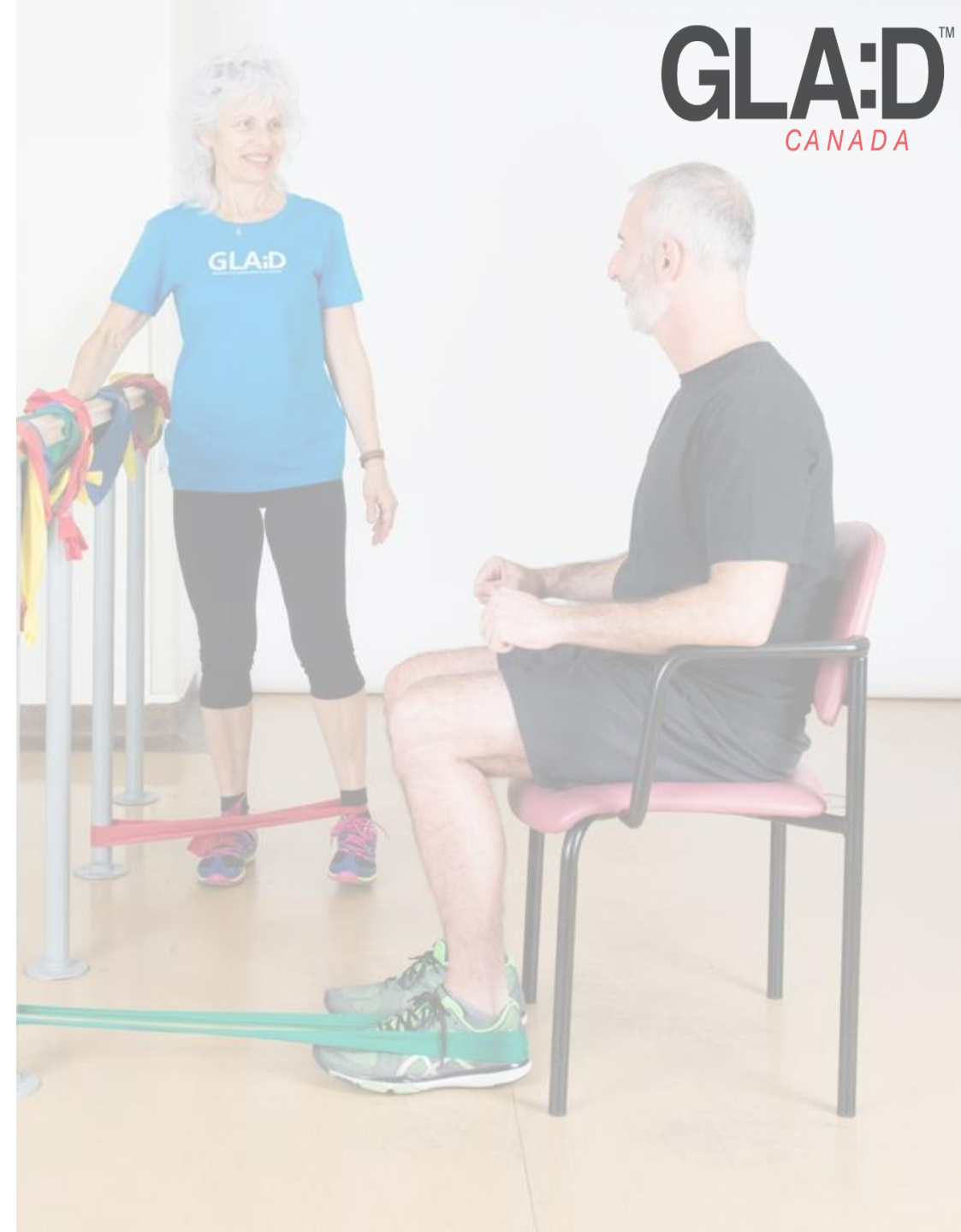


# HIP AND KNEE

## ANNUAL REPORT 2023



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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/>



GLA:D® is an evidence-based program for treatment and management of osteoarthritic symptoms. GLA:D™ Canada is licensed to the Canadian Orthopaedic Foundation



Bone and Joint Canada has teamed up with researchers from Denmark to implement this evidence-based education and exercise program to reduce the symptoms of OA in the knee and hip for individuals in Canada.

