



Update on adult musculoskeletal physiotherapy hydrotherapy services

Report from Imperial College Healthcare NHS Trust to the London Borough of Hammersmith & Fulham Health, Inclusion and Social Care Policy and Accountability Committee

1. Introduction

This report to the Health, Inclusion and Social Care Policy and Accountability Committee from Imperial College Healthcare NHS Trust ('the Trust') provides an update on changes to the way adult musculoskeletal physiotherapy hydrotherapy services are provided at Charing Cross Hospital and pilot trials undertaken to support a change in delivery.

This change in service delivery is based on the potential solutions and pilot trials suggested by the London Borough of Hammersmith & Fulham and has been developed by the Trust's physiotherapy team. It follows a safety and effectiveness review prompted by the combined challenge of maintaining and running the hydrotherapy pool at Charing Cross Hospital which was covered in a previous report submitted to the Committee in April 2019.

The Committee is asked to note and comment upon the report.

2. Imperial College Healthcare NHS Trust overview

At Imperial College Healthcare NHS Trust we provide acute and specialist healthcare for over one million people a year. Formed in 2007, we are one of the largest NHS trusts in the country, with more than 14,500 staff.

Our five hospitals in central and west London – Charing Cross, Hammersmith, Queen Charlotte's & Chelsea, St Mary's and the Western Eye – have a long track record in research and education, influencing care and treatment nationally and worldwide. We are developing a growing range of integrated and digital care services and offer private healthcare in dedicated facilities on all our sites.

The Trust is currently rated overall as 'requires improvement' by the Care Quality Commission (CQC); it is rated overall as 'good' for the caring and effective domains, and 'requires improvement' for the safe, responsive and well-led domains. Trust services were last inspected in February 2019 (report published in July 2019) – eight core services were inspected and the CQC increased its ratings for six of them, all of them were rated as 'good' or 'outstanding' and the overall rating for Queen Charlotte's and Chelsea Hospital was increased to 'outstanding'. A separate 'well-led' inspection in April 2019 increased our overall well-led rating to 'good'.

