World Physiotherapy
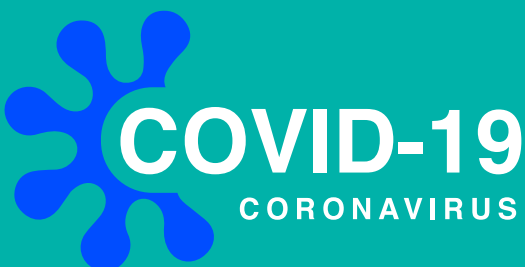# response to COVID-19

Briefing paper 6

PHYSIOTHERAPY DIGITAL PRACTICE EXPERIENCES AND INSIGHTS DURING COVID-19

COVID-19
CORONAVIRUS

April 2021

World Physiotherapy briefing papers

World Physiotherapy briefing papers inform our member organisations and others about key issues that affect the physiotherapy profession.

World Physiotherapy is producing a series of papers in response to COVID-19.

Acknowledgement

Recommended citation:

Definition

Digital practice is a term used to describe health care services, support, and information provided remotely via digital communication and devices (it includes telehealth).

Source: World Confederation for Physical Therapy & International Network of Physiotherapy Regulatory Authorities 2020. Report of the WCPT/INPTRA digital physical therapy practice task force.

➤ Introduction

The purpose of this paper is to highlight the consequences of COVID-19 on physiotherapy digital practice services as reported by World Physiotherapy member organisations and individual physiotherapists. It includes reflections on changes in practice and potential implications for the future. The case studies included serve to show the innovation and variability in changes to service delivery and act as examples for others.

➤ Key messages

Thirty-four (34) member organisations (MOs) from all of World Physiotherapy's five regions, three (3) subgroups and 148 individual physiotherapists, from 48 countries/territories, participated in a survey on the experiences of digital practice arising from the consequences of COVID-19 in 2020. Their responses provided insights into how practice has evolved to respond to the immediate challenges, and explore the implications for the future of practice.

These key messages reflect the findings from both member organisations and individual physiotherapists.

Pre COVID-19

- musculoskeletal services were the most common area supported by digital practice services
- insurance providers did not necessarily support reimbursement of digital practice services

During COVID-19

- many practice providers and service users adapted to digital practice services
- digital practice enabled service continuity
- significant expansion in digital service provision meant a wider group of service users were supported; cardiorespiratory services, paediatrics and those with long term conditions were particular areas of growth
- advocacy efforts were important to bring about practice change
- technology infrastructure and availability is not universal and can be a barrier to implementation

Facilitators and opportunities

- commitment to ensure accessibility of services
- service continuity needs
- policy, advocacy and governance activities
- infection prevention and control imperatives
- receptive and creative attitudes of physiotherapists
- desire to learn a new mode of service delivery in the profession
- public support
- cost efficiencies
- real world transferability of interventions

Barriers and concerns
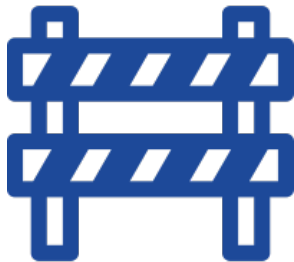
- lack of technology infrastructure
- lack of hands on assessment and intervention options
- compromised outcomes
- negative attitudes of both physiotherapists and service users
- reimbursement models
- competence with digital technology solutions of both physiotherapists and service users
- policy and regulation
- data security and privacy issues

Future insights and action

- progress would be maintained but innovations required reviewing
- technology solutions have advanced rapidly but need further development
- a blended delivery approach, combining in-person and digital services was the most likely way forward
- education is needed to support the development of competencies both in students on qualifying programmes and in continuing professional development of practising clinicians
- more research is needed to asses modes of delivery and outcomes
- advocacy is needed to retain funding support
- accessibility is increased but challenges due to lack of technology infrastructure and the digital divide need to be addressed

➢ Context

World Physiotherapy is made up of 125 member organisations from five regions and from low, middle, and high resource countries/territories. Prior to COVID-19 there was diversity in the availability and acceptability for digital practice delivery.

During the COVID-19 pandemic, the ability of health systems to facilitate access to consultations and advice via digital means has been of critical importance. Digital practice services have been shown to allow physiotherapy to continue while avoiding risks (for example, removing the need to travel and maintaining social distance) associated with other treatment approaches.

Each year World Physiotherapy carries out a census of its member organisations. From the 2020 census we know that 75% of member organisations reported that physiotherapists are permitted to provide telehealth services (this was the term used in the survey). This varies by region: Africa 67%, Asia Western Pacific 65%, Europe 76%, North America Caribbean 92% and South America 91%.

During 2020 the disruption to physiotherapy services has fostered, in some countries/territories, the development of legislation and regulations for the use of telehealth in physiotherapy services. Whilst it may be permitted, there are challenges for many people in low and middle income countries/territories due to the lack of access to digital solutions for both service providers and service users. This is also the case in some high income countries/territories. Advocacy for digital practice solutions was a key area of advocacy activity, related to the COVID-19 pandemic, reported by World Physiotherapy member organisations in the 2020 census. You can read more about the impact of COVID-19 on physiotherapy services globally in a World Physiotherapy report.

The trajectory and impact over time of COVID-19, the need for regional and national lockdowns, the advent of second and subsequent waves means the profession has had to adapt differently to reflect the local context.

