

Annual Report 2022



**PAEDIATRIC REHABILITATION
CENTRE**

Annual report
Association Lokhos / Centre qap
March 2022



INTRODUCTION

The Association Lokhos is recognised as an entity of public utility, pursuing a purpose in the public interest. It was founded in March 2019 and created Centre qap, which opened its doors in June 2020.

Its objective is to encourage development of the autonomy and physical and intellectual potential of children and young adults up to age 20 who are living with some form of disability. It promotes multidisciplinary therapy – both traditional and innovative – dispensed by medical and paramedical professionals. Through the Association, Centre qap has notably been able to acquire a Lokomat¹ exoskeleton for the rehabilitation of children and young adults limited by a physical condition.



¹Lokomat: high-tech medical device designed for intensive functional locomotor training. During motor function re-education, body weight is partially supported while two computer-controlled robotic orthoses move the patient's legs in a natural walking movement on a treadmill. The Lokomat can be adapted for a wide range of locomotor abilities/limitations by modifying step size, treadmill speed and the percentage of bodyweight support and movement assistance via the orthoses.

Centre qap, today, is a multidisciplinary paediatric rehabilitation facility occupying 880 square metres over two floors, dedicated to encouraging the progression of children in the Lake Geneva region affected by a variety of disorders.



Offering outpatient paediatric rehabilitation as an offshoot to and connected with the university hospitals in the Lake Geneva region, **in 2022 Centre qap welcomed more than 430 patients** between 0 and 20 years of age.

It provides tailored, targeted, ambulatory treatment for babies, children, and adolescents up to age 20, who need developmental support or specialised rehabilitation.

Working in conjunction with families, therapists and doctors, Centre qap aims to provide effective support for children experiencing developmental difficulties or impairments from illness or trauma. It also aims to deliver early care under the best conditions for optimal progression and rehabilitation.

Centre qap coordinates with the therapists and the health professionals involved in a child's well-being. This interdisciplinary team includes paediatricians, specialists in neurology, neuro-rehabilitation, orthopaedics, pulmonology, and nutrition, as well as experts in robot-assisted therapy.



THERAPY AT qap



Children come to us with a variety of profiles. Most require long-term treatment (for chronic, neurological, orthopaedic or respiratory disorders) and others consult for short-term treatment (for transient conditions, such as rehabilitation after accidents or surgery).

In a typical week, some 70% of treatments are directed towards chronic (long-term) conditions and around 30% towards transient (short-term) conditions.

The conditions we encounter can include:

- Diverse neurological disorders
- Transient delayed motor development
- Orthopaedic problems – chronic or acute
- Respiratory or cardiac conditions
- Post-surgical conditions (after trauma or orthopaedic problems requiring surgery)
- Developmental coordination disorders
- Learning difficulties



THE CENTRE qap TEAM



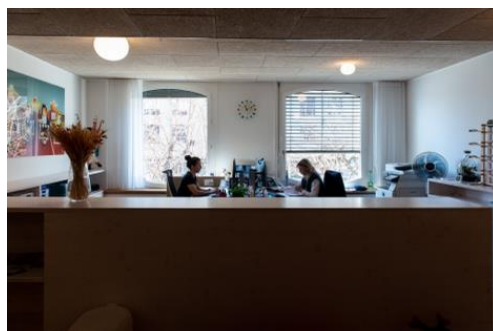
Our therapists

- 5 physiotherapists
- 2 occupational therapists
- 1 human-movement technology and robotics specialist (Lokomat and ETM¹) assisted by a year-round rotation of university students in the field on placement
- 1 massage therapist
- 1 osteopath
- 1 virtual reality engineer



Administration and reception

- 1 person in charge of accounting, reception and appointments



¹ ETM : Medical Training Therapy (MTT) consists of tailored exercises that combine muscle strengthening, stamina, coordination and mobilisation of the musculoskeletal system.