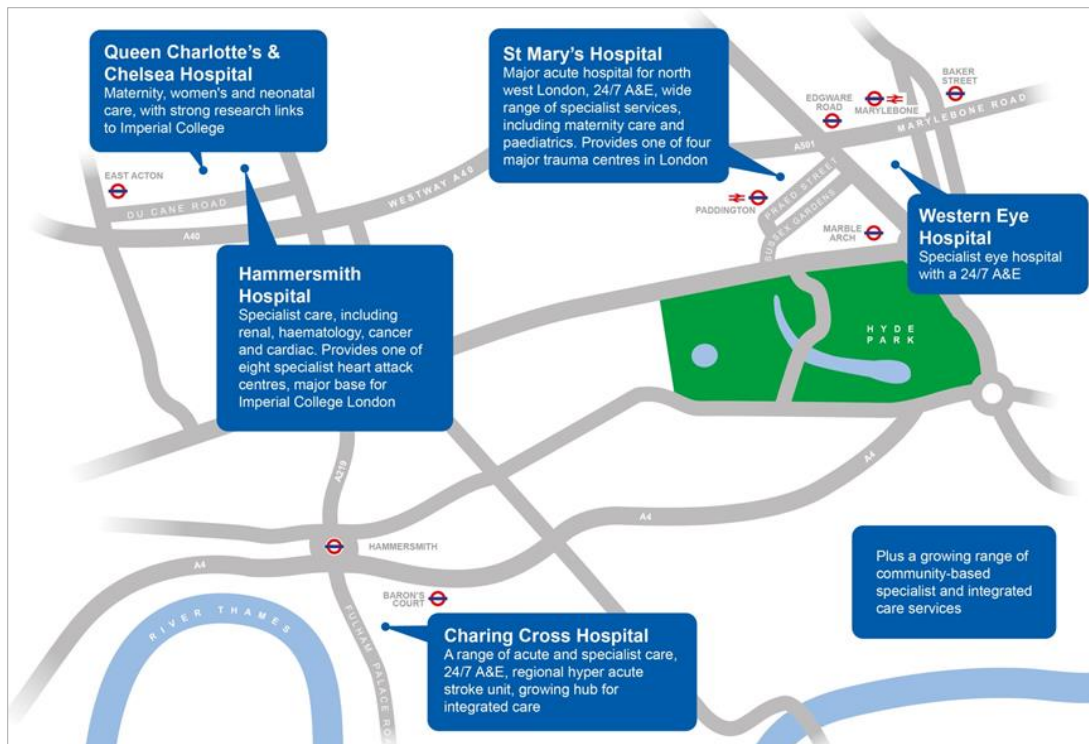


Figure 1 – Map of hospitals in Imperial College Healthcare NHS Trust

3. Trust physiotherapy services

Our Trust's physiotherapy services provide rehabilitation for inpatients and outpatients at Charing Cross, Hammersmith, Queen Charlotte's & Chelsea and St Mary's hospitals and various community locations.

The inpatient service provides expert physiotherapy assessment, treatment and advice for all inpatients requiring physiotherapy to facilitate recovery following acute illness or surgery and to facilitate discharge home or onward referral for rehabilitation.

We offer inpatient physiotherapy services within all speciality areas provided by the Trust. Our physiotherapists are allocated to specific hospital wards according to the specialty skills of each therapist. All hospital departments can discuss the specific physiotherapy needs of a patient and referrals with their ward-based therapist. Our physiotherapists attend the board rounds and multidisciplinary team meetings on the wards to assist our medical teams in the planning of on-going inpatient care.

Referrals for physiotherapy services include inpatients with the following conditions:

- orthopaedics – trauma and elective surgery
- respiratory – acute and chronic respiratory disorders and critical care
- stroke and adult neurology/neurosurgery
- neuro-rehabilitation
- major trauma – head injuries and multiple fractures
- elderly medicine – patients that have fallen or have mobility problems
- obstetrics
- gynaecology
- cancer
- vascular and amputees
- renal
- children's services

The outpatient physiotherapy service receives referrals consultants within the Trust for patients requiring further expert assessment and treatment and for rehabilitation (we are unable to accept referrals directly from GPs). We offer outpatient services for:

- musculoskeletal (MSK) conditions e.g. back and neck pain, other joint pain, soft tissue injuries
- post-orthopaedic surgery
- rheumatology conditions
- chronic pain
- vestibular disorders
- hand injuries and conditions
- intermittent claudication – classes
- amputees – prosthetic rehabilitation
- obstetrics – antenatal and postnatal assessment, treatment and advice for back pain, continence and urogynaecological problems
- gynaecology – conservative management for women with continence and urogynaecological problems
- advanced practitioner service in orthopaedic clinics, pain clinics, chronic respiratory care, and HIV clinics
- chronic pulmonary illness and post-COVID-19 clinics
- neurological conditions – expert opinion and signposting to appropriate services only

Treatment includes education, advice and exercise to maximise our patients' independence and self-management. The treatments we offer are:

- Postural and ergonomic advice and back care education
- Gait re-education to improve mobility
- Manual therapy to mobilise the joints and soft tissue
- Teaching specific exercises to improve strength or flexibility
- Joint management
- Self-management strategies and healthy lifestyle choices
- Aquatic/hydrotherapy
- Strength training regimes
- Functional task practice
- Respiratory and cardiovascular exercise regimes
- Group exercise sessions

4. Proposal to change our physiotherapy hydrotherapy services

4.1 Background and engagement

Following a safety and effectiveness review, we developed the proposal for a planned and managed approach to the permanent closure of the hydrotherapy pool at Charing Cross Hospital.

An options appraisal on the future of the hydrotherapy pool was completed in October 2018. This was a result of changes in aquatic therapy guidelines and persistent estates maintenance issues resulting in frequent unplanned pool closures. The recommendation of the Trust executive in February 2019 was to engage with service users, staff and stakeholders on a preferred recommendation to close the hydrotherapy pool at Charing Cross and reallocate the physiotherapy staff to provide land-based adult musculoskeletal physiotherapy.

The Trust engaged with patients, staff and other stakeholders over a 12-week period (11 March – 31 May 2019). We received over 30 individual pieces of feedback via email on the proposal. All the responses were acknowledged and responses provided where specific

questions were asked or further information was requested. We also noted the feedback received through face-to-face meetings.

