



Annual Report 2020



GLA:D[®]
DENMARK

GLA:D® Denmark Annual Report 2020

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GLA:D® Annual report 2020

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GLA:D®

- Treatment for knee/hip osteoarthritis or ongoing/recurrent back pain
- Evidence-based patient education and supervised exercise

This report presents the status of GLA:D® for knee/hip osteoarthritis and GLA:D® Back, including information about GLA:D® clinician, patients, research activities and other national and international activities.

GLA:D® represents evidence-based treatment plans for knee/hip osteoarthritis or ongoing/recurrent back pain based on national and international clinical guidelines. Key elements in GLA:D® are patient education and supervised exercise to increase self-management. GLA:D® has been developed at the University of Southern Denmark in collaboration with well-known researchers, patients and clinicians.

GLA:D® for knee/hip osteoarthritis and GLA:D® Back are implemented nationally in Denmark and Switzerland. GLA:D® for knee/hip osteoarthritis are also implemented in Australia, Canada, China, New Zealand and Austria. In addition, GLA:D® knee/hip osteoarthritis is tested for on a smaller scale in the Netherlands and GLA:D® Back in Canada, Australia and Norway.

Enjoy reading the report!



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What is GLA:D[®]?



Photo: © GLA:D[®]

Contents GLA:D[®]



Patient education
2 x 1—1½ hour



Supervised exercises
6-8 weeks | twice weekly

Access to GLA:D[®]



Self-referral to a GLA:D[®]-unit



Referral from general practitioner or specialist

GLA:D[®] for knee/hip osteoarthritis and GLA:D[®] Back are targeting people with knee/hip osteoarthritis and ongoing or recurrent episodes of back pain, respectively.

GLA:D[®] consists of:

- 1) An initial consultation with physical examination, functional tests, assessment of level of exercises and registration in the database.
- 2) Two sessions of patient education focusing on knowledge of knee/hip osteoarthritis or back problems, risk factors, causes of pain, purpose of exercises, recommendations and management of pain.
- 3) Individually tailored supervised group training twice a week for 6-8 weeks.
- 4) A final consultation with evaluation, functional tests and focus on topics such as continuing training.

Access to GLA:D[®]

Patients with knee/hip osteoarthritis or back pain can access GLA:D[®] via

- referral from a general practitioner,
- referral from a specialist,
- own inquiry to a GLA:D[®] clinic.

Aim of GLA:D[®]

GLA:D[®] aims to support implementation of recommendations from national and international clinical guidelines.

The overall objective of GLA:D[®] for knee/hip osteoarthritis is that

- all patients with osteoarthritis have equal access to evidence-based treatment irrespective of place of residence or financial situation,
- surgery should only be considered when non-operative treatment does not give satisfactory results.

The overall objective of GLA:D[®] Back is that

- patients learn to manage their pain through exercise and increased knowledge about the problem,
- all patients, regardless of residence, must be able to be offered patient education based upon clinical guidelines.

Distribution of GLA:D®

Clinicians are trained to deliver GLA:D® at a 2-day course held by SDU, and only certified clinicians can offer GLA:D®. This ensures that the content of the patient education and exercise therapy is similar across all GLA:D® providers.

In 2013 - 2020, SDU held 21 GLA:D® knee/hip osteoarthritis courses for a total of 1480 clinicians, and in the period 2017 to 2020, SDU held 13 GLA:D® Back courses for 653 clinicians. Mainly physiotherapists offer GLA:D®. Chiropractors are also trained in GLA:D® Back and comprise 10% of the course participants.

At the end of 2020, 301 units were offering GLA:D® for knee/hip osteoarthritis and 194 units were offering GLA:D® Back. The number of units offering GLA:D® for knee/hip osteoarthritis has been relatively stable since 2016, however, with a decrease in the period during the pandemic.

At the end of 2020, 26 municipalities were offering GLA:D® for knee/hip osteoarthritis and 5 municipalities were offering GLA:D® Back. Three municipalities were offering GLA:D® to both target groups.

