

# GLA:D® CANADA KNEE & HIP PROGRAM

GLA:D<sup>TM</sup>  
CANADA



## ANNUAL REPORT 2024



# GLA:D® CANADA LEADERSHIP TEAM

## Project Co-Leads

**Rhona McGlasson**, PT MBA

Executive Director  
Bone and Joint Canada  
Canadian Orthopaedic Foundation

**Michael G. Zywiell**, MD MSc FRCSC

Orthopaedic Surgeon and  
Assistant Bone and Joint Professor of Surgery  
Arthritis Program, University Health Network  
Department of Surgery, University of Toronto  
Institute of Health Policy, Management and  
Evaluation, University of Toronto

## National Lead

**Allison M. Ezzat**, PT PhD  
Schroeder Arthritis Institute  
University Health Network

## Research Lead

**James J. Young**, DC PhD  
Integrated Arthritis Care  
Schroeder Arthritis Institute  
University Health Network

## Operations Lead

**Rose Wong**, BHSc  
Arthritis Program  
Schroeder Arthritis Institute  
University Health Network

## Clinical Research Coordinator

**Antonietta Fazio**, BSc  
Arthritis Program  
Schroeder Arthritis Institute  
University Health Network

## Research Analyst

**Kala Sundararajan**, MSc  
Arthritis Program  
Schroeder Arthritis Institute  
University Health Network

## Research Assistant

**Sofia Magana**, BSc  
Arthritis Program  
Schroeder Arthritis Institute  
University Health Network

# ACKNOWLEDGEMENTS/ PROGRAM TRANSITION

GLA:D® Canada was licensed to the Canadian Orthopaedic Foundation (COF) with implementation under Bone and Joint Canada, the knowledge translation division of COF.

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

In 2024, the license to implement GLA:D® Canada was transferred from COF to the University Health Network.

Details of the program can be found at <https://gladcanada.ca>



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# INTRODUCTION

## The GLA:D® Canada Knee and Hip Program 2024

GLA:D® Canada is an evidence-based education and exercise program that provides first-line care for individuals with knee and hip osteoarthritis (OA).

The program is delivered in rehabilitation settings such as physiotherapy and chiropractic clinics across Canada. It consists of 2 to 3 education sessions and 12 supervised exercise sessions over a 6- to 8-week period. Sessions are conducted in small groups, typically with 4 to 6 participants, each performing individualized exercises. This group-based approach to chronic disease management encourages engagement and contributes to improved health outcomes.

Participant-reported outcomes are collected through a national registry prior to the start of the program and at 3- and 12-months following completion. This report presents the data from the GLA:D® Canada participants who attended the program in 2024.

## Three Elements of the GLA:D® Program

### One: Certification of Clinicians

- ❖ Certification of health care professionals (HCPs) in a 1.5-day course
- ❖ HCPs include physiotherapists, chiropractors, kinesiologists, and exercise physiologists

### Two: Patient Education and Supervised Exercise

- ❖ 2 to 3 education sessions followed by 12 exercise sessions in a group-based format
- ❖ Exercises are supervised and individualized using an NEuroMuscular EXercise (NEMEX) approach with a focus on quality of movement
- ❖ Sessions are delivered over a 6- to 8-week period

### Three: Quality Monitoring

- ❖ Data from pre-program (baseline) and post-program (3- and 12-month follow-up) are entered into the national electronic GLA:D® registry.
- ❖ Data includes validated, patient-reported outcome measures (e.g., pain, quality of life) and physical performance tests (e.g., 30 second chair stand).

