Telerehabilitation

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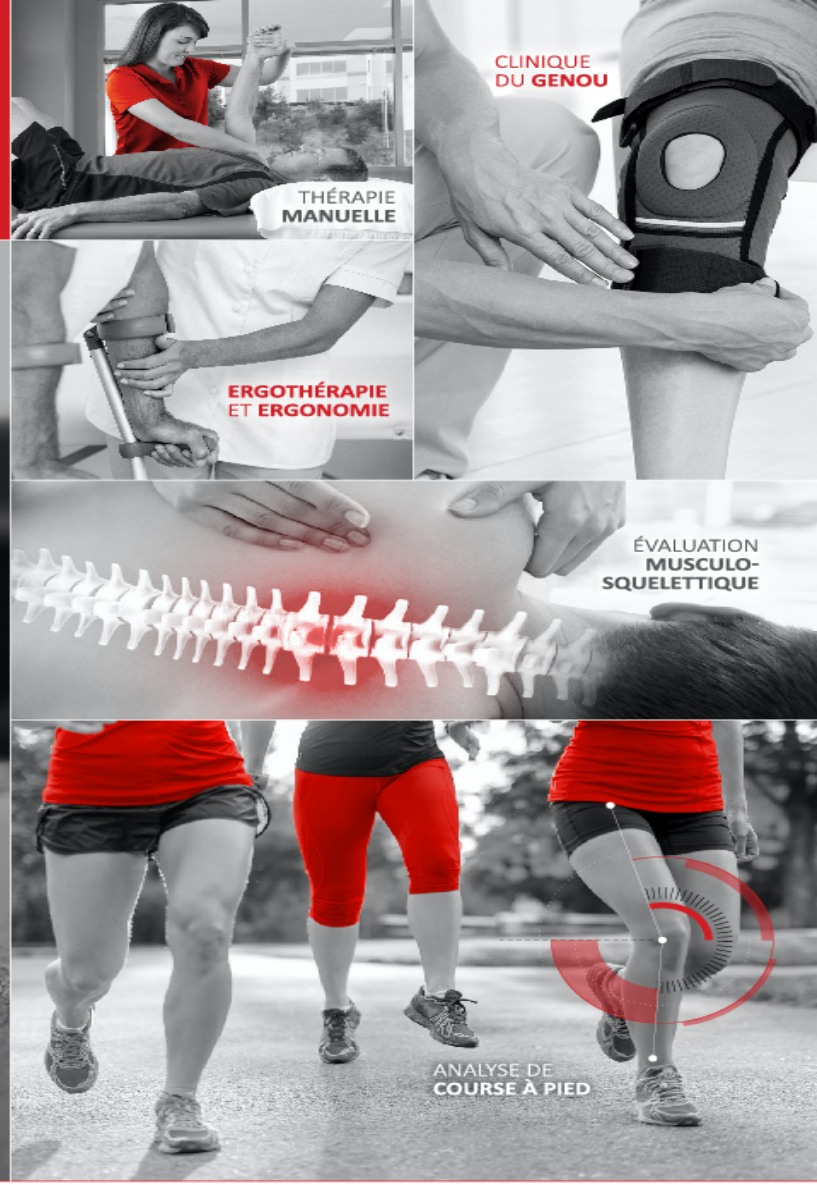
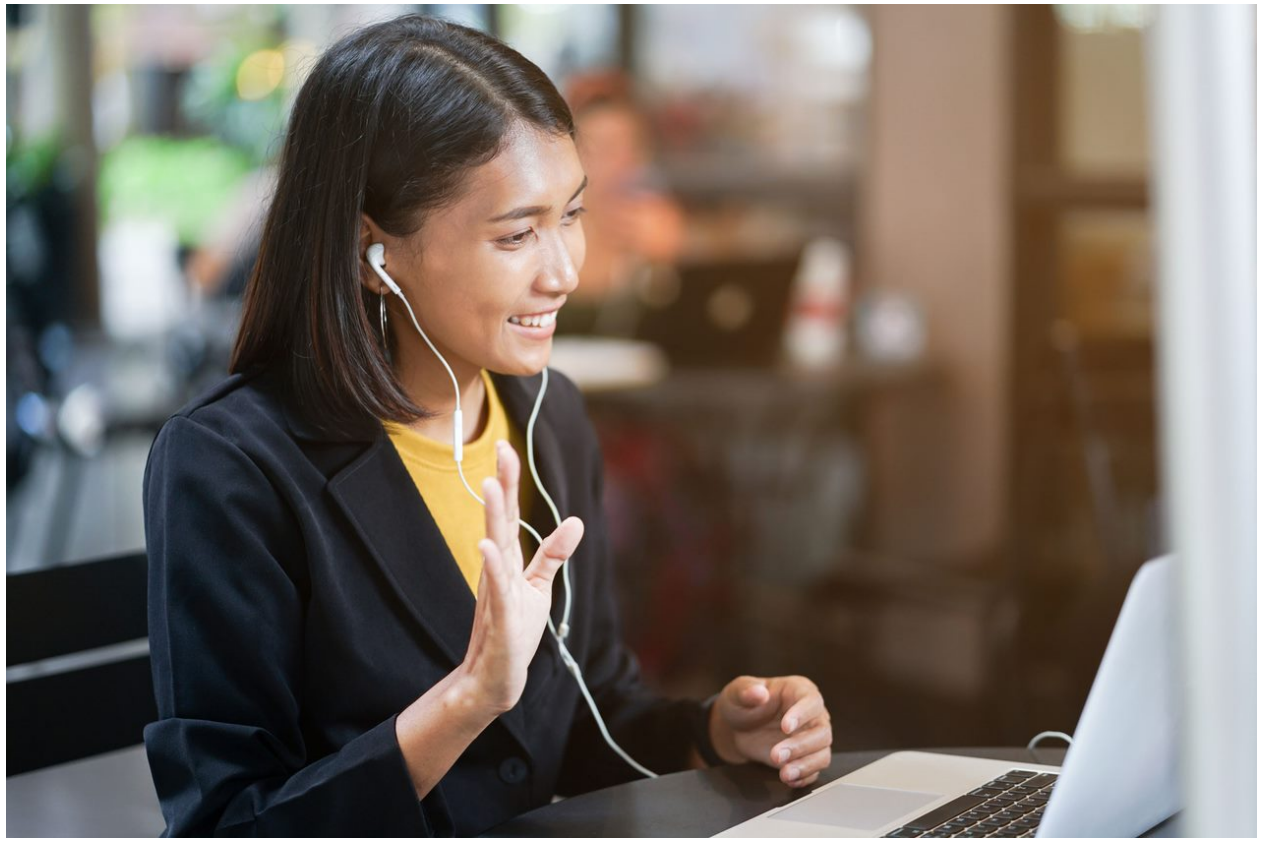
May 14th, 2020



PHYSIOTHÉRAPIE UNIVERSELLE

Objectives of the Presentation

- Understand what telerehabilitation is (TR)
- Where does it come from?
- What does science tell us?
- What do we need to make it work?
- How does it work & tools?
  - Physiothérapie Universelle Example
    - How to proceed with an evaluation?
    - How to proceed with a treatment?
- Where is it going?



Telerehabilitation - Teleheath

Telehealth: use of telecommunications and virtual technology to deliver health care outside of traditional health-care facilities and channels.

- Telehealth examples include:
  - Virtual home health care;
  - Guidance from professionals elsewhere in diagnosis, care and referral of patients;
  - Training;

Telerehabilitation - Telehealth

The delivery of health care services:

- Where distance is a critical factor;
- By all health care professionals using information and communication technologies;
- For the exchange of valid information for diagnosis, treatment, and prevention of disease and injuries;
- For research and evaluation;
- For the continuing education of health care providers;

All in the interest of advancing the health of individuals and their communities.

Telerehabilitation - Telehealth

- Improves health care access and outcomes (chronic, vulnerable groups);
- Reduces demands on crowded facilities;
- Creates cost savings ;
- Makes the health sector more resilient;
- Overall environmental impact:
  - Reduces the number of visits ➔ GHG emissions are reduced.
  - Reduces real estate requirements ➔ Smaller health facilities: reductions in construction materials, energy and water consumption, waste.

Telehealth

Comes from:

- Increased demand and cost of health care;
- Aging population;
- Geography/ equitable access to services;
- Social and demographic changes;
- Growth of Telemedecine / technologies, evidence base.

The first Telehealth projects started with health care professionnals and researchers excited about the possibilities of new technologies

Physiotherapy Alberta
College + Association

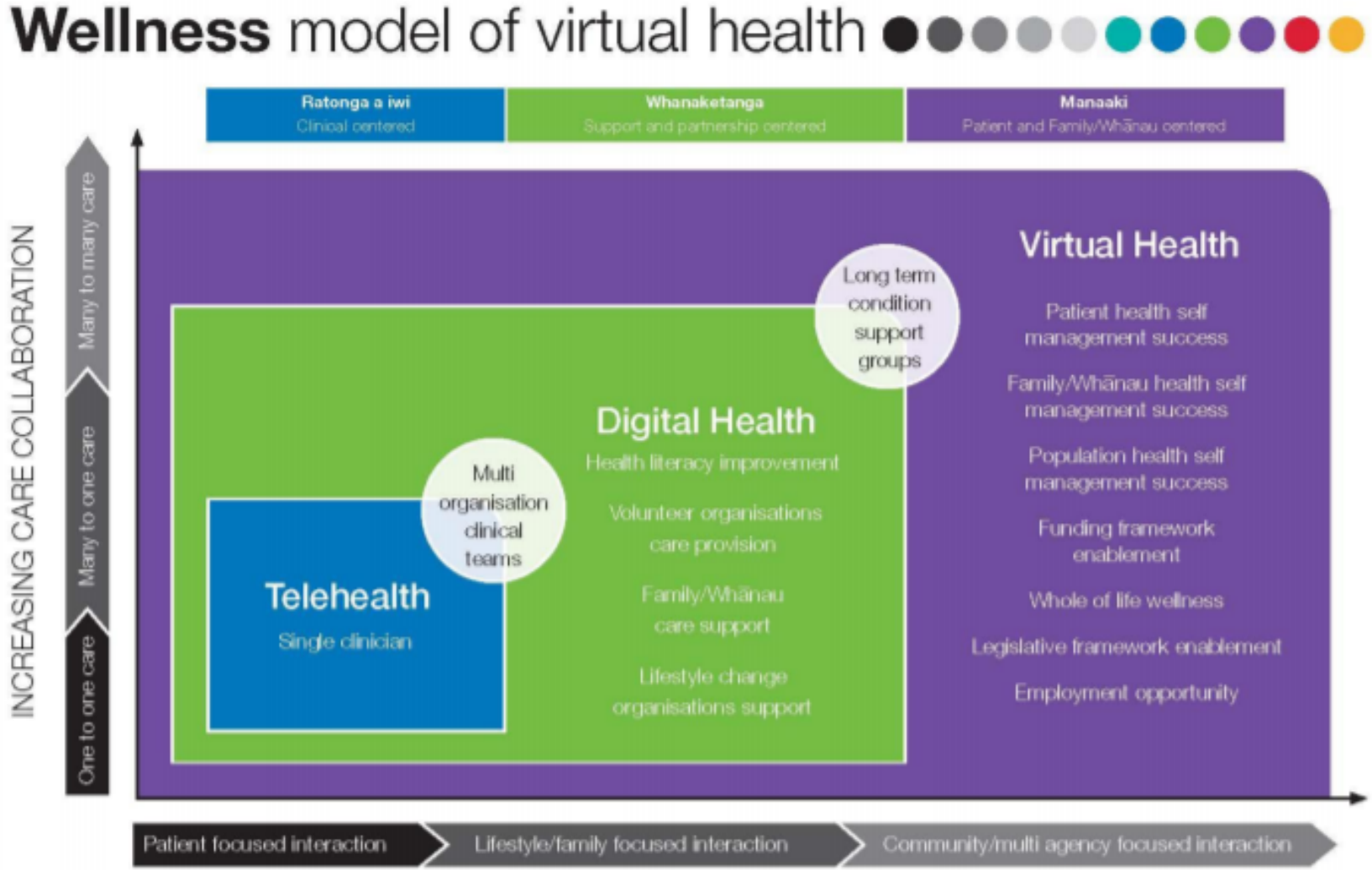
GROWTH OF TELEMEDICINE

1. About 90% of healthcare executives surveyed report that their organizations have begun developing or already implemented a telemedicine program (Foley 2014 Telemedicine Survey Executive Summary)
2. The number of telemedicine patients will increase from 350,000 in 2013 to 7 million in 2018 (Cisco Customer Experience Report)
3. In 2015, 29 states already required health insurers to pay for telemedicine services and another 26 bills were pending in Congress (How Telemedicine Became Mainstream)
4. About 22% of employers with 1,000 or more employees offer telemedicine services and another 37% planned to by the end of 2015 (Foley 2014 Telemedicine Survey Executive Summary)
5. Telemedicine makes up nearly one-fourth of the health IT market that was valued at $15.6 billion in 2014 and is expected to increase to approximately $20 billion by 2019 (IHS Press Release)

Source: http://www.wexhealthinc.com/healthcare-trends-institute/telemedicine-statistics-show-big-growth-potential/

Tele-Rehabilitation in Physiotherapy Practice Webinar Dr Russell Uni Queensland Au 2017

