



Bone & Joint Health
Strategic Clinical
Network™

Final Report

“An Environmental Scan of Programs and Education Tools for the Management of Osteoarthritis”

Presented to: Bone & Joint Health Strategic Clinical Network Leadership Team

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Introduction

Over 4.4 million Canadians are currently living with osteoarthritis (OA). Within the next 30 years, over 30 million Canadians will be affected by OA and one will be newly diagnosed every 60 secondsⁱ. This rapid increase in diagnoses will heighten the burden already experienced by the Canadian health care system and economy. In Alberta alone, OA accounted for more than \$2.7 billion in estimated economic losses in 2010ⁱⁱ. Therefore, it is vital that additional supports are provided at surgery but also upstream for Albertans to better manage their OA. Improved care and support for Albertans is the strategic focus of the BJH SCN and purpose behind the development of the BJH SCN Model of Care for OA Management (see Appendix 1).

Purpose

The purpose of this environmental scan is to inform further development and population of the BJH SCN Model of Care for OA Management (OA Model) by identifying programs and education tools in Alberta, Canada, and internationally for the management of hip and/or knee OA symptoms.

Criteria were developed for the inclusion of programs. A program was defined as “a structured approach for individuals that can be done independently or supervised by a provider to address specific symptoms (e.g. pain, function) or area (e.g. weight loss, exercise)”. Programs were classified as separate from therapies which involve individualized provider-based treatment (e.g. physiotherapy, massage). Education tools were defined as “resources that provide knowledge and/or information for a target audience (e.g. website, workshop/seminar, pamphlet)”.

Objectives

Two objectives were identified for the environmental scan:

1. Identify programs and education tools (English language) for adults with hip and/or knee OA (mild, moderate, advanced) who are non-surgical or pre/post-surgery in the following health domains:
 - I. Exercise
 - II. Mental Health
 - III. Pain Management
 - IV. Nutrition & Weight Management
2. Identify which programs and education tools have been evaluated to determine effectiveness and/or safety.

Methods

The environmental scan was conducted from April to July 2017. Methods to identify programs and education tools consisted of an internet-based search of organizations, literature search, and contacting stakeholders with expert knowledge.

Internet-based searches of organizations were conducted using search engines (Google, InformAlberta) and websites of identified organizations (e.g. MyHealth.Alberta.ca, YMCA). *Literature searches* were conducted using PubMed, Google Scholar, and Alberta Health Services (AHS) Knowledge Resource Service (KRS) to identify programs and education tools and to determine if programs were evidence-based. *Stakeholders* contacted via email and telephone included: Bone and Joint Canada, The Arthritis Society, BJH SCN Hip and Knee Working Group, BJH SCN Leadership Team members, and the Alberta Bone and Joint Health Institute (ABJHI).

In addition to the previously mentioned stakeholders, two hip and knee clinics in Alberta were visited by Julia Paccagnan with the ABJHI Quality Improvement Manager for the Hip and Knee Working Group (Emily Brockman). The clinics, South Health Campus (SHC) Hip & Knee Clinic and the Alberta Hip & Knee Clinic, located in Calgary, were visited to inquire about any known or implemented programs and education tools for patients with OA. Emily Brockman provided additional information regarding programs and education tools identified at the remainder of the hip and knee clinics in Alberta. These findings are included in the additional findings section of this report because, apart from GLA:D™ Canada (described in the results section), no OA specific programs or education tools were found for pre- and post-surgery. Existing programs and education tools at Hip and Knee Clinics in Alberta are primarily focused on supporting the patient in relation to the surgery itself rather than OA.

Meetings were held weekly with Julia Paccagnan and Ania Kania-Richmond and/or Sheila Kelly to discuss progress, findings and next steps of the environmental scan.

To enable systematic collection of information across programs and education tools, two data collection tools were created by Julia Paccagnan: “OA Environmental Scan Survey: Programs” and “OA Environmental Scan Survey: Education Tools” (see Appendix 2 and 3, respectively). Both surveys captured information of interest based on the stated objectives, including specific variables (listed in table 1). Information for each program or education tool was captured in the surveys and then in a master database, organized by variable, for all programs (Appendix 4) and all education tools (Appendix 5).

Table 1 – Information and variables collected for programs and education tools

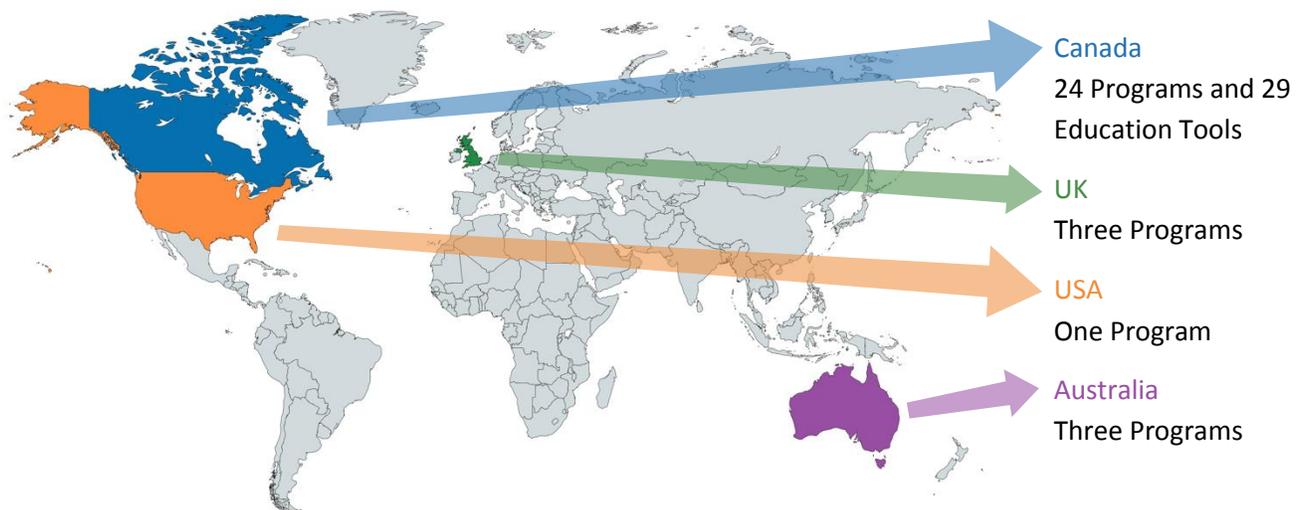
- Location,
- surgical status (pre-, post-, or non-surgical patients),
- referral,
- eligibility criteria,
- facilitator/delivery mechanism,
- cost and payment sources,
- health domain (exercise, mental health, pain management, and weight management/nutrition),
- inclusion of an education component (for programs only), and
- research and/or evaluation activity (for programs only).