## Good Life with osteoArthritis in Denmark (GLA:D®)

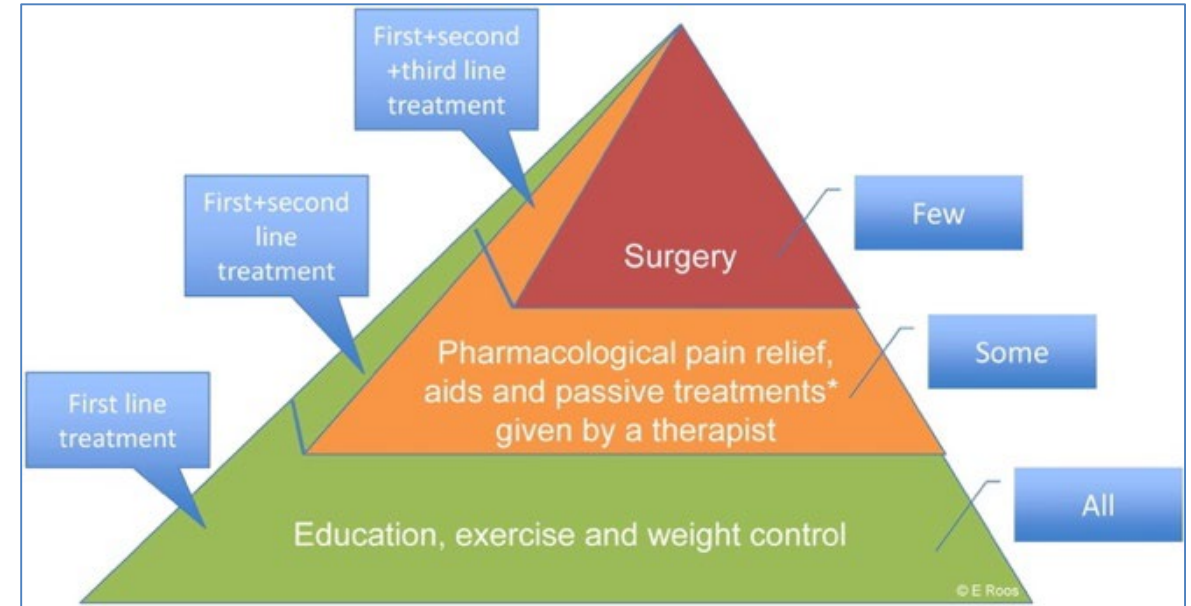
- ❖ a supervised, evidence-based, group education and individualized, targeted exercise program for people with symptomatic knee and/or hip OA
- ❖ aligns with the international guidelines for the management of knee and hip OA
- ❖ branded as GLA:D® Canada for sites to implement across Canada

## Accessing GLA:D® Canada

**Eligibility:** Patients must have a clinical diagnosis of knee and/or hip OA, which can be provided by a family physician, orthopedic surgeon, physiotherapist, or chiropractor.

**Referrals:** Clinicians can refer directly to the program. Patients may also self-refer.

**Program Access:** The GLA:D® Canada education and exercise program are available through private insurance and self-pay options. In some regions, public funding is available to support participation.



## GLA:D® Canada Goals

GLA:D® Canada aims to:

- ❖ implement evidence-based practices into clinical care
- ❖ give patients the information and skills to self-manage their condition
- ❖ ensure patients have access to non-surgical treatment options as a first-line approach before considering surgery



# TRAINING COURSES FOR CLINICIANS

## Training and Site Implementation Overview

HCPs who wish to deliver the GLA:D® Canada program must complete a 1.5-day certification course. Once certified, and after their clinic has successfully completed the setup process to become a registered program site, HCPs may begin offering the program within their clinical setting.

Launching the program involves identifying suitable participants and establishing procedures to support them to contribute their outcome data to the GLA:D® registry. The registry, housed at the University Health Network, supports national quality assurance and research to evaluate and improve the program’s effectiveness and promote evidence-based care for people with knee and hip OA.

In 2024, the GLA:D® Canada Knee and Hip National Team continued to deliver virtual certification courses for HCPs. Throughout the year, the team responded to clinical and operational questions related to both in-person and virtual program delivery, helping HCPs successfully launch the program in their clinics. The GLA:D® Registry Team also supported HCPs and participants with entering data into the registry, ensuring accurate and timely information to help monitor and improve the program.

## Certification Courses for Clinicians

By the end of 2024, a total of 2,099 HCPs from all Canadian provinces and two territories (Northwest Territories and Yukon) received training through the GLA:D® Canada program.

In 2024, three certification courses were held in May, February, and November, with 159 HCPs attending the courses.



## Master’s Courses for Certified GLA:D® Clinicians

Launched in 2020, the Master’s Courses offers previously certified GLA:D® Canada HCPs with updates on the latest research and clinical approaches for managing knee and hip OA. The course includes pre-course learning modules and an interactive online session. Led by a researcher and certified GLA:D® HCPs, these sessions feature a participant-driven review of current evidence and peer knowledge sharing using case studies. In 2024, one Master’s Course was held in February, with 19 individuals attending the course.