GLA:D™ Canada | GLA:D Annual Report 2023 | <https://GLA:Dcanada.ca>

# INTRODUCTION

## The GLA:D Canada Hip and Knee Program 2023

The GLA:D Canada program for hip and knee osteoarthritis is an education and exercise program that provides the first line of care for patients. It is hosted in rehabilitation centers such as physiotherapy and chiropractic clinics across the country. It includes 2 education and 12 exercise sessions over a period of 6 – 8 weeks. It is run as a group-based program with typically 4 – 6 participants in a sessions, during which they are completing their own independent exercises. This approach to chronic disease increases participation and results in improved outcomes. A registry is used to collect outcome data directly from participants at baseline, and at 3 and 12 months after the program.

This report provides the analysis of the results from the GLA:D participants that attended the program in 2023. This was the year that the health care system moved out of the restrictions that had been in place for the COVID-19 pandemic. As such, sites were able to return to treating people in person within the clinic and in group sessions.

## 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

# TRAINING COURSES

## Training and Site Implementation Overview

Health care professionals (HCPs) that provide the GLA:D program must attend a 1.5-day certification program. In 2023, the GLA:D Canada Hip and National team delivered four virtual training courses for HCPs. Once a HCP is certified, they can launch the program in their clinic.

Implementation includes steps to identify appropriate patients for the program and set up the processes to encourage participants to provide their data to the GLA:D registry. In 2023, the GLA:D National team answered clinical and operational questions on in-person and virtual programming to assist the clinics launch. The GLA:D registry is based at University Health Network (Toronto, Canada). The registry team supported the clinicians and participants to input information into the registry to collect the outcome data. Participant data is used to support quality assurance initiatives and research to ensure the effectiveness of the program across the country, facilitating evidence-based practice for people with hip and knee OA.

## Training Courses

All training courses were hosted virtually in 2023.

Training Courses	2023
Number of Courses	4
Number of Health professionals	215
Breakdown by Health professionals	
- Physiotherapists	69%
- Chiropractors	16%
- Kinesiologists	11%
- Other (Exercise physiologists)	4%

# CERTIFIED HCP 2023

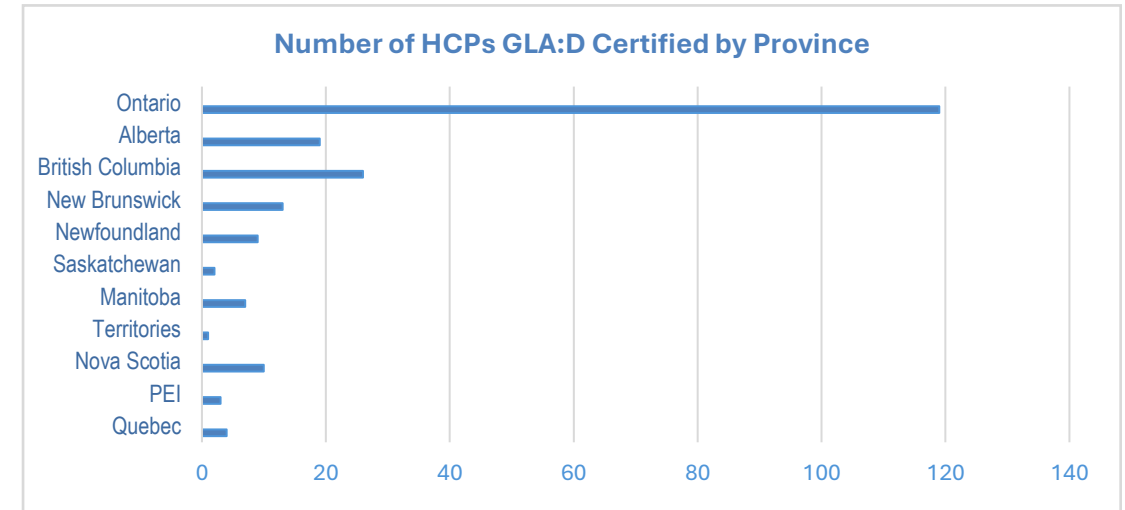
## Clinicians

By the end of 2023, there were 2,015 HCPs trained in the GLA:D program and the evidence-based management of hip and knee osteoarthritis in all provinces across Canada.

