

# moveUP

Digital Care leads to improved care experience

01

## EXECUTIVE SUMMARY

moveUP digital therapeutics is on a mission to dramatically improve healthcare through the smart application of data and technology. At moveUP we are convinced that healthcare is being transformed to a value based model and digital therapeutics has a vital role in this change. This transition means that clinical benefit should be demonstrated for every intervention. In turn, data collection to measure outcomes and drive innovation is becoming a central issue for all stakeholders.

moveUP is specialized in digital care in orthopaedics and bariatrics. Chronic joint pain and obesity are growing issues in Europe and are leading causes of physical inactivity, cardiac problems, isolation and disability.

Digital care leads to improved care experience both for patients and care providers.

1. Patients experience more autonomy, receive care in the comfort of their own home, have a better insight into their own health and have easier access to their care providers.
2. Healthcare professionals report improved collaboration and shared decision making between patients, first-and second-line healthcare providers.

3. Greater availability of data support selecting the right treatment and managing the expectations while treating many patients simultaneously.

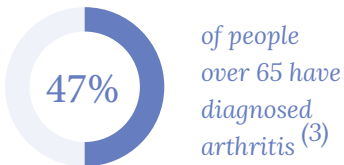
moveUP has proven that digital therapy can be done in a safe and personalized manner while at least providing the same quality of care. We have very high NPS scores with 91% saying they would choose moveUP again, 83% feel very safe, and therapy adherence is 85% and studies demonstrate that patient-reported outcome measures are as good or even better than regular therapy. Thanks to regular digital monitoring, moveUP reduces the length of hospital stay and work absenteeism

More than 3500 patients are using or have used our digital therapy platform with 25 hospitals and physicians referring into it.

*moveUP digital therapy results in great patient experience, high quality of care at reduced costs.*

## THE BURDEN OF CHRONIC JOINT PAIN

Osteoarthritis, the leading cause of disability in Europe and worldwide<sup>(1,2)</sup>, is on the rise. Longer life expectancy and increasing rates of obesity across Europe are putting more people at risk of developing joint problems.



Surgery of the century?

1/3 of people

could need a joint replacement at some point if the trend continues<sup>(4)</sup>

Chronic joint pain leads to reduced physical activity and links to obesity, cardiac issues, isolation, and burnout.

**Millions of work days are lost each year due to chronic joint pain.**

Treatment of chronic joint pain ranges from pharmacological and conservative to surgical treatments. Though very effective, conservative treatments are often underfunded and underused. Instead, surgery is a common solution in Western countries while the rehabilitation is unnecessarily long, and impacts return to work timing.

## LONG-TERM PAIN EVEN AFTER SURGERY

Despite the technological and medical progress, many patients undergoing joint replacement surgery say that they are not happy with the treatment.

10-30%

of patients are not satisfied after surgery due to chronic pain<sup>(5)</sup>

up to 30%

of patients are still under pain medication 6 months after knee surgery<sup>(6)</sup>

The criteria for deciding on the treatment often comes down to the healthcare professional's expertise and medical background. Rehabilitation protocols vary significantly per region or healthcare professional, but they do not adjust enough to the state and profile of the individual patient.