Please refer to Appendix 6 for a brief description of each variable.

Searches for programs were conducted in Alberta, other Canadian provinces, and for international locations in the USA, UK, and Australia. Searches were limited to English speaking countries and programs in Canadian provinces. Program findings in the USA were very limited, which was

not expected, however they were based on parameters of the environmental scan.¹ Searches for education tools were conducted only in Canada; outside of Alberta, searches were focused in British Columbia (BC) and Ontario, given the limited number of tools identified through an initial search in the other provinces. We did not search international locations as time lines for completion of this environmental scan did not permit a thorough search of this broad geographic area.

Results



¹ One program was identified in the USA. Searches for programs were conducted using the search terms “osteoarthritis program”, “osteoarthritis program exercise”, and “osteoarthritis program surgery”, “osteoarthritis mental health program”, and “osteoarthritis management program”. These terms included the country as “USA” and “United States” as well as included the top nine states with the highest arthritis costs to the department of health (<http://oaaction.unc.edu/policy-solutions/cost-of-osteoarthritis/>).

The results of the environmental scan are organized in the following way: program findings will be presented first followed by education tools. An overview for each will be provided and followed by more detailed results, which will be organized by location. Alberta programs will be presented followed by programs identified in other Canadian provinces (BC and Ontario) and international locations (USA, UK, Australia). Succeeding programs, education tools identified in Alberta will be presented followed by education tools developed and/or offered in other Canadian provinces. The results section concludes with additional findings that include selected programs and education tools that did not meet the criteria of the environmental scan but may be worthwhile to consider.

Results will be further organized and presented based on the following variables:

- Location(s) (country, city, name of facility)
- Area of focus (OA only, general arthritis)
- Severity of OA (mild, moderate, severe)
- Joint affected by OA (knee and/or hip)
- Surgical status (pre-surgical, post-surgical, and/or non-surgical)
- Referral source (self, physician, or other provider)
- Eligibility criteria
- Facilitator/delivery mechanism
- Cost and payment sources
- Health domain (exercise, pain management, mental health, nutrition and weight management)
- Inclusion of education component for programs
- Research and/or evaluation activity

Programs – overview

A total of 24 programs were identified, four of which will not be included in the report as an insufficient amount of information was collected. This was due to limited information found online and no response received from the identified contact individual. Please refer to Appendix 7 for a list of these programs. Of the remaining 20 programs, nine are located in Alberta and 11 in other Canadian provinces and international locations². Of the Canadian provinces and territories, apart from Alberta, four programs were found in BC and Ontario.

Of the 20 programs, 65% (13/20) are OA specific (OA only) and the remaining 35% (7/20) target general arthritis. The severity of OA (mild, moderate, or advanced) is not specified for the

² The GLA:D™ Canada program is included in the Alberta programs section of the results, however, it is also offered in BC and Ontario.

majority (85% (17/20)) of programs, while 10% (2/20) of programs are designed for mild and moderate OA only, and one program is unknown (5%)³. 95% (19/20) of programs are suitable for OA affecting the hip and/or knee joint while one program is unknown (5%).

Education tools – overview

The environmental scan identified a total of 29 education tools, eight of which have been developed and/or delivered in Alberta. The remaining 21 have been developed and/or delivered in BC or Ontario. Just over half (55%) of these tools are OA specific (in other words, are focused only on OA). All of the education tools are not specific to OA severity (mild, moderate, or advanced) and are suitable for OA in the hip and/or knee joint.

Programs - details

Alberta:

This section provides a breakdown of the nine of 20 programs based in Alberta. Details for each program are provided in Appendix 4. Three programs, GLA:D™ Canada, Joint Effort, and Osteoarthritis, will be discussed in more detail as they represent the only programs identified in Alberta that are OA specific.

Joint Effort

A six-week program for people with knee or hip OA to become more active in a safe setting. The exercise portion of the program begins with a one hour individualized program design followed by 11 sessions of supervised group exercise. The land-based exercise focuses on low-impact cardio, strength training, resistance, stretching, and balance. Additionally included in the program, is a one hour group nutrition session involving an open-ended discussion in a Q&A format for participants to ask any questions they have. Diet information from the Arthritis Society is provided. The program is also utilized as a pre-hab program for individuals scheduled for hip or knee arthroplasty.

At the time of writing, this program costs \$329 which includes an initial consultation, 11 exercise sessions, and one group education session. This program is located at the University of Calgary Health and Recreation Centre. The program is overseen by a CESP certified exercise physiologist who signs off on all activities. A registered dietician facilitates the nutrition portion and a certified personal trainer manages the exercise portion of the program.

Source of information: <https://www.ucalgary.ca/ActiveLiving/registration/Browse/Studios-Fitness-and-Lifestyle/Joint-Effort>

³ Due to response not received from identified contact individual.

Osteoarthritis

A single two to 2.5-hour group exercise and education class that covers arthritis, symptoms of osteoarthritis, risk factors, treatment options, and techniques for pain management. Following the education, the exercise component of the program teaches recommendations for exercising with osteoarthritis and participants perform stretching, strengthening, and balance exercises led by an Exercise Specialist.

The program is free of charge for participants as it is an AHS program. It is located at the Strathcona County Primary Care Network in Sherwood Park, AB. The program is run by a kinesiologist with the title of Exercise Specialist.

Source of information: <http://sherwoodparkpcn.com/ProgramsClasses/Pages/Arthritis-Workshops.aspx>

GLA:D™ Canada

An exercise and education program developed in Denmark for individuals with hip or knee OA symptoms. The program can be applied to day to day activities to prevent progression of symptoms and reduce pain. It is comprised of 12, one hour exercise sessions over 6 weeks and include land-based, low impact aerobic exercises, strength training, resistance, and stretching. There are two, 90 minute education sessions included to provide information on OA and describes how the exercise program works.