➢ Evidence

Prior to the COVID-19 pandemic a World Physiotherapy and the International Network of Physiotherapy Regulatory Authorities (INPTRA) task force worked to produce a report on digital physical therapy, published in March 2020. [1] This explored the advantages and limitations of digital practice and the current evidence base. It concluded that "The overall emerging evidence appears to indicate that digital technologies are providing new opportunities for the physical therapy profession to deliver high-quality and acceptable care to users of their service in ways that can have benefits for all" (page 9).

A rapid evidence review of physiotherapy care via telerehabilitation in 2020 concluded that it is an effective method of delivering services. [2] This review looked at simple technology solutions as well as setups that were more complex. The report was designed to provide a review of the evidence to support advocacy in Australia and change at the time of the pandemic, however it has wider applicability.

The review concluded that telephone calls and video-conferencing were the most feasible options for delivering telerehabilitation quickly to patients during the pandemic. Patients welcomed the convenience, flexibility, empowerment to self-manage, positive therapeutic relationships, satisfaction with care, and treatment benefits offered by these solutions. The key findings from this rapid review were that:

- ➢ telerehabilitation is effective for:
  - osteoarthritis and other chronic joint pain conditions
  - rehabilitation following joint replacement surgery
  - patients requiring cardiac rehabilitation
  - patients requiring pulmonary rehabilitation
- ➢ telerehabilitation is well-suited for:
  - education
  - advice for self-management
  - prescribed therapeutic exercise
  - broader physical activity advice & individualised planning
  - follow-up and monitoring of progress, including for patients that may have been seen previously in-person [2]

Whilst much of the evidence base for telerehabilitation comes from musculoskeletal practice, new insights are emerging from other digital practice services prompted by the pandemic. An example is the transition to digital delivery of a support programme for those newly diagnosed with Parkinson's disease. [3] It is interesting to note the coaching model used in the programme; the importance of communication skills in the provision of digital services and the requirement to recognise the different strategies and techniques required has been reported. [4]

Leochico has highlighted lessons learned from the adoption of telerehabilitation in a developing country. Whilst it appeared a viable solution to scale up and expand provision, especially to isolated populations, it proved challenging. There were issues with awareness, acceptance, technical readiness, resistance to change, lack of technology infrastructure, guidelines for use, privacy concerns and the reliability of the service providers. The arrival of COVID-19 helped to address some of the issues with the pressing need to find solutions quickly to sustain some form of physiotherapy service. The ability to scale-up operations was a significant barrier to progress. [5]

➢ Global survey: member organisations

In November/December 2020, a detailed survey was used to capture experiences associated with digital practice. Thirty-four MOs responded.
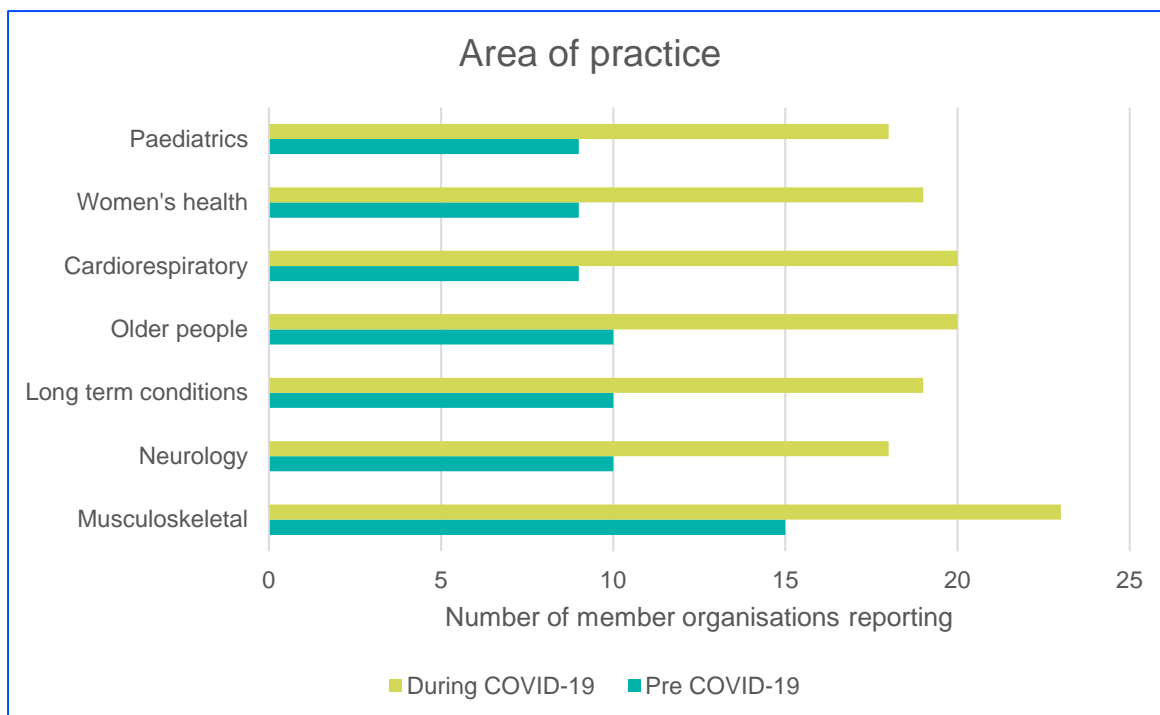
Provision of digital practice services

Prior to COVID-19, in keeping with the World Physiotherapy annual census findings, 79% of respondents (27/34) reported that digital practice was permitted, with or without some restrictions. Most of the limitations were associated with the lack of reimbursement from the insurance sector. Because of COVID-19, 27 MOs (79% of respondents) reported they had seen changes in the provision of digital services. Twenty-two of those reporting a change were those that already had digital practice permitted prior to COVID-19.