External consultants

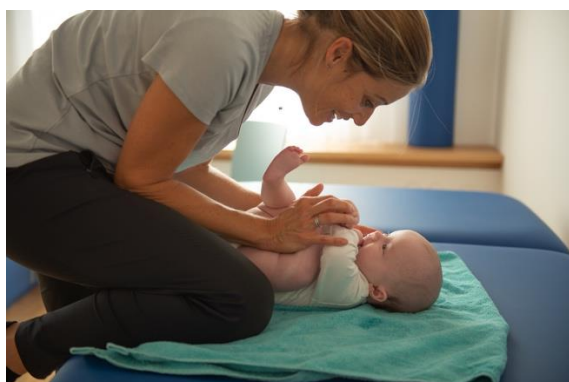
- Virtual reality specialists from the HUG (Geneva University Hospitals) / Laboratoire de la Marche (Walk Lab)
- Campus Biotech team (collaboration on virtual reality)
- 1 special education teacher
- 1 legal advisor

Reimbursement by assurances

Most of our therapists are self-employed and invoice insurance companies directly.

We begin many therapies (such as Lokomat or intensive therapy) without waiting for an insurance company's acceptance because these decisions can take up to four or six months, depending on the case. Such a long wait can hinder a patient's recovery and progress. Until now, no application for treatment has been refused by insurances.

One of the Association's principles is to finance some treatments itself **without waiting** for the reply of the relevant body. This is to avoid slow administrative procedures delaying a child's progress or rehabilitation. It allows each therapy to begin immediately and ensures care where treatment might be refused by the insurance company. Any time lost works against the children.



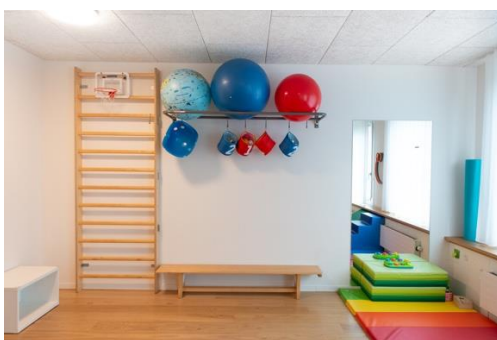
Staffing – self-employed therapists and salaried employees

As a non-profit association, our only employees are the person responsible for administration and reception, the Lokomat movement technology and robotics specialist, and a virtual reality engineer. All other members of the therapy team are either self-employed or seconded from another facility or salaried by another of the Centre's independent therapists.

Looking ahead to future development, Centre qap is waiting for official recognition as a healthcare facility by the Department of Health (DSPA). At that point, we will be able to employ salaried staff.

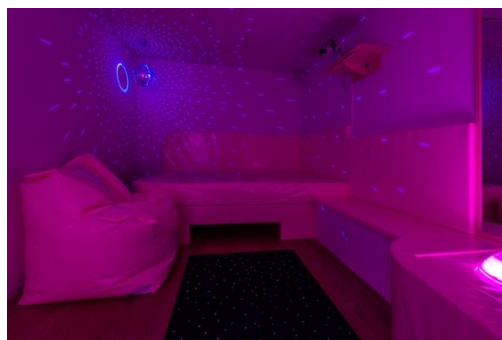
The application to acquire such status is in progress (see: Projection 2023–2024)

Therapy room rental



Self-employed therapists rent their therapy rooms, thereby reducing the overall rent for which the Association is responsible.

They are able to make use of the existing infrastructure: sensory room, two large motricity rooms, virtual reality room, meeting room and kitchen.



