Reducing the impact of OA: Prevention and effective management in Canada
Phase 3: Promotion of effective strategies

Final report

Submitted to Sanofi,
December 16, 2015

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Acknowledgement

Bone and Joint Canada wishes to acknowledge the leadership and hard work of the Steering Committee without whom this project would not have been possible.

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Background

Osteoarthritis (OA), and the resultant pain and disability, is a significant and pressing problem across the world as identified in a number of international reports[i] [ii] [iii] [iv] [v]OA is a chronic disease that requires a self-management program that includes education and exercise[vi] to manage the symptoms within a person's everyday life which entails and therefore, early detection is needed. The initial symptoms of OA include some mild joint pain and/or swelling and/or stiffness, which can lead to reductions in physical activity levels. For individuals who experience disease progression the joint degenerates, symptoms fluctuate and become worse such that further medical interventions are required. At this time these individuals need access to both non-pharmacological and pharmacological treatments to effectively manage these symptoms. Learning how to self manage chronic disease should take place within a primary care environment where patients are able to access the expertise of a number of health care providers using a coordinated model of care.

The management of OA is complex due to the following factors:

- the prevalence of risk factors such as obesity and musculoskeletal injury,
- patients' lack of knowledge of the management strategies including appropriate types and levels of exercise,
- lack of services including diagnosis for early OA,
- the variability in health care providers and scopes of practice across the country,
- and the variation in public versus private options available for OA services.

There have been standards in care established around the world including the prevention, and effective management of OA[vii] [viii] [ix] [x]. Standards for arthritis care, including inflammatory and osteoarthritis, were set in 2005 in Canada and are provided in a report "Arthritis isn't a big deal... ...until you get it. Ask 4 million Canadians. Report from the Summit on Standards for Arthritis Prevention and Care, November 1 – 2, 2005". [xi]These standards identify strategies within the context of awareness, prevention and management.

Through 2013/2014 BJC undertook a multi-phased initiative to identify OA specific programs across Canada in relation to the standards of care and the action items needed to improve access to quality care for individuals with OA. In 2013, through **phase 1**, BJC undertook a stakeholder engagement across the country to identify programs that had been designed to implement best practices in OA care. From this engagement it was clear that, since these standards were developed, little activity to implement changes at a system level in Canada has occurred. There were a number of examples of innovative practices that had been developed at a local or regional level to better manage the care needs of individuals with OA. However, services in Canada are a long way from addressing the barriers and achieving an effective system to both prevent and manage OA. In **phase 2** BJC hosted a meeting in Toronto in May 2014 to identify the challenges and opportunities in the management of OA across the spectrum of the disease including the management of early OA (Appendix A.)

In synthesizing the stakeholder engagement and the meeting discussion the following five priorities for action were identified:

1) Implementation of what we know works (e.g. education and exercise programs)

2) Conduct research to evaluate any implementation and/or program transfer/expansion opportunities identified and/or develop an evaluation framework

3) Development of a repository of existing programs

4) Engage with the other sectors, such as health and wellness, to more formally partner in developing programs

5) Target educators/providers with a consistent message related to prevention of primary and secondary OA and their management

Further detail is provided in Appendix B.

Phase 3: OA Project Action

As a result of the findings from this previous work the ***goal of this project*** (**Phase 3**) was to facilitate an improved awareness of the programs across the country and to continue to build a national network of stakeholders from across the health care, social and health/wellness sectors to: 1) identify the evidence-based strategies that will support prevention, early diagnosis and effective management that is targeted at meeting the needs of individuals, and; 2) assist local, regional or provincial communities to develop and implement the identified strategies for individuals across the spectrum of disease severity. This was undertaken using the following strategies:

1. **Governance**

   Development of a Steering Committee of experts in OA that guided the completion of the project

2. **Identification of programs**

   Extensive networking was undertaken and programs were identified wherever possible. A snowball technique was taken with programs or centres initially identified by committee members and through the BJC network. Attempts were made to identify programs in each of the provinces so as to achieve a national perspective. Contacts were made through email with a follow up email where there was no reply. An initial phone call was undertaken to provide information on the project and identify if the organization had a specific program to meet the needs of individuals with OA. However many of the programs either did not respond to the email communication or, on the initial communication it became clear there was no targeted program that was designed to meet the needs of OA specifically. After 6 months of searching, four programs with a systems approach to management of OA were identified and interviews were undertaken using a semi structured interview guide (Appendix C.)

3. **Development of written summaries**

   Extensive program details were collected and, after review by the steering committee, were distilled into information sheets reflecting the activities of these programs. The information sheets summarize the following:

   - ***General program information:*** including information on location, referral process and payment
   - ***Program structure:*** including: assessment, education, exercise, other services provided
   - ***Linkages to medical management:*** linkages to primary health care for medical management of OA as well as co morbidities and ability to link to specialists for consultations on pain or surgery
   - ***Ongoing patient support***: Linkages to community services as well as ongoing clinic support
   - ***Evaluation:*** data tracking including outcome data

   These summaries were approved by the organizations.