Clinical areas supported

MOs were asked to comment on the clinical areas covered both pre and during COVID-19. The findings are shown in figure 1.

Figure 1 Areas of practice supported by digital practice

Figure 1 Areas of practice supported by digital practice

As can be seen in figure 2 there was significant change across all areas, with paediatrics, older people, women's health and cardiorespiratory all seeing a doubling in provision.

Figure 2 Growth in provision of digital services (MOs)
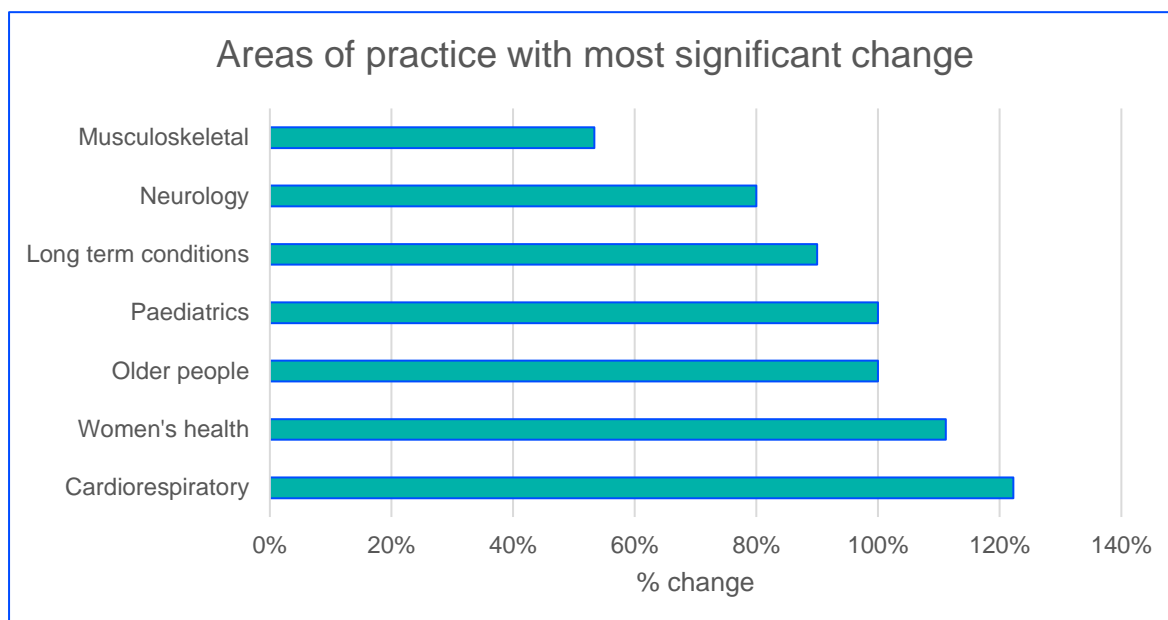
Facilitators for digital practice

Members were asked to comment on the three most important facilitators for digital practice. Free text entries were thematically analysed. Figure 3 shows that ensuring accessibility of services was the most frequent facilitator for advancing the provision of digital services. The importance of policy imperatives and advocacy was also influential. Infection prevention is obviously linked to the response to managing the COVID-19 pandemic.

Figure 3 Facilitators for digital practice

Barriers to digital practice

Challenges with technology infrastructure was the most frequently reported barrier to implementing digital practice solutions (figure 4). This was identified by both service providers and service users. Another key barrier was the attitudes of both professionals and service users.

Figure 4 Barriers to digital practice implementation
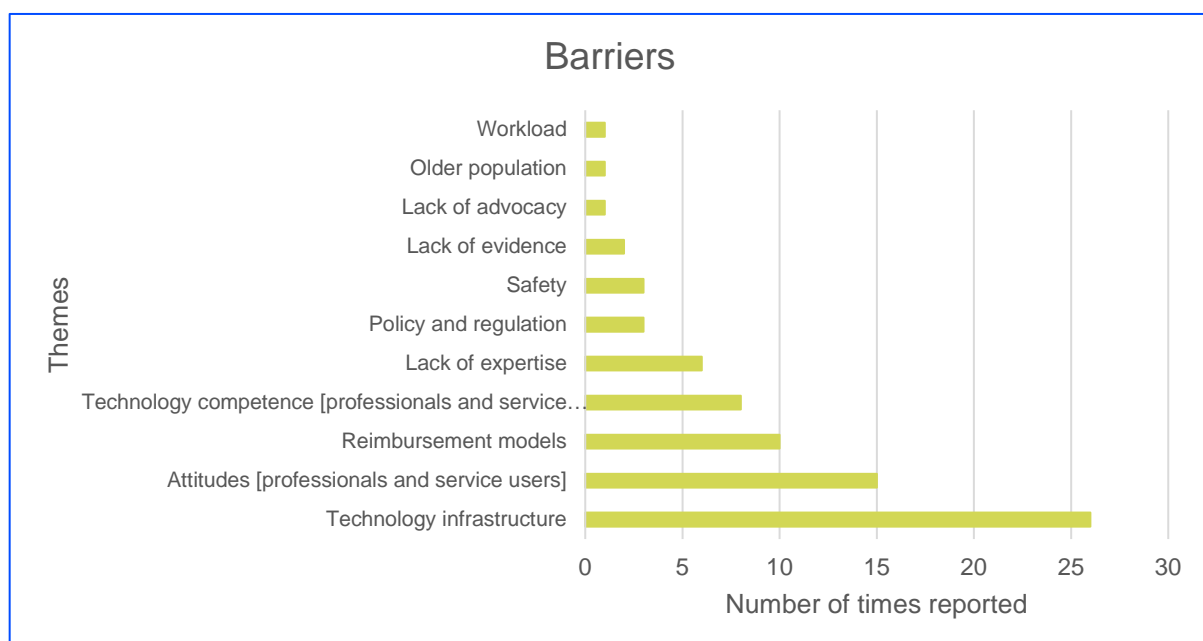
Development of resources to support members

Many MOs reported on the development of website resources to support their members.