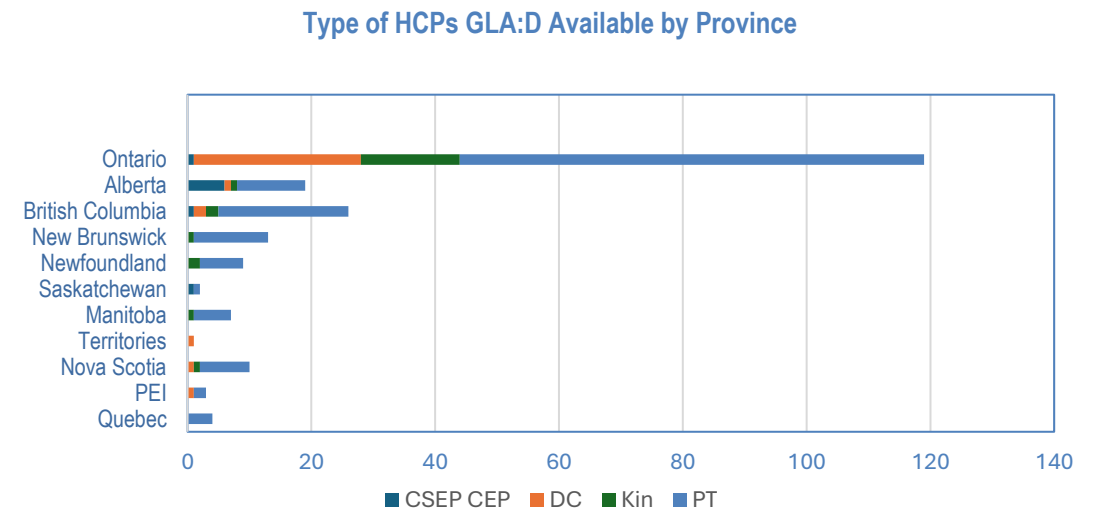
## Masters Course

The Masters course was launched in 2022 to provide previously certified HCPs with an update on research and clinical management of hip and knee OA. The course includes four asynchronous online learning sessions and a session with researchers and lead clinicians to review the evidence and complete case studies. The 2023 course was hosted in October for 70 attendees.

## Number of GLA:D Certified HCPs by Province in 2023



## Type of HCPs Available by Province in 2023



CSEP CEP=Canadian Society of Exercise Physiology – Certified Exercise Physiologist., DC=Chiropractor; Kin=Kinesiologist; PT=Physiotherapist.

# WHERE IS GLA:D AVAILABLE?

## Overview

Through 2023, following COVID pandemic, clinics were able to return to providing the program in-person which resulted in an increased uptake in clinics where the program had been put on hold, as well as the launch of additional clinics.

There were 21,295 participants registered in the registry, of which 14,571 patients had provided their data. This is an additional 4,255 participants enrolled in 2023, showing a significant return to uptake in the program across the country since the pandemic.