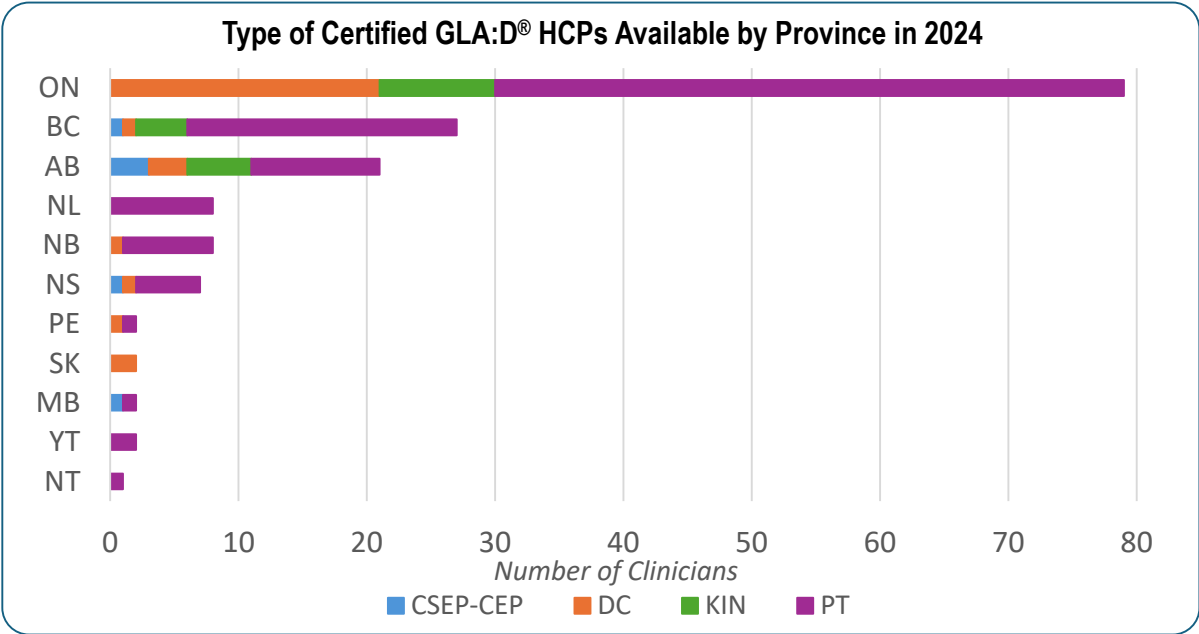
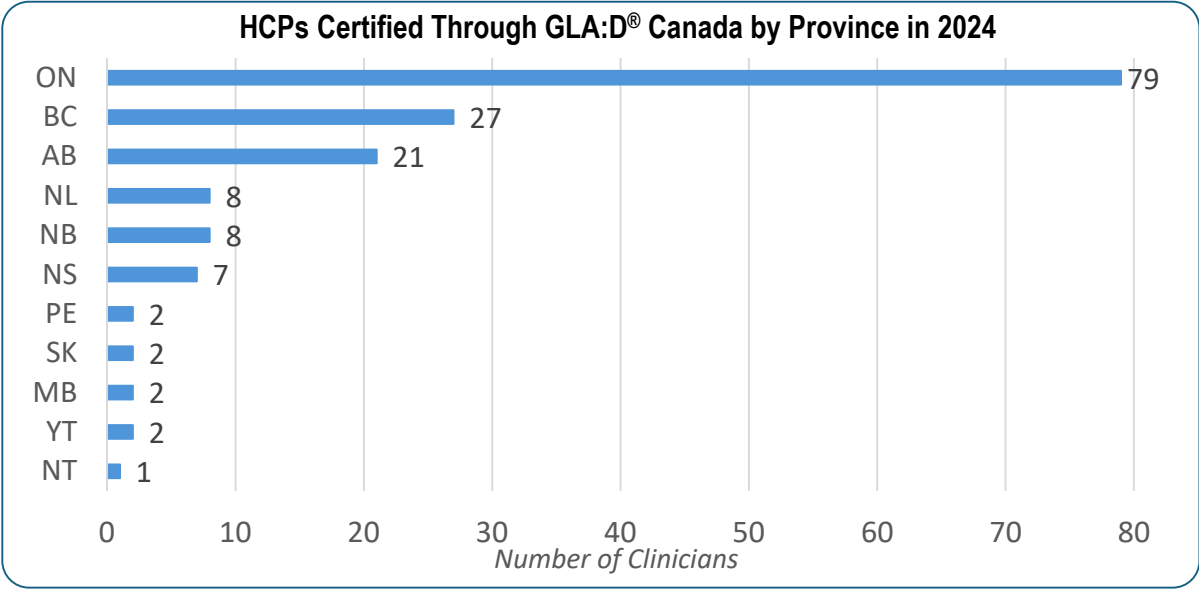
# CERTIFICATION FOR CLINICIANS IN 2024