Patient participation in GLA:D®

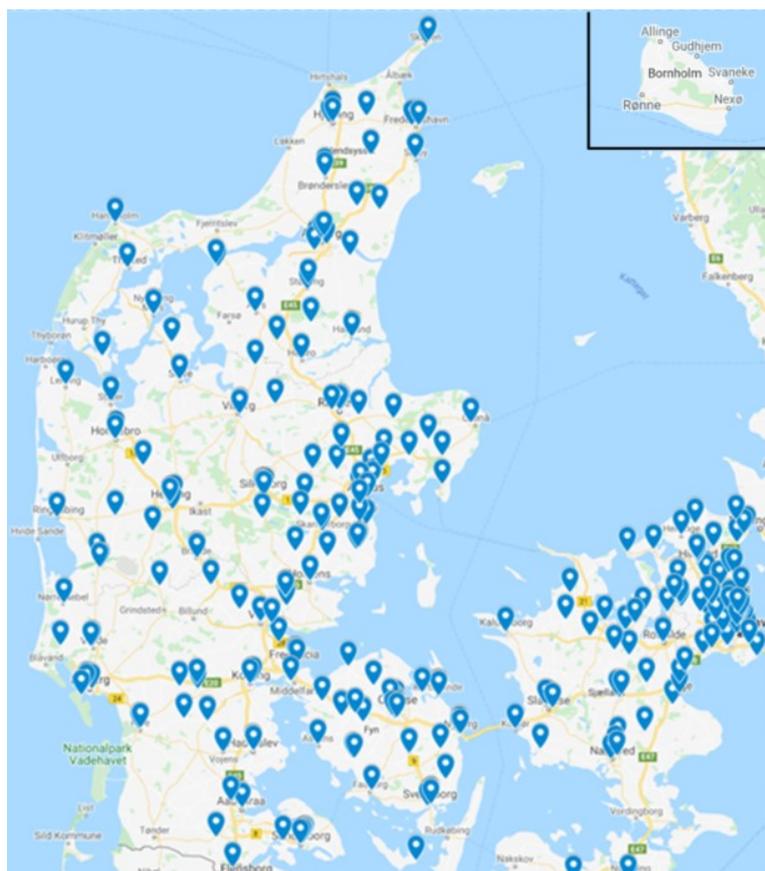
Eighty percent of the knee and hip patients participated in both education sessions, and correspondingly, 80% in a minimum of 10 out of 12 exercise sessions. Seventyfive percent of the back patients participated in both education sessions, and 80% in at least 10 out of 16 exercise sessions.

Great satisfaction with GLA:D®

Nine out of 10 knee/hip patients and 8 out of 10 back patients state that they are very or very highly satisfied with the GLA:D® intervention.



Units offering GLA:D® for knee/hip osteoarthritis

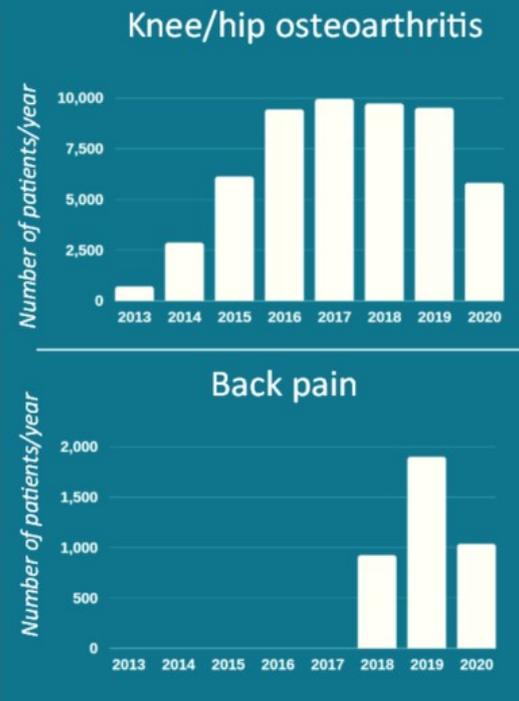


Units offering GLA:D® for low back pain

Who participates in GLA:D®?



Photo: © GLA:D®



GLA:D® for knee/hip osteoarthritis

Except during the period of COVID-19, the number of annual participants has been fairly stable at around 10,000 people since 2016. Seventy percent of the participants are women. The average age is 65 years, and 75% and 63% of the knee and hip patients are overweight, respectively. It is common for patients to have other diseases.

Most participants have problems with the knee, and fewer have problems with the hip (74% vs. 26%). About half of both knee and hip patients have had symptoms for more than a year when starting GLA:D®, and 27% and 3% of the knee and hip patients state that they have previously had surgery in the current joint, respectively. At baseline the pain level is on average 4.8 (0-10), and 63% of knee patients and 67% of hip patients report taking painkillers.

