals to deliver high-quality OA care is the necessary first step and is work currently underway through “Joint Effort”.

OAMPs have been implemented internationally and tested across a variety of settings including teaching hospitals (e.g. Osteoarthritis Chronic Care Program) (12), university clinics (e.g. Amsterdam Osteoarthritis Cohort) (31) physiotherapy clinics (e.g. Good Living with OA Denmark and Better Living with OA) (10, 13), community care (e.g. ESCAPE-PAIN) (9) and general practice (e.g. PARTNER model, MOSAICS and the SAMBA model) (30, 32, 33). Yet, there are many parts of the world that have not yet implemented OAMPs within their health systems. There is a raft of reasons why OAMPs have not become established uniformly across the world, and many of the perceived barriers and enablers to the
management of OA have been synthesised in a recent systematic review (21). There were no enablers reported, but several barriers were identified including the perception that OA as a condition is not that serious and is seen as a comorbidity in the context of other conditions (e.g. cardiovascular disease, diabetes). This perception has further compounded system-related barriers to the implementation of evidence-based OA care (34). Where the health policy and infrastructure required to support differentiated OAMPs is lacking, new, innovative models of care might prove to provide at least part of the solution. New models of OA care service delivery utilising technology such as telehealth, online consultations and online platforms have been designed and are being tested in current research (35-38).

The third highest ranked activity statement of the Joint Effort Initiative was to ‘develop and evaluate the implementation and outcomes of novel and innovative models or pathways of OAMPs’.

As these new models of service delivery for OAMPs are developed, tested and implemented, it is very important to consider the quality of OA care delivered across these programs. This was ranked the fifth most important consideration for future action in the Joint Effort Initiative consensus exercise. Quality care indicators were used to measure uptake of core non-surgical OA management in the MOSAICS study (30). These quality indicators and other metrics that reflect whether the core components of OA management are met (i.e. education around OA, support for self-management, exercise programs and promotion of increased physical activity (8)) would go a long way to ensure the provision of consistent, quality care across all international programs.

There are several limitations to note with this consensus exercise. Firstly, the participants of the survey, and of the Joint Effort Initiative in general, hail from high-income nations. We have received very minimal input from lower- or middle-income countries, or countries outside Europe, Australia and North America. This issue should be addressed through targeted invitation of researchers and clinicians...
particularly from Africa, Asia, Central and South America to contribute to the Joint Effort Initiative.

Secondly, the survey was limited to people attending the OARSI meeting, or who are members of the Joint Effort Initiative. The findings from this study were generic and should cross international borders. However, further discussions around implementation in different health systems and settings is required as an ongoing focus of the Initiative. Importantly, the participants of this study were mostly academics, a smaller proportion were clinicians, while patients and the public were not consulted. It is crucial that all end users including clinicians, patients and the public are engaged in this work. This is an important limitation that will be addressed as an immediate priority of the Joint Effort Initiative.

Future actions

The Joint Effort Initiative has proposed four working groups to address the areas prioritised. They will be:

- **Core Capabilities:** This group is currently working to identify the core capabilities required of health care professionals to deliver high-quality OA care. These core capabilities will provide a framework for the future development of strategies for training and educational activities.

- **Training and Educational Resources:** This group will develop and evaluate a professional training and education program for health care professionals delivering OA management programs.

- **OA management program implementation:** The Joint Effort Initiative will seek to develop guidelines for the implementation of OAMPs. To assist with this the group may develop a compendium of information for health care professionals, policy makers and consumers from different existing resources. New resources may also be developed as required. These resources
will focus on ensuring that OAMPs meet the core recommendations for OA care and provide
support for developing OAMPs.

- **Outcomes of OAMPs:** A working group will be assembled to work on developing a core set of
outcome measures for OAMPs. This will enable the testing and comparison of existing and novel
models of OA care service delivery particularly the comparison of clinical versus cost-
effectiveness. Systems that include the ability to share data will also enable comparative
effectiveness studies. A long-term goal may be to establish and maintain a data repository to
facilitate future research of OAMPs.