## Certification Courses & Clinician Attendance

In 2024, 159 HCPs from across Canada (except Quebec and Nunavut) attended three virtual courses. Attendees were physiotherapists (PT), chiropractors (DC), kinesiologists (KIN), and Canadian Society for Exercise Physiology Clinical Exercise Physiologists (CSEP-CEP).

2024 CERTIFICATION COURSES	
Number of Certification Courses	3
Number of HCPs Trained	159
Type of HCPs Trained	
• PT	66%
• DC	19%
• KIN	11%
• CSEP-CEP	4%

## GLA:D® Certified Clinicians by Province in 2024



# WHERE IS GLA:D® CANADA AVAILABLE?

## Overview

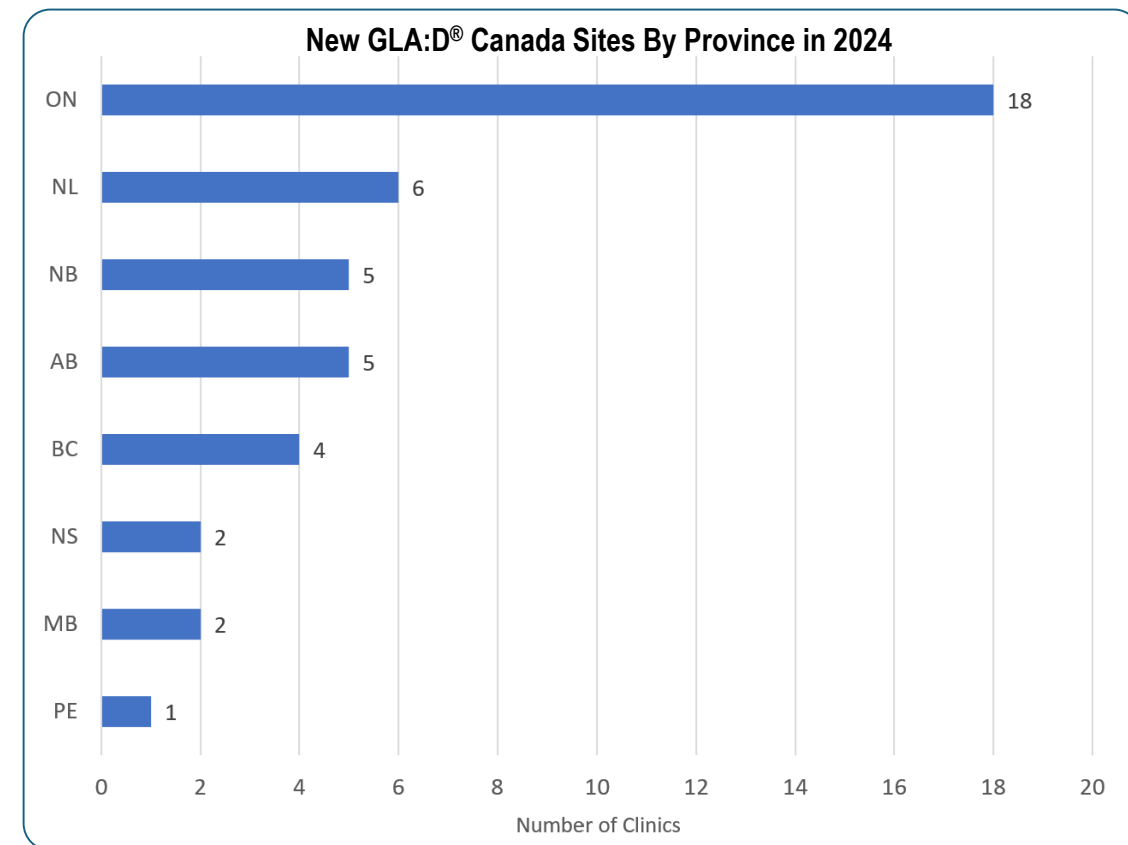
Participants who attended the GLA:D® Canada program were invited to share information about their condition and symptoms, including pain levels, physical function, and quality of life. Data were collected electronically through questionnaires at three time points: program entry, as well as 3-months and 12-months after program completion.