The main issues raised are listed below:

1. Alternative options to this proposal that have been considered by the Trust
2. Clinical improvements associated with hydrotherapy and evidence base
3. Hydrotherapy forming the only means or exercise for some patients or former patients
4. Psycho-social benefits of hydrotherapy for some patients
5. Information on the location of other hydrotherapy provision across the surrounding area
6. Lack of appropriate similar resources/facilities in the surrounding area
7. Moving to land-based therapies and impact on waiting times
8. Impact on current physiotherapy staff
9. Further information on the Quality Impact Assessment and Equality Impact Assessment
10. Clarification of the referral process for the Trust physiotherapy services
11. Potential impact on the reablement services provided by Hammersmith & Fulham Council
12. Further information on the operating costs and cost of capital investment required to repair the hydrotherapy pool
13. Clarification on whether the Trust's safety and effectiveness review was carried out under the Health and Safety at Work Act 1974 or a financial review as described in the Health Act 2006
14. Information on future use of the clinical space currently occupied by the hydrotherapy pool
15. Information on the engagement process and decision-making

After the conclusion of the patient and public engagement and follow-up of suggestions made by the London Borough of Hammersmith & Fulham and North West London clinical commissioning group (CCG) partners regarding a range of potential solutions, a paper was considered and accepted by the Trust executive team, proposing the following:

1. To work in partnership with the Jack Tizard school in Shepherd's Bush to lease their hydrotherapy pool on a sessional basis, enabling the Trust to continue to deliver hydrotherapy in an improved environment
2. To work in partnership with the Charing Cross sports club and Swim England to run group, water-based physiotherapy sessions on the Charing Cross site, enabling the physiotherapy team to support patients in the transition into self-directed exercise
3. Once both of these are in place and the concept proven, to close the existing hydrotherapy pool on the Charing Cross site and reallocate the space to clinical use

Due to the Covid-19 pandemic the planned pilots of the hydrotherapy services at Jack Tizard School and Charing Cross Sports Club were delayed until November 2021 and then had to be paused due to the Omicron variant third wave. The pilots re-started / commenced in February 2022. All patients who were attending the Charing Cross Hospital hydrotherapy service prior to the onset of the pandemic and whose appointments were cancelled have since been contacted and offered land-based treatment.

4.2 Patient impact

Aquatic / hydrotherapy is one of several forms of treatment that has historically been offered to patients under the care of our outpatient services. The aquatic / hydrotherapy service at Charing Cross Hospital predominantly treated a mix of NHS patients with a variety of conditions such as:

- musculoskeletal presentations, for example, back and neck pain, other joint pain, soft tissue injuries
- following orthopaedic surgery
- rheumatology conditions
- chronic pain

In addition, a small number of women with pregnancy related pelvic or low back pain were previously treated in the hydrotherapy pool and two private companies also hired the pool.

There was no Charing Cross Hospital hydrotherapy service offered throughout 2020/21 and 2021/22 due to the Covid-19 pandemic. We treated a total of 368 NHS patients in the Charing Cross hydrotherapy pool in 2017/18. This reduced to 179 NHS patients in 2019/20. Previously the majority of patients came from the eight north west London boroughs, although some patients are seen from outside north west London. On average, approximately 30 per cent of all patients are from the borough of Hammersmith & Fulham.

Clinical Commissioning Group	2019/20	
	Patients	Contacts
NHS EALING CCG	52	309
NHS HAMMERSMITH AND FULHAM CCG	50	336
NHS BRENT CCG	25	126
NHS WEST LONDON CCG	22	108
NHS HOUNSLOW CCG	11	49
NHS CENTRAL LONDON (WESTMINSTER) CCG	9	59
NHS HILLINGDON CCG	5	26
NHS HARROW CCG	5	17
TOTAL	179	1030

Table 1 – Charing Cross Hospital hydrotherapy pool patient numbers and contacts by NWL CCG for 2019/20 (Accessed 3/3/2022)

4.3 Hydrotherapy pool standards

Hydrotherapy pools are required to operate to particular standards to ensure they are safe and effective. Recently updated national aquatic standards require pool air temperatures to be maintained at 25-30 degrees centigrade, as well as meeting stringent microbiology testing and providing a functioning hoist facility.