Telerehabilitation - Telehealth



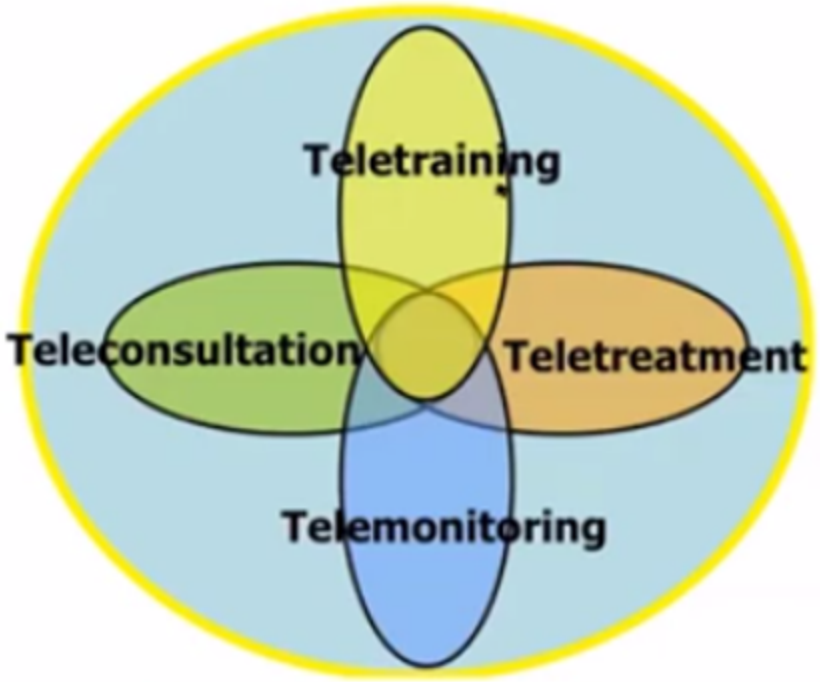
Telerehabilitation - Telehealth

Telerehabilitation - Telehealth

» A Pragmatic Overview of the Research and Implementation of Tele-Rehabilitation with Neurological Populations (April 1)

Speakers: Dr. Dahlia Kairy, Dr. Hélène Corriveau, Dr. Sarah Donkers

Telerehabilitation - Telehealth



» A Pragmatic Overview of the Research and Implementation of Tele-Rehabilitation with Neurological Populations (April 1)

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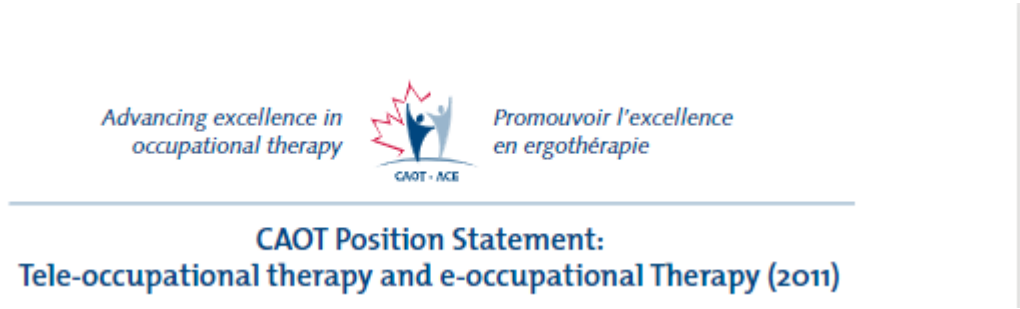
Telerehabilitation

- Subfield of Telehealth/Telemedecine
  - The advent and development of information and communication technologies (ICT) opened up new avenues in the practice of occupational therapy.
  - Telerehabilitation is one of these avenues and constitutes an innovative strategy in response to the challenges faced by the health system and the problems of accessibility to services, especially in remote regions.

Telerehabilitation

It is the position of the Canadian Association of Occupational Therapists (CAOT) that the ongoing development of tele-occupational therapy and e-occupational therapy will promote opportunities for effective, efficient and accessible occupational therapy services, education and resources to all Canadians. CAOT recognizes that the growth and sustainability of tele-occupational therapy and e-occupational therapy are essential elements of being consistent with the principles governing our health care system and represent the underlying Canadian values of equity and solidarity (Government of Canada, 1984).

CAOT(2011)



Telerehabilitation

- Telepractice refers to the use of information and communication technologies (ICT) for the purpose of delivering health care services when the client and occupational therapist are in different physical locations.
- It is seen as a means of improving health outcomes by removing barriers to access services.
- Telepractice allows OTs and clients to work together through the use of various technologies, including video conferencing, remote monitoring, virtual apps, video games, and data transmission.
- Telepractice facilitates service provision between OTs, clients and other health care providers for assessment, treatment, monitoring, and consultation.

Telerehabilitation - Telehealth

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téléconsultation

téléréadaptation

Teleoccupational therapy

Tele-Rehabilitation

Telerehabilitation - Telehealth

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Glossary

e-occupational therapy: is Occupational Therapy and education through the internet.

Occupational therapy: is the art and science of enabling engagement in everyday living, through occupation; of enabling people to perform the occupations that foster health and well-being; and of enabling a just and inclusive society so that all people may participate to their potential in the daily occupations of life. (Townsend & Polatajko, 2007)

Telehealth: is the delivery of healthcare services and education at a distance via the use of communications and information technologies.

Tele-occupational therapy: is the remote delivery of occupational therapy services and education through communication and information technologies.

Advancing excellence in occupational therapy

CAOT · ACE

Promouvoir l'excellence en ergothérapie

Telerehabilitation as a word was first introduced in 1990 as part of the language of ITC*

*information technology and communication

Burn & alls 1998

Telerehabilitation - Telehealth

INTERNATIONAL JOURNAL OF TELEREHABILITATION · TELEREHAB.PITT.EDU

WORLD FEDERATION OF OCCUPATIONAL THERAPISTS' POSITION STATEMENT ON TELEHEALTH

WORLD FEDERATION OF OCCUPATIONAL THERAPISTS
FORRESTFIELD WESTERN AUSTRALIA, AUSTRALIA

Telerehabilitation

Table 1 The 10 "E's" of any "telehealth" service.

Any successful telehealth activity should adhere to:
1.Efficiency (decrease costs)
2.Enhancing quality of care (client to provider, access to outcomes and specialists)
3.Evidence-based practice
4.Empowering consumers
5.Encouraging new relationships
6.Education
7.Enabling information exchange
8.Extension
9.Ethics and Equity
10.Easy to use, Entertaining, and Exciting opportunities

MedCrave
Step into the World of Research
International Physical Medicine & Rehabilitation Journal

Research Article
Open Access
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Telerehabilitation services: A successful paradigm for occupational therapy clinical services?

The World Federation of Occupational Therapists (WFOT)23 and the World Report on Disabilities co-produced by the World Health Organization (WHO) affirmed the efficacy of telehealth and telerehabilitation for the delivery of rehabilitation and occupational therapy services stating its use "leads to similar or better clinical outcomes when compared to conventional interventions

Writing History

- Digital healthcare has been in active practice for some time, it just hasn't been pushed into mainstream consumer options until physically attending a clinic stopped being a top of mind option.

However, much of mainstream healthcare is still driven and **limited by physical office visits.**

Digital Healthcare White Paper | UpDoc Media

Writing History

Digital Healthcare White Paper | UpDoc Media

Writing History

- The global pandemic as an accelerant of consumer behaviors.

Digital Healthcare White Paper | UpDoc Media

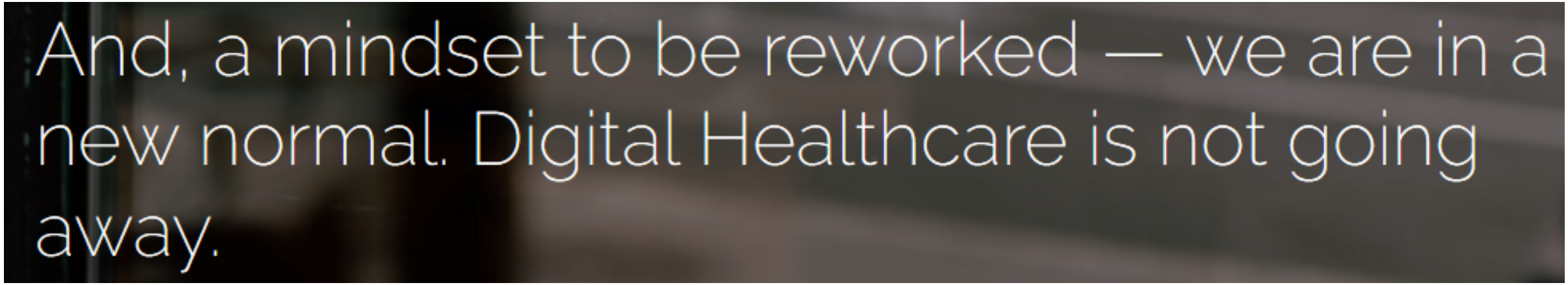
Writing History

While medical care centers are considered essential under current quarantine regulations, remote visits, otherwise known as telehealth, are playing an important role in keeping patients out of clinics unless absolutely necessary.

We are helping with telehealth efforts by rapidly expanding the availability of video visits.