There were 27,355 participants registered in the registry with 18,710 completing pre-program questionnaires by the end of 2024. This represented an additional 6,060 registrations and 4,139 participants who provided data, indicating continued growth and engagement in the program across the country.

The GLA:D® Canada Knee and Hip National Team continued implementing re-education strategies, including training sessions on registry use to support clinics in effectively encouraging participants to submit their data.

## Clinics Launched in 2024

A total of 43 new clinics across Canada registered with GLA:D® Canada in 2024. No new sites were added in Saskatchewan, Quebec, or the Territories during this period.



# WHERE IS GLA:D® AVAILABLE CONTINUED?

## Location of GLA:D® Canada Sites

The GLA:D® Canada education and exercise program is available in all provinces and in two territories.

## Public and Private Funding

The GLA:D® Canada program is a standardized approach to care that is currently available in both publicly and privately funded clinics across Canada.

By the end of 2024, 360 locations were delivering the program, including 129 locations offering the program through public funding.

The GLA:D® Canada Knee and Hip National Team continues to collaborate with clinics at the operational level and with government bodies at the policy level to enhance access to the program.

## GLA:D® Sites Across Canada



GLA:D® Sites in the Northern Territories, West Coast, and Prairie Provinces



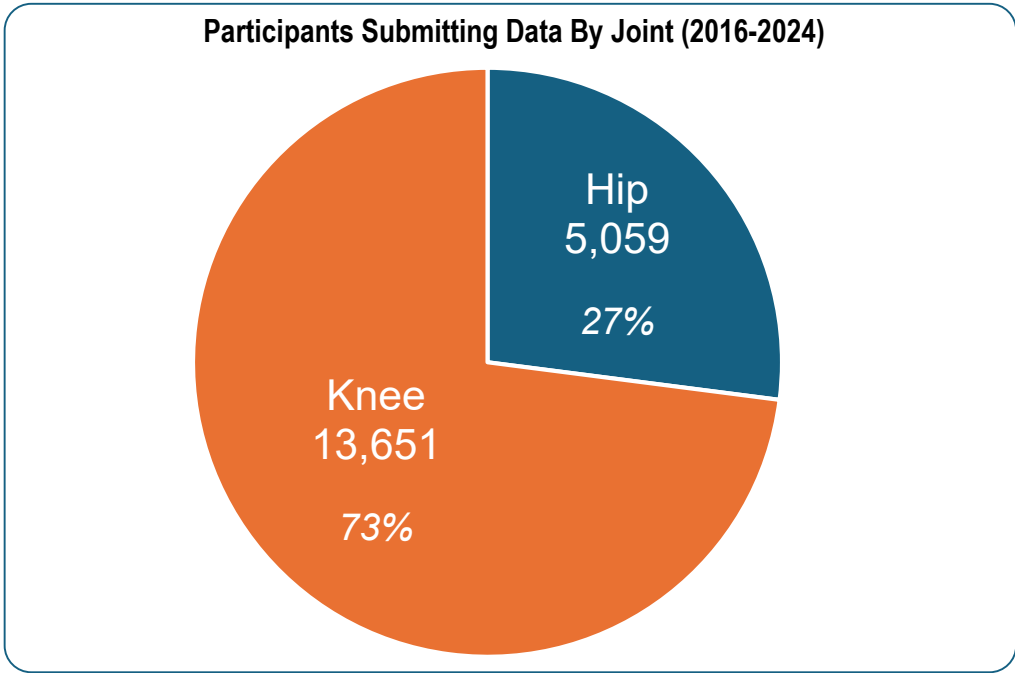
GLA:D® Sites in Central and Atlantic Canada