The cost of GLA:D™ Canada is dependent on the individual clinic providing the program (i.e. whether it is a private or public clinic). The program is located at clinics in Calgary (3), Camrose (1), Canmore (1), Edmonton (3), Lethbridge (1), and Westlock (1). In addition to the Alberta locations, the GLA:D™ program is offered in BC, Ontario, and Australia (GLA:D™ Australia). Any healthcare provider can facilitate the program if they have the “knowledge, skills, ability and scope of practice to independently assess patients, prescribe exercises, progress exercises (including home based recommendations), modify exercises” and “transition functional exercises to physical activity and activities of daily living”ⁱⁱⁱ. Qualified healthcare providers must take a 1.5 day course to become GLA:D™ trainers. Examples of qualified program providers include: chiropractors, physiotherapists, kinesiologists, certified exercise professionals.

Source of information: <http://gladcanada.ca/>

Location within Alberta – 34% (3/9) of programs in Alberta are located in Edmonton, 22% (2/9) are located in Calgary, 11% (1/9) in Lethbridge, 11% (1/9) in Red Deer, 11% (1/9) in Sherwood Park, and 11% (1/9) in various locations across the province (GLA:D™ Canada).

Surgical Status – Of the identified programs in Alberta, 89% (8/9) are non-specific and 11% (1/9) are intended for only non-surgical individuals (GLA:D™ Canada). Although the Joint Effort program is designed for all types of clients, it specifies that post-surgical participants must be six weeks post-op as the program does not replace rehabilitation from surgery. The GLA:D™ Canada program is intended for non-surgical clients because the program is not in place of rehabilitation for pre-/post-surgical individuals.

Referral – Referrals are not required for 78% (7/9) of programs, however, 56% (5/9) accept physician referrals although they are not required. 22% (2/9) require a referral from a physician or other specified professional.

Eligibility Criteria – No eligibility criteria are specified for 56% (5/9) of programs in Alberta while 44% (4/9) do provide criteria for participation in the program (see Appendix 4 for additional details).

Facilitator/Delivery Mechanism – A variety of professionals deliver the programs, including physiotherapists, fitness instructors, and kinesiologists.

Cost and Payment Sources – 67% (6/9) of programs require out-of-pocket payment from participants⁴. Two of these programs offered through the YMCA may require a membership purchase to attend (program not offered to drop-in facility users). 22% (2/9) of programs in Alberta are publicly funded and offered at AHS sites and the remaining 11% (1/9) is determined by the individual clinic where the program is run (if it is public or private).

Health Domain

- 56% (5/9) of programs provide only exercise
- 11% (1/9) includes content that covers all of the health domains
- 11% (1/9) includes exercise and weight management/nutrition
- 11% (1/9) includes exercise, pain management, and weight management/nutrition
- 11% (1/9) includes exercise and pain management

Water-based exercise programs represent 44% (4/9) of the Alberta programs and the remaining five programs (56%) are land-based exercise programs. Drop-in programs represent 44% (4/9) of programs in Alberta while 44% (4/9) have a pre-determined number of sessions for participants to attend. One program (12%) offers a combination where participants can attend for the full number of sessions or a single session as a drop-in.

Education Component – 56% (5/9) of programs in Alberta include an education component in addition to exercise (all programs involve exercise).

⁴ Programs run by professionals who are covered by insurance may be reimbursed through insurance.

Research and/or Evaluation Activity – The majority, 89% (8/9), of programs in Alberta have not undergone any formal evaluation or research to establish effectiveness. GLA:D™ Canada is the only evidence-based program identified in Alberta, based on the work of Dr Ewa Roos from Denmark (see Appendix 8 – Evidence for Research Informed Programs for details).

Table 2 – *Alberta programs and information sources*

Program Name	Source of Information⁵
Aqua Mobility	http://vecova.ca/social-enterprise/recreation-centre/programs/adult-fitness-wellness/
Arthritis Pool Exercise and Education Program	https://informalberta.ca/public/service/serviceProfileStyled.do?serviceQueryId=7710
Break Through	https://northernalberta.ymca.ca/Programs/Program-Info/HFA/Group-Fitness/Break-Through?location=e25e7dce-a771-4c9c-9c2c-16b28cc049c7
Exercising with Arthritis	TJ Dunn, Kinesiologist Alberta Health Services tj.dunn@albertahealthservices.ca
Warm Water	https://northernalberta.ymca.ca/Programs/Program-Info/HFA/Aquatics/Warm-Water?location=5d409fcb-b37f-46df-b90f-2c211ee35a92
Water Works	https://www.edmonton.ca/activities_parks_recreation/drop-in-aquatic-swim-programs.aspx

Canada and International:

Eleven programs were identified in other Canadian provinces and internationally (USA, UK, Australia).

Location – Of the Canadian programs identified outside of Alberta, 36% (4/11) are located in BC (3/4) and Ontario (1/4). The remaining 64% (7/11) are located internationally. The international programs were identified primarily in the UK (3/7) and Australia (3/7) and one was identified in the USA.

Surgical Status – 36% (4/11) of programs outside of Alberta are non-specific while 46% (5/11) of programs are not accessible to some patients due to a recent or future surgery, and 18% (2/11) are unknown.

Referral – Five (46%) of the programs require a referral from a healthcare professional, 27% (3/11) accept self-referrals, and one program (9%) is dependent on the local provider’s pathway

⁵ Other sources may have been used in addition (see Appendix 6 for additional details).

as the program is offered in multiple countries. Referral requirements for two of the programs (18%) are unknown.

Eligibility Criteria – 46% (7/11) of programs have specific eligibility criteria, criteria were not identified for 36% (2/11) of the programs, and 18% (2/11) are unknown.

Facilitator/Delivery Mechanism – The programs are delivered by fitness instructors and health care providers including: physiotherapists and kinesiologists.

Cost and Payment Sources – The cost of 18% (2/11) of programs are dependent on the specific location the program is offered (public or private clinic), 37% (4/11) are publicly funded, 9% (1/11) have a cost that can be covered by insurance, 18% (2/11) require out-of-pocket payment to attend, and 18% (2/11) are unknown.

Health Domain – 46% (5/11) of programs represent all domains, 27% (3/11) are exercise only, 18% (2/11) include an exercise and pain management component, and 9% (1/11) include exercise, pain management and mental health components.

Education Component – An education component is included in 73% (8/11) of the programs identified outside of Alberta, while 27% (3/11) do not include education in the program.

Research and/or Evaluation Activity – Formal evaluation or research to establish effectiveness has been completed for 55% (6/11) of programs outside of Alberta, two of which are Canadian programs (OA Therapeutic Education Program (ON) and GLA:D™ (BC, ON and Australia).