Hassan Izzeddin Sarsak 2020

Writing History

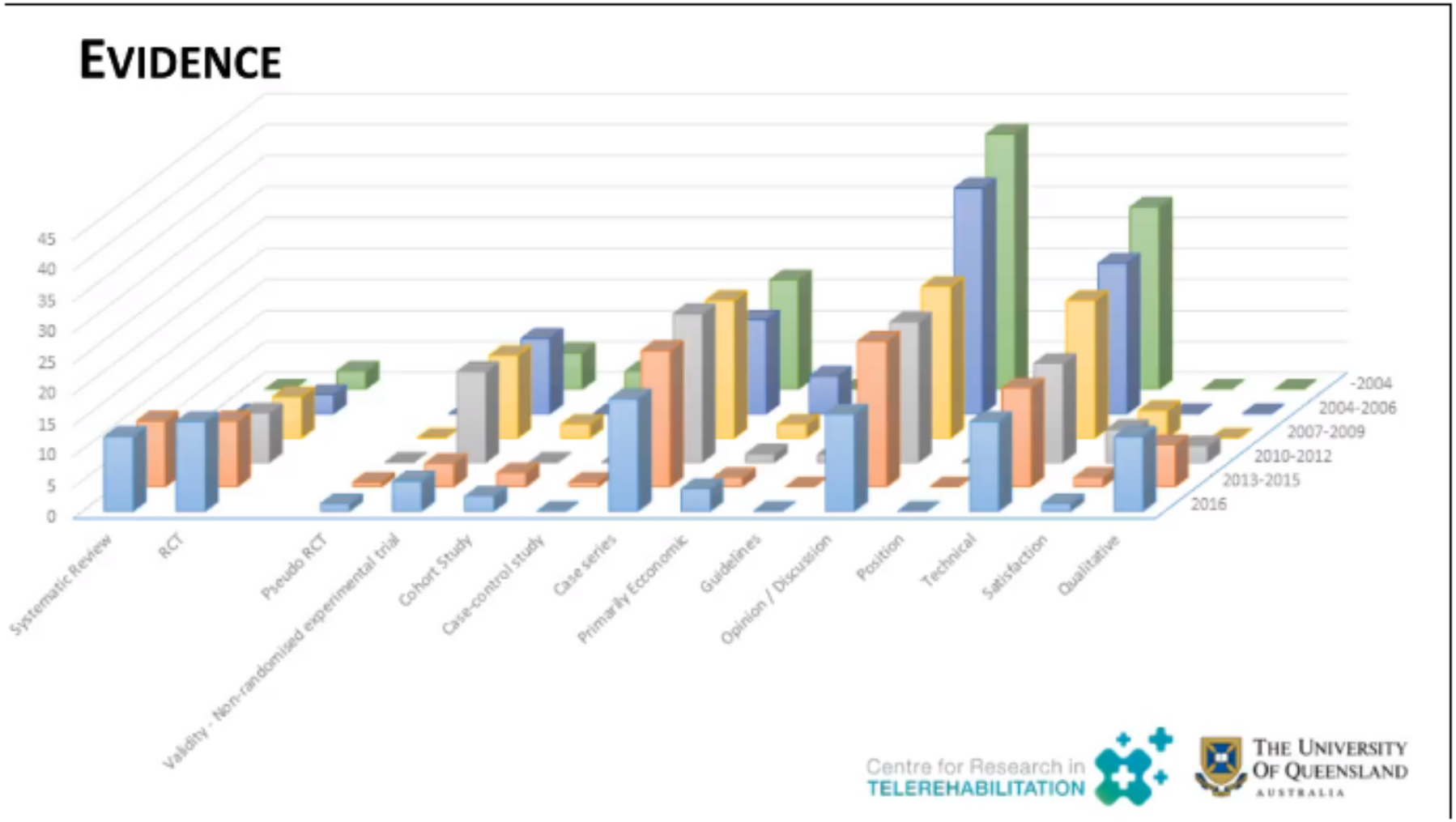


Digital Healthcare White Paper | UpDoc Media

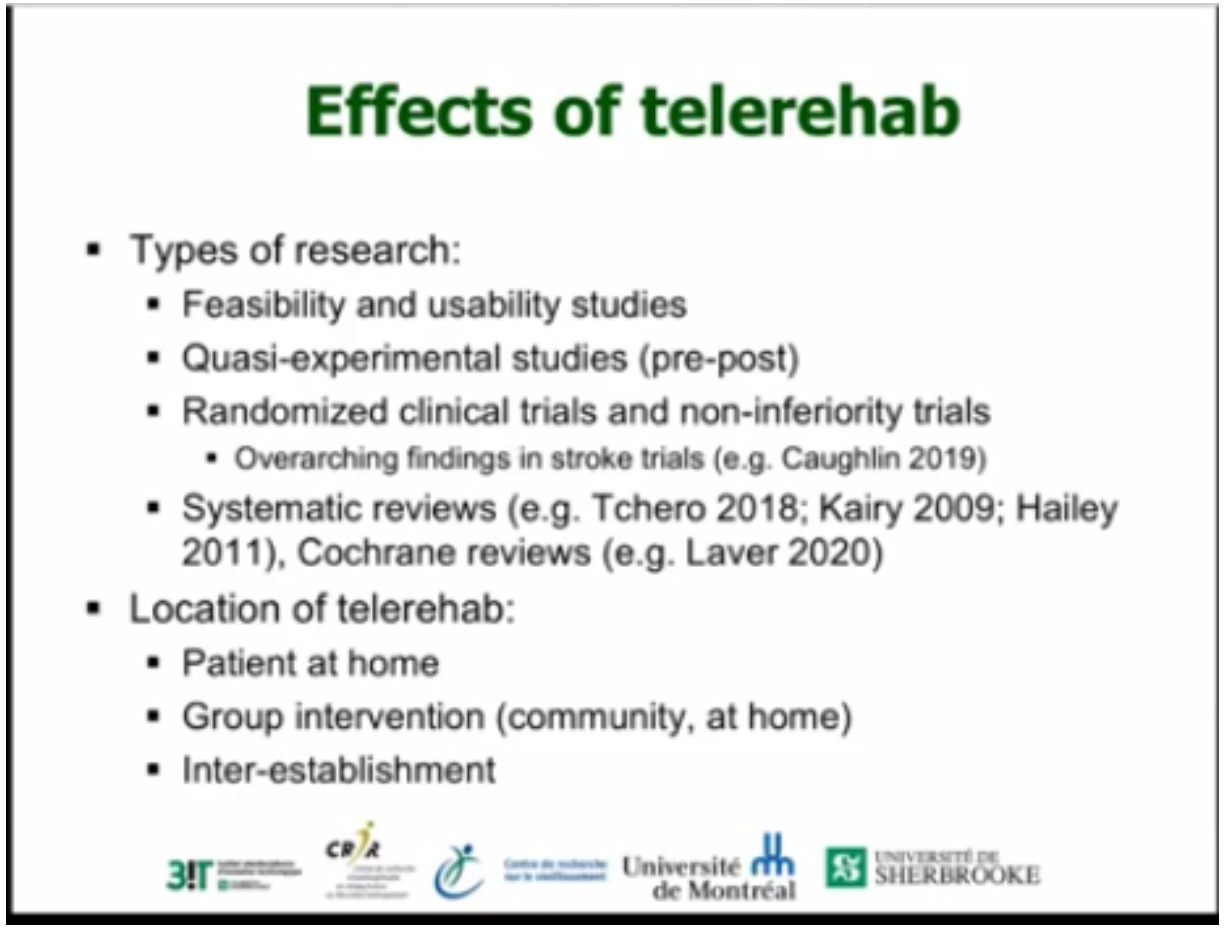
Writing History

Telehealth - APA Q&A webinars

What the science tells us



What the science tells us



What the science tells us

MS studies

What the science tells us

Hong Kong Journal of Occupational Therapy

Review

Effects of telerehabilitation in occupational therapy practice: A systematic review

Hong Kong Journal of Occupational Therapy
2019, Vol. 32(1) 3–21

DOI: 10.1177/1569186119849119
journals.sagepub.com/home/hjo
SAGE

Goris Hung KN[1] and Kenneth NK Fong[2]

- Systematic review shows that using TR in OT practice has positive therapeutic effects. TR offers an alternative service delivery model.
  - It is particularly important that more research is conducted on the use of cutting-edge mobile technology to determine its effectiveness in TR for various pathologies and impairments, its cost efficacy and the characteristics of clients, interventions and therapists leading to the best fit for this alternative form of service delivery.

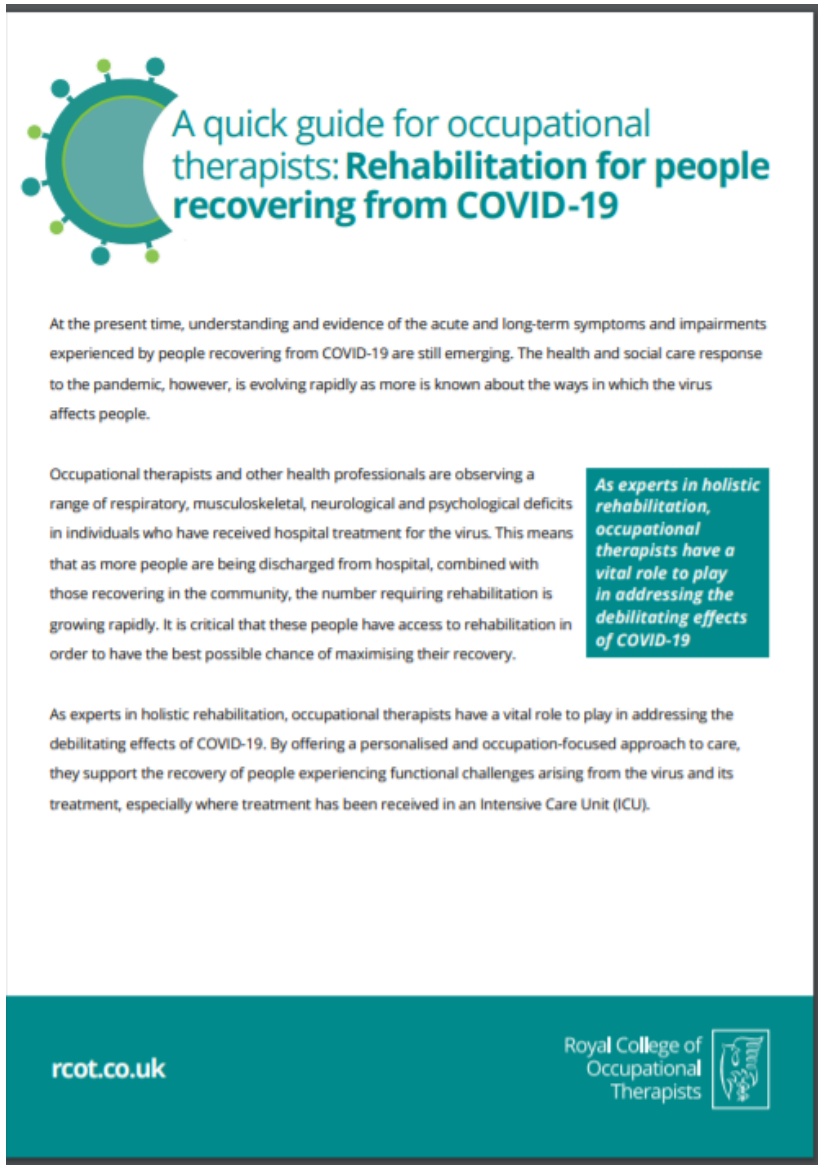
What the science tells us

PHYSIOTHÉRAPIE UNIVERSELLE MD

Spring 2019

TELEHEALTH AND REHABILITATION: EXTENDING OCCUPATIONAL THERAPY SERVICES TO RURAL MISSISSIPPI

Melody M. Burrage
University of Southern Mississippi



A quick guide for occupational therapists: **Rehabilitation for people recovering from COVID-19**

At the present time, understanding and evidence of the acute and long-term symptoms and impairments experienced by people recovering from COVID-19 are still emerging. The health and social care response to the pandemic, however, is evolving rapidly as more is known about the ways in which the virus affects people.

Occupational therapists and other health professionals are observing a range of respiratory, musculoskeletal, neurological and psychological deficits in individuals who have received hospital treatment for the virus. This means that as more people are being discharged from hospital, combined with those recovering in the community, the number requiring rehabilitation is growing rapidly. It is critical that these people have access to rehabilitation in order to have the best possible chance of maximising their recovery.

As experts in holistic rehabilitation, occupational therapists have a vital role to play in addressing the debilitating effects of COVID-19

As experts in holistic rehabilitation, occupational therapists have a vital role to play in addressing the debilitating effects of COVID-19. By offering a personalised and occupation-focused approach to care, they support the recovery of people experiencing functional challenges arising from the virus and its treatment, especially where treatment has been received in an Intensive Care Unit (ICU).

rcot.co.uk

Royal College of Occupational Therapists

What the science tells us

- Teletherapy was considered reliable to increase functional ability and outcomes in school-aged children.
- In fact, researchers found that all measured outcomes were increased.
- Functionally, fine motor and gross motor abilities, and even participation in daily activities demonstrated a significant increase.

What the science tells us

Nicholson et al. (2014) also indicate that other occupational therapy practitioners have determined videoconferencing as an effective alternative to in-person interactions for caregivers, paraprofessionals, and other supportive individuals for home assessments with a therapist in a remote location.

What the science tells us

Research supports the use of telehealth as a viable service option to receiving occupational therapy services.

Occupational Therapy Telehealth Cason (2014)

Tele-rehabilitation was an effective service model for rehabilitation for clients with brain injury, spinal cord injury, speech impairment, kidney impairment, and COPD.

Kairyet al., 2009

What the science tells us

- Studies show that half of health care professionals are already using virtual care and most of the sessions are done with a one-on-one model

- In occupationnal therapy specifically : the ratio of virtual sessions to in-person sessions is 1 to 3

- Researchers are asking why? Is it because:
  - Lack of mastering the technology
  - Lack of practice
  - Realization of resistance due to the “anticipated feelings of isolation and lack of support”

    - all the while when Occupationnal Therapists are really eager to take the leap
      - (les ergos ont un fort intérêt à faire le saut)

Nicholson et al., 2014 & Melody M. Burrage 2019

What the science tells us

PHYSIOTHÉRAPIE UNIVERSELLE MD

Summary of Systematic Reviews

✖ favours Control; ✓ telerehab equivalent; ✓✓ favours telerehab; ǂ Positive result (no comparison)

Author (Year)	Population	No. papers (participants)	Study types	Meta-analysis	Conclusions
Bohnert (2010)	Autism	8 (46)	7 case study 1 Quasi-exp	No	Low quality evidence ǂ primary outcomes
Halley (2011)	Routine care	61 (?)	-	No	71% studies successful 18% unsuccessful 51% clinically sig.
Johansson (2011)	Stroke	9 (724)	4 RCT 4 Obs 1 Qual	No	Low qual evidence ǂ motor function ✓ satisfaction ✓ QoL ✓ anxiety
Steel (2011)	Chronic Conditions	35 (2684)	8 RCT 27 service eval, pilot, case studies	No	✓ psychological outcomes ✓ physical outcomes ✓ satisfaction ✓ therapeutic alliance
Dorstyn (2013)	managing mental health following spinal cord injury	7 (272)	Quasi-exp	No	✓ pain and sleep ✓ QoL at 12 Mo ✓ time efficiency ✓ satisfaction
Hall (2013)	Aphasia	10 (153)	6 single case 2 Crossover 1 RCT 1 Obs	No	ǂ assessment outcomes ǂ treatment outcomes
Laver (2013)	Stroke	10 (933)	RCT	No	Insufficient evidence ✓ ADL ✓ UL function
Steins (2014)	Neurological populations	12 (522)	Validation	No	ǂ type, quantity, quality measure of functional activities ǂ discriminate non-healthy/healthy
Agostini (2015)	Motor function recovery (Neuro, ortho, cardiac)	12 (1047)	RCT	Yes	✓ neurological studies ✓✓ cardiac studies ✓✓ ortho studies

What the science tells us

Summary of Systematic Reviews

✖ favours Control; ✓ telerehab equivalent; ✓✓ favours telerehab; ǂ Positive result (no comparison)

Author (Year)	Population	No. papers (participants)	Study types	Meta-analysis	Conclusions
Amatya (2015) (Same study as Khan with extra papers)	Multiple Sclerosis	12 (564)	10 RCT 2 Obs	No	Low to mod evidence ✓ short term disability ✓ fatigue ✓ functional activities ✓ symptoms ✓ QoL
Bittner (2015)	Low-vision	0	RCT CCT	No	Nil
Coleman (2015)	Acquired Brain Injury	10 (272)	Quasi-exp	No	ǂ assessment outcomes ǂ treatment outcomes
Hwang (2015)	Cardiopulmonary disease	11 (908)	RCT	No	✓ 6 min walk test ✓ peak O2 consumption ✓ QoL ✓ adherence
Khan (2015)	Multiple Sclerosis	9 (469)	RCT CCT	No	Low quality evidence ✓ short term disability ✓ fatigue ✓ functional activities ✓ participation
Lavdoli (2015)	Chronic Obstructive Pulmonary Disease	9 (982)	RCT	Yes	✓✓ physical Activity ✓ physical Capacity ✓ dyspnea
Molini-Avejonas (2015)	Speech, Language and hearing science	103 (?)	-	No	ǂ satisfaction
Chan (2016)	Cardiac and pulmonary rehabilitation	9 (782)	CCT	Yes	Cardiac Rehab ✓ peak Oxygen ✓ peak workload ✓ 6 min walk test ✖ test duration Pulmonary Rehab ✓ 6 min walk test
Cottrell (2016)	Musculoskeletal disorders	13 (1520)	RCT CCT	Yes	✓✓ physical function ✓ pain