4. **Posting the information for distribution**

   BJC will post the summaries on the BJC web site and start the process of dissemination to the relevant stakeholders.

Additional work

Within the context of this search, as there were few programs within Canada which met the criteria, and BJC was interested in an OA program that has the potential to be implemented as a best practice at multiple settings, a search was also undertaken to identify any international programs that had been effectively implemented in multiple centers. BJC identified two programs that had been implemented at a national level. The first was in Sweden "Better management of patients with Osteoarthritis" (BOA) has been implemented at multiple locations across Sweden. A program "Good life with osteoarthritis in Denmark" (GLA:D) was also identified which is an evidence-based education and neuromuscular exercise program that has resulted in the training of 290 physiotherapists and the treatment of 8600 individuals. Research from the program has demonstrated a reduction in progression of symptoms by 36%. This program was identified as the best researched and evidence based program available. As such BJC worked closely with the researchers from Denmark to develop a plan to bring the program to Canada. Through additional funding from Sunnybrook Health Sciences Centre (SHSC), BJC undertook the translation of the Danish program into English and hosted a 2-day training session for the physiotherapy staff within the Holland Orthopaedic and Arthritic Centre at SHSC. The OA program will be offered at the Holland Orthopaedic and Arthritic Centre to patients who have undergone consultation for hip and knee replacement surgery and who are deemed non surgical. SHCS will undertake a pilot feasibility study to determine the success of the program for individuals with moderate to severe OA within Canada.

Conclusion

Phase 3 of the OA strategy successfully identified four programs in Canada that currently use best practices in the management of OA. Although a number of other Canadian sites were identified many did not respond or they did not have a focused system based management strategy to their management of OA. Information about these Canadian programs has been developed and will be posted on the BJC website for dissemination.

Due to the lack of OA specific programs in Canada, an international search was undertaken to identify programs that were evidence based and which had been implemented at multiple sites. Through this strategy, a program called GLA:D was identified from Denmark which is an evidence based education and neuromuscular exercise program which has been implemented at 290 sites across Denmark and could have promising results in Canada. A pilot project has been launched at the Holland Orthopaedic and Arthritic Centre in Toronto, Ontario.

Next Steps

The next steps with this strategy therefore are 2 fold. The first step is to promote the best practices for the programs for OA, through integration within the community including primary care. The second step is the evaluation of the implementation of the evidence based education and neuromuscular exercise program GLA:D and the appropriate expansion across Canada.

Appendix A: Challenges and opportunities in an OA model

The management of OA is complex and requires a multi system approach that includes the health and wellness sector intersecting with the health care sector to provide a coordinated approach to the education and information on lifestyle management as well as access to activity for people in Canada[xii]. Through the stakeholder engagement it was identified that currently, within Canada, there are a number of perceived barriers to this coordinated approach to care and some examples of local, effective solutions that have been used to address these barriers at a local or regional level. Below are the barriers and some examples of potential opportunities that were identified to improve care.

Challenge 1: Lack of implementation of evidence based strategies for primary and secondary prevention

A. There are some evidence-based strategies that reduce the incident of injury in sports (e.g. FIFA 11+ which reduces injury rates in youth athletes in soccer by up to 70%), which are currently not implemented within Canada due to lack of a coordinated approach between health care providers and sporting organizations.
   Potential opportunity: Work with sporting organizations to implement injury prevention programs

B. There is also an epidemic of obesity that is leading to an increase in rates of OA including primary and secondary joint disease.
   Potential Opportunities: Work with other groups support the messaging from the experts in obesity

C. Exercise is an important strategy for secondary prevention of OA. There is lack of facilitation of knowledge regarding exercise to manage OA including type and intensity.
   Potential opportunities*:* Develop physical activity and exercise guidelines that promote the uptake of appropriate exercises for person with OA.

Challenge 2: Level of education available on halting the disease process in OA

A. Although there are a number of initiatives that have developed educational information for people with OA, there are little information available on early OA including the signs and symptoms and the disease modifying opportunities.
B. There is lack of education with many of the individuals who assess and manage people with OA, specifically early OA, including those working in the health/wellness fields as well as primary care practitioners who often have little training in MSK disorders. This educational need includes appropriate exercise prescription and other management strategies.

Potential Opportunities: Educational programs are being undertaken in a number of regions for health care providers in OA such as a provincial program in British Columbia. There are also opportunities to improve access to patient education, educate wellness providers through a coordinated approach to education and the use of IT and remote programming.

Challenge 3: Lack of connection between wellness and health care sectors

The health/wellness sector, which provides the person with the access to supported self-management, and the health care sector, which has the disease specific assessment and treatments are not well aligned. This leads to lack of access for people as well as confusion in education with different criteria for assessment and exercise prescription. The wellness sector uses wellness measures such as the PAR-Q and the Guidelines for Physical Activity which bias against exercise with knee pain without a health care consultation.

Potential Opportunities: Examples of opportunities that have been identified are the development of Physical activity guidelines for people with OA knee pain, opportunities to improve people's physical literacy and education and training on OA for personal trainers.

