



ANNUAL REPORT

2020

GLA:D™ Canada Project Team

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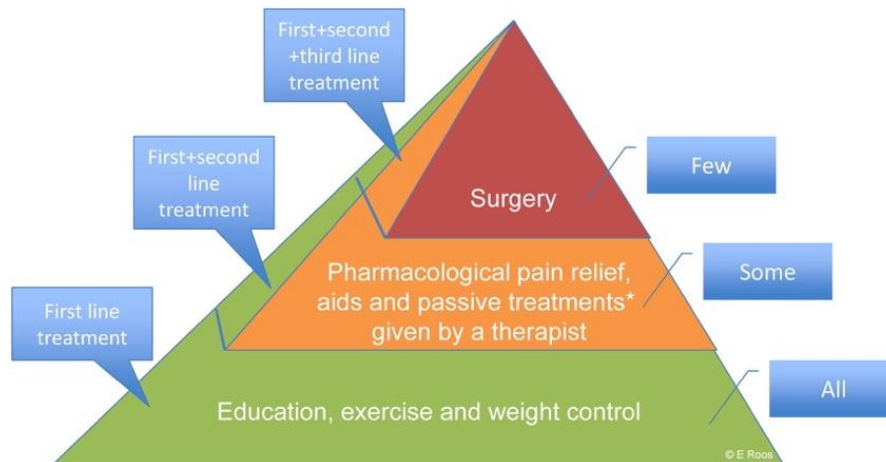
GLA:D™ Canada is licensed to the Canadian Orthopaedic Foundation (COF) with implementation under Bone and Joint Canada, the knowledge translation division of the COF. Details of the program can be found at <https://gladcanada.ca/>



What is GLA:D™ Canada?

GoodLife with osteoArthritis in Denmark (GLA:D®) is:

- ✚ a supervised, evidence-based education and personalized, targeted exercise program for people with symptomatic hip and or knee osteoarthritis (OA).
- ✚ aligned with the international guidelines for the management of hip and knee osteoarthritis.
- ✚ branded as GLA:D™ Canada for sites to implement across Canada (referenced as GLA:D throughout this report)



Three Elements of the GLA:D® Program

One: Health Care Provider Certification

- ✚ Certification of Health Care Providers (HCPs) in a 1.5-day course
- ✚ HCPs include physiotherapists, chiropractors, regulated kinesiologists, exercise physiologists

Two: Patient Education and Exercises

- ✚ 2 (or 3) education and 12 sessions exercise in a group session
- ✚ Exercises are supervised and individualized using the NEuroMuscular EXercise program (NEMEX) to improve movement
- ✚ Delivered over a 6-to-8 week period which is organized by each site to meet the needs of their patients

Three: Quality Monitoring

- ✚ Data from pre-program (baseline), 3- and 12- month follow-up are input into the national electronic GLA:D registry
- ✚ Data includes patient-reported, validated outcome measures and functional tests
- ✚ The registry evaluates pain, function, quality of life as well as other outcomes

Accessing GLA:D

- ✚ Patients need a diagnosis of hip and/or knee osteoarthritis which can be provided by a physician, surgeon, physiotherapist or chiropractor
- ✚ Referrals can be made by a physician or surgeon or therapists can refer their patients directly into the program
- ✚ The programs are available through insurance and self-pay and in some regions are available through public funding

GLA:D aims to:

- ✚ Implement evidence into clinical practice
- ✚ Give individuals the information and skills to self-manage their condition
- ✚ Ensure patients have access to conservative management prior to deciding on surgery

Moving to Virtual Care

The year 2020 was defined by the global pandemic COVID-19. Across Canada each province made policy decisions to keep people safe including the ability of provided virtually so that patients could continue to access it across the country. Changes included updating the materials, modifying the registry questions and providing support to the GLA:D clinicians to implement virtual care through formal education and informal support networks.

GLA:D Canada Implementation – Virtual training 2020

In 2020 the following courses were offered:

- ✚ 1 course was hosted in person in Toronto in January for 77 health service providers
- ✚ 6 courses were hosted virtually and were organized by time zone:
 - 3 Eastern Standard time
 - 1 Atlantic Standard time
 - 1 Pacific Standard time
 - 1 Mountain Standard time
- ✚ All courses were smaller to allow for the materials to be adapted and the instructors to gain experience in providing the training virtually
- ✚ Language: 5 courses were hosted in English, 1 course was hosted in French
- ✚ By the end of 2020, in total, 1377 HCPs have been trained in the GLA:D program nationally. The majority were physiotherapists (78%); 9% were chiropractors and 10% were kinesiologists.