**Conclusion**

Prioritizing statements will bring focus to the future work of the Joint Effort Initiative in the immediate
future and provide a basis for longer-term actions.

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Author contributions

DH conceived the study. JE, JB, DH, KB, MH, MVE, RH and KD designed the study, JB and JE collected and analysed the data, and JE and JB drafted the manuscript. All authors gave critical review and advice on the study design and interpretation, including the questions for both surveys. All authors contributed to reviewing and revising the manuscript, and agreed on the final draft.

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Conflict of Interest

DJH provides consulting advice to Tissuegene, Merck Serono and TLCBio.
References


Figure Legends

Figure 1: Overview of the prioritisation process.

Figure 2: Total number of responses received to multiple choice options in each domain. A maximum of 3 responses were allowed for each domain.
Table 1: Participant demographics for survey 1 and survey 2. (*) designates multiple answers were allowed for that question.

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<td>26 (100)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Highest degree</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PhD</strong></td>
<td>36 (70)</td>
<td>17 (65)</td>
</tr>
<tr>
<td><strong>MD</strong></td>
<td>2 (4)</td>
<td>1 (4)</td>
</tr>
<tr>
<td><strong>Masters by Research</strong></td>
<td>4 (8)</td>
<td>2 (8)</td>
</tr>
<tr>
<td><strong>Completing PhD</strong></td>
<td>9 (18)</td>
<td>6 (23)</td>
</tr>
</tbody>
</table>
Table 2: Top 20 topics identified from Survey 1 and the respective action statements developed for each. Results are ranked in order by the highest priority topics identified by survey 2. A lower median value means participants rated this action as a higher priority for OAMP implementation.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Topic presented in Survey 1</th>
<th>Action statement presented in Survey 2</th>
<th>Median Rank</th>
<th>(IQR)</th>
<th>Action statement ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Mode of delivery of the OA Management Program</td>
<td>Establish guidelines for the implementation of different OA Management Program models to ensure consistency of delivery and adherence to international best practice (see 7)</td>
<td>6.25</td>
<td>8.88</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>Implementation and adherence to international OA guidelines</td>
<td>Incorporated into statement 8 above</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>18</td>
<td>Training for OA management program personnel</td>
<td>Develop and assess training and education programs for health care professionals delivering OA Management Programs</td>
<td>7.00</td>
<td>8.38</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Novel models or pathways of OAMP</td>
<td>Develop and evaluate the implementation and outcomes of novel and innovative models or pathways of OA Management Programs</td>
<td>7.50</td>
<td>8.38</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>Skills, confidence and training (including core competencies) of health professionals</td>
<td>Develop and assess core skill sets and resources for health care professionals delivering specialised OA care including those who operate with an extended scope of practice.</td>
<td>7.50</td>
<td>8.38</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Delivering the OAMP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---------------------</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Managing therapeutic effects / behaviour change</td>
<td>Incorporated into statement 9 above</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>Quality of the OA care provided for consumers</td>
<td>Develop a framework for enhancing the quality of care provided to people living with OA who engage with OAMPs including measurement of care quality and strategies for improvement.</td>
<td>7.75</td>
<td>6.37</td>
<td>4</td>
</tr>
<tr>
<td>19</td>
<td>Developing consumer self-management</td>
<td>Develop, assess and compare programs in community settings (e.g. care managers/ coordinators/teams) that aim to support self-management for people living with OA</td>
<td>8.50</td>
<td>6.87</td>
<td>5</td>
</tr>
<tr>
<td>16</td>
<td>Consumer engagement with the OAMP</td>
<td>Develop and assess strategies to enhance the engagement of people living with OA with OA Management Programs including uptake and adherence.</td>
<td>8.50</td>
<td>7.25</td>
<td>5</td>
</tr>
<tr>
<td>15</td>
<td>Health-care provider engagement with the program</td>
<td>Evaluate and develop strategies to enhance the engagement of all relevant health providers with OA Management Program models of care</td>
<td>8.75</td>
<td>5.25</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Comparison of clinical outcomes and cost</td>
<td>Develop, evaluate and compare clinical outcomes vs cost-effectiveness for the delivery of different models of OA Management Programs</td>
<td>8.75</td>
<td>7.0</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Statement</td>
<td>Score</td>
<td>Importance</td>
<td>Weight</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>-------</td>
<td>------------</td>
<td>--------</td>
</tr>
<tr>
<td>20</td>
<td>Cost-effectiveness of OAMPs</td>
<td>Incorporated into statement 2 above</td>
<td>-</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>Health care system</td>
<td>Evaluate the implementation of OA Management Programs, and how they operate within different health care systems (e.g. government supported vs user-pays)</td>
<td>8.75</td>
<td>8.63</td>
<td>6</td>
</tr>
<tr>
<td>17</td>
<td>Health care policy</td>
<td>Develop strategies to influence/change healthcare policy to support the implementation and maintenance of OAMPs</td>
<td>9.00</td>
<td>5.5</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>Skills, confidence and training of HCP delivering OAMPs</td>
<td>Develop and assess competency standards (certification) for all health care professionals delivering OA Management Programs</td>
<td>9.75</td>
<td>7.63</td>
<td>8</td>
</tr>
<tr>
<td>12</td>
<td>Reimbursements of out-of-pocket for OAMP participants (public, private, insurance)</td>
<td>Develop strategies to engage healthcare policy and insurance agencies to limit out-of-pocket expenses for OA Management Program participants</td>
<td>10.25</td>
<td>10.0</td>
<td>9</td>
</tr>
<tr>
<td>14</td>
<td>Provision of accurate information for consumers</td>
<td>Develop and maintain resources that provide accurate, evidence-based information for people living with OA.</td>
<td>10.50</td>
<td>2.25</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>Operational funding for programs</td>
<td>Develop and assess strategies to secure and maintain operational funding for OA Management Programs</td>
<td>11.00</td>
<td>10.25</td>
<td>11</td>
</tr>
<tr>
<td>13</td>
<td>Stakeholder engagement</td>
<td>Implement and assess strategies that aim to achieve broad OA Management Program stakeholder engagement within the greater implementation framework</td>
<td>11.25</td>
<td>8.12</td>
<td>12</td>
</tr>
<tr>
<td>10</td>
<td>A core recommended set of outcome measures for OAMPs</td>
<td>Develop a set of minimum core set of outcome measures for OAMPs</td>
<td>12.25</td>
<td>7.37</td>
<td>13</td>
</tr>
</tbody>
</table>
Identification of domains, key topics and multiple choice questions by the study team