What the science tells us

Effects of telerehab

At clinical level

- Improvement with telerehab is at least comparable to that achieved in person
- Impact on ADL, return to work, range of motion, walking, balance, pain, cognitive tasks, skin integrity, fatigue, confidence about falling, quality of life, anxiety, depression.
- Many good quality studies

Effects of telerehab

Process measures

- Good attendance rates
- Good compliance with recommendations
- Few adverse events (e.g. falls…)
- Duration of consultations similar or shorter
- High satisfaction rate, patients > clinicians
- Assessments and treatment plans may be incomplete
- Fewer studies

Effects of telerehab

On costs

- Few studies examining this aspect
- Cost measurement varies as to what is included
- Depends on distances travelled
- Direct and indirect costs, different perspectives
- Trend: costs are lower for the organization offering telerehab

» A Pragmatic Overview of the Research and Implementation of Tele-Rehabilitation with Neurological Populations (April 1)

Neurology webinar Speakers: Dr. Dahlia Kairy, Dr. Hélène Corriveau, Dr. Sarah Donkers

What the science tells us

What do we need to make it work

Access to health care

- Relates to the ability to obtain health services when needed.
  - ***Availability***
    - relevance to the isolated rural population, and the inner city, chronically ill, poor and disadvantaged (relates to adequacy of supply of existing services, facilities, and specialized programs and services)
  - ***Accessibility***
    - location of supply in relation to the location of the clients, and takes into account issues of transportation, travel time, distance, and cost
  - ***Accommodation***
    - organizational and administrative arrangements and clients' ability to accommodate to these factors, and their perception of their appropriateness
  - ***Acceptability***
    - incorporates cultural and/or social issues; and· relative affordability

What we need to make it work

- Organizational context:
  - The "readiness" of the organization: the ability to adapt and innovate :
    - senior leadership support within a workplace environment which is prepared, agile and robust.
  - Clinical champions;
  - Clinician involvement in design, selection and implementation of new technology;
  - Equipment and technology :
    - Reliable, accurate, and easy to use;
    - Secure;
    - Offer advantages over existing practices;
  - Training : clinicians who are familiar with, and confident using technology;
  - Social networks: peer networks and communities of practice;

What we need to make it work

Communities of practice

- Bringing providers/clinicians together to solve problems, share expertise, and engage the wider clinical community (Darkins 2014, Wade et al 2016).
- Basic building blocks of a social learning system; learning partnerships, and join forces to make sense of and address challenges collectively (Wenger 1998, Wenger et al 2011).
- Simple discussion groups through to forums that share resources or infrastructure (Wade et al 2016).

What we need to make it work

Achieving deployement

- Increase patient engagement and empowerment;
- Team based approach: task delegation, shared accountability and contingency planning. Multiple chronic conditions who pose particular challenges in relation to coordination and continuity of care.
- Efficiencies: reduce unnecessary tests or referrals:
  - access to results;
  - clear care plans;
  - online communication between different healthcare providers;

Clinicians play a fundamental role in the success of such interventions

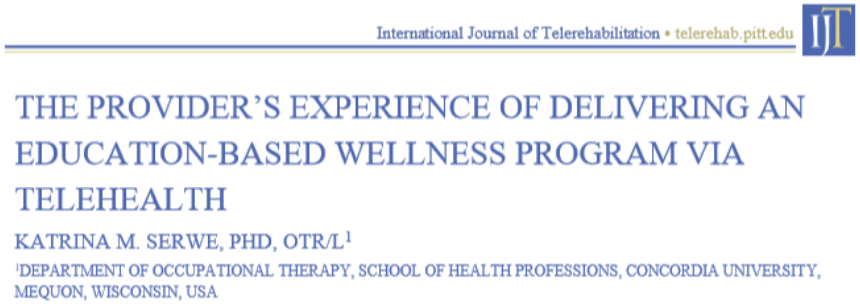
Brewster et al 2014, Greenhalgh et al 2017b, Jamieson et al 2015, Standing et al 2016, Wade et al 2014, Zanaboni & Wootton 2012

Client's preference

- A wide range of factors affect client preference and willingness to consider utilizing video consultations;
- Clinical issues such as the nature of the client's condition;
- Access and continuity issues such as whether or not they are known to the provider already;
- Technology issues such as
  - their past experiences with technology and their confidence in using the particular technology involved;
  - their access to support to assist with navigating set up and trouble-shooting problems the reliability of the technology they will be using;
  - access to feedback and monitoring technologies as a part of their care;
- Their trust that occupational therapy via a video consultation is at least as good as the alternative;
- Their perception that occupational therapy treatment should include manual therapies or '"touch";
- Their views about health, self-care and dependency;
- Their ethnicity and cultural beliefs about health care and technology;
- Their socio-economic status.

For culturally important reasons, some clients may prefer not to have their image taken or recorded.

Provider's insatisfactions



International Journal of Telerehabilitation • telerehab.pitt.edu

THE PROVIDER'S EXPERIENCE OF DELIVERING AN EDUCATION-BASED WELLNESS PROGRAM VIA TELEHEALTH

KATRINA M. SERWE, PHD, OTR/L[1]

[1]DEPARTMENT OF OCCUPATIONAL THERAPY, SCHOOL OF HEALTH PROFESSIONS, CONCORDIA UNIVERSITY, MEQUON, WISCONSIN, USA

- Providers must shift their roles and work habits to successfully adopt telehealth delivery methods (Segar, Rogers, Salisbury, & Thomas, 2013).
- Providers tend to clients (Mair et al., 2005) and report a variety of concerns related to the adoption of telehealth delivery methods.
- Include technical difficulties (Collier, Morgan, Swetenham, Currow, & Tieman, 2016; Levy & Neil, 2013);
- Technology that is either inadequate or too expensive (Wade et al., 2014);
- Lack of resources and organization support;
  - including lack of technical support (Odeh, Kayyali, Nabhani-Gebara, & Philip, 2014);

Factors reported that have a less positive view of telehealth

- Missing nonverbal cues resulting in decreased rapport with clients (Levy & Neil, 2013);
- Time lag impeding conversation flow (Brandon et al., 2015);
- Internet connectivity issues resulting in decreased rapport with clients (Collier et al., 2016; Holland et al., 2014);
- Lack of reliable internet service (Sinclair, Holloway, Riley, & Auret, 2013);
- Concern of increased workload (Collier et al., 2016; Odeh et al., 2014);
- Concern for client safety (Shulver, Killington, & Crotty, 2016);
- Concern for decreased quality of care (Levy & Neil, 2013).

Telerehabilitation vs rehabilitation

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Digital Healthcare must now serve as both a parallel and primary patient care service channel.

Healthcare companies must now quickly implement digital healthcare strategies; both for the present, and for this new normal.

Digital Healthcare White Paper | UpDoc Media

What do we need to make it work

Asynchronous different time frames according to users' convenience (e.g. email).
Real-time (synchronous) video simultaneously present during the consultation and have synchronous audio-visual communication.

Technology

- A telehealth consultation uses less than half of the data you would use while watching a YouTube video in High Definition. That's about 230 MB on a mobile device, and 450 MB on a PC for a 20 minute call, which is similar to Skype or FaceTime.

- The technology is reliable and works well over the locally available network and bandwidth.
  - The requirements are consumer friendly and readily available e.g. smart phones and laptops
  - Any software download must be as straight forward as possible
  - The technology is compatible with the technology used by the client and health worker
  - the technology used is secure, and privacy and confidentiality during the consultation can be ensured
  - the technology is of a high enough quality to facilitate good communication between all participants and accurate transfer of clinical information

Technology

PHYSIOTHÉRAPIE UNIVERSELLE MD

Table 5. Telehealth video conference equipment overview

Equipment type	Description
Standard mobile trolley 	Mobile video conference system with quality camera and features such as zooming in/out, voice tracking etc. Small footprint trolley with the option of 32 or 43-inch TV.
Clinical mobile trolley 	This may be an enhanced WoW/CoW to include video conferencing software, quality camera and features such as zooming in/out, voice tracking, etc. It is a small footprint battery powered trolley with screen.
Desktop video conference 	All-in-one video conferencing unit with life-size video on a 23-inch touch screen. A second monitor can be attached to enable access to health information systems (e.g. eMR) whilst a video conference is in progress.
Personal computer 	Laptops provide mobility with built-in webcam and remote access to health systems and video conferencing capability.
iPad/Tablet 	Tablets provide mobility with remote access to health systems and video conferencing capability. Can use both the forward and rear facing camera. The mobility allows for use within and outside of health facilities providing greater accessibility and support to our patients where ever they may be.
Mobile phones 	Mobile smart phones are widely accessible by clinicians, patient, carers and other providers. These devices (android or apple IOS) can support web-based applications including video conferencing as well as image capture, videos or clinical information transfer via clinical apps.

NSW GOVERNMENT | AGENCY FOR CLINICAL INNOVATION

Technology

- Supporting applications
  - telephone-based health coaching
  - use of ‘apps’ to structure exercise programs and report on progress
  - video clips of exercise demonstrations
  - telemonitoring (e.g. home-based collection of data on vital signs or function)
  - eVisits (which are asynchronous, email-like communications through a portal – often one facilitated by the client’s electronic health record)
- Checking in advance whether a third party will be present at the client’s end (or joined in, with the client’s consent).
  - provides consent to their involvement prior to the consultation.

Technology

PHYSIOTHÉRAPIE UNIVERSELLE MD

Presently, there are four primary "typologies" considered as digital healthcare delivery.

1. Synchronous with Live Communications
2. Asynchronous with Planned Touch Points
3. Remote Monitoring with Wearables and Mobile Devices
4. Mobile Care / App Care

Digital Healthcare White Paper | UpDoc Media

Considerations

Occupational Therapists must use their **professional judgement** to determine if virtual care service delivery is appropriate, taking into consideration:

- The diagnosis
- Client's preference
- Access to technology
- Ability to measure outcomes must be taken into consideration
- Safety, effectiveness, sustainability, and quality of interventions provided exclusively through telehealth or in combination with in-person interventions;

Melody M. Burrage 2019

Considerations

Occupational Therapists must use their **professional judgement** to determine if virtual care service delivery is appropriate, taking into consideration:

- Whether it is the most appropriate available method
- Whether a direct physical examination is required to complete an assessment and determine a diagnosis and treatment plan/recommendations
- The ability to deliver substantively similar care as if face-to-face
- If participant factors such as physical, sensory, or cognitive deficits may impact the ability to deliver appropriate care virtually

Considerations

Re-consider the use of video consultations in the following circumstances

- Where there is a material risk of a rapid decline in health status;
- Where the client's condition is unstable, following recent trauma;
- Where the client has a risk of falling / imbalance and cannot be accompanied through the entire encounter by a person capable of supporting them;
- Where the client needs a carer or assistant and such a person will not be available for the duration of the consultation.

Considerations

Table 2 WFOT occupational therapy telehealth ethical considerations.

Ethical consideration	Explanation
Licensure/Registration	• Occupational therapists (OTs) shall comply with professional licensure/registration requirements.
Collaboration with Local Occupational Therapists	• Telehealth providers are encouraged to seek opportunities to collaborate with and promote local occupational therapy providers, organizations, educationalinstitutions, and/or associations in the interest of cohesive, relevant, andsustainable services.
Client Selection	• OTs should use clinical reasoning to determine the appropriateness of telehealth use based on individual client situations (e.g., client's diagnosis andimpairments, nature of the occupational therapy interventions to be provided, client's ability to access technologies, etc.).
	• Telehealth should therefore not be used to avoid in-person services when indicated by client-specific needs, nor be usedby therapists to avoid contact with clients on the basis of discrimination.
Consent to Treat	• OTs shall inform clients about the nature of the occupational therapy services to be provided, risks, benefits, alternate treatment options, and any limits to protection of privacy, security, and confidentiality of personal health information associated with the technology.
Professional Liability Insurance	• OTsshould comply with jurisdictional, institutional, and professional requirements for maintaining professional liability insurance.
	• OTs should confirm coverage of professionalliability insurance for the geographic areas served.

Consideration

Confidentiality	• Users of telehealth are obligated to employ mechanisms to ensureconfidentiality for synchronous and stored client data in compliance withjurisdictional, institutional, and professional regulations and policiesgoverning occupational therapy practice.
Personal and Cultural Attributes	• Therapists should follow principles outlined in the WFOT's document, Guiding Principles on Diversity and Culture and the Diversity and Culture position statement.
Provider Competence/ Standard of Care	• Therapists must maintain professional competency, acquire competency using telehealth technologies, ensure client safety, and adhere to ethical principles of practice.
Reimbursement/Payer Guidelines	• Therapists must adhere to reimbursement requirements and accurately represent the services delivered through telehealth.
Authentic Occupational Therapy Practice	• The WFOT endorses practice that is client-centered and occupation-centered, and which portrays the breadth of the profession.