The Aquatic Therapy Association of Chartered Physiotherapists (ATACP) produced Guidance on Good Practice in Aquatic Physiotherapy (2015). The guidelines were reviewed in February 2018, with the following amended, based on Swimming Pool Water Treatment and Quality Standards (2017):

1.2 The ambient temperature in the pool hall is maintained within the range 25 to 30 degrees Celsius.

1.4 The atmospheric humidity level is maintained within the range 50 to 60% with a preferred maximum of 60%.

1.6 Disinfectant levels are maintained within the following parameters:

If disinfected using chlorine only:

- Free chlorine within the range 0.5 to 3.0 parts per million (ppm) ideally 1-2ppm
- Total chlorine within the range 0.5 to 4.0 ppm
- Residual chlorine is never more than 1.0 ppm and is less than half the free level. 1.8 The total alkalinity is maintained within the range 80 to 200 ppm.

1.9 The calcium hardness is maintained within the range 80 to 200 ppm.

4.4 Unplanned hydrotherapy pool closures

Over the years before the start of the Covid-19 pandemic, health and safety issues led to repeated unplanned closures of the hydrotherapy pool, often at short notice and for prolonged periods, affecting the quality of care for patients and causing inconvenience to all users, resulting in increased complaints.

The root cause for these repeated closures was that, after many years of operation, the hydrotherapy pool was in poor condition, making it very difficult to meet modern health and safety standards. Examples of specific reasons for closures and complaints included:

- failed microbiology tests resulting in the need for drainage and cleaning
- failed water analysis tests revealing water standards outside of safety parameters
- low air temperature poolside
- plant and pool equipment failure
- hoist failure.

4.5 Operational and financial impact

The impact of these issues was that hospital-initiated rescheduling of appointments increased, which is outlined in Table 2. The average hospital cancellation rate in 2019/20 was 32 per cent, however the range varied between 2 per cent (December 2019) up to 76 per cent (September 2019).

Financial Year	Hospital initiated cancellation rate
2016/17	7 per cent
2018/19	18 per cent
2019/20	32 per cent

Table 2 – Charing Cross Hospital hydrotherapy pool appointment cancellation rate (hospital-initiated)

There is nothing to suggest that unplanned, repeated and indefinite closures of the pool on health and safety grounds will be any less in the coming years without significant investment into the pool estate.

The service was previously running at a financial loss, even when the pool was fully functional, and the level of capital investment and on-going revenue required to bring the pool up to the required standard is significant.

5. Pilot trials

Two pilot trials have been implemented to examine the impact of alternative locations on patient experience and service efficiency. The first pilot trial commenced in November 2021 at Jack Tizard School (JTS), in Hammersmith. Initially planned for three months across two six week blocks, it was unfortunately interrupted by the impact of the Omicron variant and pandemic third wave. The onset of a similar trial at Charing Cross Sports Club (CCSC) was also delayed due to the impact of the Omicron variant. These pilots were re-instated in February 2022.

5.1 Venues

JTS is a day school offering education to children and young people with severe learning difficulties between the ages of two and 19.

CCSC is located on the grounds of Charing Cross Hospital and is owned and operated by a private provider.

A summary of the pilots and the pool location are outlined below (Table 3, Figure 1).

Characteristics	Jack Tizard School	Charing Cross Sports Club
Depth	1.3 metres	0.9 metres
Temperature	33.5 degrees Celsius	29 degrees Celsius
Patient capacity	Currently 4 patients per hour due to Covid-19 restrictions. <i>Expect to increase to 8 patients per hour when restrictions ease.</i>	12 patients per hour
Change rooms	Individual	Communal
Timing of sessions	Thursdays, 15:30 – 18:00	Tuesdays, 10:00 – 12:00
Access to location	Street parking is free after 17:00. Nearest tube stations: White City (Central Line) 0.5 miles away, Wood Lane (Circle, Hammersmith & City) 0.6 miles away. Nearest overground: Shepherd's Bush, 1 mile away. Bus routes via South Africa Road 220 / 283.	Adjacent to Charing Cross Hospital
Access to pool	Ramp access	Ladder and hoist access
Other:	Sessions are not offered during half-term weeks as JTS is unable to provide an emergency poolside responder during these times.	Patient access outside and beyond hydrotherapy sessions to perform independent exercises and rehabilitation