Table 3 – *Canada and international programs and information sources*

Program Name	Source of Information
GLA:D™ Australia	https://gladaustralia.com.au/
Osteoarthritis Healthy Weight for Life Program	https://www.hcf.com.au/members/manage-your-health/weight-management
Osteoarthritis Hip and Knee Program	https://www.epworth.org.au/Our-Services/rehabilitation/Pages/osteoarthritis-hip-and-knee-program.aspx
Land-based OA Exercise Program	Gregory Noonan, PT Practice Coordinator/Clinical Resource Mary Pack Arthritis Program, Vancouver Coastal Health gregorynoonan@vch.ca
Pool OA Exercise Program	Gregory Noonan, PT Practice Coordinator/Clinical Resource Mary Pack Arthritis Program, Vancouver Coastal Health gregorynoonan@vch.ca
Osteoarthritis Fitness	https://webreg.surrey.ca/WebReg/Start/start.asp
Osteoarthritis Therapeutic Education Program	http://boneandjointcanada.com/the-arthritis-program-southlake-regional-health-care/

Enabling Self-management and Coping with Arthritic Pain using Exercise (ESCAPE-pain)	http://www.escape-pain.org/about-escape/overview
Osteoarthritis Rehabilitation Group	http://www.pat.nhs.uk/gps-and-partners/physiotherapy-services_2.htm
The Joint Care Programme	http://cwmtaf.wales/exercise-and-nutrition-advice-can-change-your-life-in-12-weeks/
Fit & Strong!	https://www.fitandstrong.org/about/about.html

Education Tools - details

Alberta:

Eight education tools were identified in Alberta, 62% (5/8) of which are workshops and 38% (3/8) are websites that provide information on OA. Half (4/8) of the identified education tools are not OA specific while the other 50% is specific to OA.

Location within Alberta – Of the five education tools in Alberta that are workshops, 40% (2/5) are located in Camrose, 20% (1/5) are located in Calgary, 20% (1/5) are located in St. Albert and Sherwood Park, and 20% (1/5) has a total of 10 locations in Edmonton and Calgary.

Surgical Status – The surgical status of participants is non-specific for all education tools in Alberta.

Referral – None of the education tools require a referral for access.

Eligibility Criteria – 62% (5/8) of Alberta education tools do not specify any eligibility criteria while 38% (3/8) have specific eligibility criteria for access of the education tool (see Appendix 5 for additional details).

Facilitator/Delivery Mechanism – Of the three websites identified as education tools in Alberta, 67% (2/3) were developed by unspecified healthcare professionals and 33% (1/3) rheumatologists. Of the five education tools in Alberta that are workshops, 40% (2/5) are facilitated by physiotherapists and 40% (2/5) by trained volunteers, while the remaining 20% (1/5) is facilitated by registered dieticians and kinesiologists.

Cost and Payment Sources – All education tools identified in Alberta are free to access.

Health Domain – 74% (6/8) of the education tools identified in Alberta represent the domains of exercise, pain management, and weight management/nutrition. 13% (1/8) represent only the pain management and mental health domains and 13% (1/8) represent all domains.

Table 4 – Alberta education tools and information sources

Education Tool Name	Source of Information
Living Well with Osteoarthritis	Melissa Fontaine, Kinesiologist Alberta Health Services – Healthy Living Centre 780-608-8683
Alberta Bone & Joint Health Institute (website)	https://albertaboneandjoint.com/patients/healthy-living/
Alberta Rheumatology (website)	http://albertarheumatology.com/osteoarthritis/
MyHealth.Alberta.ca (website)	https://myhealth.alberta.ca/search/Pages/results.aspx?k=osteoarthritis
Arthritis 101	The Arthritis Society http://www.albertahealthservices.ca/info/page13984.aspx
Arthritis 101	Melissa Fontaine, Kinesiologist Alberta Health Services – Healthy Living Centre 780-608-8683
Chronic Pain Management	Liz Kehler, Education & Services Manager The Arthritis Society Alberta & NWT and Saskatchewan Divisions 403-802-5928
Healthy Living Class *Only for patients of the Alberta Hip and Knee Clinic	Elizabeth Hitt, Kinesiologist Alberta Hip and Knee Clinic Elizabeth.H@orthosurgeons.ca

Canada (BC and ON):

A total of 21 education tools outside of Alberta were identified. The BC and Ontario education tools include seven websites of organizations, nine workshops, and five online workshops. 71% (15/21) of the identified education tools outside of Alberta are specific to OA while 29% (6/21) are designed for arthritis in general.

Location – Of the nine workshops that are not online, 89% (8/9) of the workshops are located in Richmond and Vancouver, BC and 11% (1/9) are located at 12 individual sites in Ontario.

Surgical Status – Surgical status of all the identified education tools outside of Alberta are non-specific.

Referral – A referral is not required to access or use any of the education tools.

Eligibility Criteria – All education tools do not have any eligibility criteria to access, however, the Mindful Eating for Weight Control, Part 2 workshop requires participants to attend Mindful Eating for Weight Control, Part 1 as a prerequisite.

Facilitator/Delivery Mechanism – The seven websites contain OA content written by various professionals. The nine workshops are facilitated by one or more of the following: physiotherapists, occupational therapists, registered nurses, and registered dieticians.

Cost and Payment Sources – There is no cost to access any of the education tools (websites or workshops).

Health Domain

- 24% (5/21) of identified education tools outside of Alberta represent all domains
- 24% (5/21) represent the domains of exercise, pain management, and weight management/nutrition
- 19% (4/21) represent the mental health domain only
- 10% (2/21) represent weight management/nutrition and mental health
- For the remaining domains or combinations, one education tool (5% (1/21)) represents each of the following:
 - exercise, weight management/nutrition, and mental health
 - exercise and pain management
 - exercise only
 - pain management only
 - mental health only