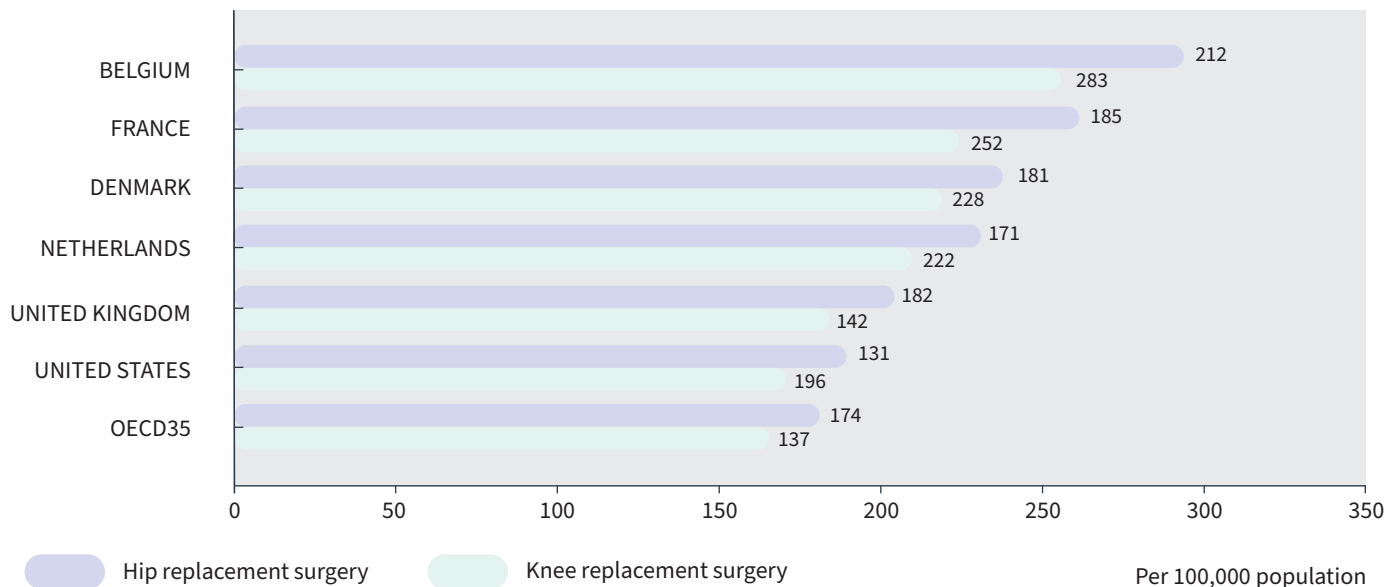
The lack of data makes the right decision only more difficult. Each surgery costs €6-25k, and the increasing number of surgeries is already presenting a challenge for the healthcare system. The total amount of spending on hip replacements in the Netherlands will increase by 40% in 2030 based on the cost levels in 2014<sup>(7)</sup>. Clearly, we need to rethink how to allocate the budget properly to make healthcare affordable and accessible to everybody.

60.000+

joint replacement surgery take place in Belgium every year (8).



Consumption of procedures in some countries (9)



## CHANGE THE WORLD OF HEALTHCARE WITH DIGITAL THERAPY

*The benefits of digital care are clear: remote patient monitoring, easy access to care teams and better insights are welcomed by both patients and healthcare providers.*

### Improved care-experience.

Patients who just got a new hip or knee appreciate receiving care in the comfort of their own homes. They choose their own pace, spread their therapy throughout the day and decide when and where it suits them. With the support of an app, patients can see their progress, are motivated and feel safe as they can easily communicate with their care providers who monitor them daily.

### Increased quality of care thanks to advanced analytics

Big data make treatments' outcomes more transparent and help make difficult choices, e.g., whether surgery is the best option for a specific patient or not. Digital monitoring of patients generates precise data. These data not only support personalized treatment but also reveal differences in treatment outcomes between healthcare providers, technologies or different approaches. Those insights

make it possible to improve the quality of care.

### Integrated care paths

Health care providers can monitor patients remotely through daily data, videos and pictures and adjust the therapy to the needs of each individual. Medical specialists from the hospital are at the same time well-informed about the progress of their patients and can easily be consulted when needed. Specialists can focus their time on patients who most need their attention.