Table 3. Summary of pool characteristics and pilots service provision

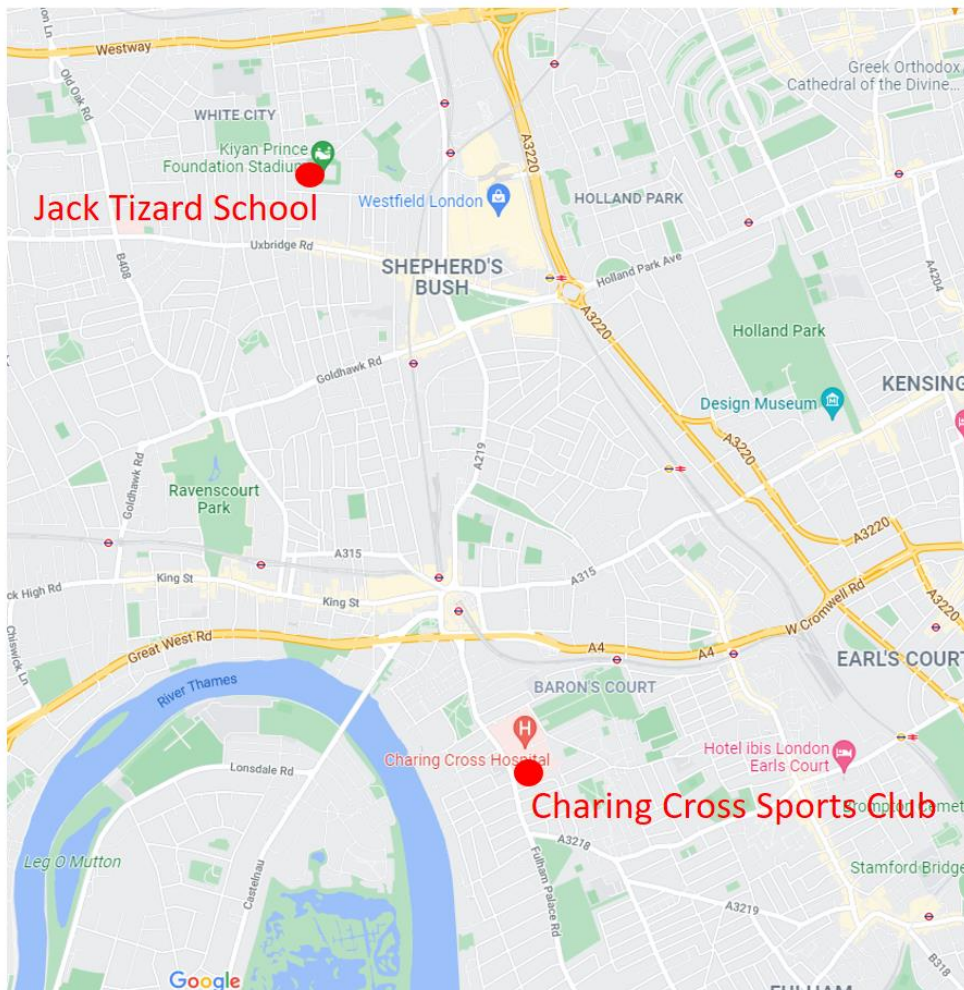


Figure 1. JTS and CCSC locations

5.2 Service capacity and delivery

We are currently offering eight appointments per week at JTS – this is expected to increase to 16 appointments per week as Covid-19 restrictions at the venue are lifted. Twenty four appointments are available per week at CCSC – delivering a total of 40 appointments per week across both sites. This amounts to approximately 2,000 appointments per year (after the lifting of Covid-19 restrictions).

Between 2018 and 2020, the Charing Cross Hospital musculoskeletal (MSK) service was planned to deliver 47 appointments per week, or approximately 2350 per year, through a mix of 2:1 (patient:staff) ratio and classes. The pilots on both sites have been structured to deliver care in group / class formats whilst still individualising advice, support and exercises to specific patient presentations and conditions. It is our intention to explore further sessions at both venues, including re-introducing pelvic health physiotherapy sessions and female only sessions.