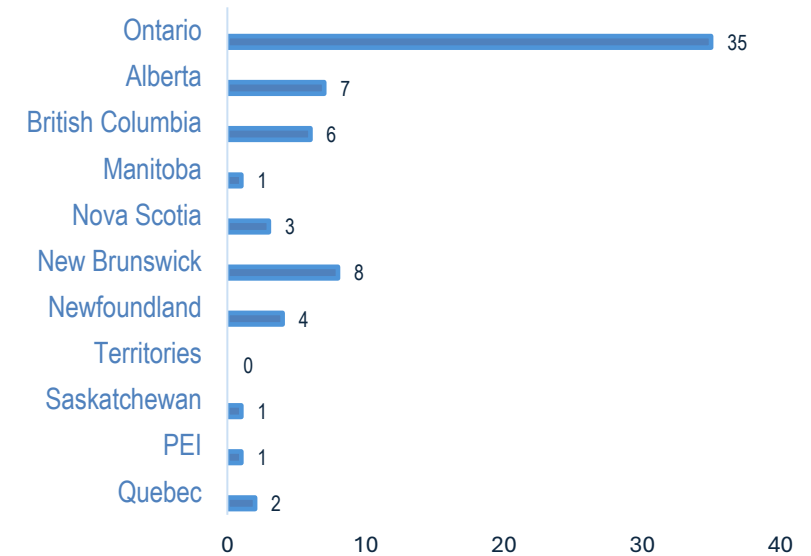
There were issues with clinics tracking participant data following the COVID pandemic as sites moved back from virtual programming to in-person sessions.

The GLA:D National team continued with re-education strategies including group based and site specific education sessions on the use of the registry to ensure clinics were successful in encouraging patients to provide their data.

## Clinics launched in 2023

A total of 68 clinics launched the program across Canada in 2023.

### Clinics Launched in 2023



# WHERE IS GLA:D AVAILABLE?

## Locations of GLA:D Sites

GLA:D is available in all provinces and in two territories. At the end of 2023, there were 402 clinics registered as offering the program.

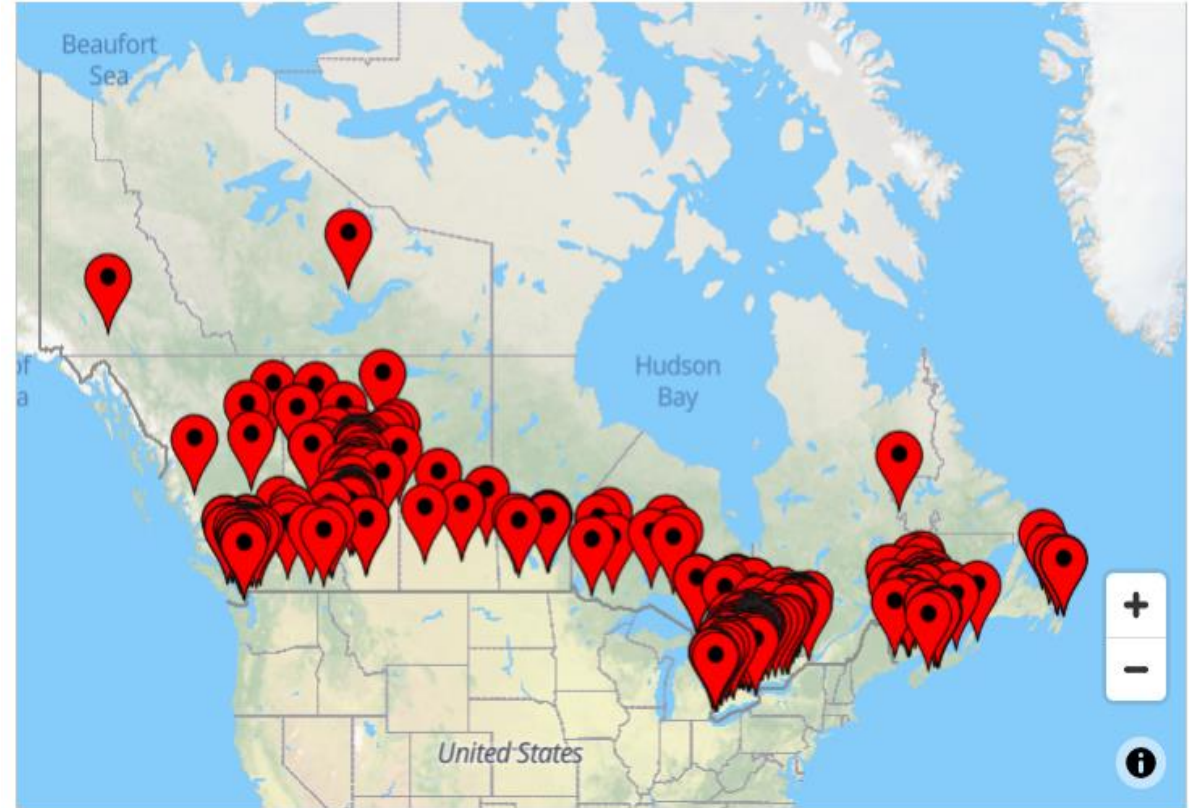
## Public and Private Funding

The GLA:D program is a standardized approach to care that is currently being offered in publicly and privately funding clinics across Canada.