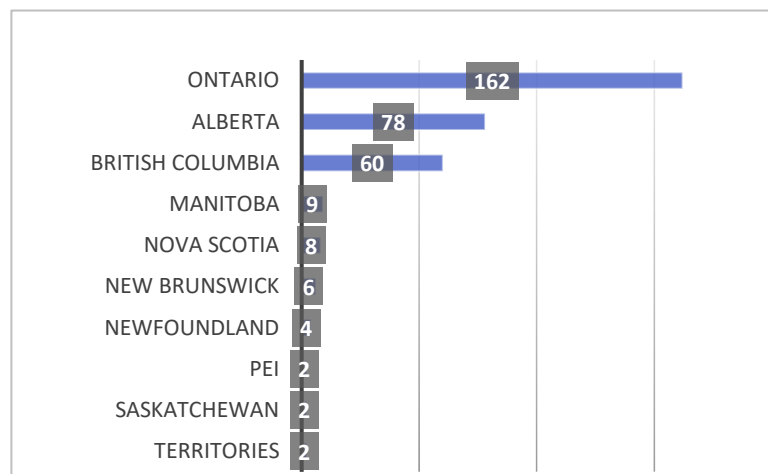
GLA:D Sites Launched

Even with the limitations that resulted from the pandemic, the GLA:D program continued to grow across Canada:

- ✚ Available in 9 provinces and 1 territory
- ✚ Training was launched in Quebec



GLA:D Canada Sites Across Canada (n=333)



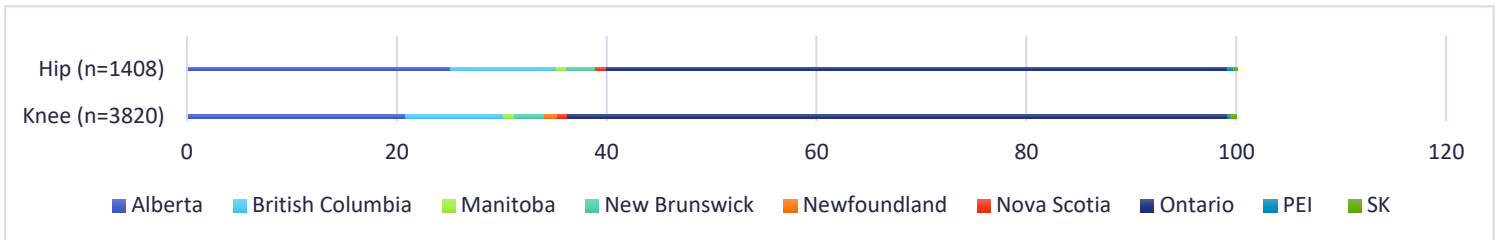
Geographical Locations of GLA:D Canada Active Sites



Characteristics of GLA:D Participants

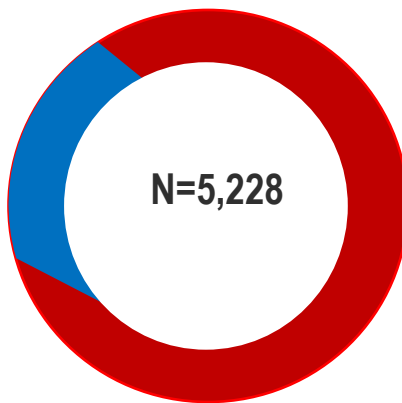
- ✚ By the end of December 2020, **5,228** participants had enrolled in the GLA:D Canada outcomes registry and provided information concerning their demographic characteristics and baseline clinical and functional status
- ✚ In 2020, **207** participants that completed the registry reported that they attended the program virtually (online) and **111** participants attended a combination of virtual (online) and in-class (in-person) setting.