STATISTICS 2022

Statistics cover the period from January 2022 to December 2022

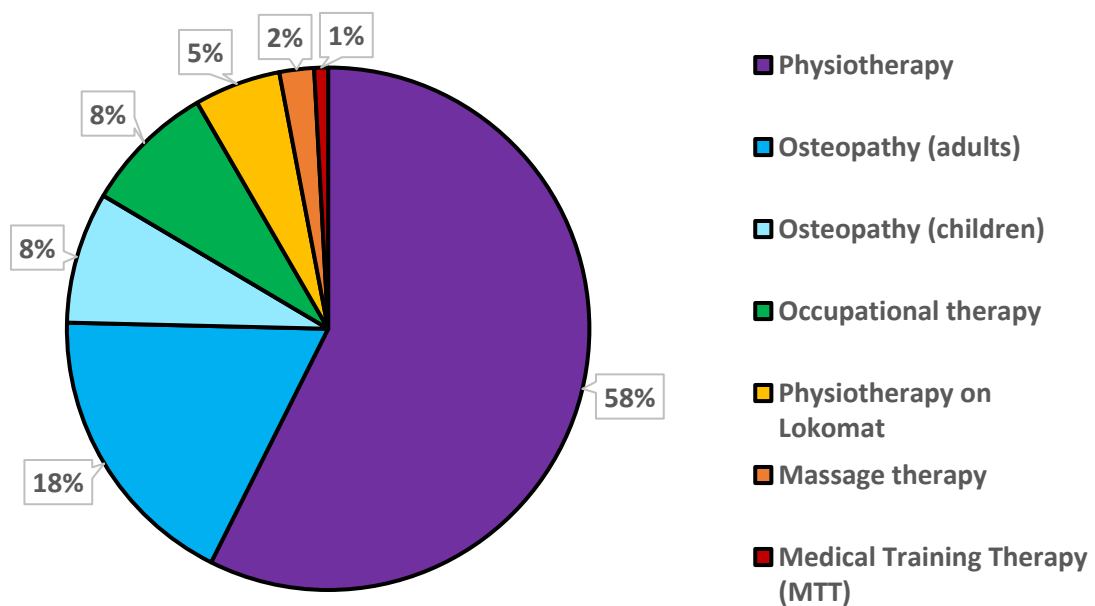
Centre qap patients

Total number of patients: **433**

Total number of therapy sessions: **5650**

Patients according to therapy type

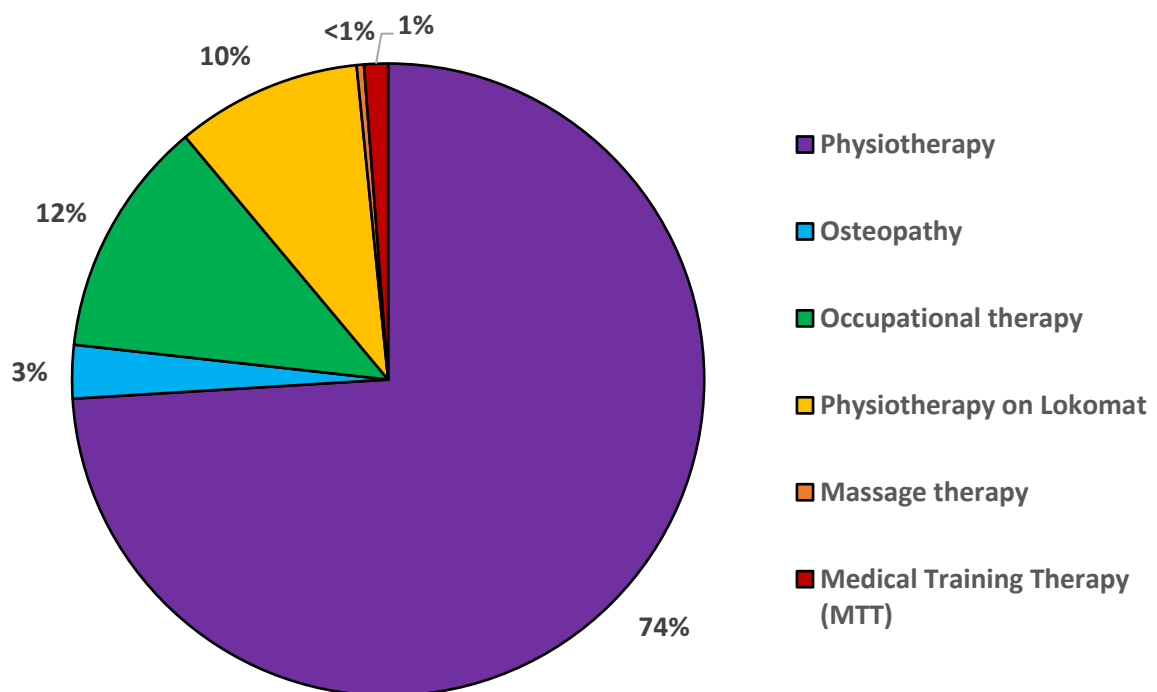
- Physiotherapy: **268**
- Occupational therapy: **38**
- Physiotherapy on Lokomat: **25**
- Osteopathy: **122** (including **84 adults**)
- Massage therapy: **10** (including **3 adults**)
- Medical Training Therapy (MTT): **4**