Sarsak HI. Telerehabilitation services: a successful paradigm for occupational therapy clinical services? *Int Phys Med Rehab J.* 2020;5(2):93–98.

Considerations

To adhere to their ethical and legal obligations, the factors that occupational therapists need to consider include:

- the environment (e.g. the space that both the client and occupational therapist use for the interaction is private)
- the channel of communication (e.g. steps are taken to ensure that the information cannot be ‘hacked’ as it is transferred to and from the client). We recommend using a platform that is end-to-end encrypted.
- the identity of the client and those involved in their care (e.g. that identity is confirmed when contact is occurring)
- data and information retention and destruction (e.g. retention and destruction of clinical notes or digital images)
- the staff team (e.g. that each member is skilled in maintaining the security and privacy of client information)
- the site’s policies and procedures (e.g. that they are updated to reflect new policies and procedures concerning information and communications technology and its use)

considerations

But:

In the field…

- Variable Internet conditions
  - Picture degradation
  - Delays
  - Desynchronisation
- Cancellations
  - Technical issues
  - Participant forgets

Specific telerehab considerations

- Does not allow for hands-on assessment or teaching
- Can only see what the camera sees (clinician and patient)
  - Consider pan-tilt-zoom cameras (PTZ)
- Speaking etiquette (wait for your turn to speak, wait for response…)
- Presentation rules (slide or simple document, using mouse as pointer…)
- Depending on the technology, simultaneous transmission of video, audio and other information is not always possible.

Enhancers

PHYSIOTHÉRAPIE UNIVERSELLE MD

Situation analysis

Digital Care ENHANCERS

- **Preset Expectations:**
  What happens before, during, after an appointment?

- **Ease of Scheduling & Rescheduling:**
  How many screens, clicks, and scrolls are required to schedule? Can you reschedule in less steps

- **Ease of Payment:**
  Is payment part of the scheduling process? Is it automated and drawn against the account for future visits? What about refunds?

- **Automated Follow Up Touch Points:**
  Do you have initial and follow up visit summaries being sent? Is a scheduling button a part of those touch points? How about appointment reminders? What about colleague/family/friend recommendations & referral prompts?

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Enhancers

- Such skills including sound, lighting, understanding camera angles and framing, disconnection, reconnection, multi-platform use due to technical difficulties — as well as contingency plans being readily available without a provider (or, patient) getting flustered or frustrated.

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Detractors

PHYSIOTHÉRAPIE UNIVERSELLE MD

Situation analysis

Digital Care DETRACTORS

- **Bad Lighting:**
  Backlit provider, Only Top Down Lighting, Harsh Lighting, Uneven Lighting.

- **Poor Sound Quality:**
  Bad Mic, Distortion from excessive Audio Gain, Echos, Feedback.

- **Inconsistent Connection:**
  WiFi, internet speed, hardware limitations, platform congestion, video and audio lag/delay.

- **Distracting Backgrounds:**
  Visual and Auditory clutter; extraneous activities being picked up by camera/mic.

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What do we need to make it work

Technical Tips	Audio Visual Tips
✓ Place the microphone on a firm, flat surface as close as possible to participants to enhance audio quality and minimise background noise	✓ Ensure good lighting in the room so that faces are clearly visible
✓ Ask participants to speak clearly, at their normal voice volume, and one person at a time	✓ Avoid placing bright lights behind the people being viewed
✓ Ask participants to switch mobile phones off or to silent mode	✓ Explain to participants if someone being viewed needs to move in or out of the camera frame
✓ Minimise background noise	✓ Check the camera gaze angle in advance and adjust to allow eye contact between participants.
✓ Use the mute button when people at the other end of the video consultation are speaking	✓ Ask participants prior to the consultation to avoid wearing brightly patterned or reflective clothing
	✓ Check the ability to move the camera to focus on certain items (such as assistive technology equipment)
	✓ Check the ability to share the screen for sharing clinical treatment guidelines or resources.

Adapted from Telehealth video consultations guide (RACGP, 2019)

OTA Telehealth guidelines 2020

What do we need to make it work

All normal standards of practice apply to telehealth as they would in face-to-face consultations.
WFOT, 2014

- Clients must be confident that we adhere to the same strict data security and privacy protocols that we follow in non-digital practice when gathering, storing and sharing their data.

- It can be useful to consider:
  - What occurs prior to the video consultation
  - What occurs at the time of the video consultation, and
  - What occurs after the interaction.

Virtual consultation

- Starting the consultation
  - a summary of what happened
  - agree on the next steps / plan with the client
  - ask the client to repeat back the plan
  - plan the next appointment and schedule the booking
  - ask the client for any feedback on the session.

Emergency Response Telehealth Guidelines March 2020

Step by step

Virtual consultation

- It may be useful to end the consultation with:
  - A summary of what happened
  - agree on the next steps / plan with the client
  - ask the client to repeat the plan
  - plan the next appointment and schedule the booking
  - ask the client for any feedback on the session

Virtual consultation

- After the consultation is complete, it will be important to:
  - Write the record of the consultation into the client's clinical notes (including outcomes)
  - Record any technical malfunctions
  - Implement and monitor agreed follow-up actions
    - With the client
    - With other professionals involved in the care team.

Emergency Response Telehealth Guidelines March 2020

    - collection of data about the client's experience following the consultation.
    - collection of Patient Reported Outcome Measures (PROMs) and Patient Reported Experience Measures (PREMs)
    - as standard care from as early as possible.
    - This will assist in providing further evidence of benefit.

Tips

Tips for implementing

- Pre-collecting proxy and emergency info
  - *Cautious of care-giver overload and consider resources to support them too*
- Get an idea about what technology your clients already have and/or use
  - *e.g. step counter, HR monitor*
- Create templates
  - *Generic email templates; videos on how to access; practice links; have admin or support pre-check that patients can access technology etc. (so that your session can focus on your PT intervention)*
  - *Give example set ups you will need for your session (e.g. an open space in your home with a chair, a table...etc) and also consider privacy*
- Consider a 'mobile technology' (e.g. tablet or smartphone) to do 'home visit'
  - *pre-warn clients if you're hoping to do this...*
- Decide what you are going to do if you feel there is no way to continue without an in-person assessment

Speakers: Dr. Dahlia Kairy, Dr. Hélène Corriveau, Dr. Sarah Donkers

Technical support

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Situation analysis

- Internal Tech Support is Key.
- Such systems includes billing, as well as personnel training for standard line deliveries such as Explanation of Benefits.
- While not immediately a concern to many practice, it **will** matter as digital healthcare runs and grows in its own space and in tandem with brick-and-mortar clinical care.

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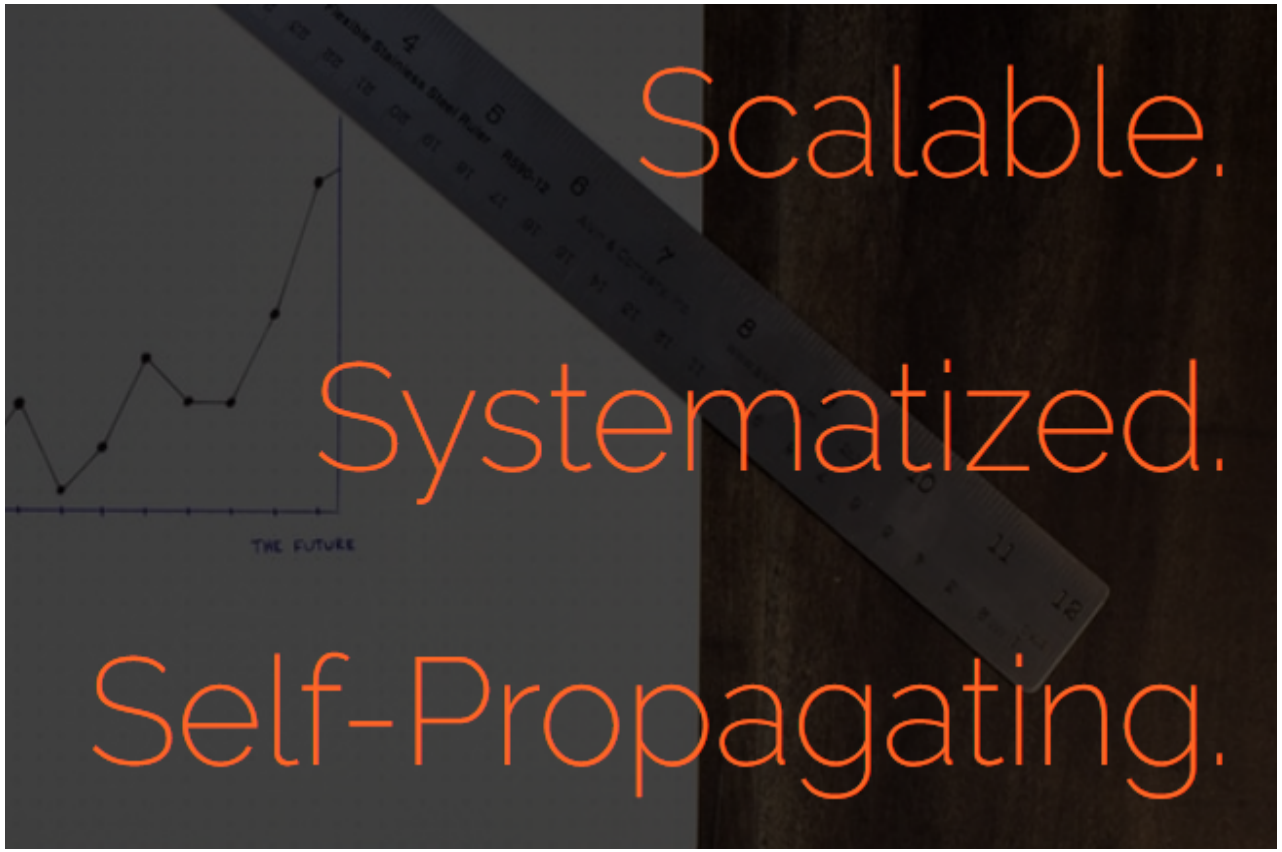
What do we need to make it work



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Greatest Challenges

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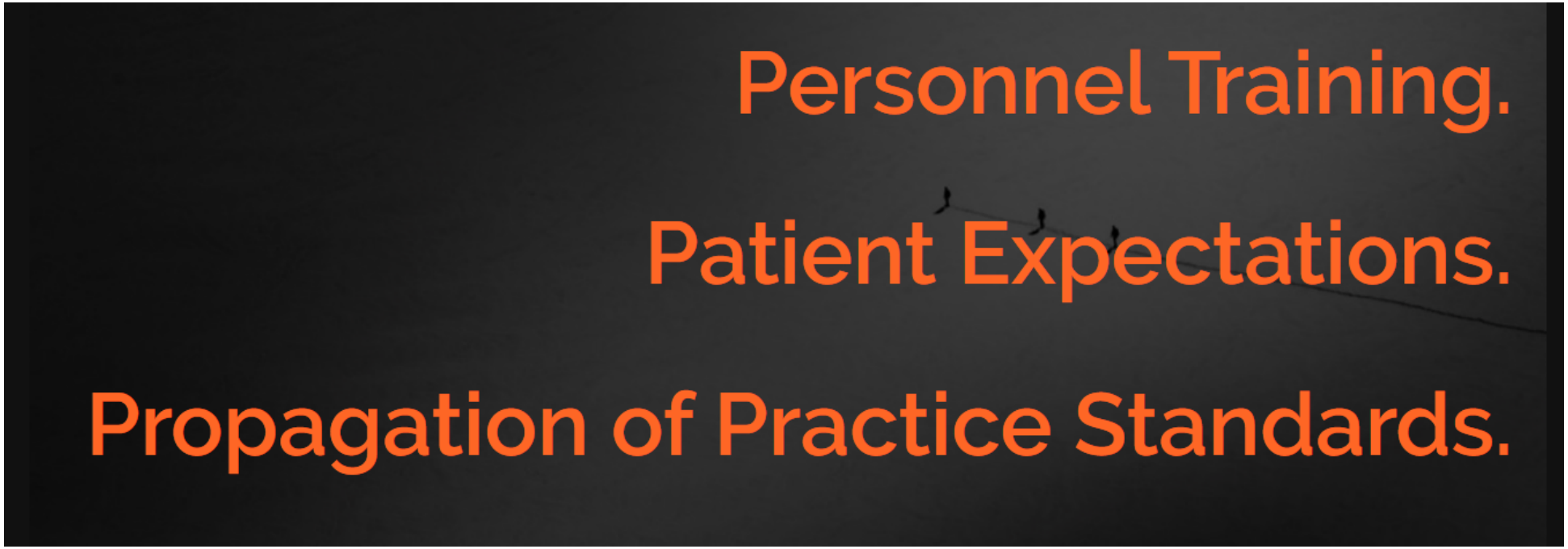

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What do we need to make it work

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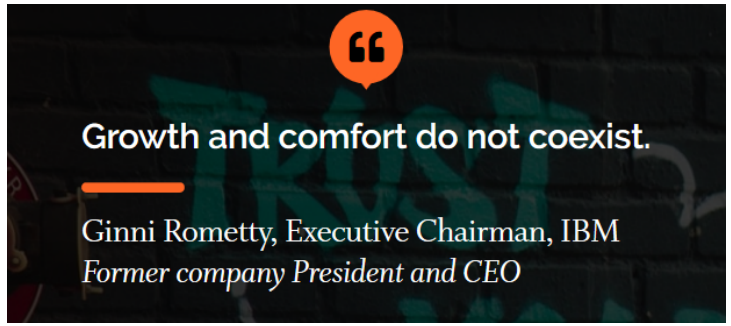