➢ Colombia - Colombian Association of Physiotherapy: [Digital physiotherapy document: guidelines and perspective](#)

➢ Costa Rica - Physical Therapy Commission of the Therapist Guild of Costa Rica: [Guideline on telehealth](#)

➢ Denmark - Association of Danish Physiotherapists: [Theme on distance physiotherapy](#)

➢ Finland - Finnish Association of Physiotherapists: [Introduction of distance technology in physiotherapy](#)

➢ Iceland - Icelandic Physiotherapy Association: [Remote healthcare](#)

➢ Italy - Italian Association of Physiotherapists: [Physiotherapy remote consultation](#)

➢ Netherlands - Royal Dutch Society for Physiotherapy: [Coronavirus: Digital aids for patient instruction and exercises](#)

➢ New Zealand - Physiotherapy New Zealand: [Telehealth Guidelines: COVID-19 Response](#)

➢ Portugal - Portuguese Association of Physiotherapists: [Telephysiotherapy](#)

➢ UK - Chartered Society of Physiotherapy: [digital physiotherapy resource hub](#)

➢ USA - American Physical Therapy Association: [Telehealth in practice](#)

Case studies

MOs provided examples of case studies advocating for digital practice services as well as examples from practice. Some of these along with examples provided by individuals appear at the end of this briefing paper.

Future insights

MOs were asked to comment on what they predicted the changes in digital practice in response to the pandemic would mean longer term.

Observations:

➢ COVID-19 had accelerated the pace of change

➢ technology solutions developed are here to stay

➢ it is likely that digital solutions will be used more in the longer term and integrated into health systems

➢ digital solutions make physiotherapy more accessible in rural communities

➢ digital solutions could be a preferred choice for some patients

➢ physiotherapy competencies need to encompass those relevant to digital service delivery

➢ physiotherapist entry level education programmes need to prepare students for digital practice and continuing professional development opportunities provided for those already in practice who need to upskill

➢ evaluation is need to capture information on effectiveness

➢ awareness and interest has been raised which provides the opportunity for change

- digital solutions have the potential to widen accessibility to physiotherapy
- digital solutions are not the answer unless technology resources and infrastructure are sufficiently resourced and robust
- reimbursement challenges still remain to be resolved
- it is an adjunct to, or optional alternative, to standard in person physiotherapy service provision and we may see the emergence of blended service delivery models

> " We must also make the most of the cultural change in the profession and in the public with acceptance of digital. If we don't make the most of this it will take years to regain any lost ground.
>
> MO06

➤ Global survey: individual physiotherapists

Provision of digital practice services

Prior to COVID-19, only 32% of respondents (n=47/148) reported that digital practice was permitted with or without some restrictions. As a result of COVID-19, 73% (n=108) reported they had seen changes in the provision of digital services. Of these, 35% felt the changes were likely to be permanent and 26% thought the changes would be temporary to support the pandemic response, the rest were unsure.

Clinical areas supported

Individuals were also asked to comment on the clinical areas covered both pre and during COVID-19. The findings are shown in figure 5.

Figure 5 Clinical areas supported by digital practice (individuals)
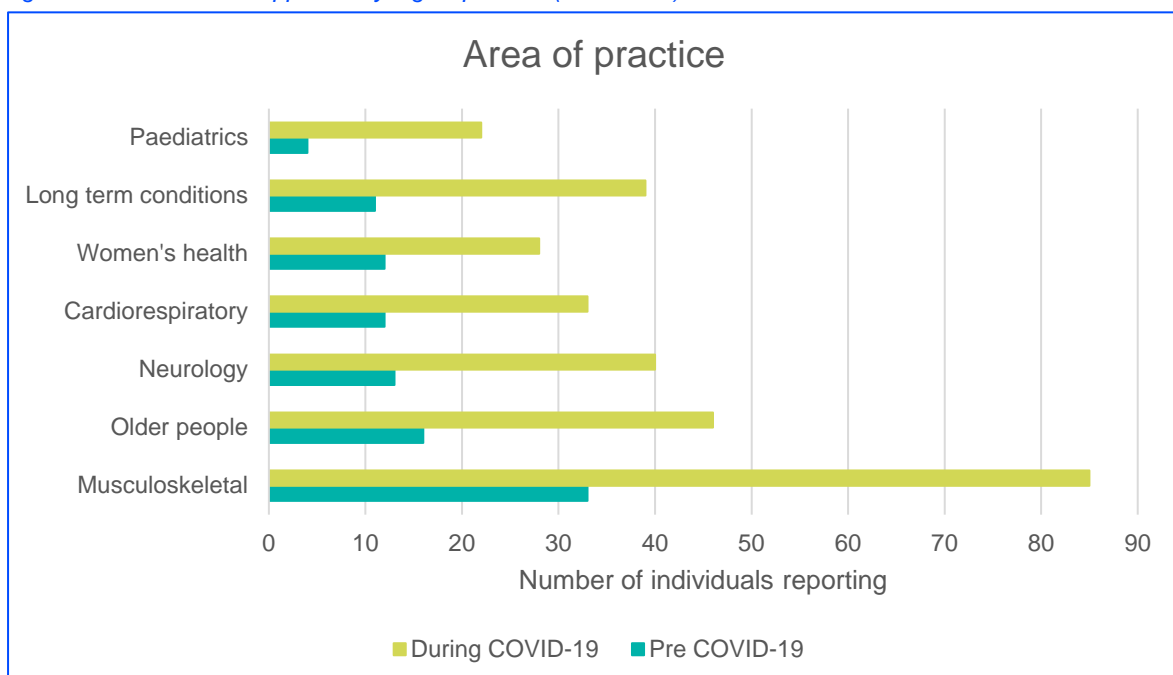
As can be seen in figure 6 there was significant change across all areas. Compared to reports from MOs, the responses from individuals showed a 450% increase in digital service provision in paediatrics and 250% for those with long term conditions. The clinical specialties of those responding was not collected and may have influenced the results.