GLA:D® Back

The number of annual participants in GLA:D® Back has been increasing from 2018 to 2019. Two out of three participants are women, and the average age is 58 years.

Fifty-nine percent have had back pain for more than a year. At baseline the pain level is on average 5.4 (0-10), and 57% state taking painkillers. More than half of the participants in GLA:D® Back have other diseases.

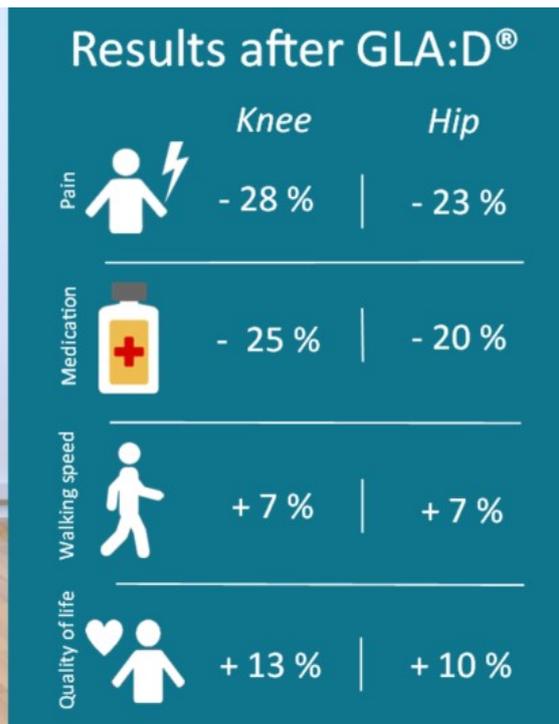
Most people have received other treatment for their back problem the month before starting a GLA:D® Back course. On average, participants have had 5.4 sick days due to back pain in the last 3 months before entering the GLA:D® Back course.

2020

During COVID-19, there has been a significantly lower number of participants with both knee/hip osteoarthritis and back pain in GLA:D®. The average pain level for the knee and hip patients was 4.9 and 5.1 (0-10), respectively and thus slightly higher than before for the hip patients. During COVID-19, 60% of knee and hip patients have had symptoms for less than a year, which is a slightly higher proportion than previously.

Results—GLA:D® knee/hip

Photo: © Jørn Ungstrup, GLA:D®



Less pain

Immediately after the GLA:D® course, the average knee/hip pain intensity decreases by 28% (from 4.8 to 3.4 (0-10)) for the knee patients and by 23% (from 4.8 to 3.7 (0-10)) for the hip patients. One year after starting the GLA:D® course, the average reduction in pain intensity is maintained.

Use of pain medication decreases

Immediately after the GLA:D® course, the proportion who have reported taking painkillers within the last 2 weeks drops from 63 to 44% for the knee patients and from 67 to 51% for the hip patients. Respectively, 42 and 39% of the knee and hip patients report having a lower use of painkillers than before the GLA:D® course, and similar results are seen after one year.

Better physical function

Walking speed increases on average by 7% from 1.5 m/sec before the GLA:D® course to 1.6 m/sec immediately after the GLA:D® course for both knee and hip patients.

Higher quality of life

Immediately after GLA:D®, the average quality of life related to the knee/hip measured with the KOOS/HOOS QOL is improved by 13% for the knee patients (from 45.2 to 51.7) and 10% for the hip patients (from 47.2 to 52.4). One year after entering GLA:D®, there is an improvement of 21 and 22% for the knee and hip patients compared to before the course, respectively.

Fewer are on sick leave

Among knee patients who have not received a new joint during the follow-up period, the proportion who state that they have been on sick leave due to their joint within the past year decreases from 13 to 6% and correspondingly from 7 to 4% for the hip patients.

2020

During COVID-19, there has been an average improvement in pain for the knee patients immediately after the course of 30% and in quality of life of 15%, which is a slightly greater improvement than before the COVID-19 period. The hip patients have also achieved a slightly greater improvement in quality of life than before (12%) but have the same level of improvement in pain.

Results—GLA:D® Back



Results after GLA:D®



Less pain

Immediately after the GLA:D® course, the average pain intensity in the back decreases by 31% (from 5.4 to 3.8 (0-10)). One year after starting the GLA:D® course, the average reduction in pain intensity is maintained.