5.3 Results

The first session was offered at JTS on 4 November 2021. Due to the interruption of the Omicron variant, the pilot was paused on 9 December 2021. Sessions resumed on 3 February 2022 and ten sessions have been delivered. In addition to the pause due to Omicron, there was no session offered on 27 February at JTS due to it being half-term week.

As of 3 March 2022, 26 patients have been referred to the service. Twenty three patients have participated or are planned to participate in the service. One declined after referral, one was unable to independently enter the pool via the ramp and the CCSC pilot (with a hoist) was not running at that time, and one failed to respond to our attempts to contact and

confirm attendance. Thirty eight per cent of referred patients have long term conditions and 62 per cent have acute trauma or post-surgical presentations.

To date, 79 appointments have been offered. The service did not attend (DNA) rate is 12 per cent. Hospital initiated cancellations are 2 per cent and patient initiated cancellations are 4 per cent.

Patient feedback (see Figure 2 below) has been positive, although it must be recognised that a small number of patients have provided feedback to date. Eight patients have responded to our requests for feedback – three attending JTS and five attending CCSC. Of the patients who indicated that they found accessing the hydrotherapy service 'somewhat difficult', one attended JTS and the other CCSC. The patient attending CCSC elaborated on their difficulty, citing the distance to walk along the poolside from the change rooms to enter the pool, as well as the communal nature of the changing space. They also raised concerns about a lack of disabled access toilets at this venue.

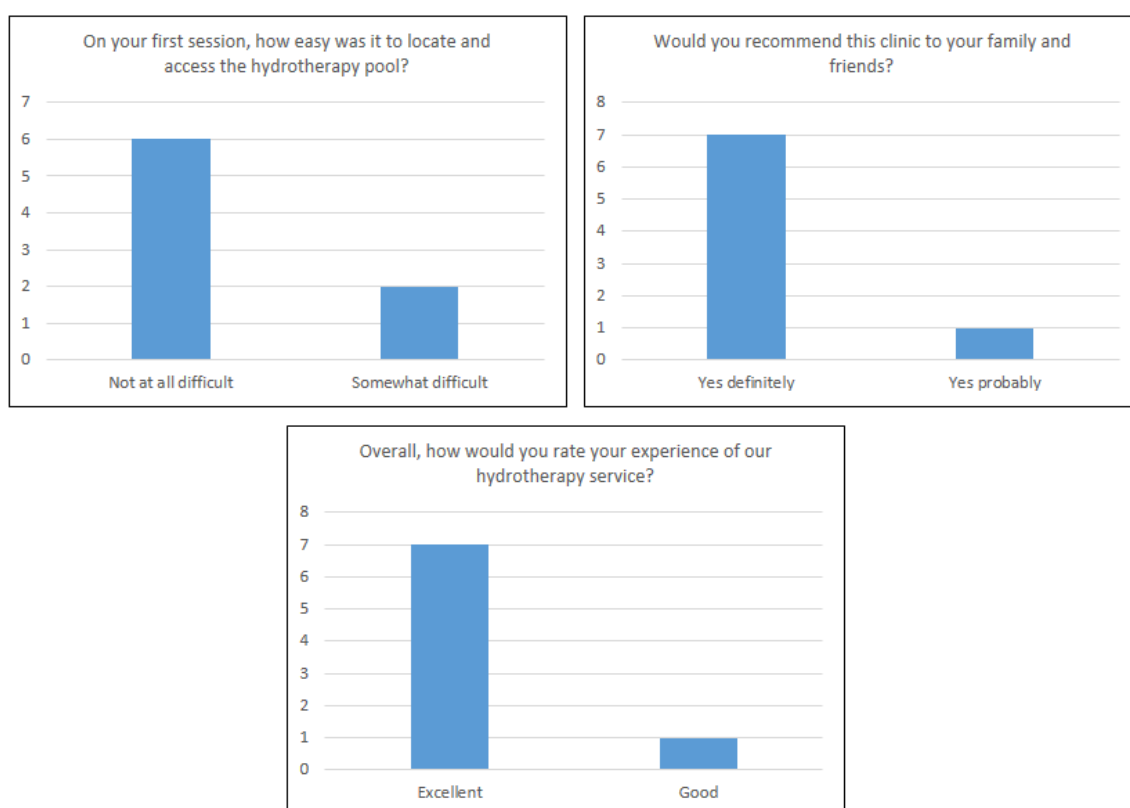


Figure 2. Patient satisfaction feedback

5.4 Financial costs

The cost per term to use the JTS swimming pool for one afternoon / evening per week is £2,275 and £9,100 per year. There is no charge for the use of CCSC.