Figure 6 Growth in provision of digital services (individuals)

Areas of practice with most significant change
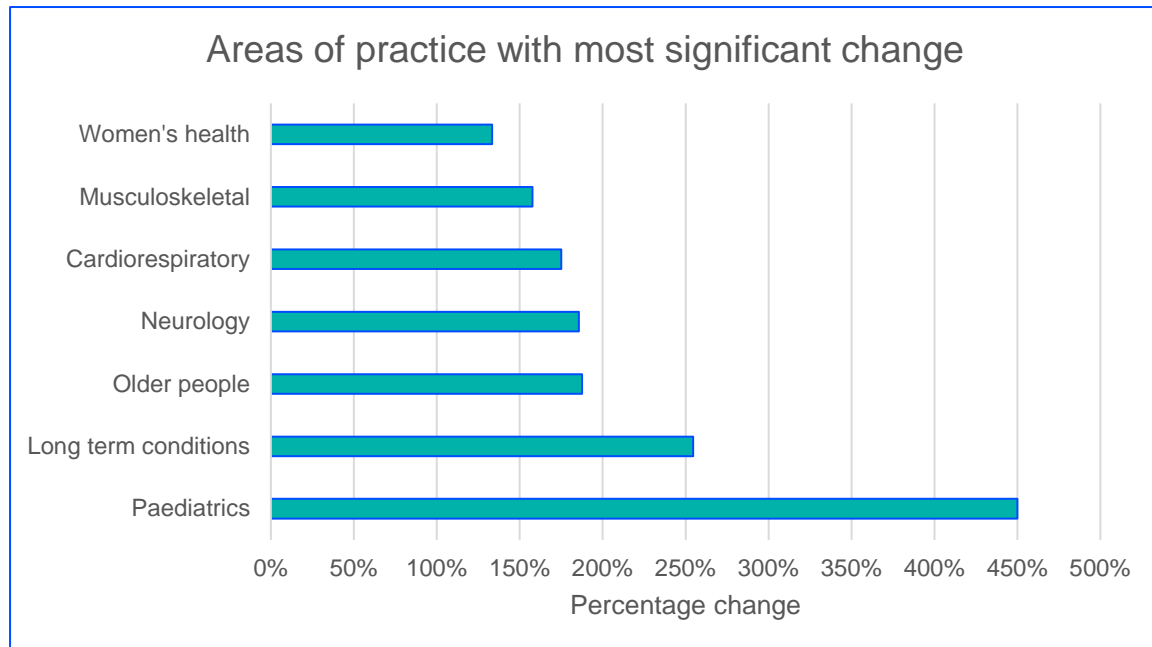
Opportunities from digital practice

Individuals were asked what, if any, had been the top three opportunities as a result of digital physiotherapy service developments. Rather than asking about facilitators, this was seen to get at the actual experience of clinicians. As can be seen in figure 7 on page 10, service accessibility and service continuity were the most frequent themes identified from responses.

Concerns associated with digital practice

Individuals were asked to comment on what, if any, have been the top three concerns from delivering digital physiotherapy services (see figure 8 on page 10). In contrast to digital services being seen to support accessibility, one of the biggest concerns was the lack of technology infrastructure, both at a service and user level. This is in keeping with the most frequently reported barrier from MOs. Not surprisingly, individual physiotherapists were concerned about the lack of hands-on assessment and interventions, as well as a feeling that services and outcomes were compromised.