# GLA:D® PARTICIPANTS

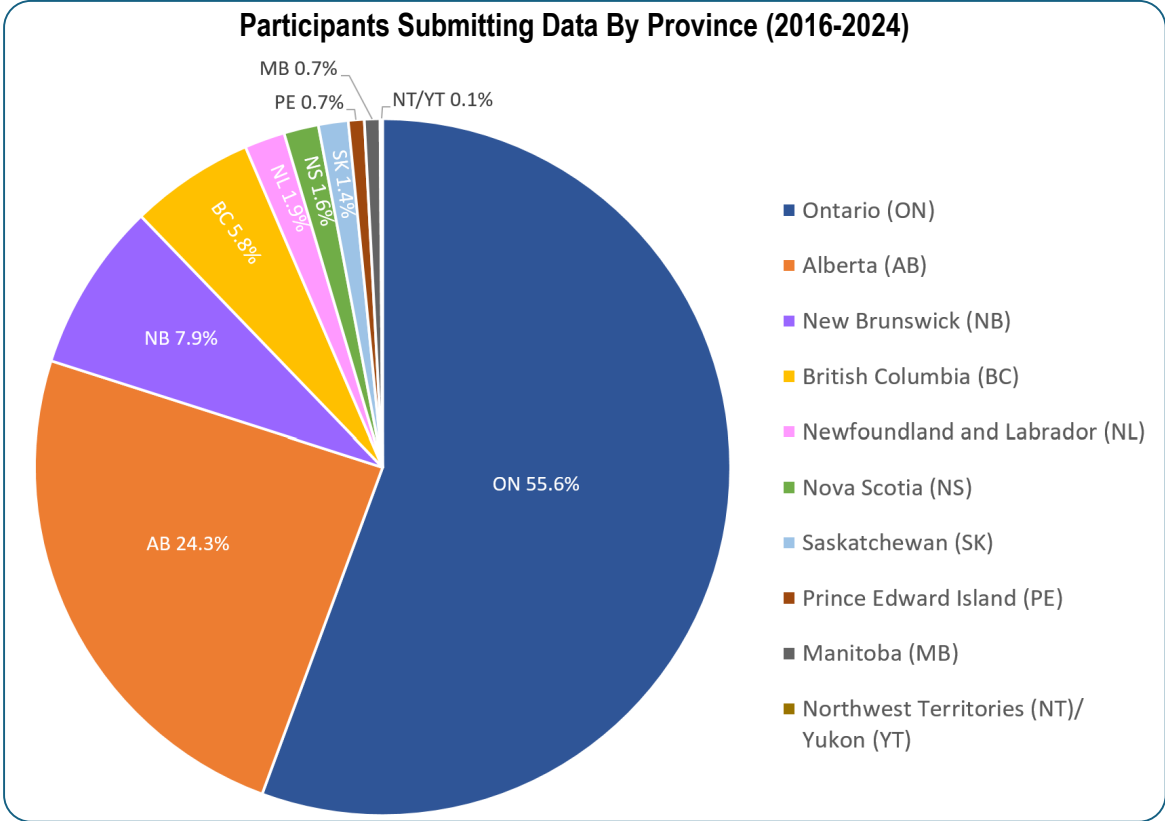
## Total Knee and Hip Participants 2016 - 2024

Since the start of the GLA:D® Canada program in 2016, 18,710 participants experiencing knee and hip OA symptoms have provided pre-program outcome data.



## Distribution of Participants Across Canada 2016 - 2024

Participants from all provinces have contributed outcome data. Contributions from Quebec are too small to appear on the chart below. Of the territories, only Northwest Territories and Yukon have registered sites with patient-reported outcome data.





# GLA:D® PARTICIPANT CHARACTERISTICS


## Baseline Characteristics

The baseline characteristics of participants who have attended the GLA:D® Canada program up to the end of 2024 were:



### Gender:

- 76% female 
- 24% male 


### Age categories:

- 9% under 55 years 
- 29% aged 55-64 years
- 44% aged 65-74 years
- 18% aged 75 years or older


### Work status:

- 63% retired 
- 27% working (full- or part-time) 


### Overweight or obese:

- 81% of knee participants 
- 71% of hip participants

### Average symptom duration:


- 6.8 years for knee participants 
- 4.4 years for hip participants

### Medication use:


- 72% of all participants (71% and 74% of knee and hip participants, respectively) reported using medications to manage their joint symptoms 
- Acetaminophen and oral and topical nonsteroidal anti-inflammatory drugs (NSAIDs) were most commonly used

## Baseline Characteristics Continued

### Pain intensity level:

- In the past month, both knee and hip participants reported an average pain of 5.1 on a scale from 0 (no pain) to 10 (worst pain) 

### Previous surgery:


- 21% of knee participants and 12% of hip participants had previous surgery on the affected joint 

## Summary: Who Takes Part in the GLA:D® Program?

- Most participants are female between the ages of 55 and 74 years, and many are retired
- Participants with knee OA are about 10% more likely to be overweight or obese than those with hip OA
- On average, participants with knee OA report having symptoms for about two years longer than those with hip OA
- Prior to the start of the program, participants reported a pain level of around 5 out of 10
- About 7 out of 10 participants take medications to help manage their symptoms. This includes common pain relievers like acetaminophen, as well as oral and topical NSAIDs.