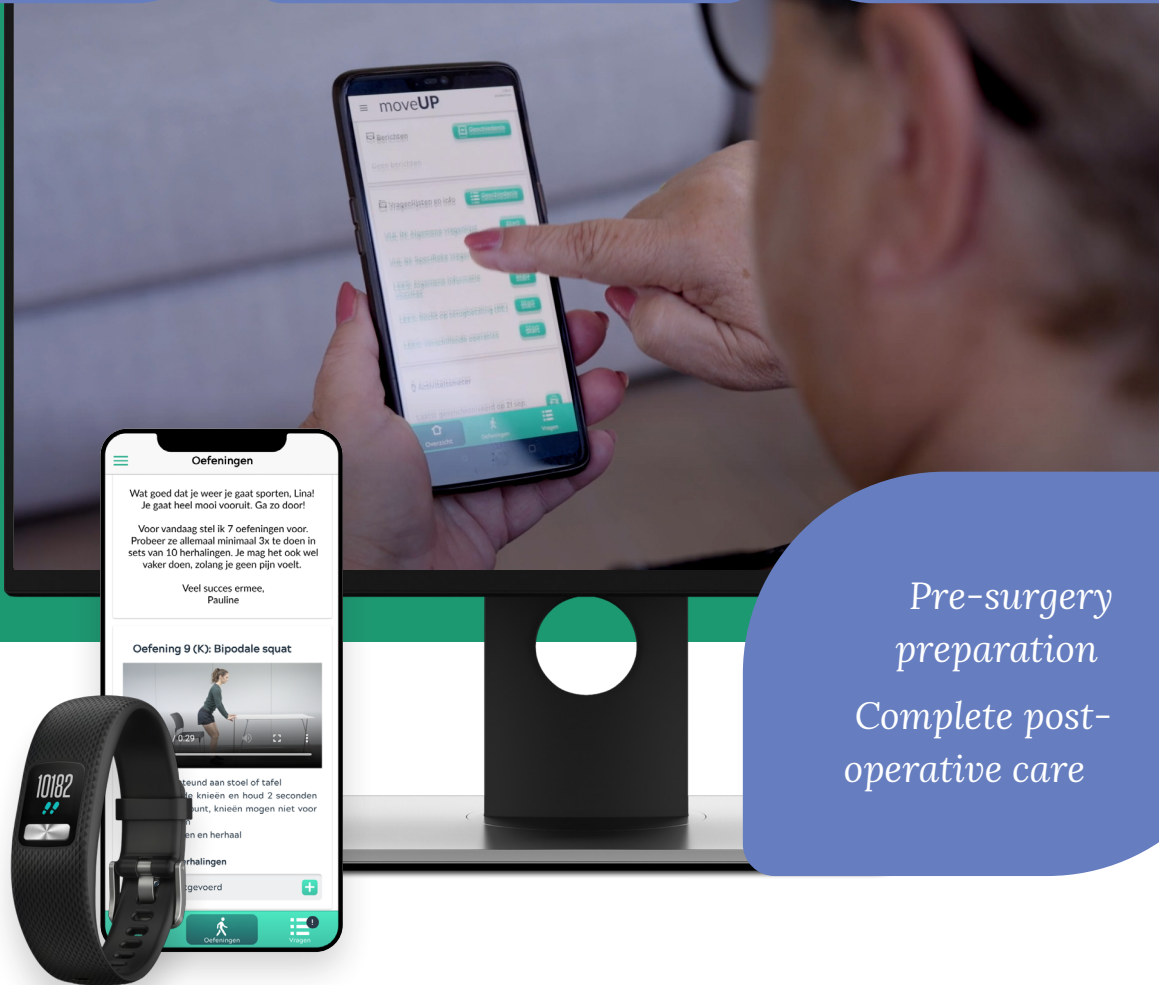
### Improved cost effectiveness

Digital care facilitates remote communication with healthcare professionals leading to reduced physiotherapy- and hospital visits or even length of hospital stay. Furthermore, big data will better predict outcomes, and a reduced number of surgeries is expected.

Pain-relief

Managing expectations

Daily tailored exercises



Pre-surgery  
preparation  
Complete post-  
operative care

*When technology and data are paired with the work of licensed physiotherapists, digital therapy increases patient satisfaction, improves adherence, and decreases pain<sup>(10,11)</sup>.*

## Key points

- 👤 Digital therapy makes care delivery more effective and reduces overconsumption of sub-optimal treatments
- 👤 It gives patients the care they need, where and when they need it
- 👍 Patients feel more engaged, empowered, and enjoy the convenience

## MOVEUP IS EASY TO USE BY ALL PATIENTS

*moveUP combines an activity monitoring wearable with an easy-to-use mobile application, offering patients the right therapy at the right time in the comfort of their home.*

We have proven that older age is not a limiting factor in using digital care. The largest age group in our population is between 65 and 70 years of age.

Our team of medical experts follows and supports the patients daily and adjusts the therapy to the needs of each individual. Certified therapists answer any questions or concerns 24/7.

Our solution allows medical specialists to track the patients' entire trajectory and stay informed about their progress. Most importantly, patients gain complete control over their own recovery and feel highly engaged.

*Experts in hip and knee rehabilitation: Every physiotherapist in our virtual clinic can treat hundreds of THA/TKA patients simultaneously, bringing huge efficiencies without compromising on quality of care experience.*

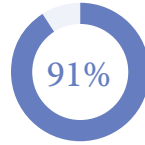
*Thanks to daily feedback via the app and activity tracker, we provide a more personalised rehabilitation, focusing on*

## IMPROVE PATIENT CARE EXPERIENCE

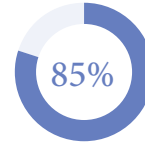
moveUP has a very high success rate in implementing digital therapies.