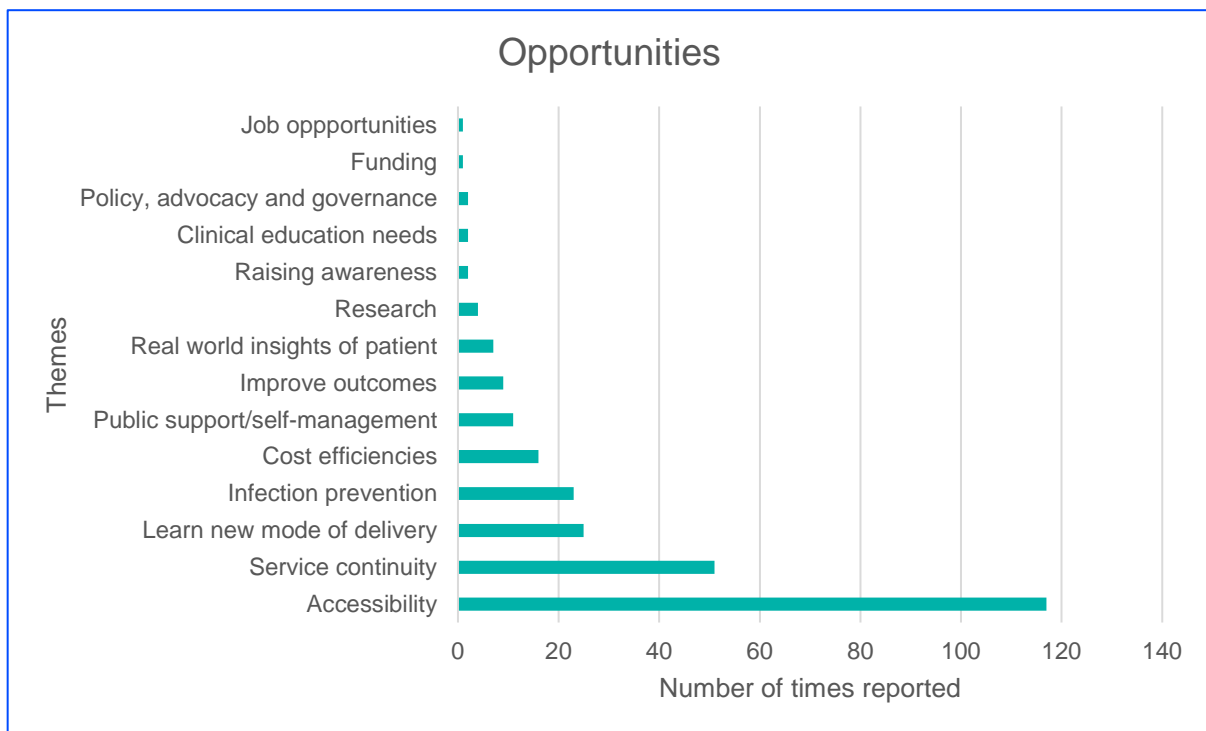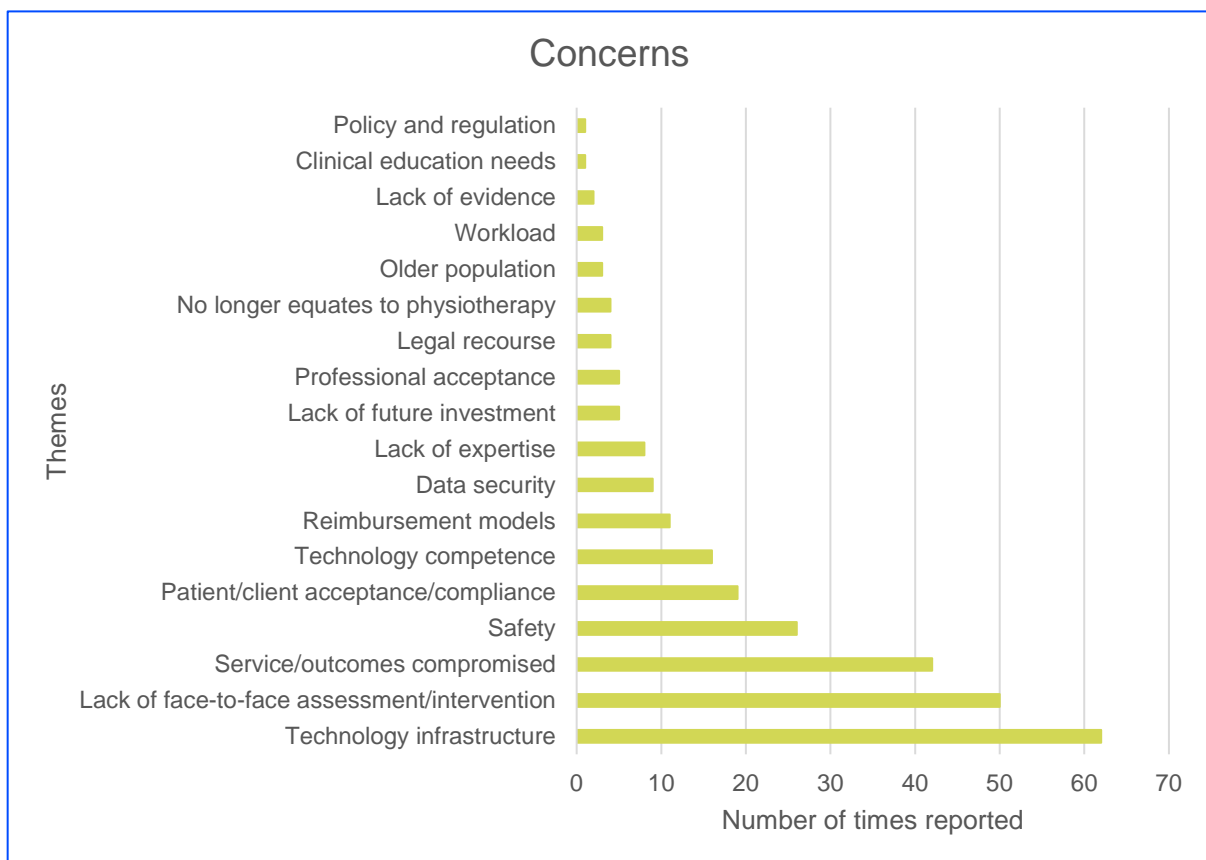*Figure 7 Opportunities from digital practice*

Figure 8 Concerns from digital practice

Case studies

Thirty-four individuals provided examples of digital physiotherapy practice during the pandemic. A small selection from across different contexts are shared below. The importance of excellent communication skills adapted to digital service delivery, and flexibility to use different solutions to meet service users' needs, were common themes across many of the case studies provided.