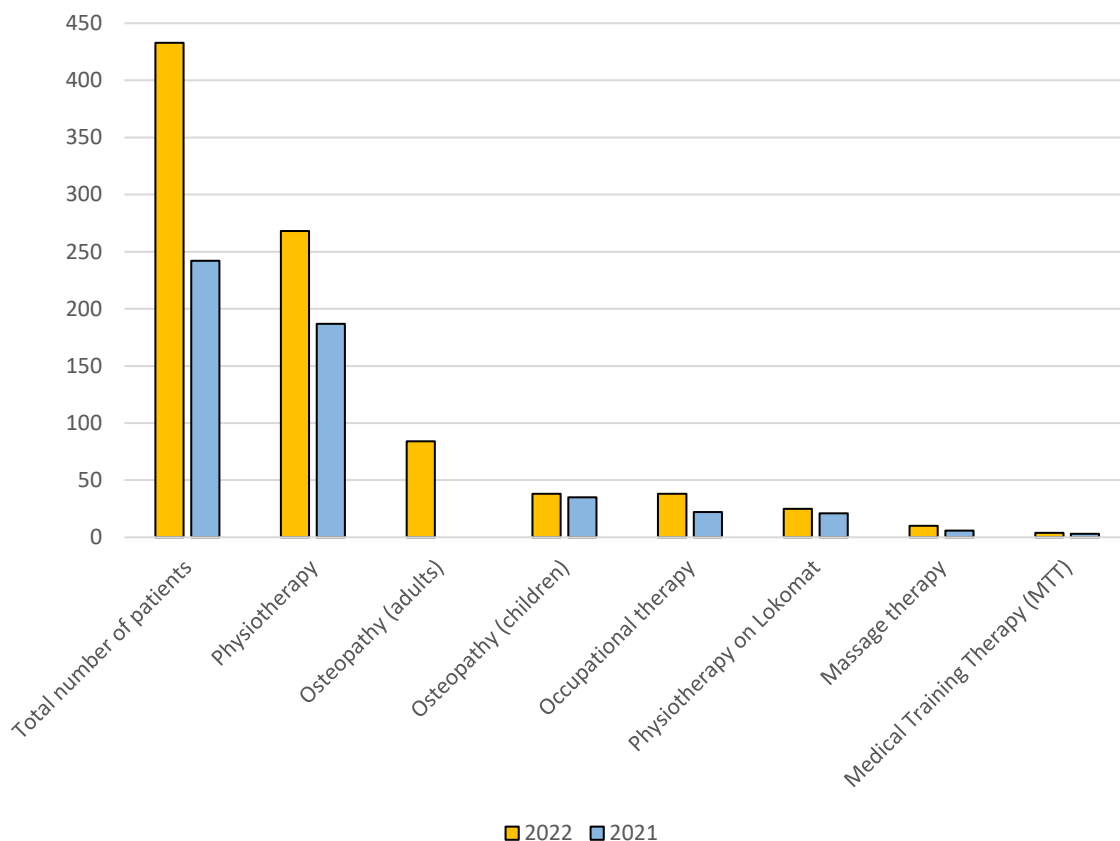
NB: Because many patients attending the Centre follow particular treatments principally for chronic conditions, this will influence the statistics. It is therefore important to refer to the following chart.

Patients according to therapy type

- Physiotherapy: **4183**
- Occupational therapy: **687**
- Physiotherapy on Lokomat: **536**
- Osteopathy: **154**
- Massage therapy: **21**
- Medical Training Therapy (MTT): **69**



Evolution of patient numbers according to therapy type between 2021 and 2022



Physiotherapy on Lokomat is generally intensive therapy or therapy for chronic conditions. The number of patients is, therefore, not representative of the number of sessions carried out (see following chart).