At the end of 2023, there were 109 clinics offering the program through public funding, covering all provinces except Quebec and the Territories.

The GLA:D National team continue to work with clinics at an operational level, and with governments at a policy level to facilitate access to the program.

## GLA:D Locations in Canada

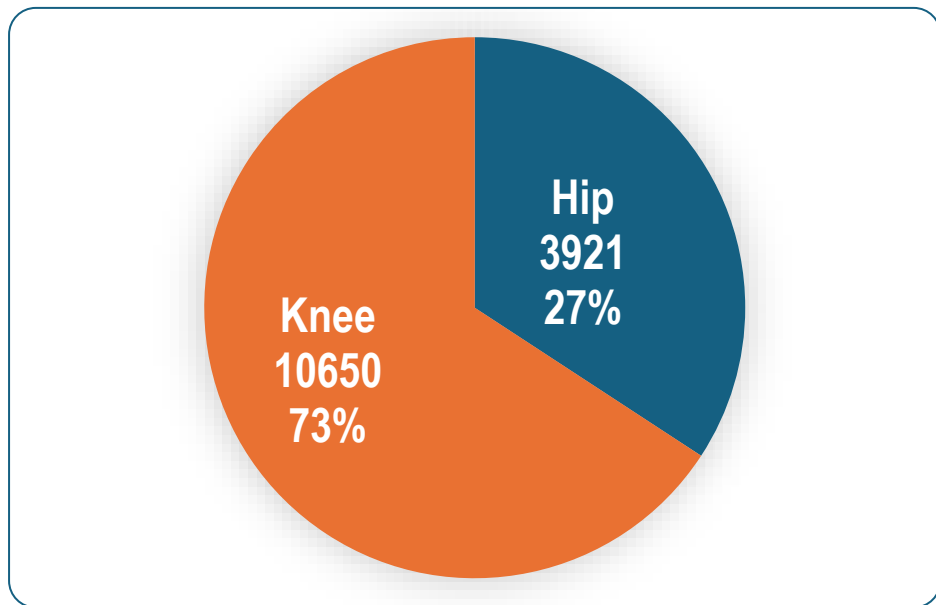


Store Locator Software © StoreLocatorWidgets.com

# GLA:D PARTICIPANTS

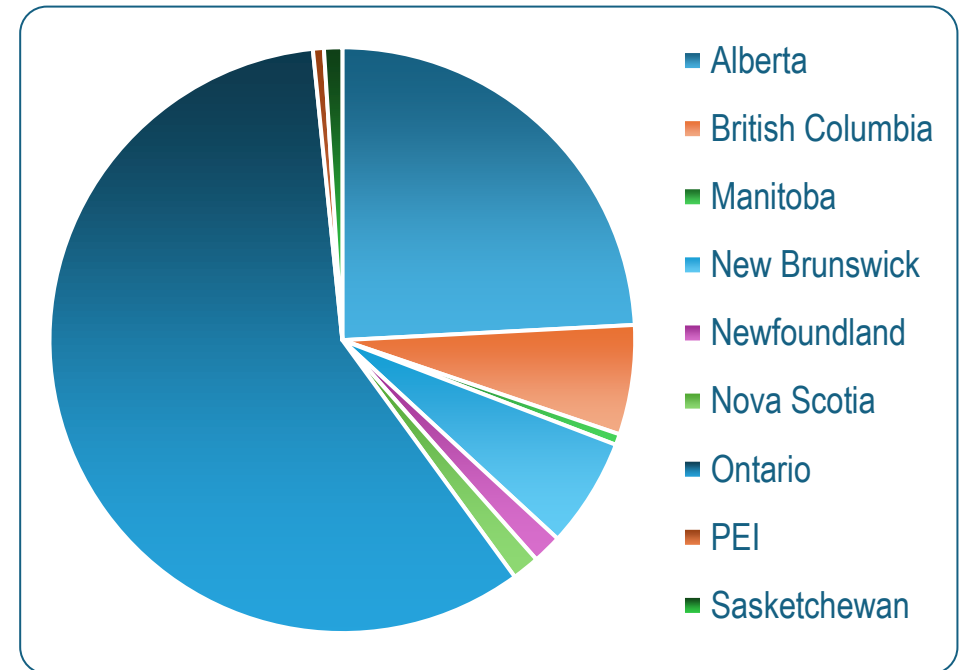
## Total Hip and Knee Patients 2016 - 2023