We collaborate with over 25 hospitals.

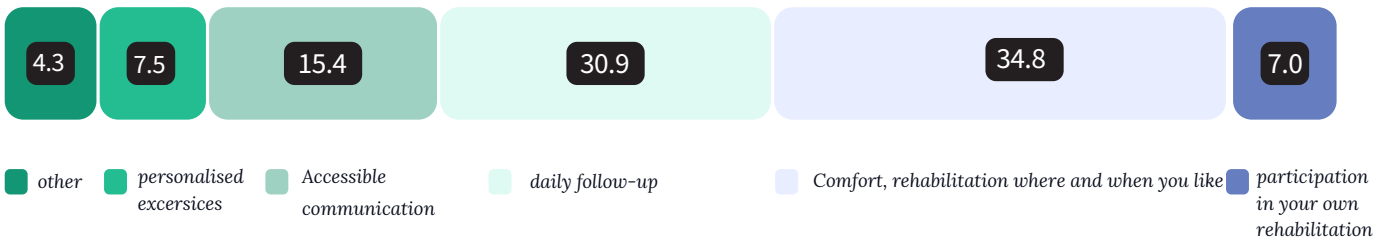
More than 3500 patients have chosen moveUP



of patients would choose moveUP again



Therapy Adherence (7days a week)



Top 3 cited reasons from over 3000 patients why they appreciate digital care by moveUP →



### Daily follow-up

This gives patients confidence that they are on the right path. Patients can see their own progress and milestones. Rather than an obligation, moveUP becomes a companion throughout their therapy .



### Comfort

Patients appreciate getting their therapy in the comfort of their own homes. They can do their therapy independently, at their own pace, without having to bother loved ones to bring them to the physiotherapist during working hours.



### Accessible Communication

The moveUP app allows easy access and contact with healthcare professionals. The patients can now quickly and regularly share their concerns and reach out for help at any time.

## Testimonials



### HELMA

Hip surgery patient

You can contact your physiotherapist every day and ask questions about what you're actually struggling with. And pretty soon, you get an answer back. And then you can move on again. So you don't have to worry about doing something wrong or something is not going well.



### PETER

Knee surgery patient

The great thing about moveUP is that you can see the exercises every day. If you go to a physiotherapist's office, they give you exercises, and they will often write them down on a piece of paper. But now you can just watch the video over and over again.



## EFFECTIVE TREATMENT AND HIGH QUALITY OF CARE

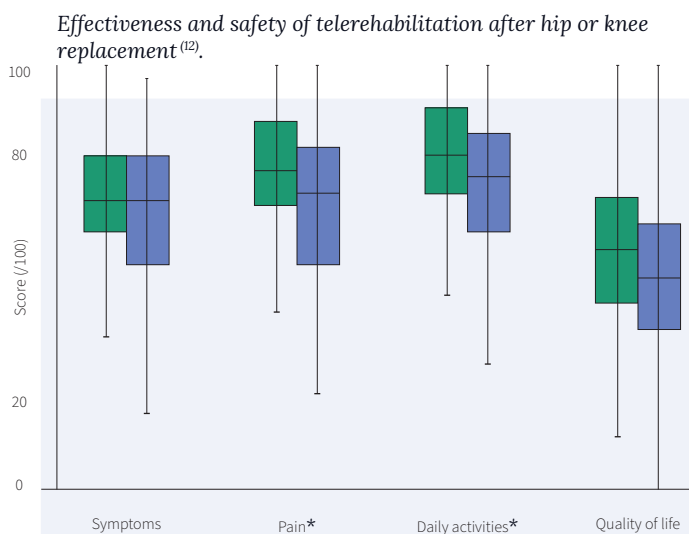
*moveUP provides a high quality of care by combining data with the work of certified medical professionals.*

Collecting more than 400 data points through an activity tracker and questionnaires on a mobile app, we measure, analyse and improve daily the patient's parameters. The result is a complete picture of the patient's medical profile, physical activities, psychosocial profile and expectations.

*Virtual physiotherapy as effective as physical therapy.*

*Patient reported outcomes are included in moveUP's routine clinical practice and quality management.*

The Patient Reported Outcome Measures (PROMs) of moveUP patients demonstrate that our digital care is at



Green = moveUP (n=68) digital therapy, Blue = Control group (n=108) physical physiotherapy.