Development and circulation of survey 1 in REDCap software (n=115)

Completion of survey 1 by invited participants (n=51, 44%)

Analysis of survey 1 results and identification of top 20 topics chosen by participants

Synthesis of top 20 topics into 17 action statements for the Initiative to undertake

Circulation of survey 2 to consenting participants (n=40)

Completion of survey 2 (ranking of statements) via 1000minds (n=26, 65%)

Analysis of results and identification of the top 5 priorities for action

Circulation of final priority results to the Initiative members for discussion

Previous priority topics discussed by the Initiative

Review of topics and consensus by study team
operational funding
healthcare systems
stakeholder engagement
reimbursement for participants
healthcare policy
governance
electronic medical record
safe and appropriate
low SE countries
other
environmental features
mode of delivery
specialised skill sets for OA professionals
accurate information for consumers
Training for OA management personnel
updating with most current knowledge
overarching framework
general skill sets for OA professionals
comorbidities
defining roles for HCP
accessability
socioeconomic considerations
cultural considerations
Competencies for HCP
managing therapeutic affects / behaviour change
HP engagement with program
consumer engagement with program
self-management
cost-effectiveness
function
pain
QoL
long term program monitoring
consumer adherance
sharing challenges of implimentation
research collaboration
clinical outcomes vs cost
skills, confidence and training for HCP
novel models of OAMP
adherence to international OA guidelines
core outcome measures for OAMP
quality of care
core interventions of OAMP