National Distribution of GLA:D Program Participants



Hip or Knee

27% (n=1,408)
Hip - the most problematic joint



73% (n=3,820)
Knee - the most problematic joint



Age, Gender and Work Status

Gender



75% (Female) 25% (Male)

Retired



60%

Working or Looking for work



31%

- 75% Female and 25% Male
- Mean age was 65 (+/-9) years
- Working status: approximately 60% retired, 31% working or looking for work

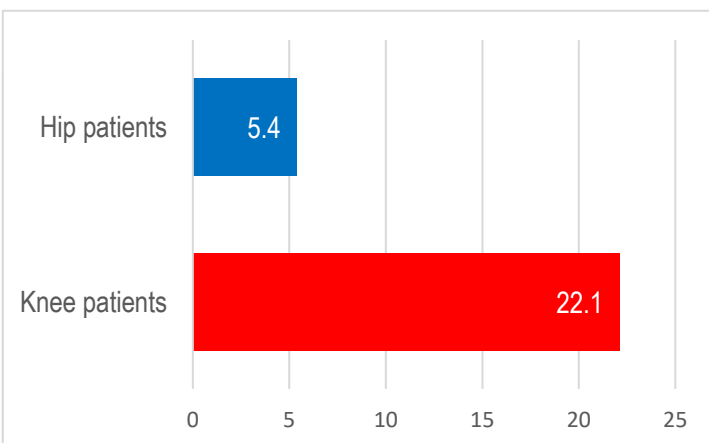
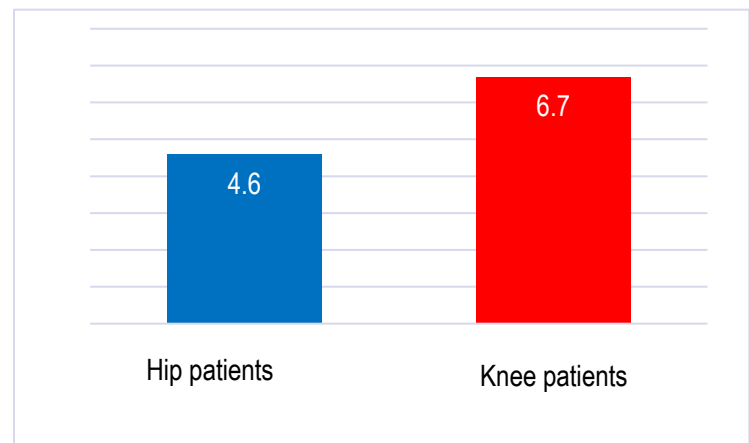
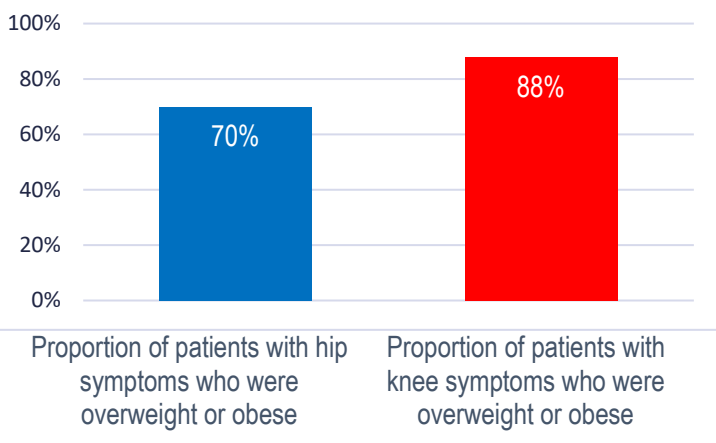
Elevated Body Weight, Symptoms and Other Treatments

Elevated Body Weight

70% of individuals with hip problems were overweight or obese and 88% of individuals with knee problems

Symptoms

Hip patients had been experiencing symptoms for 4.6 years and knee patients for 6.7 years



Prior Joint Surgery before Starting GLA:D

5.4% of hip patients and 22.1% of knee patients presumably had undergone previous surgery on the symptomatic joint.

Approximately 70% of patients had recently taken medications for their joint symptoms prior to starting GLA:D, with the top medications being Acetaminophen, non-steroidal anti-inflammatory drugs/NSAIDs and topical NSAID creams.

How the Program Helps

Participant Engagement and Impact

High Participation Rates

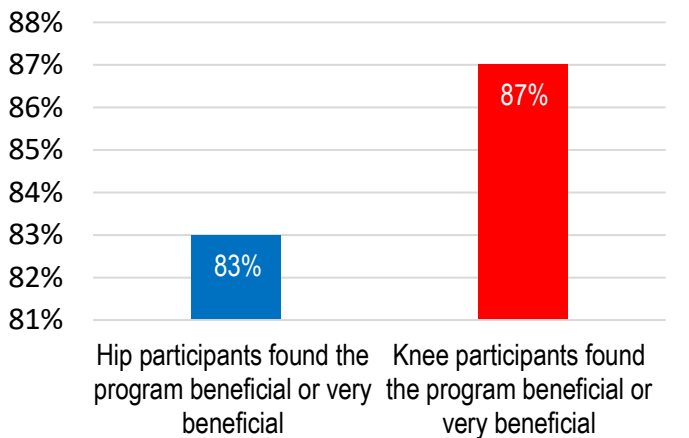
GLA:D program participation rates are high, with most patients attending almost all sessions:

- 80% of hip and 78% of knee participants attended all the education sessions
- 77% of participants missed no more than one exercise session

High Perceived Benefit

Perceived Benefit

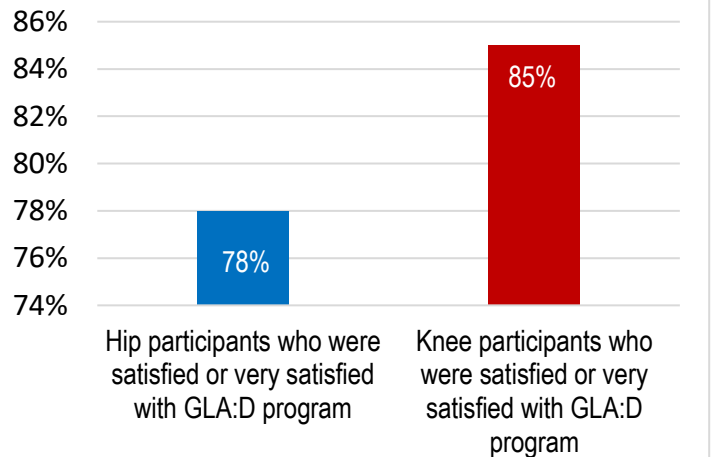
83% hip and 87% knee participants found the program beneficial or very beneficial



High Satisfaction

Satisfaction

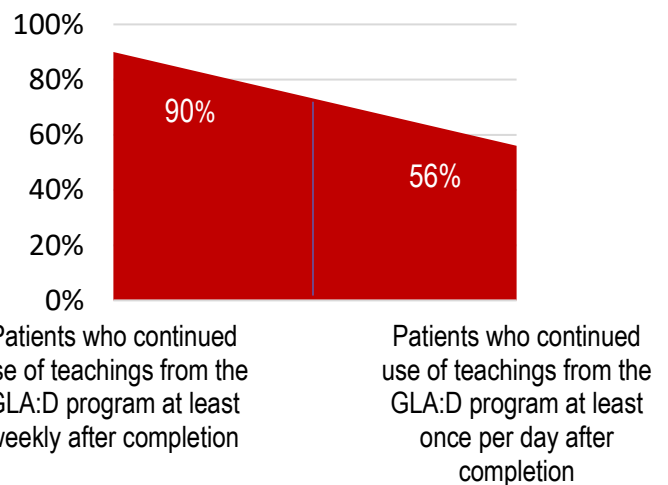
78% of hip participants and 85% of knee participants were satisfied or very satisfied with the GLA:D program



Frequent Continued Use of GLA:D Teachings After Program Completion

Use of GLA:D Teachings After Program Completion

90% of patients report continued use of teachings from the GLA:D program at least weekly after program completion, with 56% using them at least once per day



Participant Outcomes at 3 Month Follow-Up

Pain

After GLA:D, patients had a mean improvement in pain of **20%** for hip participants and **28%** for knee participants. **52%** of hip participants experienced a meaningful improvement in their symptoms, as did **61%** of knee participants.

Improved Quality of Life

The average improvement in quality of life for **hip** participants was **15%** and **knee** participants was **23%**. The percentage of participants that reported a meaningful improvement to their quality of life was **54%** of **hip** and **63%** of **knee** participants 3 months after starting the program

Knowledge





Decreases were seen in the proportions of patients reporting that they were afraid of damaging their joint at the 3-month follow-up, with **40%** and **47%** reductions for hip and knee patients, respectively.



Improved Function

Both hip and knee participants reported an improvement in function (mean improvement in functional scores: hips **53%**, knees **58%**). This was demonstrated in the functional tests where **68%** of hips and **73%** of knees participants had a meaningful improvement in their sit to stand function with an increase in **2** or more. Walking also improved with **35%** of hips and **40%** of knees participants having a meaningful improvement of over 0.2 metres per second.

Proportion of participants that had a clinically meaningful improvement

		Hip	Knee
Function		53 %	58 %
30 sec chair to stand		68 %	73 %
40-meter walk test		35 %	40 %
Quality of life		54 %	63 %





Participant Outcomes at 12 Month Follow-Up

Pain

Pain improved by 30% for hip participants and 24% of knee participants. 54% for both hip and knee participants had a meaningful change in their pain.