Distribution of number of Lokomat sessions (*number of patients*)

- Long-term: **205 (7)**
- Intensive: **140 (8)**
- Intensive + Long-term¹ : **187 (6)**
- Trial sessions : **4 (4)**

Trial in 2022:

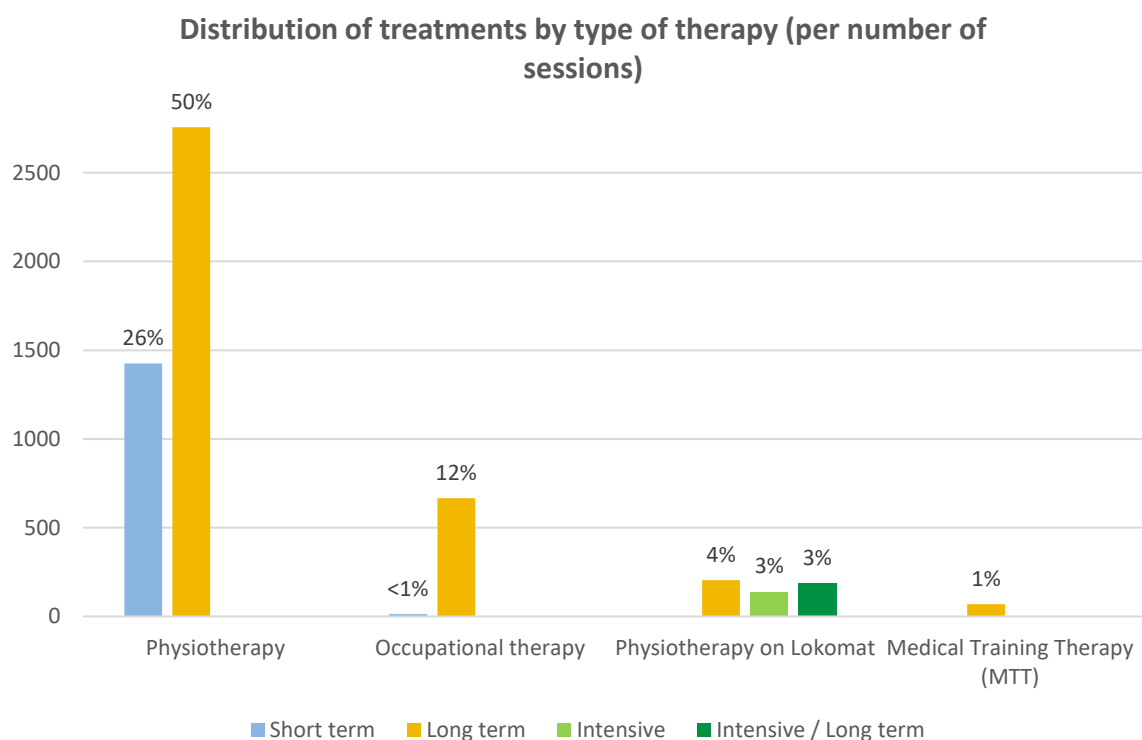
- 29 patients underwent combined therapy, for example:
physiotherapy /osteopathy, occupational therapy, Lokomat, massage therapy
- 25 patients underwent treatment from two therapists together (joint therapy).

¹ Patients in this category, in 2022, trained regularly on Lokomat and underwent an additional period of intensive training.

Patient numbers (*number of sessions*) according to therapy type

- Short-term treatment (ST): **175 (1439)**
 - Physiotherapy: **163 (1426)**
 - Occupational therapy: **3 (13)**
- Long-term treatment (LT): **148 (3697)**
 - Physiotherapy: **105 (2757)**
 - Occupational therapy: **31 (666)**
 - Physiotherapy on Lokomat: **7 (205)**
 - MTT: **4 (69)**
- Intensive + Intensive / LT (Lokomat)²: **14 (327)**
- Assessment / Trial session: **8 (12)**

Massage therapy and osteopathy – being occasional and, mostly, short-term therapies – are not included in these statistics.