Since inception in 2016, 14,571 patients experiencing hip and knee osteoarthritis symptoms have provided their outcome data.



## Distribution of Participants 2016 - 2023

All provinces have sites that are providing the program.





# PARTICIPANT CHARACTERISTICS

## Baseline Characteristics

The baseline characteristics of the patients who have attended the GLA:D program up to the end of 2023 were:

**Gender:** 75% female, 25% male

**Age:** <55 9%, 56-64 30%, 65-74 43%, >75 17%

**Work status:** 63% retired, 30% working

**Weight (overweight/obese):** 70% hips, 81% knees

**Symptom duration (years):** Hip: 4.4    Knee 6.7

**Medications:** 71% of patients have taken medications for their joint symptoms with the top medications being Acetaminophen, non-steroidal anti-inflammatory drugs (NSAIDs) in both oral and topical formats.

**Surgery:** 11% of hip patients and 21% of knee patients had undergone previous surgery

**Pain (Numeric Pain Rating Scale):** 5.1 (0 no pain – 10 worst pain)

## Summary

The participants of the GLA:D program are typically females, are between 56 and 74 years of age and are retired.

There are differences between hip and knee OA in weight where 10% more individuals with knee OA are overweight/obese.

Symptom duration before diagnosis also differs with an additional 2 years of symptoms prior to diagnosis for knee OA.

The individuals present with a pain score of 5.2 with 69% taking medication, which includes acetaminophen, and oral and topical NSAIDs.

# 3 MONTH OUTCOMES

## Engagement and Impact

The participation rates are high in the GLA:D program with patients attending most education and the exercise sessions:

- 73% of hip and 70% knee participants attended all the education sessions.
- 77% of participants missed no more than one exercise session.

Patients felt the program helped them manage their condition with 86% reporting that the program was beneficial or very beneficial.

Patients were satisfied with the program with 87% reporting that they were satisfied or very satisfied

The program education, which is provided in structured sessions and is reinforced through the exercise sessions, resulted in 89% of patients reporting they use the education every week and 50% reporting using it at least once per day.

## Pain

After GLA:D the pain improved by 37.7% for hip participants and 43.0% for knee participants (pain numeric rating scale).

## Beliefs

Decreases were seen in the proportions of patients reporting that they were afraid of damaging their joint at the 3-month follow-up, with 8.9% and 13.5% reductions for hip and knee patients, respectively.





## Quality of Life

The average improvement in quality of life for hip participants was 38.3% and knee participants 43.9% which is clinically significant. The percentage of participants that reported an improvement to their quality of life was 37.7% of hip and 43.9% of knee participants 3 months after starting the program.

# 3 MONTH OUTCOMES

## Function

Both hip and knee participants reported an improvement in function. This was further demonstrated in the functional tests, where both hip and knee participants had a meaningful improvement in their sit to stand test with an increase of two or more. Walking also showed clinical improvement for both hip and knee participants.

		Hip	Knee
Function		39.1 %	42.3 %
30-sec sit to stand		72.0 %	73.9 %
40-meter walk test		38.4 %	40.4 %
Quality of life		37.7 %	43.9 %

## Summary

The GLA:D program requires that patients receive both education and exercise with the goal of changing movement patterns and levels of physical activity.