Table 5 – *Canada (BC and ON) education tools and information sources*

Education Tool Name	Source of Information
OASIS Website	http://oasis.vch.ca/manage-your-oa/
Understanding Osteoarthritis	http://oasis.vch.ca/our-classes/class-descriptions/
Osteoarthritis & Exercise	http://oasis.vch.ca/our-classes/class-descriptions/
Nutrition & Supplements/Weight Control	http://oasis.vch.ca/our-classes/class-descriptions/
Pain Management	http://oasis.vch.ca/our-classes/class-descriptions/
Mindful Eating for Weight Control, Part 1	http://oasis.vch.ca/our-classes/class-descriptions/
Mindful Eating for Weight Control, Part 2	http://oasis.vch.ca/our-classes/class-descriptions/
Nordic Pole Walking & Osteoarthritis	http://oasis.vch.ca/our-classes/class-descriptions/
Understanding Osteoarthritis	http://oasis.vch.ca/our-classes/class-descriptions/
Sleep, Stress & Osteoarthritis	http://oasis.vch.ca/our-classes/class-descriptions/
Arthritis Society Website	http://arthritis.ca/understand-arthritis/types-of-arthritis/osteoarthritis#Overview
Joint Matters at Work	http://arthritis.ca/manage-arthritis/educational-resources-tools/online-arthritis-self-management-courses
Managing Chronic Pain	http://arthritis.ca/manage-arthritis/educational-resources-tools/online-arthritis-self-management-courses
Mental Health and Well-Being	http://arthritis.ca/manage-arthritis/educational-resources-tools/online-arthritis-self-management-courses
Overcome Fatigue	http://arthritis.ca/manage-arthritis/educational-resources-

	tools/online-arthritis-self-management-courses
You and Your Healthcare Provider	http://arthritis.ca/manage-arthritis/educational-resources-tools/online-arthritis-self-management-courses
Arthritis Broadcast Network	http://arthritisbroadcastnetwork.org/?s=osteoarthritis
Canadian Orthopaedic Foundation Website	http://whenithurtstomove.org/page/1/?s=osteoarthritis
Arthritis Consumer Experts Website	http://jointhehealth.org/aboutarthritis-diseasespotlight.cfm?id=7&locale=en-CA http://jointhehealth.org/programs-jhworkshop.cfm?id=27&locale=en-CA
Public Health Agency of Canada Website	https://www.canada.ca/en/public-health/services/chronic-diseases/arthritis.html
RheumInfo.com (website)	http://rheuminfo.com/diseases/osteoarthritis
Manage your Hip and Knee Osteoarthritis Pain	https://arthritis.ca/events/find-courses-and-workshops/on/on-north-york-stay-active-manage-your-hip-and-knee-osteoarthritis-oa-pain-june-05-2017

Additional Findings:

Five programs and educational tools are offered by hip and knee clinics across Alberta. These are based on information gathered from two clinics (SHC and Alberta Hip and Knee Clinic), however, they are representative of clinics across the province (confirmed by Jane Squire Howden). These specifically target pre- and post-surgery patients to prepare them for surgery and optimize post-surgical outcomes. All clinics offer pre-operative teaching classes and provide patients with education booklets, which include exercises to be done prior to surgery and proper care of the joint after surgery. At select clinics, a *Healthy Living Class* is offered pre-surgery. At SHC, a new post-surgery exercise program has been introduced - the *Post-Op Hip and Knee Exercise Program*. A description is provided in table 6. No programs or education tools specific to OA only were identified.

Table 6 – *Post-Op Hip and Knee Exercise Program Description*

Post-Op Hip and Knee Exercise Program
An exercise and education program for SHC patients who are three weeks post-op hip and knee arthroplasty. The class runs for one hour two times a week for six weeks. The exercise portions is land-based and focuses on strengthening, balance, stretching and other functional exercises in a station-based approach.
<i>Eligibility criteria –</i>
“Inclusion Criteria:
<ul style="list-style-type: none"> • Ability to attend 6 group sessions + initial 1:1 physio assessment over 9 week period on either a

Monday OR Wednesday consistently (i.e. cannot switch days of the week)

- Ability to follow verbal instructions independently (i.e. not eligible if cognitive impairment/diagnosis, language barriers prevent independent participation)
- Reliable transportation
- 2-4/52 Post Primary Single Joint Total Hip or Knee Arthroplasty
- Full weight bearing status
- Ambulates independently with or without gait aide
- Timed Up and Go (TUG) <20 seconds

Exclusion Criteria:

- Neurological conditions that prevent independent participation in group exercise
- Revision procedures & complex soft tissue/bony repairs (i.e. osteotomy, compromised abductors, bone grafting, intra-operative fracture, etc.)
- Current post-operative infection/complications
- Any co-morbidity or medical diagnosis where patient has not been cleared by physician to participate in exercise
- Identified lack of compliance with and understanding of post-operative protocols
- Relies on Access Calgary for transportation
- A patient will also be discharged from the program if they fail to attend >3 sessions"

Source of information: Marie DeGuzman, PT (Marie.DeGuzman@albertahealthservices.ca)

Several approaches were identified during the search but not included in the results above as they did not meet the inclusion criteria of the environmental scan. This includes assessment only programs or interventions that are provider oriented. For example, PT services or multi-disciplinary teams. As they are notable findings, a brief description and source for additional information is included in Table 7.

Table 7 – *Programs/therapies not included in environmental scan*

Name of Program/Therapy	Description	Source of Information
3-D Gait Analysis (Alberta)	Using technology, running and other musculoskeletal injuries are identified, prevented, and treated. The program uses 3D motion analysis to produce a 3D motion capture that is personalized. A kinesiologist administers the initial test and then a physiotherapist analyzes the report to create a treatment plan.	http://3dgaitanalysis.com/
Calgary Foothills PCN Extended Health Team	An interdisciplinary approach to support patients in managing their osteoarthritis by making or confirming diagnosis, providing support, and informing them of	http://boneandjointcanada.com/osteoarthritis/health-care-

(Alberta)	available community services. It is comprised of a physiotherapist (connect patients to a physio clinic with GLA:D™), physician, pharmacist, kinesiologist, registered nurse, occupational therapist, rheumatologist, and a behavioural therapist. The team often treats patients with OA who are struggling psychosocially and mentally work to build confidence, coping skills and resiliency. An individualized care plan is created for each patient and they are seen as needed and given recommendations for education and exercise. Exercise, a pacing group, and pain management techniques are included. Follow-ups are provided over the telephone. The clinic runs one day/week.	professionals/oa-programs-in-canada/calgary-foothills-primary-care-network/
Osteoarthritis Service Integration System - OASIS (BC)	A program for individuals with OA that assesses patients and refers them to a surgeon if necessary. It helps patients achieve their goals for management of their OA. After an appointment at the clinic, patients receive an 'Action Plan' outlining treatment recommendations, follow-up, and referrals to community programs and support services.	http://oasis.vch.ca/our-clinics/our-clinics
Mary Pack Arthritis Program (BC)	An exercise and education program that focuses on self-management and provides physiotherapy, occupational therapy, and social work services. Education sessions are only available in Victoria and Vancouver and nursing services only in Victoria. Vocational rehabilitation services are only offered in Vancouver. Each service provider completes an initial assessment and a treatment and education plan is designed based on assessments and the goals of the individual.	http://boneandjointcanada.com/osteoarthritis/health-care-professionals/oa-programs-in-canada/mary-pack-arthritis-program/
I Manage My Knee Osteoarthritis Program (Quebec)	A multidisciplinary clinic for individuals with knee OA that includes a physiotherapist, kinesiologist, nutritionist, and an orthopaedic surgeon. The program consists of an intake assessment and an analysis is conducted to make recommendations for treatment and other community resources. Education is provided on a variety of topics on a monthly basis. Exercise is the next component followed by a reassessment. A detailed report is provided to the patient's primary care physician.	http://boneandjointcanada.com/osteoarthritis/health-care-professionals/oa-programs-in-canada/i-manage-my-knee-osteoarthritis-program/