Challenge 4: System planning and coordination for health care interventions

A. People who are experiencing OA need access to the most appropriate health care professional to ensure access to the best evidence-based care. This care includes education about their symptoms so that they can manage them effectively. The current system is an uncoordinated system where people may receive duplicate care or insufficient care based on the service provider available.
B. As a chronic disease, the management of OA aligns with the management of other chronic diseases such as diabetes, osteoporosis and cancer all of which require a coordinated approach to facilitating physical activity. Currently there is little coordination between these programs across the country

Potential Opportunities:

1. Planning for an inter professional model of care that maximizes the ability of each professional to work within their scope of practice and provide evidence based care.
2. Ensure the appropriate resources within the health care sector and the health/wellness sector so that individuals have access to a system that is coordinated.
3. Enhance access through the improved coordination of physical activity programs with other chronic disease populations.

Appendix B

In synthesizing the stakeholder engagement and the meeting the following five priorities for action were identified in a report “Reducing the impact of OA: A report on the prevention and effective management in Canada” which has been made available through the BJC web site at www.boneandjointcanada.com

1) **Implementation of what we know works**
   It was identified that there are currently programs that are available for OA prevention and to improve the management of individuals with early OA. However, these are at a local level and there is opportunity to expand them to a regional or provincial level or to transfer and evaluate the effectiveness of the program in local regions of other provinces. This includes programs that are health care based where there is a focused approach on education on self-management and exercise as well as access to evidence-based medical care. There are also programs that are more population based that focus on participation in exercise that could reinforce exercise prescription to improve symptoms.

2) **Conduct the research to evaluate any implementation and/or program transfer/expansion opportunities identified and/or develop an evaluation framework**
   It was noted that many of the programs are still in early stages and that the strategy must ensure a comprehensive research and evaluation approach to ensure the program is being developed to meet the needs of individuals with OA in the different regions of Canada.

3) **Development of a repository of existing programs**
   There are a number of programs that were discussed and significant interest in the different types of approaches to care. It was identified that a repository of the programs with information about the programs and key contacts would be beneficial in continuing to promote their use across the country.

4) **Engage with the other sectors, such as health and wellness, to more formally partner in developing programs**
   Many of the programs and initiatives discussed required interaction with the health and wellness sector. Developing a more established relationship with this sector was therefore identified as important in moving forward improved programing in OA. Work should also be considered in building relationships within the private sector.

5) **Target educators/providers with a consistent message related to prevention of primary and secondary OA and its management**
   Messaging to individuals with knee pain and potential OA will be important in reducing the progression of OA. Identifying the key stakeholder including health care and wellness professionals who will be connecting with these individuals and ensuring a consistent message will be important.

Appendix C

Stakeholder engagement questions

This engagement is being undertaken to identify the strategies that are currently being used across Canada in the conservative management of osteoarthritis along the spectrum of the disease severity. The information may be used to develop a short summary document on the best practice in OA management programs across the country.

Identify program and where located, including satellite locations?

Policy

1. How do you ensure that the program is evidence-based?
    a. guidelines? Which guidelines do you use? Regular Literature Reviews
    b. criteria or
    c. care plans/ standardize Care Pathways
    d. Do you have inclusion criteria for treatment access

2. Were individuals with OA involved with its development?

3. How is the program funded?

4. Is the OA program group based or individual?

5. Who is involved with the program?
    a. Physicians
    b. Physiotherapists
    c. Chiropractor
    d. Kinesiologist/athletic therapist
    e. Other

6. Where do the referrals come from for the program? Do they require a physician's referral?

7. How is the program integrated into the system? Does it align with any provincial program within the area?

Structure

8. How are the patients' visits structured? Is it multidisciplinary? Do all patients see the different health professionals? How is it decided who gets what care?
    a. Medical intervention (medications and joint injections)
    b. Education
    c. Exercise
    d. Pain management

e. Weight management
f. Manual therapy

9. What education materials do you use? In what format are they delivered? Written, verbal, web based? What topics are covered? Is the education provided passive or actively support behavioral change? Do you use technologies in your practice such as web based exercise programs

10. Where do you hold the exercise program and what types of equipment do you use?

11. Do you send patients for additional treatments to other places or individuals? If so for what?
    a. Referral Practice
        i. Rheumatology
        ii. Orthopaedics
        iii. Sport Medicine
        iv. Pain Management
        v. Specialized Centre

12. Is there opportunity to re engage with the program once discharged?

Community services

13. What do you recommend to patients for activity management? Do you facilitate access to exercise facilities for ongoing physical activity? If so, where? Do you recommend specific types of activity and if so to whom?
    a. Running
    b. Yoga
    c. Pilates
    d. Water exercise
    e. Cycling
    f. Walking
    g. Weight Training
    h. Balance Training
    i. Other

14. Are you aware of any other resources/programs that exist or are being developed for people with OA in your region/province?

Results and next steps

15. Do you evaluate the program and if so using what metrics?
16. Is your program successful? How many people attend the program? What are the facilitators of the success?
17. What are the barriers to the program and the patient access?
18. Do you have plans to modify or improve your program?

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