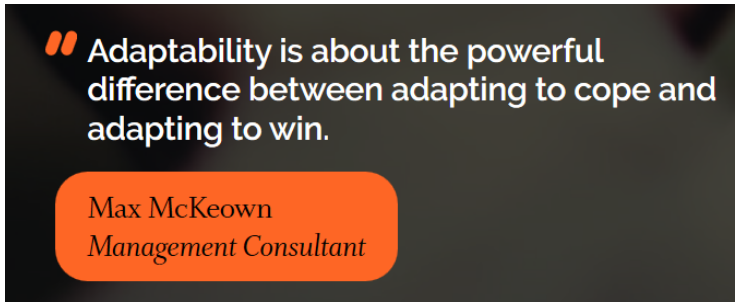

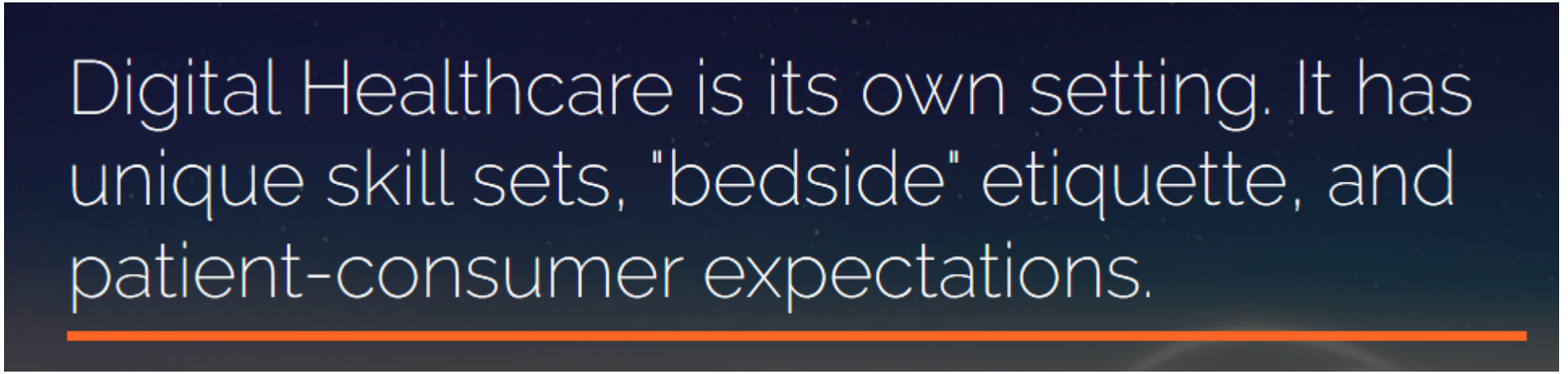

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What do we need to make it work

PHYSIOTHÉRAPIE UNIVERSELLE MD

Other Considerations of "New Normal"

- A re-assessment of "need" by both consumers and suppliers of services/products.
- Employer considerations of salary vs. hourly employees.
- Employer considerations of exempt vs. non-exempt status.
- Consumer behaviors will never go back.
- Provider behavior SHOULD NOT go back.
- Global pandemic has served to become a time accelerator of early adoption.

Digital Healthcare White Paper | UpDoc Media

What's happening

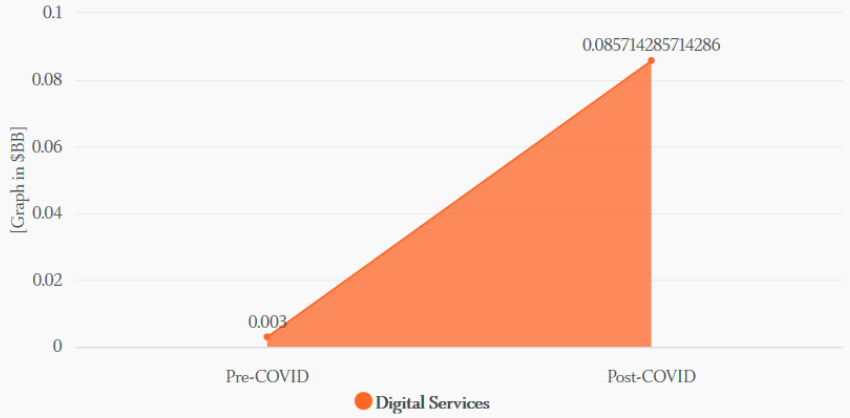
Conservatively, pre-COVID-19 "telehealth" was projected to be a $34 billion dollar industry.

Digital Healthcare White Paper | UpDoc Media

What's happening

Outpatient physical therapy Post-COVID-19.

If digital care continues with its current trajectory, it will exist as an $86 million dollar clinical setting.



Digital Healthcare now projected to increase by 28,600% by end of 2020.

Digital Healthcare White Paper | UpDoc Media

Physiothérapie Universelle example

At Physiothérapie Universelle,

Our **hope and our objectives** are to provide you with some examples of Telerehabilitation

and communicate our passion for this new way of practice.

We would like you to try it, see its potential, and hopefully contribute to its research and development.

With your help we will not only change occupational therapy for the better,

but we will contribute to maintain the population in good health

Physiothérapie Universelle example

- At Physiothérapie Universelle, we are always looking for new ways to create a connection with our patients so that our services are: accessible, safe, efficient and practical.
- Therefore Physiotherapie Universelle decided early on in this Covid 19 pandemic to use virtual care / Telerehabilitation. We needed to reach our clientele in need of physiotherapy, while in-person follow-ups were not accessible. We made sure that there were no delays in treatment that could prevent patients' full recovery. In addition, maintaining financial health in this time of crisis drove change at an unprecedented pace.
- Slowly but surely, Telerehabilitation was launched, and a lot of learning took place through the deployment. The entire group of employees allows Physiothérapie Universelle to proudly offer a very valuable service to our clients and the community.

Physiothérapie Universelle example

PHYSIOTHÉRAPIE UNIVERSELLE MD

Stop, and ask yourself these questions prior to implementing tele-rehabilitation services

- Is tele-rehabilitation appropriate for this client?
- Do I have the skills and training to provide remote occupational therapy to my clients?
- Am I providing evidence-based informed remotely delivered occupational therapy services?
- Does this client have the required technology to support remote delivery?
- Does this client need technical support or in-home support to facilitate the session?
- What is your “big picture” goal for this remote session; Consultation? Education? Assessment? Treatment?
- Which platform will allow you to provide the same quality care as face-to-face?
- Is the setting on the client’s end a safe, secure, and confidential environment?
- Is my environment appropriate for this delivery model (high speed internet, confidential setting, consent, and PIPEDA compliant platform, etc.)?
- Am I following all of the required guidelines from my professional order?

https://physiotherapy.ca/times-covid-19

Step by step

PHYSIOTHÉRAPIE UNIVERSELLE MD

https://lifemark.adracare.com/login

- Adracare is a platform, similar to an application such as FaceTime or WhatsApp.
- The key difference is that it is secure and private.
- Through this platform, the clinician is able to communicate with the patient/client using audio and video.
- Besides security, another benefit of using Adracare is that the session is logged as evidence of the call taking place. The session itself is not recorded.
- Use the links above to find out more about our services and how to use them.

Step by step

Guidelines

- Informed consent:
  - Consent must be informed for it to be valid
  - Completed at time of appointment and recorded through patient chart note
  - Participant must have a clear understanding of the unique risks and benefits, as well as the limitations compared to in person provision, and the options available (including receiving in person service delivery).

- ID verification:
  - Provider must ensure and document proper ID verification from patient (government issued ID)
  - Provider must share ID so patient can verify and document in chart

- Emergency Preparedness:
  - Providers must be aware of emergency procedures of the remote site if any, and/or local emergency resources such as primary health care providers and/or local emergency phone numbers
  - Verify/collect client/patient location (address) during session
  - Verify/collect alternate contact method (phone number) should your virtual session be disconnected
  - Verify/collect emergency contact name & number

Physiothérapie Universelle example

- Administrative procedures with the insurers.
- Presentation on Virtual Care and our platform.
- Webinar on OT, PT assessment (mock assessment).

Step by step

Statistics

- More than 6 721 OT sessions in Virtual Care since March 2020.
- Physiothérapie Universelle top leader in OT virtual Care within Lifemark.
- Around 40 OTs participating in the Virtual Care practice.

Step by step

PHYSIOTHÉRAPIE UNIVERSELLE MD

How did we achieve this success?

Physiothérapie Universelle example

PHYSIOTHÉRAPIE UNIVERSELLE MD

Conditions

- Musculoskeletal
- TCCL
- Mental Health
- Hand treatment
- Ergonomics
- Fibromyalgia
- Post-cancer
- Paediatrics

- Restricted: Job demand analysis/ home care, disabled parking permit, paratransit.

Physiothérapie Universelle example

- A client that needs occupational therapy;
- Md gives them a referral or not;
- The referral has been forwarded to the Central Telephone number or to a specific clinic
  - Client is contacted by the clinic secretary
  - The file is opened
  - Consent for payment is sent (with an explanatory letter)
  - Appointment is scheduled
  - Verification by the assistant of the client's computer installation
    - Computer, tablet, smartphone with integrated camera and audio (earphones, headphones, microphone, etc.)
    - Instruction that there is no need to create an account.
    - Just Click on the link sent.
    - Explanation on compatible search engines (ex: Must use Chrome or Firefox on the computer with Adracare)

Physiothérapie Universelle example

Therapist in charge establishes first contact with the patient

- Explanation of the session
- Material / clothing required for the evaluation
- Private room (quiet; space for standing and sitting)
- Duration
- Confirms the evaluation by TR. Sends Adracare invitation or other platforms
- Sends consent to the evaluation and questionnaires
- Development of an alternative communication option

Physiothérapie Universelle example

PHYSIOTHÉRAPIE UNIVERSELLE MD

PHYSIOTHÉRAPIE UNIVERSELLE

Name:

File number:

CONSENT TO VIRTUAL-CARE FOLLOW-UPS AND INFORMATION TRANSMISSION

Physiotherapy Universelle is always looking to adapt to the reality of its clients by offering services that use electronic communication technologies (TCE) to meet your needs more easily. Where appropriate, we can provide remote services by telephone and/or videoconference.

What is a virtual care session?

- Any documentation that you need to review and complete will be sent to you prior to the date of your appointment.
- All participants in the virtual care session will be required to provide proof of identity.
- You will need to notify us of any problems with the connection and installation of the platform used.
- A link and instructions for the appointment session will be provided. Please test your connection 15 minutes before your appointment and inform us of any problems.

Are there any limitations/risks to participating in a virtual care session versus a face-to-face service?

- There are some limitations such as the inability to treat the patient directly, but this will not be required as part of the virtual care service you will receive
- The use of electronic communication technologies (Ects) poses risks to the security of participants' information; however, Lifemark – Universal Physiotherapy has strict privacy and information security policy procedures in place to assess and manage these risks; our virtual care providers are required to meet the same regulatory and legislative requirements and their respective standards of practice and code of conduct, as well as in-person services.

At the beginning of the session, the supplier will discuss your understanding of this information. In addition to the usual process of informed consent, they will seek your informed consent for the following:

- Receive services and transmit information via one or more ECT platforms.

Are you ready for your virtual care session with Lifemark – Universal Physiotherapy?
I have reviewed and understood the information provided about virtual care services
I have reviewed and completed all necessary prerequisites
I tested my access 15 minutes before my appointment using the link I received by email.

If you have any questions, do not hesitate to contact us

CONSENT TO FOLLOW-UPS

I, the undersigned
✓ Agree to participate in monitoring to the best of my ability.

CONSENT TO TRANSMIT INFORMATION

I, the undersigned, authorize the clinic (physiotherapist, occupational therapist, kinesiologist, psychologist, coordinator, director) to prepare an interdisciplinary file concerning me and to exchange with each other information relevant to my rehabilitation.

I also authorize these same stakeholders to forward my file and any relevant information, including any factors that may impede my rehabilitation, if any, to the following individuals:

☐ rehabilitation counsellor or other representative of the paying agency ____ (Initials)
☐ attending physician ____ (Initials)
☐ employer ____ (Initials)

Signature : _____ **Date:** _____

Patient Health History Form

PHYSIOTHÉRAPIE UNIVERSELLE

The information requested below will enable us to treat you safely. If you have any questions about the information requested please ask your health care professional (HCP). All information provided below will be kept confidential. Your written permission is required to release any information.

