

## GLA:D™ Canada Project Team

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### What is GLA:D™ Canada?

The national organization  $GLA:D^{\mathbb{M}}$  Canada, supports the  $GLA:D^{\mathbb{R}}$  program, an education and exercise program for people with hip and/or knee symptoms due to osteoarthritis (OA).

- GoodLife with osteoArthritis in Denmark (GLA:D®)<sup>1</sup> is an individualized education and exercise program developed at the University of Southern Denmark.
- The GLA:D® program was introduced to Canada in 2016 as part of a licensing agreement with the Canadian Orthopaedic Foundation (COF).
- The program was adapted to the Canadian health care setting through a trial study<sup>2</sup> and has been implemented across Canada through Bone and Joint Canada (BJC).<sup>3</sup>

#### **EDUCATION AND EXERCISE**

The Key to Staying Active by Managing Osteoarthritis Symptoms in the Hip and Knee:



- Symptoms of OA, including pain, reduce our ability to do the activities that we enjoy.
- Weaker muscles in the legs can increase the symptoms of OA, such as pain.
- **EDUCATION** about OA improves our knowledge and confidence in managing OA symptoms and daily activities.
- Learning what **EXERCISES** can be done with OA lowers pain and fear of movement, increases physical activity and improves quality of life, allowing us to do more of the activities we enjoy.



### The Three Elements of the GLA:D® Program:

There are three parts to the Canadian program:

#### 1. A training course for health care providers (HCPs)

- The training course is for HCPs who specialize in the treatment of hip and knee OA, for example, physiotherapists, chiropractors, kinesiologists, and exercise physiologists.
- HCPs take part in a 1.5-day course giving them the skills to deliver the GLA:D<sup>®</sup> program to help people with hip and knee OA manage their condition.<sup>4-6</sup>

#### 2. Patient education and exercises

- Patients in the GLA:D® program attend:
  - 2 education sessions
  - 12 sessions of supervised exercises that meet individual needs.
- Patients participate in group-based exercises.<sup>7,8</sup>
- The exercise program uses NEuroMuscular Exercises, or NEMEX, a type of exercise training that works to
  improve muscle control and stability. NEMEX exercises focus on muscle exercises in positions that help
  support joint during activities of daily living.
- The patient education and exercise program is delivered over 6-to-8 weeks.

#### 3. A national quality monitoring database that supports a high quality of care across Canada

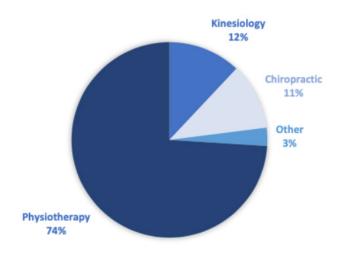
- Data is obtained from patients at the start of the program, and at 3-month and 12-month follow-ups
- Program effectiveness is monitored including changes in pain, function, quality of life as well as other outcomes.



# **GLA:D™** Canada Health Care Provider Training Programs to 2018

- A total of 20 health care provider (HCP) training courses for the GLA:D<sup>®</sup> program were held through to the end of 2018:
  - 11 in Ontario
  - 2 in British Columbia
  - 3 in Alberta
  - 1 each in Manitoba, Nova Scotia, New Brunswick, and Newfoundland.
- In total, 760 health HCPs were trained in the GLA:D® program across Canada.
- HCPs reported the benefits of the training course in a survey:
  - 93% of HCPs were ready to deliver the GLA:D® program
  - 99% felt confident to teach the NEMEX exercises
  - 95% were confident in their ability to answer GLA:D® participants' questions

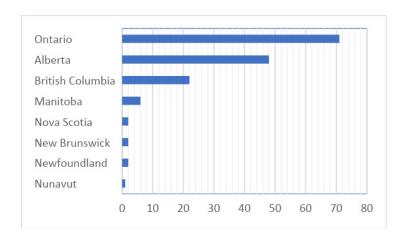
#### GLA:D™-Canada Health Care Providers Trained in 2016-2018



#### **GLA:D® Sites Across Canada**

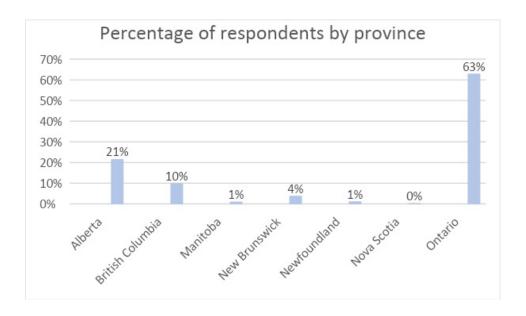
- By the end of 2018, 154 sites in 7 provinces and one territory had implemented the GLA:D® program.
- Most of the GLA:D™ Canada sites are in Ontario, Alberta and British Columbia.
- All sites are trained to help their patients enter their outcomes into the database.
- 1634 people with hip and knee OA have provided their data and experiences with the GLA:D® program into the national database.
- GLA:D® sites are supported by the GLA:D™ Canada National team.

### The number of GLA:D™ Canada sites across Canada (n=154)



## **RESULTS WITH GLA:D®**

A total of 1,634 people with hip and knee OA have provided their data to the GLA:D® database which includes entering data at baseline, 3 months and 1 year after the program.



## **High Participation Rates**

There is a high participation rate in the exercise and education sessions.

- 79% of participants attended 2 or more education sessions;
- 81% attended 11 or more exercise sessions.

## Participant benefits and satisfaction with the GLA:D® program

• Most participants found the GLA:D® program to be beneficial or very beneficial, and were satisfied or very satisfied with the program.