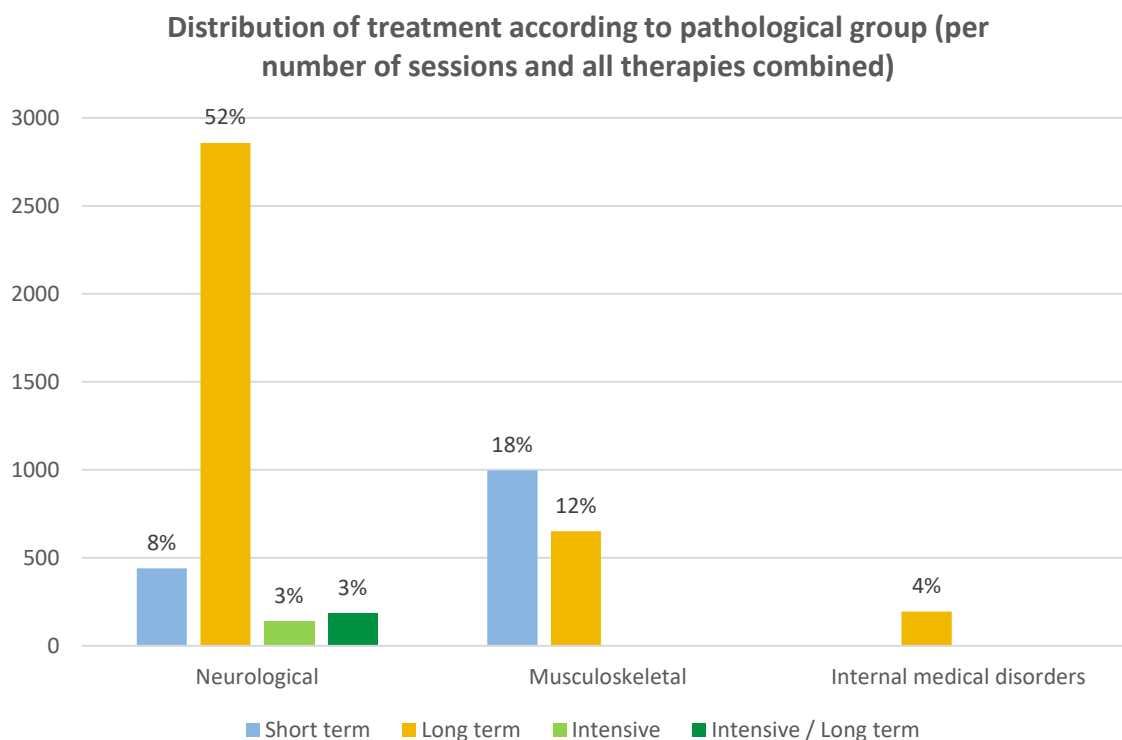


Categories of conditions (total patients per group)

- **Neurological disorders** (e.g., cerebral palsy, developmental disorders, paraplegia): **162**
 - Physiotherapy: **116** (number of sessions → ST: **428**; LT: **1971**)
 - Occupational therapy: **38** (ST: **13**; LT: **666**; Assessment: **8**)
 - Physiotherapy on Lokomat: **25** (LT: **205**; Intensive: **140**; Intensive /LT: **187**; Assessment: **4**)
 - Massage therapy: **4**
 - MTT: **2** (LT: **16**)
- **Musculoskeletal disorders 'MSD'** (e.g., club foot, plagiocephaly, sprained ankle): **272**
 - Physiotherapy: **146** (ST: **996**; LT: **603**)
 - Osteopathy: **122**
 - Massage therapy: **5**
 - MTT: **1** (LT: **42**)
- **Internal medical disorders** (e.g., cystic fibrosis, cardio-respiratory problems): **6**
 - Physiotherapy: **6** (ST: **2**; LT: **183**)
 - Massage therapy: **1**
 - MTT: **1** (LT: **11**)
 - MTT: **1** (LT: **11**)

Type of treatment (ST, LT) for massage therapy and osteopathy is not included in these statistics since such treatment is occasional.

Several patients in a group can undergo several types of therapy.



2023 NEWS

The Centre achieved a number of its objectives this year:

- **Realisation of the partnership between Centre qap, the regional university hospitals and Clair Bois¹**

A convention between the HUG², Centre qap and Clair Bois was signed in January 2023, which allows us to benefit from the services of a neuro-rehabilitation doctor who will coordinate patients' therapy, act as a link between the various institutions and assist us in setting up intensive therapy, which is one of Centre qap's principal objectives. The doctor will be assisted by a CHUV³ professor, an eminent specialist in paediatric neuro-rehabilitation.