Patient Name: Name ☐ Female ☐ Male ☐ Other ☐ Prefer not to say it
Occupation: Occupation **Have you received therapy before?** ☐ Yes ☐ No
If yes, what were you treated for and when?
What is your current reason for seeking therapy? Comment
How would you rate your general health status? ☐ Good ☐ Poor ☐ Other Comment
Please indicate conditions you are experiencing or have experienced:

Cardiovascular
- ☐ High blood pressure
- ☐ Low blood pressure
- ☐ Chronic congestive heart failure
- ☐ Heart attack
- ☐ Phlebitis/ varicose veins
- ☐ Stroke/ CVA
- ☐ Pacemaker or similar device
- ☐ Heart disease

Is there a family history of any of the above conditions?
☐ Yes ☐ No

Respiratory
- ☐ Chronic cough
- ☐ Shortness of breath / Chest pains
- ☐ Bronchitis
- ☐ Asthma
- ☐ Emphysema

Is there a family history of any of the above conditions?
☐ Yes ☐ No
Do you smoke?
☐ Yes ☐ No

Loss of Sensation/ Weakness
- ☐ General loss of sensation, hot/cold
- ☐ Weakness

Infections
- ☐ Hepatitis
- ☐ Skin conditions (integrity, wounds)
- ☐ Tuberculosis
- ☐ HIV
- ☐ Herpes
- ☐ Other: Other

Other Conditions
- ☐ Cancer (where)
- ☐ Diabetes, type and onset
- ☐ Thyroid disorder
- ☐ Allergies / hypersensitivity to what?
- ☐ Epilepsy
- ☐ Hemophilia
- ☐ Nervous system disorder: Type :
- ☐ Mental Health issues
- ☐ Anxiety
- ☐ Sleep disorders
- ☐ Weight loss
- ☐ Night fever

Is there a family history of any of the above conditions?
☐ Yes ☐ No

Life Habits
- ☐ Use of marijuana, drugs or alcohol

Head/ Neck
History of Headaches: type & frequency:
- ☐ History of migraines
- ☐ Vision problems
- ☐ Vision loss
- ☐ Ear problems
- ☐ Hearing loss
- ☐ Head trauma

Femmes
- ☐ Pregnant, due date:
- ☐ Gynecological conditions. What?
- ☐ Menstrual problems
- ☐ Diseases of the breasts/uterus /ovaries

Digestive
- ☐ Ulcer
- ☐ Hernia
- ☐ Gall bladder / liver
- ☐ Kidney / bladder
- ☐ Constipation / diarrhea
- ☐ Painful/ frequent urination

Do you suffer from any digestive conditions. What are they?
What are they

Muscles / Joints
Previous
- ☐ Pain / stiffness
- ☐ Arthritis, arthrosis, osteoporosis
- ☐ TMJ
- ☐ Neck
- ☐ Upper back
- ☐ Mid back
- ☐ Lower back
- ☐ Hip L / R
- ☐ Knee L / R
- ☐ Ankle L / R
- ☐ Shoulder L / R
- ☐ Elbow L / R
- ☐ Wrist L / R
- ☐ Hand L / R
- ☐ Metal implants (pins, plates, joints, artificial limbs)
- ☐ Other: other

List all medications you are taking and the conditions they are for:
Comments
List any surgeries you have had. Please include types and dates:
Comments
List any past injuries. Please include types and dates:
Comments
Please list any other Health care professional you are currently receiving treatment from:
Comments

****If you would like to provide additional information, please turn sheet over and use the blank side.**

Signature
55/55/5555 ×
Date

For internal use only
Date of initial health history
Update 1: update 1
Update 2: update 2
Update 3: update 3

Physiothérapie Universelle example

- Some safeguards that should be used include:
  - Both the client and the occupational therapist ensure their location is:
    - Private,
    - Free from hazards.
  - Both the client and occupational therapist will need to:
    - Test the communications technology and ensure it is working
    - Test any clinical equipment to be used to ensure it is safe and operating.
  - Both the client and the occupational therapist will need to:
    - Orient themselves to the activity ahead
    - Check that any other participants are ready and online.
- Mobile phone numbers available and phones turned on: alternative communication in case of technical failure or delay.
- The address of the patient for the consultation should be known so that assistance can be sent for any deterioration in the patient's condition, for example,
  - an ambulance can be called if there is an emergency.
- Ensure the identity verification: validate the client's identity (government card) and register it in his file.
- The therapist must also show his identity card (professional order / association card) /client can be sure that the therapist is the right one.
- Collect the name and phone number of the person to contact in case of emergency.

Occupational Assessment

History of present illness

- Symptom appearance/ injury mechanism
- Past exams / in waiting / medical monitoring
- Previous episodes
- Medical history
- Previous treatments

Occupational Assessment

Semi structured interview (MCREO)

- Specific questions are very important
- Use of questionnaires

Physical evaluation

- Range of motion
- Strenght
- Prehension strenght / grips
- Balance / one leg stance
- Weight bearing capacity

Occupational Assessment

PHYSIOTHÉRAPIE UNIVERSELLE MD

Functional assessment

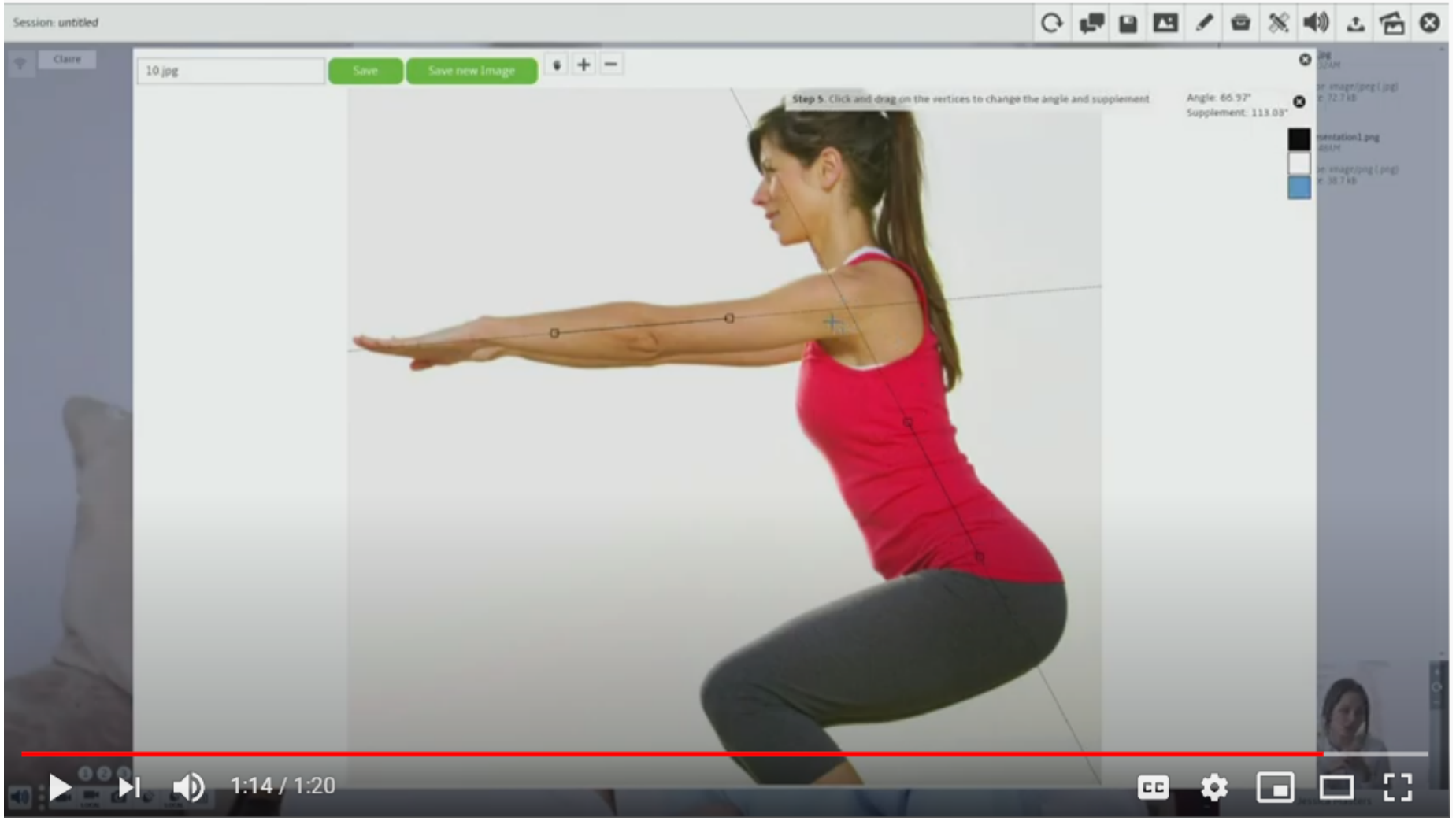
- Handling capacities
- Push/Pull capacities
- Tolerances: sitting , walking, standing
- Climbing up/down stairs
- Borg Scale (perceived physical effort/exhaustion)
- CSPE questionnaire
- MES

Tools

Keep it simple

Tools

https://youtu.be/jVcspsa5p-M



Health Screening before Assessment

CSEP | SCPE
THE GOLD STANDARD IN EXERCISE SCIENCE AND PERSONAL TRAINING

Get Active Questionnaire

CANADIAN SOCIETY FOR EXERCISE PHYSIOLOGY –
PHYSICAL ACTIVITY TRAINING FOR HEALTH (CSEP-PATH®)

Physical activity improves your physical and mental health. Even small amounts of physical activity are good, and more is better.

For almost everyone, the benefits of physical activity far outweigh any risks. For some individuals, specific advice from a Qualified Exercise Professional (QEP – has post-secondary education in exercise sciences and an advanced certification in the area – see csep.ca/certifications) or health care provider is advisable. **This questionnaire is intended for all ages – to help move you along the path to becoming more physically active.**

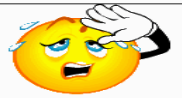
☐ I am completing this questionnaire for myself.

☐ I am completing this questionnaire for my child/dependent as parent/guardian.

Tools

Borg Scale

Rating of Perceived Exertion Chart
(Cardiovascular Endurance)

#10 	I am dead!!!
#9 	I am probably going to die!
#8 	I can grunt in response to your questions and can only keep this pace for a short time period.
#7 	I can still talk but I don't really want to and I am sweating like a pig!
#6 	I can still talk but I am slightly breathless and definitely sweating.
#5 	I'm just above comfortable, I am sweating more and can talk easily.
#4 	I'm sweating a little, but I feel good and I can carry on a conversation comfortably.
#3 	I am still comfortable, but I'm breathing a bit harder.
#2 	I'm comfortable and I can maintain this pace all day long.
#1 	I'm watching TV and eating bon bons.

Occupational Assessment

- Analysis
  - Barriers/ facilitators for rehabilitation
  - ISHT
  - Rehabilitation Prognosis
  - Telerehabilitation «nuances »

- Interventions Plan
  - SMART objectives/ functional goals
  - Treatment modalities
  - Treatment scheduling

Occupational Assessment

- Referral to other health professionnels

- File should include:
  - Client's TR/evaluation consent
  - Assessment
  - Virtual plateform used
  - Session duration
  - Identification card was obtained
  - Encountered difficulties

Treatment

- Therapeutic activities program includes:
  - Activity programs based on client's equipment;
  - Web sites: Passeport Santé, cardiac coherence, yoga/training video;
  - Active pain management strategies, sleep hygiene, ernergy conservation, condition education/documentation, etc;
  - Yoga, hypnosis;
  - Preparing the return to work;
  - Reassessment : goal oriented, doctor visit, CNESST/SAAQ reports, etc.

***Safe platform for information sharing

Physiothérapie Universelle example

Maintain contact while working remotely not in clinic :

- With the treatment team;
- Multidisciplinary meeting on a monthly basis or more as needed;
- Monthly meeting with network occupational therapists for support with clinical reasoning and others;
- With reference source;
  - Compensation officer;
  - Rehabilitation counselor
  - Referring or treating doctor

In an academic setting, faculty members can take advantage of telehealth to facilitate clinical reasoning skills training during a student's rotation/fieldwork via ongoing dialogue about client cases through online assignments, discussion board forums, and the use of videoconferencing technology (Nicholson, Bassham, Chapman, & Fricker, 2014).

Physiothérapie Universelle example

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Testimonial

In addition, recent studies showed that ease of use, usability, and accessibility for telerehabilitation services could be sometimes unsolved problems, especially for older people and people who live in rural areas who may have little experience or confidence in using advanced technology.

Hassan Izzeddin Sarsak 2020

What to expect

The impact of being a patient in an Intensive Care Unit (ICU)

- For people who have experienced a prolonged stay in the ICU: lung function, physical functioning and emotional wellbeing are affected.
- Common symptoms reported one year later by people who have been in ICU :
  - anxiety (34%), depression (33%) and post-traumatic stress disorder (19%).

These include physical, cognitive and psychological difficulties which can be prolonged, lasting as long as 15 years, and are known to impact on return to usual occupations and work

PHYSIOTHÉRAPIE UNIVERSELLE MD

Musculoskeletal/Physical	
• Overwhelming fatigue • Muscle deconditioning • Global muscle weakness • Neuropathy	• Reduced range of movement in upper limb • Upper limb oedema • Pain and discomfort • Changes to vision, and sight loss
Cardiopulmonary	
• Breathlessness • Limited exercise tolerance • Postural hypotension • Rapid oxygen desaturation during exertion	• Dysfunctional breathing patterns • Hyperventilation • Continued cardiac issues e.g. atrial fibrillation and arrhythmias
Communication	
• Post intubation swallowing and feeding needs (dysphagia) • Speech difficulties (dysarthria and dysphasia)	• Difficulty using alternative communication aids due to cognitive and musculoskeletal impairments

Royal College of Occupational Therapists

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Neurological	
• Reduced wakefulness • Impaired consciousness • Ongoing delirium • Severe attention deficits and poor concentration • Visuospatial • Agitation, pacing and 'wool picking'	• Disorientation • Executive dysfunction • Critical illness neuropathy / myelopathy • Impulsivity • Disinhibition • Reduced working memory and no memory of admission
Psychological	
• Loss of confidence and trust in own body • Fear – particularly when waking in an environment of personal protective equipment (PPE) • Loss of dignity and control • Anxiety, panic attacks • Low mood, depression	• Grief • Problems with body image, related to treatment • Reduced grounding in own experiences • Exacerbation or relapse of existing mental health conditions • Post traumatic stress disorder (PTSD)

Royal College of Occupational Therapists

Where is it going?