## **Improvements**

Table 1: Improvements in pain, function, quality of life, and medication use were reported at 3 months and 1 year after the GLA:D® program.

Average Percent Improvements after the GLA:D® Program*				
KNEE GROUP		DOMAIN	HIP GROUP	
31%	3 months		3 months	240/
	( <u>n=609)</u>	Pain	( <u>n=266)</u>	24%
200/	12 months		12 months	269/
29%	(n=170)		<u>(n=87)</u>	26%
21%	3 months		3 months	150/
	( <u>n=609)</u>	Quality of Life	( <u>n=264)</u>	15%
34%	12 months		12 months	23%
34%	(n=169)		<u>(n=86)</u>	23%
12%	12 months	Medication	12 months	430/
	(n=168)	Use	<u>(n=86)</u>	13%
33%	3 months	Sit to stand	3 months	26%
	(n=481)	Sit to stand	( <u>n=207)</u>	20%
8%	3 months	Malling and a	3 months	450/
	(n=339)	Walking speed	( <u>n=148)</u>	15%

<sup>\*</sup> Outcomes measured changes from the start of the GLA:D® program to the follow-ups at 3-months and 12-months

# Improved pain and function at 3-month and 12-month follow-ups

- At 3-months after participating in the GLA:D® program most participants reported or showed:
  - a clinically meaningful improvement in pain of 15% or more (based on numeric pain rating (NPR) outcomes)
  - a decreased fear of damaging their joints with activity:
    - 47% for hip participants
    - 50% for knee participants
  - significant improvements in the number of times they can manage sitting to standing in 30 seconds (i.e. the 30-second chair stand test)
  - improvements in their walking speed over a distance of 40-metres.
- **By 12 months** after the GLA:D® program:
  - Over 40% of participants reported **30% or more improvement in pain, or no pain at all**

## Reduced Need for Pain Medications among Participants in the Knee Group

- At the 12-month follow-up, knee participants reported they were significantly less likely to use any medications in the prior three months compared to before starting the GLA:D® program.
- Knee patients also reported fewer injections were needed to manage their pain.
- Hip participants reported no significant changes in their use of medications, either at 3-month or 12-month follow-ups.



# Improved Body Mass Index in both Hip and Knee Groups

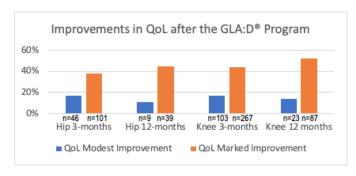
- Hip participants reported significant decreases in Body Mass Index (BMI) from the start of the GLA:D® program, at both the 3-month and 12-month follow-ups.
- Knee participants reported a significant decrease in BMI at 12 months, but no significant change at 3 months.
- A significant decrease was observed in the number of knee participants who were obese 12 months after starting the GLA:D® program.

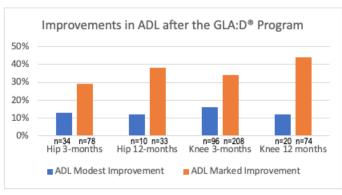
# **Knowledge from GLAD® Program Used Weekly and Even Daily**

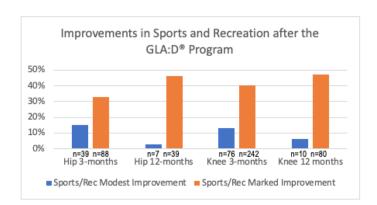
- At the 3-month follow-up:
  - Most participants reported that they were using knowledge gained from the program at least daily (64% of hip participants and 60% of knee participants).
  - The vast majority of participants in both groups reported using knowledge from the program at least weekly (93% of both hip and knee participants).

# Improved Quality of Life, Activities of Daily Living, and Sports/Recreation

- Participants answered questions about their ability to manage their activities of daily Living (ADL), sports and recreation, and about their quality of life (QoL).
- Overall, most patients reported improvements in their quality of life, activities of daily living, and sports and recreation after the GLA:D® program.







## **Key Summary: GLA:D™ Canada 2018**

- With two years of participant results in the national database, several key findings are emerging. These include:
  - Less Pain: On average participants with hip and knee OA reported a 30% improvement in pain.
  - A Better Quality of Life: Measures of quality of life improved from the start of the GLA:D<sup>®</sup> Program to 3 months, and from the start to 12 months, for both hip and knee groups.
  - **Improved Function:** Patients reported improvements from their first session to their last session in both number of chair stands and walking speed.
- Based on the results to date, the GLA:D® program is successfully supporting people with hip and knee OA to manage their symptoms, improve their function and enhance their quality of life.



## **Building a program for the future**

- Based on the results from the large number of sites across Canada, the GLA:D® program is successfully supporting people with hip and knee OA to manage their symptoms, improve their function and their quality of life.
- Plans are underway to increase the number of sites available across
  the country to make the program available in all communities. The
  HCP training sessions are being made available in BC, Alberta, Ontario
  and the Atlantic provinces in 2019. French translation is also being
  completed to make the program available in French communities.
- A strong and clear communication strategy across Canada is important for the continued success of the GLA:D® program. Wider communications are now underway to share the results with HCPs and people with OA. The sharing of these results will help to continue to improve treatment and the quality of care for individuals in Canada with hip and knee OA.
- As the GLA:D® program becomes available in more communities
  there is a focus on diagnosing hip and knee OA earlier in the disease
  process. This will allow individuals to remain as physical activity as
  possible which will have a positive effect on their overall health and
  improve their long-term outcomes.



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