Over 3 months, the high level of reported benefit, the continued use of the learnings from the program, and the improvements in the reported functional levels supported by the clinically significant improvements in the functional tests demonstrate that the program is meeting this goal.

# 12 MONTH OUTCOMES

## Outcomes

Outcomes are tracked through validated questionnaires at 12 months. There are no functional test performed. The functional scores are reported as percentages, acknowledging that there is a smaller cohort of participants that chose to provide their outcome data at 12 months.

## Beliefs



At 12 months, there was a sustained decrease in the proportions of patients reporting that they were afraid of damaging their joint with 7.4% and 10.5% reductions for hip and knee patients, respectively.

## Pain

Pain improved for the majority of participants with 40.8% of hip and 38.6% of knee participants having a meaningful change in their pain (numeric rating scale).

## Function and Quality of Life

At 12 months, both hip and knee participants reported an improvement in function and quality of life.

		Hip	Knee
Function		42.3 %	43.0 %
Quality of life		45.7 %	49.3 %

## Summary

At 12 months, there was a sustained decrease in the proportions of patients reporting that they were afraid of damaging their joints, a continued decrease in pain, and improvement in both function and quality of life scores.

# SUMMARY

In 2023, the program continued to expand across Canada with increased sites providing care to an increasing number of patients. Participant enrolment rebounded and surpassed pre-pandemic levels, with sites returning to offering the exercises and education in-person. Sites were also able to continue offering the program via virtual care, improving access for patients.

The GLA:D Canada program has proven to be stable after the COVID-19 pandemic. The GLA:D Canada National team will continue to train more clinicians and expand access for patients with knee and hip osteoarthritis in both public and private settings across the country.

# GLA:D CANADA

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

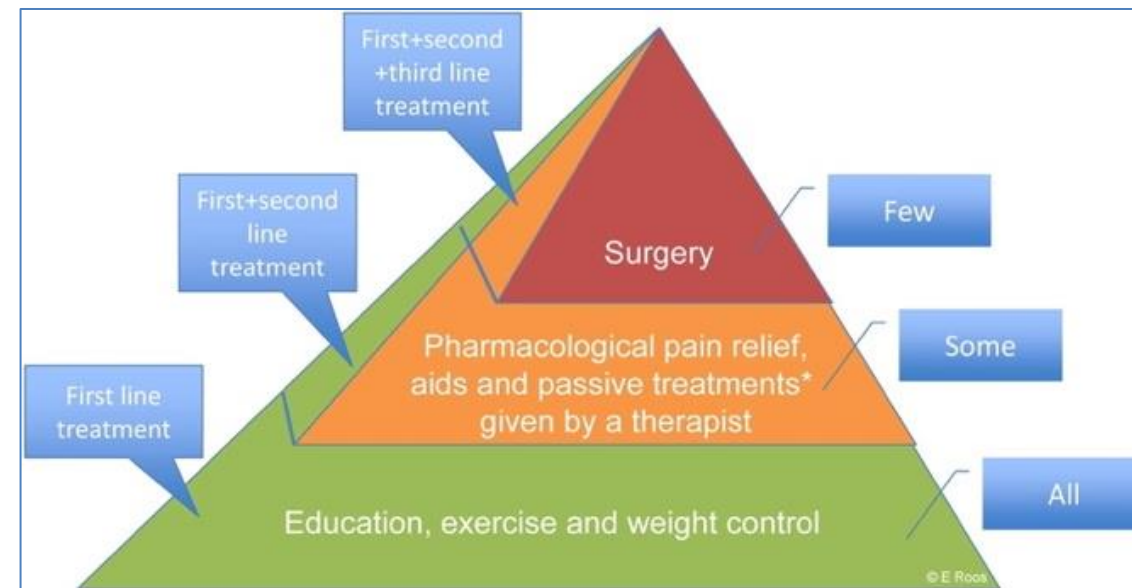
✚ a supervised, evidence-based education and personalized, targeted exercise program for people with symptomatic hip and or knee osteoarthritis (OA).

✚ 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).

## 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, surgeon or therapist who 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.

# GLA:D CANADA LEADERSHIP TEAM 2023

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