Use of pain medication decreases

Immediately after the GLA:D® course, the proportion who report having taken painkillers for their back pain drops from 57 to 41%. This level is maintained one year after initiating GLA:D®.

Better physical function

Physical function measured via the number of times you can rise from sitting in 30 sec. (sit to stand test) improves on average by 25% from 12 to 15 times. Similarly, the level of functioning measured via the Oswestry Disability Index increases by 24% (from ODI score of 25 to 19% (0-100)). Endurance of abdominal and back muscles is increased by 46% and 43%, respectively.

Less fear of physical activity

After the course, there are fewer thoughts or

fears of pain during physical activity measured as an average decrease of 22% from 9.3 to 7.3 (0 -24) on the fear-avoidance scale.

Fewer are on sick leave

The average number of days on sick leave during the last 3 months due to back pain decreases from 5.4 to 1.0 immediately after the course and further to an average of 0.5 days at one year.

Many achieve personal goals

Before the course, the patient and clinician, in collaboration, set a personal goal for the patient. At the end of the course, 68% state that they have partially or fully achieved their goals, and 22% that they have fully achieved their goals.

2020

During the period under COVID-19, only a single course for clinicians in GLA:D® Back has been held at SDU, and in 2020, fewer back patients were included compared with 2019.

Patient characteristics and results for patients with back problems do not differ from the previous years.

New research in GLA:D®



Research

- Implementation
- Attendance
- Pain medication
- Educational level
- Comorbidities

Implementation of GLA:D® Back or not?

A research project has investigated which factors influence whether the clinicians offer GLA:D® Back after the certification course. Practicalities, organizational conditions, beliefs that GLA:D® Back is effective, personal benefits for the clinician, and clinicians attitude, in general, towards back treatment influence the decision whether to implement the program. [Link to the article.](#)

Who has low attendance in GLA:D® Back?

Three-quarters of GLA:D® Back participants have a high or moderate attendance during the program's 10 weeks. The only factor that predicts low attendance is whether the participant fills out the first questionnaires. [Link to the article.](#)

Osteoarthritis and pain medication

More than half of those who use painkillers before GLA:D® for knee/hip osteoarthritis either stop using painkillers or switch to a milder type. [Link to the article.](#)

Osteoarthritis and educational level

Educational level and labour market affiliation for participants in GLA:D® for knee/hip osteoarthritis

does not influence how much pain relief is achieved. Participants with a low level of education generally had higher pain and higher use of painkillers prior to GLA:D®. [Link to the article.](#)

Osteoarthritis and comorbidities

Most patients with knee or hip osteoarthritis have at least one comorbidity, and the number of comorbidities is linked to generally poorer health. The presence of comorbidities does not affect results after GLA:D®. [Link to article 1.](#) [Link to article 2.](#)

GLA:D® clinical registers

Patients' benefit of the GLA:D® program is monitored in clinical registers. Clinicians enter data at the start and end of the intervention, and patients fill out questionnaires at the beginning, after 3 and 12 months, and additionally at 6 months for the back patients. The registers provide continuous monitoring of the program and offer unique opportunities for research into treatment delivered in the primary sector.