Future insights

Individuals were asked to comment on what they predicted the changes in digital practice in response to the pandemic would mean longer term. It was noted in the comments that more was needed from research and an assessment of outcomes. Others commented on the challenges where reimbursement was linked to the funding system; while there had been temporary changes to support the pandemic they were concerned that funders would not maintain their support. Many noted that digital solutions would be an adjunct to face-to-face services and not a replacement. The overwhelming observation was that digital practice solutions were here to stay.

Negative observations:

➢ risk of widening disparities for those without technology or who find it difficult

➢ competencies for safe and effective delivery still need defining

➢ cultural and educational barriers

➢ more guidelines are needed to ensure safe delivery

> " I have felt resistance even from my staff as digital practice is so physically restrictive to us to have to sit and do as a profession that is normally much more dynamic.
>
> INDPT049

The challenge of technology infrastructure, provision and disparities in accessibility was highlighted as a driver for advocacy efforts to address inequalities.

Positive observations:

➢ permanent integration into health services

➢ a silver lining from COVID-19 widening access to services

➢ funders will appreciate that digital service are viable and cost effective

➢ should be part of interprofessional collaborative care models

➢ enhances some areas of practice with insights into, for example worksite stations

➢ a helpful solution for triaging and managing caseloads

➢ provides greater empowerment for patients

➢ it is a convenient preferred solution for some patients

➢ with appropriate education and competency development it was a safe service delivery model in some instances

> " I believe that the digital era has come rushing in, and that there are certain forms of care that can be guided by telerehabilitation.
>
> INDPT070

The following quote provides a valuable summary of how digital practice can complement practice and the profession can make connections across borders:

> " More variety of service delivery options. In one day during Western Australia's very short lockdown I completed a home visit with special permission and precautions; a video call; a phone appointment and a Microsoft teams meeting, along with online training conducted from Canada on the opposite time zone. The world is closer, even while being further apart.
>
> INDPT126

➢ Subgroup feedback

Whist aquatic physiotherapy is not an obvious area for digital service delivery the International Organisation of Aquatic Physical Therapists (IOAPT) noted that in some parts of the world some patients had access to private pools so could be given advice to support the continuation of rehabilitation. The International Acupuncture Association of Physical Therapists (IAAPT) noted that offering digital support was focused on self-management. Support for pain management and exercise prescription were key features of digital practice provision reported by the International Federation of Orthopaedic Manipulative Physical Therapists (IFOMPT). They also identified how valuable digital solutions were in providing musculoskeletal services, but there was a need to support assessment to ensure that red flags were being assessed and managed. [6]

➢ Additional resources

World Physiotherapy has a COVID-19 resource area on its website that includes links to resources in support of digital practice.

➢ Case study examples

Portability and Accountability Act) compliance. Audit tools were developed and utilized in order to ensure compliance.

Population: Older adults in SNF with complex conditions, and Outpatient services in their Home

Outcomes: Our qualitative and quantitative analysis are currently being collected and under review, however some outcomes we have affected so far include: policy changes at the state level in over 10 states; improved employee engagement through education to over 1000 clinicians; improved patient access to care with telehealth services provided in 94 sites in 29 states and growing; positive patient outcomes identified by quarterly clinical reports; advocacy efforts through use of company database case reviews; increased recognition of PTs as essential healthcare workers reducing staff furloughs.

Lessons learned: The rapidly changing landscape of laws and policies due to the pandemic, and the immediate need to provide access to care for patients that would have declined without PT, forced us to research alternative opportunities for providing patient care. The complexities of state practice acts, state and federal laws, executive orders, payer policies, and clinician inexperience necessitated a comprehensive approach prior to implementation of telehealth in skilled nursing facilities. Lessons learned have provided material for strong advocacy efforts that are much needed to support full implementation of telehealth into practice following COVID.

Case study 3: from Nepal

Objectives: Ensure physical rehabilitation services followed up to clients who had benefitted with the services in the past. To provide follow up services to clients who could not reach the rehabilitation centre during lockdown. To ensure follow up of assistive devices and their repair, maintenance and replacement services if required.

Service delivery: Phone follow up and a few video calls.

Population: People with physical disabilities arising from eg stroke, cerebral palsy, low back pain, amputation, Spina Bifida, spinal cord injury, traumatic head injury, orthopaedic and neurologic cases.

Outcomes: Follow up services were provided including basic exercises being taught to prevent secondary complications. Clients responded positively, while some clients were reluctant to receive services through digital ways. Some clients responded that they would prefer to receive services at the centre with support from a physiotherapist conducting physical manual exercise. Most of the clients were happier to receive the services. Minor repair and maintenance for amputee and wheelchair users was followed up, which had a better impact on clients. Support was effective for clients who were bed ridden and clients of child age and old age benefitted more.

Lessons learned: Digital physiotherapy practice is an essential way of reaching clients who cannot access services and also for clients who cannot afford to due to the high expenditure of accessing services at rehabilitation centres. In negative way this approach may hamper the quality of services until it is well structured and planned. Compliance to services may reduce from clients if more digital practice causes ethical concerns.

Case study 4: from Jamaica

Objectives: To educate patient and family members on the problem at hand and the role they will play. To evaluate functional status of a stroke patient. To restore function. To identify specific impairments which contribute to functional disability.

Service delivery: Electronic health services utilising mainly therapeutic and functional exercise on whichever platform the patient had access to, including WhatsApp, Doxy.me, Zoom, and Google.

Population: Neurological patients eg stroke, with comorbidities that should be sheltering in place due to increased Covid-19 risk.

Outcomes: Comparative measurements attained were useful in placing a patient in a particular stage or classification.