# 3-MONTH OUTCOMES

## Engagement and Impact

 Outcomes were collected 3 months after participants joined the program (10,861 participants with 7,848 knees and 3,013 hips).

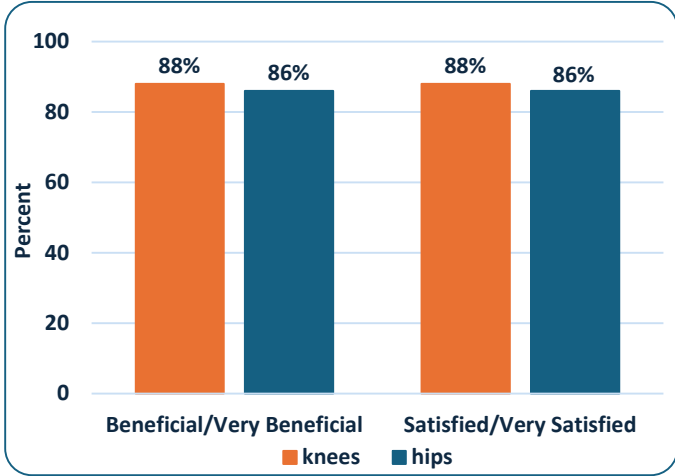
### Participation

Participants attended the majority of sessions.

ATTENDANCE	KNEE	HIP
2 education sessions	68%	70%
At least 11 of 12 exercise sessions	76%	77%

### Benefits & Satisfaction

At the end of the program, greater than 80% of participants reported that the program was beneficial/very beneficial and were also satisfied/very satisfied with the program.



### Knowledge Use

Both knee and hip participants reported regularly applying the knowledge gained from the program in their daily lives. In fact, 90% of participants used what they learned at least weekly, and 50% reported using it daily.

## Beliefs



After completing the program, fewer participants feared that physical activity or exercise would damage their joints compared to before the program began. Knee participants experienced the biggest improvement, with fear dropping by 13%, from 31% to 18%. While the drop was smaller for hip participants, they still saw progress, with an 8% decrease from 23% to 15%.

## Pain



On a scale from 0 (no pain) to 10 (worst pain), 43% of participants with knee pain and 38% of participants with hip pain felt their pain got much better after the program. This means their pain either went down by at least 30% or they had no pain at all.


## Quality of Life



By the end of the program, 43% of participants with knee problems and 38% of participants with hip problems had a meaningful improvement in quality of life. This means their scores improved by at least 10 points out of 100, or reached the highest possible score indicating no issues at all.

# 3-MONTH OUTCOMES CONTINUED






## Function

 By the end of the program, 41% of knee participants and 39% of hip participants showed important improvements in how well they could move and do daily activities. This means their scores improved by at least 10 points out of 100, or reached the highest possible score indicating no issues at all.

Participants also reported noticeable improvements in the following physical performance tests:

- In the 30-second chair stand test, 74% of participants with knee OA and 73% of participants with hip OA had clinically significant improvements, meaning they were able to stand up two or more times more than baseline.
- In the 40-metre walking test, 40% of people with hip problems and 41% of people with knee problems were able to walk faster, increasing their speed by at least 0.2 metres per second.

## 3-Month Data Collection Summary

MEANINGFUL CHANGES BY END OF PROGRAM		KNEE	HIP
	Pain Intensity (↓ of 30% or more or no pain)	43%	38%
	Function (↑ of 10 points or more or best possible score)	41%	39%
	Number of chair stands (↑ of 2 or more additional stands)	74%	73%
	Walking speed (↑ speed of 0.2 metres per second)	41%	40%
	Quality of Life (↑ of 10 points or more or best possible score)	43%	38%

By the end of the program, participants reported positive results, kept using the skills they learned, and saw improvements in their pain, ability to do daily activities, and overall quality of life. These benefits were also reflected in physical performance tests, like walking and standing from a chair, indicating measurable improvements in mobility and strength.