The cost of restoring the Charing Cross hydrotherapy pool and annual running costs were last explored in 2019. At this time the capital investment forecast was estimated to be £480,000 and annual delivery cost to be £62,000.

5.5. Limitations of the pilot trials and proposed venues

Unfortunately the planned pilot trials were interrupted by the increase in Omicron variant cases of Covid-19 and the impact on social distancing with increased restrictions in December 2021. This affected the continuity of patient care in the hydrotherapy pilots and current limitations include:

1. Limited availability of data, including patient feedback, however we are confident an ongoing iterative approach with regular review of data and feedback will lead to an improved substantive service
2. The pilot trials limited the offer of hydrotherapy to specific patient groups and sessions as part of re-setting the service following the Covid-19 pandemic. For example, hydrotherapy was previously offered three days / week with morning and afternoon sessions, and included pelvic health physiotherapy classes and female only classes. There is scope to explore other possibilities, including widening inclusion criteria, expanding days / times and offering female only classes.
3. JTS access and location:
 - i) Access to the swimming pool at JTS is limited to outside of regular school hours and is not available during school holidays. This restricts the times available to run hydrotherapy at this venue. For example, morning sessions are not available.
 - ii) The location of this site from Charing Cross and St Mary's hospitals requires travel time for physiotherapy staff. This adversely affects clinical time in the service however we have mitigated for this by offering group rather than 1:1 or 1:2 patient sessions.
 - iii) Lack of hoist access for less mobile patients – however ramp access is available for those patients who are able to mobilise without walking aids
 - iv) We have also been limited by restrictions required by JTS on the number of patients allowed through the premises at the current time. This was previously greater prior to the Omicron variant, and we expect it to increase again in the near future.

The JTS pool has the benefit of being heated to 33.5 degrees Celsius which patients find to be soothing during exercise.

4. CCSC access:
 - i) There is no ramp access to the pool at CCSC and patients must be able to use a ladder entry or can use the hoist. Working with the CCSC to install a 'pool pod' has been raised as a potential opportunity to improve access.
 - ii) One patient has raised concerns about communal changing rooms and a lack of accessible facilities.

CCSC is open to the public and our physiotherapy staff encourage patients to access the pool outside of their booked sessions. CCSC has previously been open to pursuing the option of offering access at a discounted rate to patients and we hope to explore this with them again in the future.

6. Proposal summary

Our proposal developed by the Trust's physiotherapy team, which is subject to completing the pilot trials and presenting recommendations for the Trust's executive team to consider, is to continue the closure of the hydrotherapy pool at Charing Cross Hospital and replace it with a service running on local out-of-hospital sites at Jack Tizard School and Charing Cross Sports Club.

This proposal was developed following a safety and effectiveness review prompted by the combined challenge of maintaining and running the pool and engagement with users and the local community. Despite restrictions in running the pilot trials we are confident that continued review and iteration of the service will ensure it meets the needs of local patients.

Whilst the venues for the pilot trials each have their own limitations in terms of access we anticipate greater stability and consistency of service delivery compared to previous years, at a significantly reduced cost to the Trust. In addition the Trust will be able to use the

existing Charing Cross Hospital hydrotherapy pool space to provide much-needed capacity for other clinical services.

The key benefits to be gained from this proposal include:

- a continued offer of hydrotherapy in two different local locations for those patients who would benefit
- prevent poor experience of hydrotherapy service users through repeated, unplanned and indefinite closures of the Charing Cross Hospital hydrotherapy pool
- re-allocate the existing space occupied by the Charing Cross Hospital pool for alternative clinical space
- re-allocate estates resource from pool repairs to other important areas of hospital maintenance
- avoid recurring financial operating loss.