\* Significant pain differences: Pain average differences 5,6; p=-,020); Daily activities (average difference 5,2; p=0,006)

Data and clinical studies show that digital therapy with moveUP is as effective and safe as in-person therapy. Our study shows that the patients using moveUP had at least the same outcome as the control group that received conventional physical physiotherapy.

		moveUP	Pre-op score difference	LROI	Pre-op score difference
Knee	Pre-op	24,6		25,2	
	6M	38,1	13,5	37,9	12,7
	12M	39,2	15,1	40,4	15,2
Hip	Pre-op	24,6		25,2	
	3M	40,4	15,8	41,0	15,8
	12M	43,6	19,0	44,4	19,2

Mean pre-operative, 3 months-, 6 months- and 12 months- postoperative Oxford Knee/Hip scores of patients who underwent a TKA / THA both for moveUP patients in 2017-2021 and a similar ASA group of patients in The Netherlands

We compared the mean outcomes of all moveUP patients with those of Dutch patients with similar pre-operative status on the Oxford Knee / Hip Scores. The groups are best compared to look at the difference between post-operative and pre-operative scores, called the increased outcomes. The increased outcomes for the moveUP patients are as good as today's standard of care. Go to [moveUP.care](https://moveup.care) for more details and similar outcomes on different PROMs.

## We go beyond PROM to ensure the objective quality of care assessment.

Advances in wearable technology have enabled us to track physical activity closely and follow the changes in real-time. Apart from collecting Patient Reported Outcome Measures (PROMs) at particular time points and relying on subjective measures only, we analyse the actual level of physical performance.

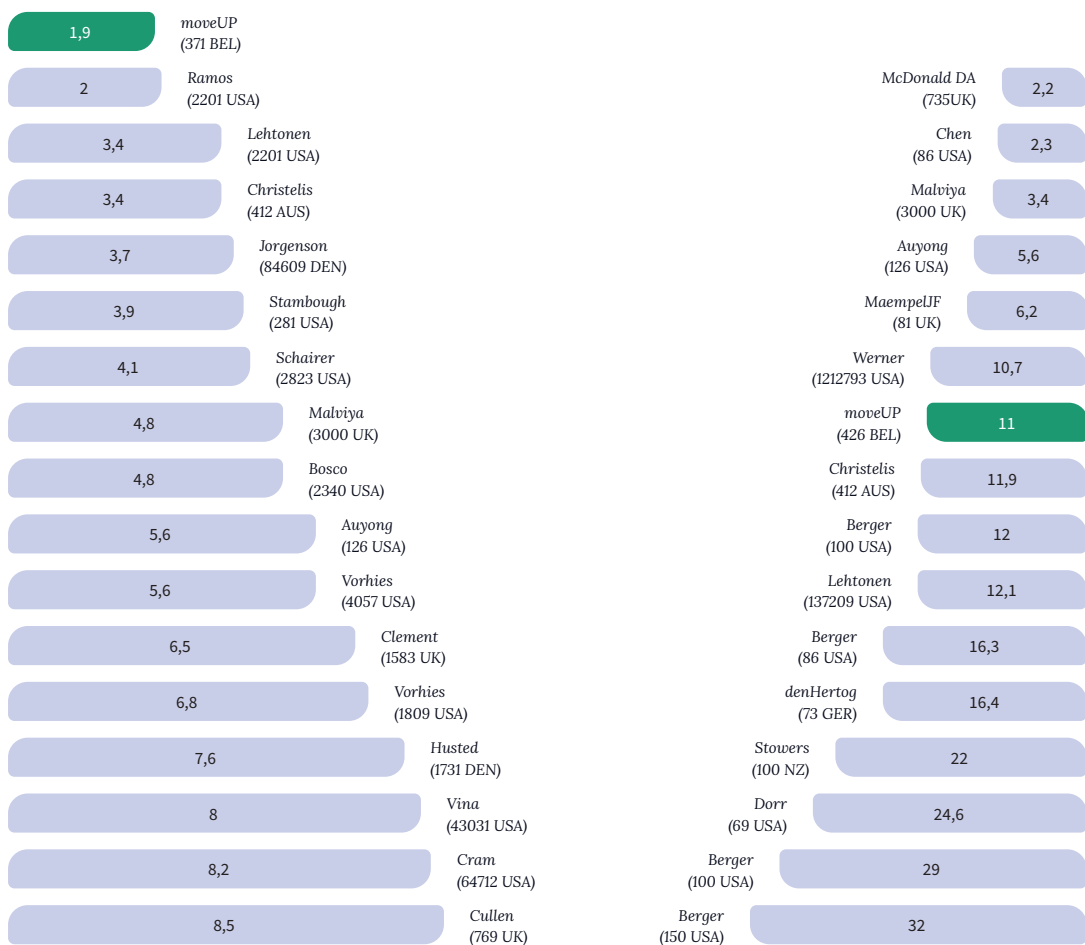
Our approach combines Performance Based Outcome Measure (PBOMs), such as gait quality, range of motion and 6 min walking test, to measure the quality of rehabilitation in an objective way.