Lessons learned: 1.Sessions can be just as effective if the patient can participate in the process. If there are obstacles to communication then there may a barrier. 2. Some platforms provide clearer imagery.

Case study 5: from Uruguay

Objectives: Trying not to cut treatments during lockdowns or quarantines, especially in patients with home care needs.

Service delivery: Videocalls (WhatsApp, Zoom, Google Duo). Check treatment protocols previously provided to a caregiver or patient´s relative. Develop video treatment guides and provide it to patient.

Population: Variable

Outcomes: In some cases, telehealth was unable to replace the presence of a physiotherapist. In other cases, patients with caregivers or responsible families, the outcomes were barely enough. In almost all cases, patients and families did not feel abandoned by their physiotherapist and in almost every case they expressed great gratitude to them.

Lessons learned: The pandemic forced us to sharpen our minds and to engage in telehealth even if we had never done so before.

Case study 6: from Uganda

Objectives: To reduce the risks of contracting COVID-19, both from the patient and health worker. To improve on the number of patients worked on daily by the health worker. To ensure that the patient is comfortable due to the protection/distance – for example, the female patients are uncomfortable when male physiotherapists are examining them on a ward when they are both in one room, but when they are at a distance they are comfortable.

Service delivery: In Uganda digital service delivery is not yet well established due to the lack of funds. With funding and donations it was possible to provide.

Population: Quite large groups of people here are served compared to those via non-digital options, due to the reduced time spent on travelling to hospital or waiting for a particular hospital. With digital options provided in a particular hospital it's possible to connect to another healthcare professional in another hospital supporting service delivery.

Outcomes: Reduction in the rate of spread of COVID-19. Patients were comfortable receiving treatments this way.

Lessons learned: Positive: a country needs both digital and non-digital services to provide an adequate level of service delivery throughout the country. Negative: it's costly to maintain and setup.

Case study 7: from UK

Objectives: Promote paperless services. Triage patients into appropriately times and managed slots within a multimedia clinic. Maximise student placements.

Service delivery: New patient telephone calls for 30 minutes - soon to be increasing to 45. This helps to triage into a multimedia telephone or video follow up or face to face if needed. Using accurx for video calls within MSK for student placements and video assessments.

Population: Adult MSK age 16+

Lessons learned: We have made telephone triage training and telephone neuro prompt sheets. Students are working from home reducing footfall in department. However we have lack of equipment so it is not helping staff footfall. I know of other trusts who have utilised working from home and done the above. I have found that younger physios have adapted better than older physios. Overall I think people's expectations of digital Physiotherapy were low and everyone has been surprised at how well it has worked. I was starting to find patients were getting fed up of telephone calls and lack of face to face appointments in August/September when COVID was easing, however they have been more flexible and accepting of this when COVID has peaked.

Case study 8: from Australia

Objectives: Provide regular 2x week virtual exercise opportunity to existing group clients with Parkinson's disease. Aim to maintain their exercise participation during COVID restrictions.

Service delivery: 2 x week, 1 hour exercise program delivered via Microsoft Teams for up to 4 participants. During a brief time in June we used a hybrid model with 4 participants on screen and 4 participants in face to face group.

Population: Existing (and potentially new) community health clients with early to moderate Parkinson's disease

Outcomes: Regular attendance since May 2020 (COVID restrictions), groups are currently ongoing in this way. Participant feedback - not as good as face to face, miss the socialisation, but advantage as no travel, no parking, and once used to the process usually easy to participate (internet access dependant).

Lessons learned: Microsoft Teams is not the easiest platform to use for many clients. Maximum no of 4 allows each participant to see clearly. For clients with hearing or mild cognitive deficits, using headphones or AirPods improves the interaction. An iPad is the minimum sized device for most people to use. A wide screen camera for the Physio makes it easier to be seen. Clear communication and instructions are required particularly for elderly clients. Telehealth groups are a viable alternative for people with limited mobility or transport provided they have access to the appropriate technology.

References

1. World Confederation for Physical Therapy, International Network of Physiotherapy Regulatory Authorities. Report of the WCPT/INPTRA digital physical therapy practice task force.; 2020. https://world.physio/sites/default/files/2020-06/WCPT-INPTRA-Digital-Physical-Therapy-Practice-Task-force-March2020.pdf

2. Hinman R, Lawford B, Bennell K. Physiotherapy care via telerehabilitation: Evidence summary March 2020. Melbounre, Australia: Centre for Health Exercise & Sports Medicine, University of Melbourne.; 2020.

3. Quinn L, Macpherson C, Long K, Shah H. Promoting Physical Activity via Telehealth in People With Parkinson Disease: The Path Forward After the COVID-19 Pandemic? Physical Therapy. 2020. https://doi.org/10.1093/ptj/pzaa128

4. Roberts LC, Osborn-Jenkins L. Delivering remote consultations: Talking the talk. Musculoskeletal Science and Practice. 2020:102275. http://www.sciencedirect.com/science/article/pii/S2468781220305804

5. Leochico C. Adoption of telerehabilitation in a developing country before and during the COVID-19 pandemic. Annals of physical and rehabilitation medicine. 2020. https://www.sciencedirect.com/science/article/pii/S1877065720301238?via%3Dihub

6. Finucane LM, Downie A, Mercer C, Greenhalgh SM, Boissonnault WG, Pool-Goudzwaard AL, et al. International Framework for Red Flags for Potential Serious Spinal Pathologies. Journal of Orthopaedic & Sports Physical Therapy. 2020;50(7):350-72. https://www.jospt.org/doi/abs/10.2519/jospt.2020.9971

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