Conclusion

The environmental scan provides useful information to develop a sense of what types of programs and education tools currently exist for patients with OA, which the SCN could draw upon in its ongoing work along OA continuum of care (from conservative to surgical care). Specifically, there are a number of existing programs and education tools with which to

populate the Model of Care for OA Management, saving the SCN a considerable amount of time and resources in developing such programs/tools from scratch. Several programs identified are based in Alberta, which may be suitable for faster uptake and/or provincial spread. Interestingly most programs are not focused on a specific level of OA severity or the patient's surgical status, which may pose a challenge for categorizing them within the stepped care approach of the OA Model. Majority of the programs and tools have not been evaluated or researched to establish their effectiveness and safety. As such, caution should be used in determining whether and how the SCN incorporates or endorses any of these programs and tools for Albertans living with OA and in relation to the OA Model.

Recommendations

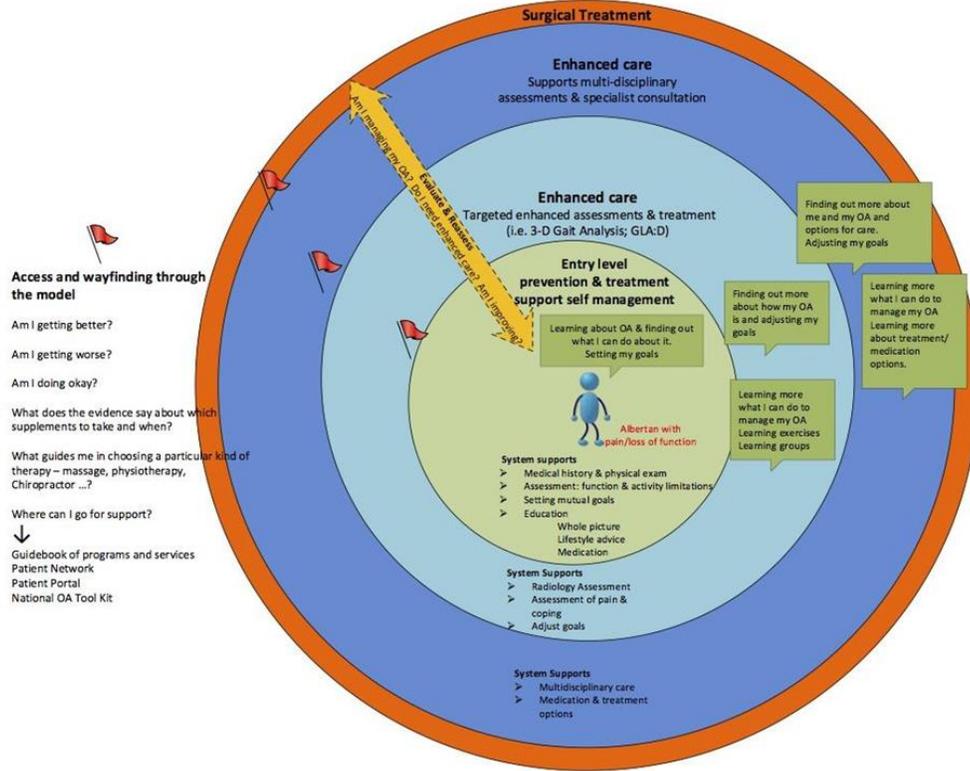
- The programs and education tools identified may be listed within the OA Model as a means of providing information to patients. The challenge may be to determine which “step” in the model the programs would apply to since few are specific to OA severity or surgical status of the patient.
 - Attention may be focused on the programs and education tools already established in Alberta. These include Joint Effort, Osteoarthritis, Living Well with Osteoarthritis (Melissa Fontaine – Healthy Living Centre), Healthy Living Class (Elizabeth Hitt – Alberta Hip and Knee Clinic), Arthritis 101 (the Arthritis Society)
 - With the exception of GLA:D™, these are delivered in a localized way and may be explored by the SCN for provincial scale and spread in relation to the OA model.
- Programs or tools that are supported or endorsed by the SCN should be evaluated to ensure effectiveness and monitoring.
- As international locations for education tools were not searched, it may be worthwhile to consider exploring these area for established education tools.
- OA specific programs may be considered for integration into hip and knee clinics, similar to GLA:D™. These sites may also consider forming stronger partnerships with community partners who can or do provide OA programs to facilitate a streamlined approach between community and health services in the province. For example, creating active partnerships with a PT clinic or YMCA where programs are offered that patients can be directly referred to.
- There are several multi-disciplinary approaches that emerged and are listed in the Additional Findings section. These may be explored further for potential implementation in Alberta.

Appendices

- Appendix 1 – BJH SCN Model of Care for OA Management
- Appendix 2 – OA Environmental Scan Survey: Programs
- Appendix 3 – OA Environmental Scan Survey: Education Tools
- Appendix 4 – OA Programs Spreadsheet (separate document)
- Appendix 5 – OA Education Tools Spreadsheet (separate document)
- Appendix 6 – Spreadsheet Elements
- Appendix 7 – Additional Findings
- Appendix 8 – Evidence for Research Informed Programs

Appendix 1 – BJH SCN Model of Care for OA Management

Draft Model of Care for OA Management Version March 3, 2017



Guiding Principles for review of the model

- Albertan with pain/loss of function is informed and is an active participant in their care planning and treatment options.
- A person can enter at any point and move either to requiring 'more support' or less support/maintenance/function.
- The model is evidenced-informed.
- It is dynamic and will grow and develop as new models of care and approaches/research are evaluated and incorporated.
- Multiple providers are involved in the programs and services available.

Appendix 2 – OA Environmental Scan Survey: Programs

Osteoarthritis Environmental Scan: Programs

The Bone and Joint Health Strategic Clinical Network (BJH SCN) is conducting this survey to identify programs adult Canadians use to manage their knee and/or hip osteoarthritis (OA) symptoms. We would like to learn more about your services to inform the BJH SCN and improve access to programs.