**"Using 3D frameworks provide objective information about e.g. gait speed, step length and symmetry to measure gait quality"**

### Readmission and complication comparison

When comparing real-life data with multiple studies, moveUP showed a low complication rate and a very low readmission rate.

Integrated care pays off: early detection leads to less readmissions (13)



Readmission rate %

Complication rate %



## INCREASED QUALITY OF CARE THANKS TO ADVANCED ANALYTICS

*With the moveUP index, we have developed a tool to predict patient satisfaction after a joint replacement. This information supports the surgeon and the patient in deciding whether joint replacement is the best option or whether an alternative therapeutic strategy would be a better choice.*

The moveUP Index score offers an indicator of the likely satisfaction of the patient, based on specific relevant objective and subjective elements collected throughout the patient journey of very similar patients. Realistic expectations of the outcomes and recovery can be assessed for each patient.

### moveUP Index Surgery score

The moveUP Index score gives you an overall indication on how close you are to a perfect fit for joint replacement surgery, and what similar patients achieved with the surgery.










The subdimension below details the subscores:

● 4	<b>X-Ray</b>	The severity of your arthrosis is in line with patients getting surgery
● 1.5	<b>Previous treatments</b>	Besides painkillers, you have not tried any conservative treatments, such as physical therapy. Usually patients undergoing surgery tried conservative treatments before.
● 4.1	<b>Pain</b>	The severity and frequency of your pain is in line with patients getting surgery
● 4.4	<b>Expectations</b>	You are well informed about the surgery, its risks, and what it can and cannot solve
● 4.5	<b>Co-morbidities</b>	You do not have co-morbidities contra-indicating the surgery
● 2.5	<b>Physical activity</b>	You are still very active and able to walk at a good speed. Usually patient undergoing surgery are not as active and performing as you – they start from a lower state

Expectations of patients with a similar moveUP Index:



-  Patients with a similar moveUP Index are usually satisfied to **very satisfied** with their joint replacement surgery\*
-  Similar patients usually are able to **walk** as much as before the surgery **after 5 to 7 weeks\***
-  Similar patients usually are able to **cycle** as much as before surgery **after 4 to 5 weeks\***
-  Similar patients usually **stop pain medication between day 12 and 18 after surgery\***
-  Similar patients typically **stop using crutches in week 4\***
-  Similar patients start **driving in week 5\***
-  Similar patients are able to get back to a similar type of **work** as yours around **week 6\***

\* With 80% confidence based on data of 2500 patients



### Testimonials



#### STEFAN BOLDER

Surgeon

*What happened to a patient between surgery and consultation was previously not visible. Thanks to moveUP, we now gain insight into how the patient is doing in the meantime. This new way of working brings orthopaedic surgery and rehabilitation closer together. We think this improves the quality of care.*



#### VALERIE TIMMERMANS

Physiotherapist

*It is important that the patient starts exercising regularly. That means not too much, but also not too little. In addition, as a physiotherapist, we draw up the exercise schedule for the patient. They can indicate whether they have successfully completed those exercises and whether they like them or not. Eventually, we create a fully personalised exercise schedule.*

## REDUCE COSTS

Thanks to moveUP technology, based on AI recommendations and asynchronous communication between medical professionals and patients, high-quality care is possible with a lower time burden than conventional rehabilitation. Such technology leads to direct and indirect savings and improved quality of care.