# 12-MONTH OUTCOMES

## 12 Month Data Collection



Outcomes were collected 12 months after participants joined the program (7,666 participants with 5,610 knees and 2,056 hips).

## Beliefs



At 12 months, among those with knee problems, fear remained 11% lower than at the beginning, decreasing from 31% to 20%. Participants with hip problems were still 8% less likely to fear that physical activity might harm their joints, with fear dropping from 23% to 15%.

## Pain



Most people felt their pain had improved compared to when they started. This included 38% of participants with knee pain and 42% of participants with hip pain who reported a meaningful change (either their pain dropped by at least 30% or it went away completely).

## Function and Quality of Life



Similarly, at 12 months after starting the program:

- 43% of participants with knee problems continued to notice improvements in how well they could move and manage daily activities, and 49% also experienced meaningful improvements in their quality of life.
- 42% of participants with hip problems were still noticing improvements in how well they could move and manage daily activities, and 46% reported meaningful improvements in their quality of life.

Once again, this means their scores improved by at least 10 points out of 100, or they reached the highest possible score indicating no issues at all.

# 12-MONTH OUTCOMES CONTINUED

## 12-Month Data Collection Summary

MEANINGFUL CHANGES: 12-MONTH FOLLOW-UP		KNEE	HIP
	Pain Intensity (↓ of 30% or more or no pain)	38%	42%
	Function (↑ of 10 points or more or best possible score)	43%	42%
	Quality of Life (↑ of 10 points or more or best possible score)	49%	46%

- The program’s early success had continued, with meaningful improvements seen at 3 months still present at 12 months follow-up.
- Both knee and hip participants were less worried about harming their joints and continued to experience less pain, greater ease in daily activities, and better overall quality of life – all clinically important changes that may make a real difference in participants’ lives.

# OVERALL PROGRAM SUMMARY

In 2024, the GLA:D® Canada program continued to expand reach across Canada with additional sites implementing the program to an increasing number of patients.

The GLA:D® Canada Knee and Hip National Team will continue to train more clinicians and expand access for patients with knee and hip OA in both public and private settings across the country.

# GLA:D® CANADA LEADERSHIP COMMITTEE 2024

NAME	TITLE	ORGANIZATION
Rhona McGlasson	Executive Director	Bone and Joint Canada
Allison Ezzat	National Lead	GLA:D Canada Schroeder Arthritis Institute, University Health Network, Toronto, Ontario
	Clinical Assistant Professor	Department of Physical Therapy, Faculty of Medicine, University of British Columbia, Vancouver, British Columbia
Michael Zywiell	Orthopaedic Surgeon	Division of Orthopaedic Surgery, Arthritis Program, University Health Network, Toronto, Ontario
	Assistant Professor of Surgery	Department of Surgery and Institute of Health Policy, Management and Evaluation, University of Toronto, Toronto, Ontario
Jason Martyn	Senior Practice Consultant, Physiotherapy Bone & Joint Health Strategic Clinical Network	Alberta Health Services, Alberta
Amy Wainwright	Physiotherapist	Sunnybrook Health Sciences Centre, Division of Physiatry, Physical Medicine and Rehabilitation, Toronto, Ontario

NAME	TITLE	ORGANIZATION
Rebecca Moyer	Assistant Professor	School of Physiotherapy, Faculty of Health, Dalhousie University, Nova Scotia
James Young	Scientific Associate in Integrated Musculoskeletal Care	Schroeder Arthritis Institute, University Health Network, Toronto, Ontario
Lori Manuel	Regional Physiotherapy Professional Practice Consultant	Eastern Health, St. John's, Newfoundland and Labrador
Emily Stevenson	Associate Director, Community Rehabilitation	West Toronto Community Health Services, Toronto, Ontario
Denise Taylor	Program Manager	North West Regional Rehabilitative Care, St. Joseph's Care Group, Thunder Bay, Ontario
Melanie Farmer	Physiotherapist	Montfort Academic Hospital, Ottawa, Ontario
Laura Lundquist	Owner/Physiotherapist	Registered International Sports Physical Therapists, Halifax, Nova Scotia