- **Intensive therapy**

Intensive therapy has two main objectives:

- To allow young patients with neurological disorders to benefit from a wide range of therapy with sufficient frequency and intensity to make progress, enhance their well-being and achieve as much independence as possible.
- To allow young patients to benefit from a wide range of services, with sufficient frequency and intensity, and throughout the year, for full and speedy recovery after an operation or to meet their target advancement goals.

During 2022, 13 children benefitted from personalised intensive therapy, over varying periods of time and frequency. These intensive sessions were either Lokomat-based, physiotherapy-based, or combined therapy.

The aim of intensive treatment is to reinforce specific targets to improve a patient's particular motor function deficiencies and to spur optimal recuperation.



¹ **Clair Bois** : Special school for children and adults living with handicaps

² **HUG** : Geneva University Hospitals

³ **CHUV** : Lausanne University Hospital

- **Expansion of Centre qap premises**

After two-and-a-half-years in operation and facing an ever-growing demand, Centre qap had reached capacity. The opportunity presented itself to extend our premises. We have rented part of the floor below and linked this new area with our current premises, giving us a total space of 800 square metres.

The construction work is now finished and the new area of Centre qap opens in March. It will allow us to accommodate new therapists and, of course, welcome new young patients currently awaiting treatment.

In the space of one year, **we have almost doubled our treatment capacity**, with patient numbers up from 220 to 430.

The new space includes:

- 4 new therapy rooms
- 1 large new motricity room with athletics track
- 1 classroom/ homework room for children undergoing intensive therapy
- 1 kitchen corner for intensive therapy patients



- **Training**

This year, our therapists have attended various training courses:

- Bobath – two physiotherapists
- Paediatric orthopaedics (scoliosis, plagiocephaly) – three therapists
- RMTi (Rhythmic Movement Training International) – five therapists
- MEDEK training



- **Team building**

A new osteopath and a new massage therapist joined our team in 2022 (replacing two therapists who left us for personal reasons).

A second occupational therapist came on board to assist the first.

A speech therapist will join us at the start of the new school year, late August 2023.



- **Virtual reality**

The year 2022 allowed the Centre to make good strides in its virtual reality project.

Working with various specialists, the centre developed two new re-education tools using this new technology.

A treadmill linked to a screen, allowing a patient to work on their gait (walking or running) in a totally immersive environment, and a game specially designed to exercise the upper limbs have been developed through motion capture technology.

Future projects will develop different immersive worlds as well as new fun games to bring renewed motivation to children as they work on their rehabilitation.



PROJECTION 2023–2024



- Acquire official recognition as a healthcare facility from the Department of Health (DSPS).
This will be a major step in the Centre's evolution because it will allow us to take on new salaried therapists and realise one of qap's principal – and unique – projects: provision of intensive, year-round therapy.
- Build strong relationships with quality “outside” bodies to enhance collaboration between therapists with shared paediatric rehabilitation objectives.
- Develop therapies using virtual reality and robotics which immerse children in different worlds while helping to work on their balance, coordination and reaction speed.
- Continue the fruitful collaboration with the HUG's Laboratoire de la Marche (Walk Lab) and the Campus Biotech team.
- Continue to encourage therapist training to constantly enhance quality of treatment.
- Continue to build up Medical Training Therapy (MTT) to offer intensive sport training to children with a chronic or transient handicap.
- Engage new therapists to adequately respond to expectations and with a view to the future development of the Centre's services.
- Develop specialised therapy on cognitive aspects to enable children to exploit their intellectual ability and communication skills to the full.
- Continuing to improve the quality of our services by acquiring specialist materials.
- Focus on maintaining excellence in welcoming and helping the children and teenagers who attend the Centre.



CONCLUSION

Centre qap's statistics show the number of patients currently attending but do not however reflect the number of children awaiting treatment. The numbers underline the massive need for such centres in this part of Switzerland.

In view of the already high pressure on Centre qap (waiting list for all therapies), becoming one of the HUG's outpatient hubs, together with our intention to develop intensive therapy and offer adaptation to sport will place greater demands on us. To ensure we meet this exciting challenge, it is imperative to expand Centre qap and engage new therapists.

Thus, by offering continued, attentive and personalised care, we will be able to provide the greatest possible opportunities for qap's young and older champions to develop their cognitive and motor abilities, fulfil their potential, enhance their autonomy and quality of life and, thereby, their general health and well-being.



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