**10.000€**

The typical Belgian total cost of a total hip/knee arthroplasty (including rehabilitation)

**1.400€**

An average cost of the rehabilitation

**10-20% lower costs**

Of procedure with moveUP

**30-50% lower costs**

Of rehabilitation with moveUP

Therapy with moveUP leads to



### Reduced number of surgeries:

Our data help us better predict the outcomes and prescribe the best intervention. Acting proactively, we reduce the number of surgeries.



### Reduced Length of Stay (LoS):

We successfully reduced the median LoS in Belgium from three to one night without negatively impacting complications and readmissions <sup>(14)</sup>.

Generalising a one-night stay would provide further savings of 1500€ per patient.



### Less absence from work:

Chronic joint pain can lead to 2-3 weeks of absence per year, while surgery recovery takes 8-12 weeks.

With moveUP, patients typically return to work after 25 days, 30-50% faster than the average sick leave duration. Rehabilitation can happen anywhere, at the patient's convenience, helping them return quicker to work.

10-20% of surgeries could be prevented with the right therapy at the right time

## WE ARE YOUR TRUSTED PARTNER

*At moveUP, we care about creating an evidence-based, secure, efficient, and valid system meeting current standards.*

### Quick facts about moveUP



Established



Countries



Employees



Surgeons



Hospitals



Customizations

*After a 200-patient clinical trial, in which we demonstrated safety, efficacy and high satisfaction, moveUP became certified as CE Medical Device in 2017.*

We comply with the international standard IEC 62304 for medical device software. Since 2019, we have been ISO 13485, guaranteeing patient safety and effectiveness. The ISO 27001, which we obtained in 2020, proves that we have processes for managing cyber security risks.

These are external quality assurances to the hospitals, clinics, and professionals we work with. Our partners know that they can rely on us and that we are always keeping up-to-date with the newest changes, standards, and regulations. Some of the partners that trust and rely on moveUP are:

### moveUP partners

DKV



ethias



Partena  
PROFESSIONAL

*In 2021, we qualified for reimbursement from the national health payer in Belgium and health payers in The Netherlands and France*

We started with joint replacement therapy but expanded to bariatric digital therapy in 2021. We are currently working on launching a solution for chronic obstructive pulmonary disease (COPD), neurological, oncology, and cardiac rehabilitation.

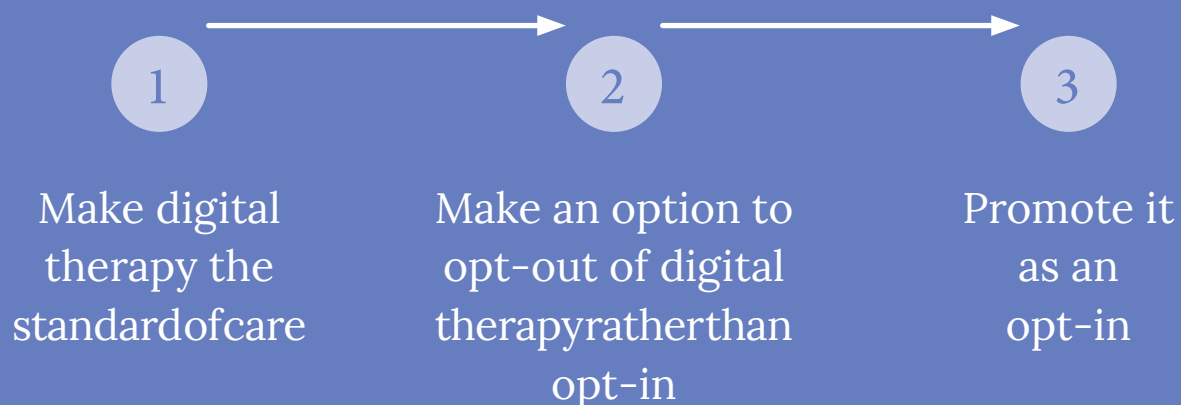
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# Join the other health insurance working with us

Digital therapy is an opportunity for health insurance companies to optimise the care experience both for patients and care providers and offer the most efficient therapy solution.

Here are the ways you can fund and promote digital therapy:



We help you deliver this to your affiliates members dealing with joint pain, going through joint or bariatric surgery. Working with us means you get a patient assessment tool for targeted or mandatory screening and a digital therapy solution for those undergoing surgery. The trained and licensed physiotherapists and medical professionals we work with are committed to bringing efficiency and transparency to care delivery.

*Ready to get started?*

Contact us for a product demo