GLA:D[®] International Network

GLA:D[®] is implemented in several countries

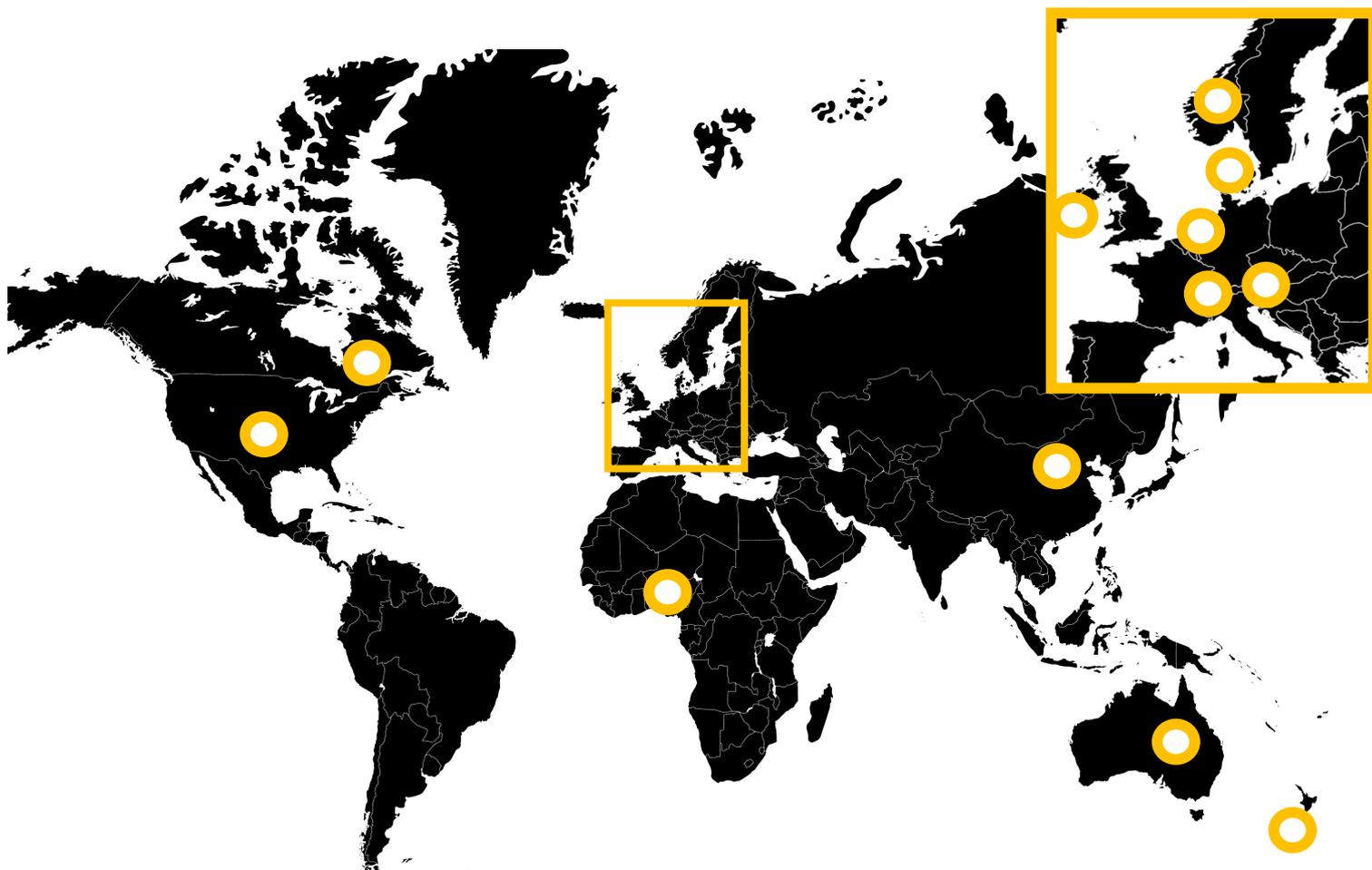
GLA:D[®] for knee/hip osteoarthritis and GLA:D[®] Back is implemented nationally in Denmark and Switzerland. GLA:D[®] for knee/hip osteoarthritis has also been implemented in Australia, Canada, China, New Zealand and Austria. In addition, GLA:D[®] is being tested for knee/hip osteoarthritis on a smaller scale in pilot projects in the Netherlands, Ireland and the USA (+ previous pilot project in Nigeria) and GLA:D[®] Back is being tested in Canada, Australia and Norway. A feasibility study has shown that GLA:D[®] Back is feasible in Alberta, Canada. [Link to the article.](#)

International collaboration

All partner countries are part of a formalized collaboration in GLA:D[®] International Network (GIN), and joint meetings are held twice a year. The purpose of the collaboration is, i.a. to exchange experiences and ensure consistent GLA:D[®] delivery worldwide. See more: www.gladinternational.org.

	<i>Knee-/hip osteoarthritis</i>	<i>Back pain</i>
	75,000 patients	4,000 patients
	5,200 clinicians	700 clinicians
	1,200 clinics	200 clinics

Based on GLA:D[®] registers in Canada, Australia and Denmark, researchers have collaborated on a research report which shows that participant characteristics and improvement in pain, function and quality of life after participation in GLA:D[®] are more or less the same in the three countries. These results support that the program can be implemented under other conditions and in other health systems outside of Denmark. [Link to the article.](#)



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GLA:D® website: www.gladdanmark.dk

International website under construction: www.gladinternational.org



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