Proportion of participants that had an improvement

		Hip	Knee
Function		53 %	58 %
Quality of life		61 %	67 %

Knowledge

At 12 months there was a sustained decrease in the proportions of patients reporting that they were afraid of damaging their joint with 34% and 35% reductions for hip and knee patients, respectively.

Improved Function and Quality of Life

At 12 months 53% of hip and 58% of knee participants reported an improvement in their function and 61% of hip and 67% knee participants reported an improvement in their quality of life.



Other Considerations

Interpretation of results

The analyses included in this Annual Report are entirely descriptive and the results should be interpreted with caution. The data are based on validated questionnaires, objective functional tests and questions whose validity has not yet been examined. We have strived to achieve the highest degree of validity in data collection as possible under the given circumstances, where data are collected in clinical practice. It cannot be ruled out that some data may be associated with uncertainty. The analyses do not involve a control group, and therefore it is possible that factors other than the GLA:D program may have affected the results.

To rule out competing causal factors, the analyses have been repeated excluding patients who have had joint replacement surgery during the follow-up period. Consequently, the most obvious competing causal factor has been taken into account.

The majority of GLA:D participants are people who are able and willing to pay for a treatment plan in a private clinic and who are able to attend appointments at the clinic or in 2020 were able to attend in their own home through virtual technology. Consequently, it cannot be ruled out that the composition of the patient population may have affected the results. Future work will be undertaken to understand the outcomes for private payers versus those who undertake the program through public funded programs.

Conclusion

The GLA:D program continued to grow through 2020 even with the limitations of access related to the social and business restrictions that were put in place in each province/territory due to the COVID pandemic. The GLA:D National team were able to provide the training and certification through online courses which increased therapists access. Although the numbers of patients that accessed the program was limited, many of the clinics were able to transition to offer the program virtually thereby continuing to provide patients with access in their homes.

GLA:D International

By the end of 2020, the GLA:D program has been implemented in Canada, Denmark, Australia, China, New Zealand and Switzerland and ongoing implementation was underway in Austria. The GLA:D International Network (GIN), which includes representation from all the countries, meets every 6 months to share experiences and ensure the program is updated and standardized in the different countries around the world.

With data now being available in multiple countries, research has also been started using the baseline and outcome data between countries. This can be used to further develop the program at an international and a national level. Information about the GLA:D International Network is available on the website: <http://gladinternational.org>.

GLA:D Canada Leadership Team 2020

Name	Position	Organization
Rhona McGlasson	Executive Director	Bone and Joint Canada
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Christian Veillette	Orthopaedic Surgeon and Assistant Professor of Surgery	Division Head, Orthopaedic Surgery, Arthritis Program, University Health Network, Department of Surgery, University of Toronto, Toronto, Ontario
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Jane Burns	Practice Lead, Physiotherapy	Vancouver Coastal Health, Vancouver, British Columbia
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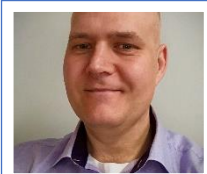
GLA:D Canada National Trainers Team



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Mia Bechard



Jason Daoust



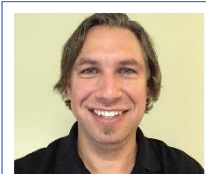
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Sarah Williamson



Mary Foley



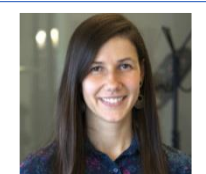
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Crystal MacKay



Kelly Hunter



Tsvetelina
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Kira Ellis



Laura Lundquist



Laura Beaupre



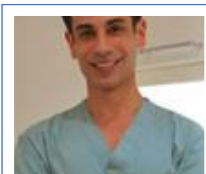
Leesha Buisman



Allison Ezzat



Michael Hunt



Mark Anunciacion



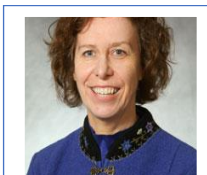
Rebecca Moyer



Agnes Makowski



Tisha Bohne



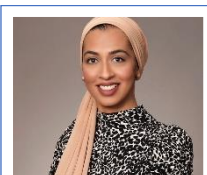
Allyson Jones



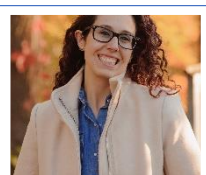
Amy Wainright



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