Contact Information	
First Name: _____	Last Name: _____
Title/Occupation: _____	
Cell Phone: _____	Work Phone: _____
Email: _____	

A. General Information

Do you offer a program for the management of hip and/or knee OA symptoms?
 Yes No

Is the program exclusively for individuals with OA?
 Yes No

Explain: _____

Program title: _____

Program description: _____

What severity of OA does your program manage? (Select all that apply)

- Mild Advanced
 Moderate Unknown

Which specific joint location does your program focus on?

- Hip OA Knee OA
 Both (multi joint OA)

Are the individuals using your program non-surgical or pre/post-surgery OA clients? (Select all that apply)

- Non-surgical Post-surgical
 Pre-surgical Unknown

1

How do individuals with OA access your program? (Select all that apply)

- Self referral Other: _____
 Physician referral _____

Does this program have eligibility criteria?

- Yes No
 If yes, provide the criteria: _____

Who is directly involved in delivering or facilitating the program(s)? (Select all that apply)

- | | |
|--|--|
| <input type="checkbox"/> Acupuncturist | <input type="checkbox"/> Physician |
| <input type="checkbox"/> Athletic Therapist | <input type="checkbox"/> Physiotherapist |
| <input type="checkbox"/> Chiropractor | <input type="checkbox"/> Registered Dietician |
| <input type="checkbox"/> Fitness Trainer | <input type="checkbox"/> Registered Nurse (RN) |
| <input type="checkbox"/> Kinesiologist | <input type="checkbox"/> Social Worker |
| <input type="checkbox"/> Licenced Practical Nurse (L-PN) | <input type="checkbox"/> Therapy Assistant |
| <input type="checkbox"/> Massage Therapist | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Naturopath | _____ |
| <input type="checkbox"/> Nutritionist | _____ |
| <input type="checkbox"/> Occupational Therapist | _____ |

What training/education does the program facilitator have? (Include credentials)

Where do individuals participate in the program? (Select all that apply)

- At home
 Clinic
 Hospital
 Leisure/fitness centre
 Gym
 Pool
 Spa
 Other: _____

Please list the locations the program is delivered (name of facility and city or town): _____

Who pays for the program?

- Free (covered by provincial health care)

2

- Paid for by individual
 Covered by group insurance providers
 Other: _____

Program cost (if not covered by provincial health care): _____

B. Program Type – Detailed Information

Program type (Select all that apply):

- Mental Health
 Physical Activity
 Weight Management/Nutrition
 Pain Management

Please provide additional information for each program type selected above.

Mental Health

What is the format of the mental health program? (Select all that apply)

Self study
 1:1
 Group
 Other: _____

Summarize the content of the program: _____

Physical Activity

What type of physical activity does the program facilitate? (Select all that apply)

Endurance
 Low impact aerobic
 Strength training
 Resistance
 Stretching
 Active range of motion
 Balance
 Other: _____

Is the activity land-based or water-based?
 Land-based
 Water-based

3

Provide a description of the physical activity: _____

Weight Management/Nutrition

Which of the following approaches does the program encompass? (Select all that apply)

Specific dietary needs/requirements
 Weight loss/management
 Other: _____

Provide details about the weight management/nutrition aspect of the program: _____

Pain Management

Describe how the program aids with OA pain management: _____

Is there an educational component to the program?

- Yes No

What form of education does your program provide? (Select all that apply)

- Verbal
 Self study
 1:1 education
 Group education
 Other: _____
- Written
 Pamphlet
 Information package
 Online/website
 Other: _____
- Other: _____

Summarize the educational content: _____

4

Appendix 3 – OA Environmental Scan Survey: Education Tools

OA Environmental Scan Data Collection Template: Education Tools

The Bone and Joint Health Strategic Clinical Network (BJH SCN) is conducting this survey to identify education tools Canadians use to help manage their knee and/or hip osteoarthritis (OA) symptoms. We would like to learn more about your education tool(s) to inform the BJH SCN and improve patient access.

Contact Information	
First Name: _____	Last Name: _____
Title/Occupation: _____	Work Phone: _____
Email: _____	

A. General Information

Do you offer an education tool for the management of hip and/or knee OA symptoms?
 Yes No

Is the education exclusively for individuals with OA?
 Yes No

Explain: _____

Education tool title: _____

Education tool description: _____

What severity of OA is the education for? (Select all that apply)
 Mild Advanced
 Moderate Unknown

Which specific joint location does the education tool focus on?
 Hip OA Knee OA
 Both (multi joint OA)

Is your education tool intended for non-surgical or pre/post-surgery OA clients? (Select all that apply)
 Non-surgical Post-surgical
 Pre-surgical Unknown

How do individuals with OA access your education tool? (Select all that apply)
 Self referral Other: _____
 Physician referral

Does this education tool have eligibility criteria?
 Yes No
 If yes, provide the criteria: _____

Who is directly involved in providing the education? (Select all that apply)
 Acupuncturist Naturopath
 Athletic Therapist Occupational Therapist
 Chiropractor Physician
 Dietician/Nutritionist Physiotherapist
 Fitness Trainer Registered Nurse (RN)
 Kinesiologist Therapy Assistant
 Licenced Practical Nurse (LPN) Other: _____
 Life Coach Massage Therapist

What education/training does the education provider have? (Include credentials)

Where do individuals access the education tool? (Select all that apply)
 At home Online
 Information package Other: _____
 Clinic
 Hospital
 Leisure/fitness centre
 Other: _____

Please list the locations that the education tool is delivered: _____

Who pays for the education tool?
 Free (covered by Alberta Health Services)
 Paid for by individual
 Covered by group insurance providers
 Other: _____

2

Education tool cost (if not covered by Alberta Health Services): _____

B. Education Tool – Detailed Information

What form of education does your program provide? (Select all that apply)
 Verbal
 Self study
 1:1 education
 Group education
 Other: _____

Written
 Pamphlet
 Information package
 Online/website
 Other: _____

Education tool type (Select all that apply):
 Mental Health
 Weight Management/Nutrition
 Pain Management
 Other: _____

Please provide additional information for each education tool type selected above.

Mental Health
 What is the format of the mental health education tool? (Select all that apply)
 Self study
 1:1
 Group
 Other: _____

Summarize the mental health content of the education tool:

Weight Management/Nutrition
 Which of the following approaches does the education tool encompass? (Select all that apply)
 Specific dietary needs/requirements
 Weight loss/management

3

Other: _____

Provide details about the weight management/nutrition aspect of the education tool:

Pain Management
 Describe how the education tool aids with OA pain management:

Other
 Describe any other educational components:

4

Appendix 4 – OA Programs Spreadsheet (separate document)

Appendix 5 – OA Education Tools Spreadsheet (separate document)

Appendix 6 – Spreadsheet Elements (includes variables of interest)

- Program/education tool title
- Location(s) (country, city, name of facility)
- Description of the program/education tool
- Source(s) of spreadsheet information
- Area of focus (OA only, OA + other, arthritis only, arthritis + other)
- Severity of OA symptoms (mild, moderate, advanced)
- Joint affected by OA (knee and/or hip)
- Surgical status (pre-surgical, post-surgical, and/or non-surgical)
- Referral (self, physician or other provider)
- Eligibility criteria
- Facilitator/delivery mechanism
- Cost and payment sources
- Health domain and related information
- Inclusion of an education component (for programs only)
- Research and/or evaluation activity
- References for research informed programs/education tools

Appendix 7 – Additional Findings

The following findings were not included in the report due to limited information being found online and no response received from the identified contact individual.

Program/Education Tool Name	Source of Information
Osteoarthritis Information Sessions – Mount Forest Family Health Team (ON)	http://www.mountforestfht.com/displayProgram.php?prog=Healthy%20Lifestyle%20and%20Wellness%20Programs
Osteoarthritis Fitness Class – Carlton Senior Recreation Centre (ON)	http://www.torontocentralhealthline.ca/display/service.aspx?id=152935
Knee Exercise Class – Physio Plus Health (ON)	http://www.physioplushealth.com/programs/knee-arthritis-program/
Follow-on Group Physiotherapy Program (Australia)	http://www.huntershillprivate.com.au/Rehabilitation/Osteoarthritis-Management-Program
Osteoarthritis Group Exercise Class – Empower Rehab (Australia)	http://www.empowerrehab.com/treatment/pain/osteoarthritis/

Appendix 8 – Evidence for Research Informed Programs

GLA:D™ Program

- Skou, S. T., Odgaard, A., Rasmussen, J. O., & Roos E. M. (2012). *Group education and exercise is feasible in knee and hip osteoarthritis*. Danish Medical Journal, 59(12):A4554.
- Skou, S. T. & Roos, E. M. (2017). *Good Life with osteoArthritis in Denmark (GLA:D™): Evidence-based education and supervised neuromuscular exercise delivered by certified physiotherapists nationwide*. BMC Musculoskelet Disord.,18(1):72. doi: 10.1186/s12891-017-1439-y.
- Skou, S. T., Roos, E. M., Laursen, M. B., Rathleff, M. S., Arendt-Nielsen, L., Simonsen, O., & Rasmussen, S. (2015). *A randomized, controlled trial of total knee replacement*. N Engl J Med, 373(17): 1597-1606.

OA Therapeutic Education Program

- Bain, L., Mierdel, S., & Thorne, C. (2012). *Modeling best practices in chronic disease management: The Arthritis Program at Southlake Regional Health Centre*. Journal of Allied Health, 41(4):e83-7.
- Veres, A., Bain, L., Tin, D., Thorne, C., & Ginsburg, L. R. (2014). *The neglected importance of hope in self-management programs – a call for action*. Chronic Illness, 10(2): 77-80. doi: 10.1177/1742395313496827.
- Tin, D., Bain, L., Charette, S., Thorne, C., Kang, H., & Jeffrey, J. (2014). *Addressing emotional aspects of living with osteoarthritis as a standard of practice in the osteoarthritis therapeutic education program*. Journal of Rheumatology, 41(7): 1453-1454.

Osteoarthritis Healthy Weight for Life Program

- Atukorala, I., et al. *Is there a dose response relationship between weight loss and symptom improvement in persons with knee osteoarthritis?* Arthritis Care & Research 2016, 68: 1106–1114.
- Allen KD, et al. *Osteoarthritis: models for appropriate care across the disease continuum*. Best Pract Res Clin Rheumatol. 2016; 30: 503– 535.

Enabling Self-management and Coping with Arthritic Pain using Exercise (ESCAPE-pain)

- Pearson, J., Walsh, N., Carter, D., Koskela, S., & Hurley, M. (2016). *Developing a web-based version of an exercise-based rehabilitation program for people with chronic knee and hip pain: A mixed methods study*. JMIR Res Protoc., 5(2).
- Hurley, M. V., Walsh, N. E., Mitchell, H., Nicholas, J., & Patel, A. (2012). *Long-term outcomes and costs of an integrated rehabilitation program for chronic knee pain: A pragmatic, cluster randomized, controlled trial*. Arthritis Care & Research, 64(2), 238-247.
- Bearne, L. M., Walsh, N. E., Jessep, S., & Hurley, M. V. (2011). *Feasibility of an exercise-based rehabilitation programme for chronic hip pain*. Musculoskelet. Care, 160-168.

The Joint Care Programme

Pickles, S., Evans, D., Gibbons, D., Hazard, N., Williams, R., Jones, A., & Martin, R. (2014).

Evaluation of Cwm Taf Health Board's knee-joint care programme a year from its completion: a professional-led dietetic and exercise intervention for obese patients with knee osteoarthritis. *The Lancet*, 384.

Fit & Strong!

Ory, M. G., Lee, S., Zollinger, A., Bhurtyal, K., Jiang, L., & Smith, M. L. (2015). Translation of fit & strong! For middle-aged and older adults: examining implementation and effectiveness of a lay-led model in central Texas. *Front Public Health*, 2(187).

References

- ⁱ Bombardier, C., Hawker, G., & Mosher, D. (2011). *The impact of arthritis in Canada: Today and over the next 30 years*. Arthritis Alliance of Canada.
- ⁱⁱ Alberta Bone and Joint Health Institute (n.d.). *Osteoarthritis occurs as shock-absorbing cartilage breaks down*. Retrieved from Alberta Bone and Joint Health Institute: <https://albertaboneandjoint.com/projects/arthritis/osteoarthritis-occurs-as-shock-absorbing-cartilage-breaks-down/>
- ⁱⁱⁱ GLA:D™ Canada (2016). *Is GLA:D™ Canada right for you?* Retrieved from GLA:D™ Canada: <http://gladcanada.ca/index.php/for-trainers/is-glad-canada-right-for-you/>