Virtual reality in Rx algodystrophy

- Randomized study
- The results show a reduction in pain compared to the control group but do not specify the duration of the analgesia.

(Keefe FJ, 2012)

- Reported disappearance or reduction of pain for hours after the sessions.
- However, a month after the end of therapy, the pain intensity returned to its pre-treatment level, showing the limitations of the study.

Oneal et al. (2008)

Where is it going?

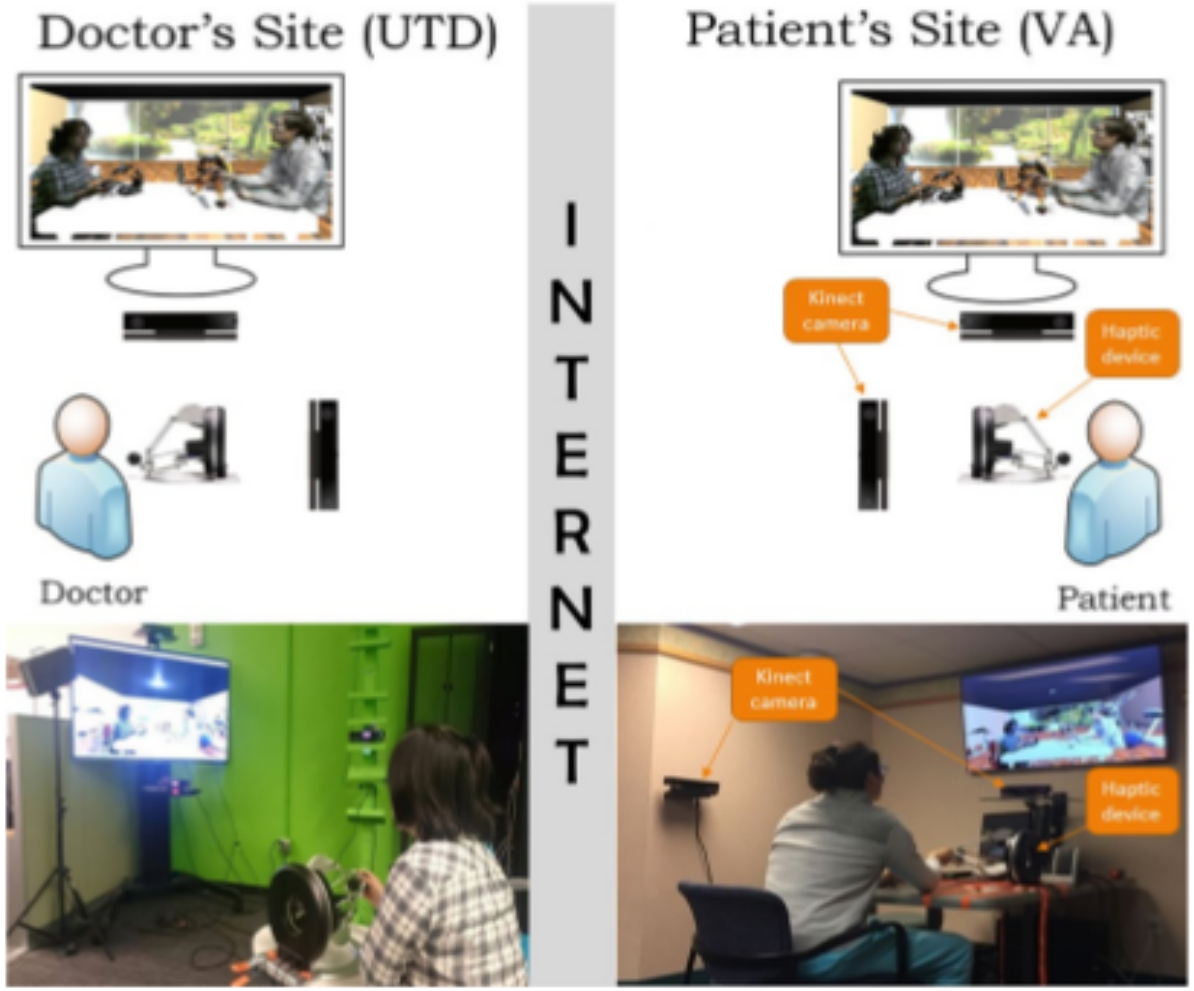


Figure 1. Each site was equipped with two Xbox Kinect RGB-D cameras (arranged orthogonal to user), one haptic controller (fastened to the desk), a 3D-capable TV, active 3D-glasses, and a computer. The computers were networked via the Internet, and audio, video, and force data were transmitted in real-time between the two sites.

Where is it going?

PHYSIOTHÉRAPIE UNIVERSELLE MD

Gaming healthcare: How Microsoft Kinect is revolutionizing the future of rehab

Jintronix, a Canadian healthcare startup, uses games on Microsoft Kinect for stroke therapy.

Image: Jintronix

Where is it going?

The Interface and Communication Module of KiReS offers an interface (see Figure 8) that provides a game-like immersive experience that motivates and makes the therapy more enjoyable.

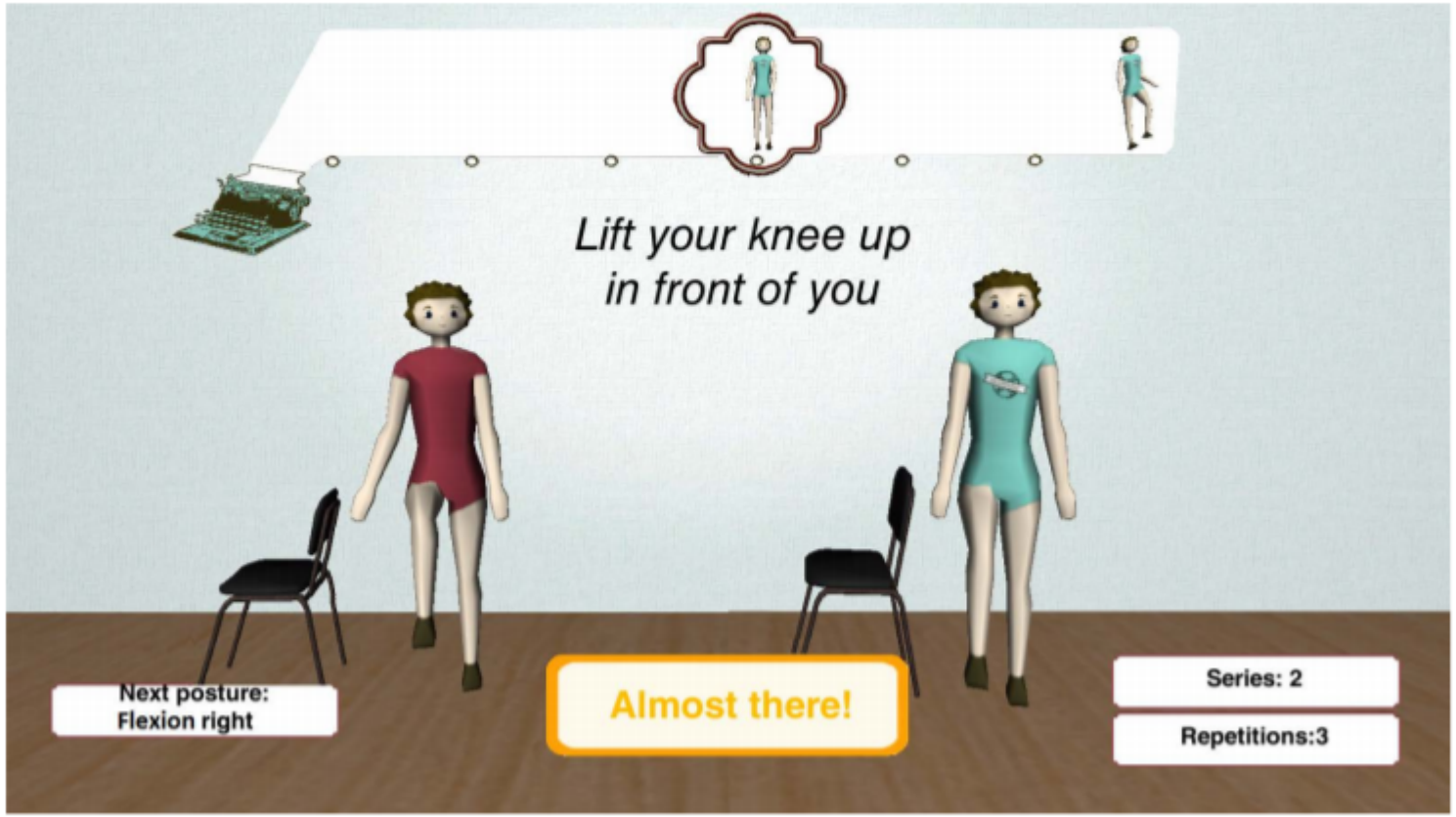


Figure 8. User interface.

Where is it going?

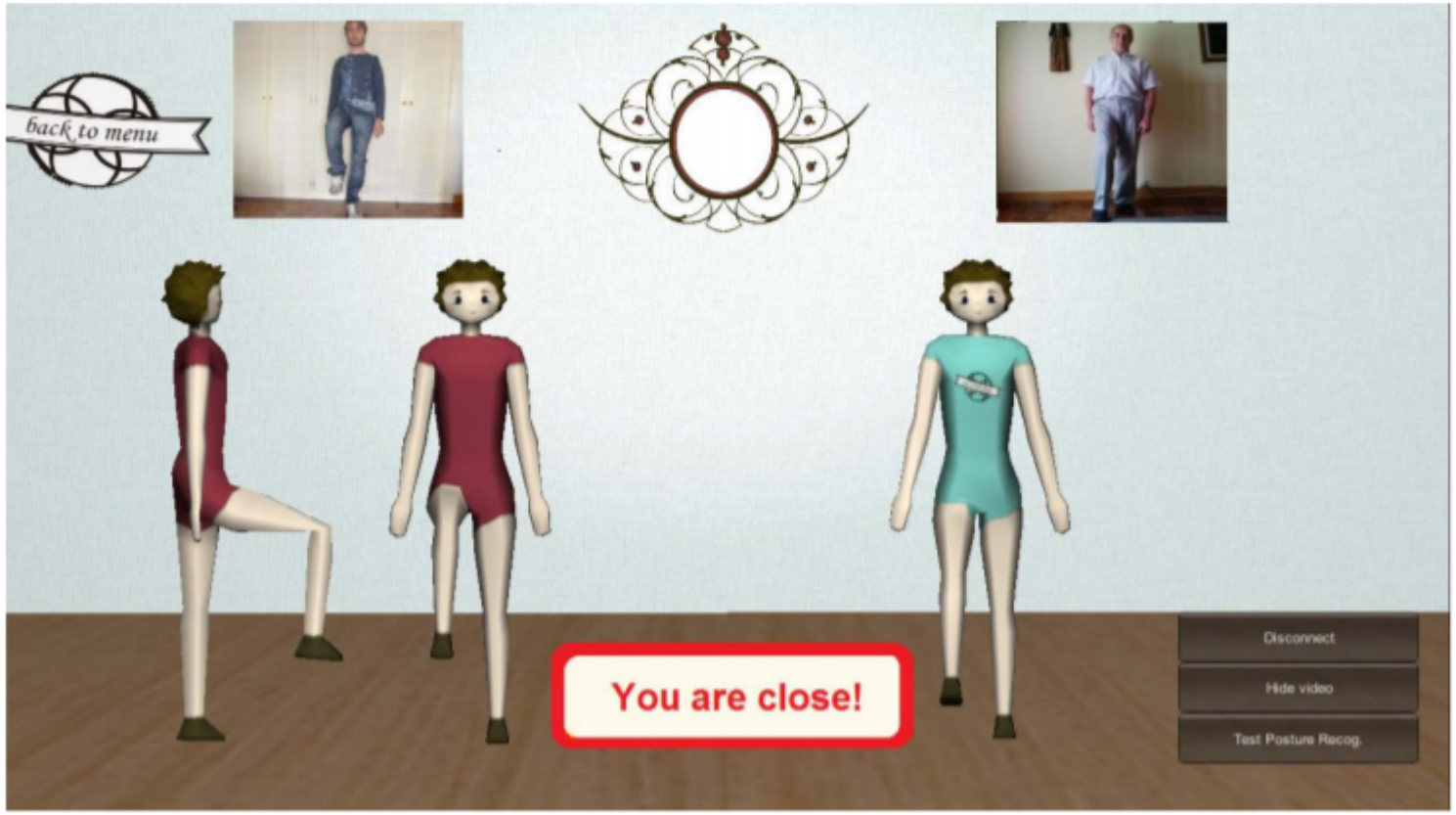
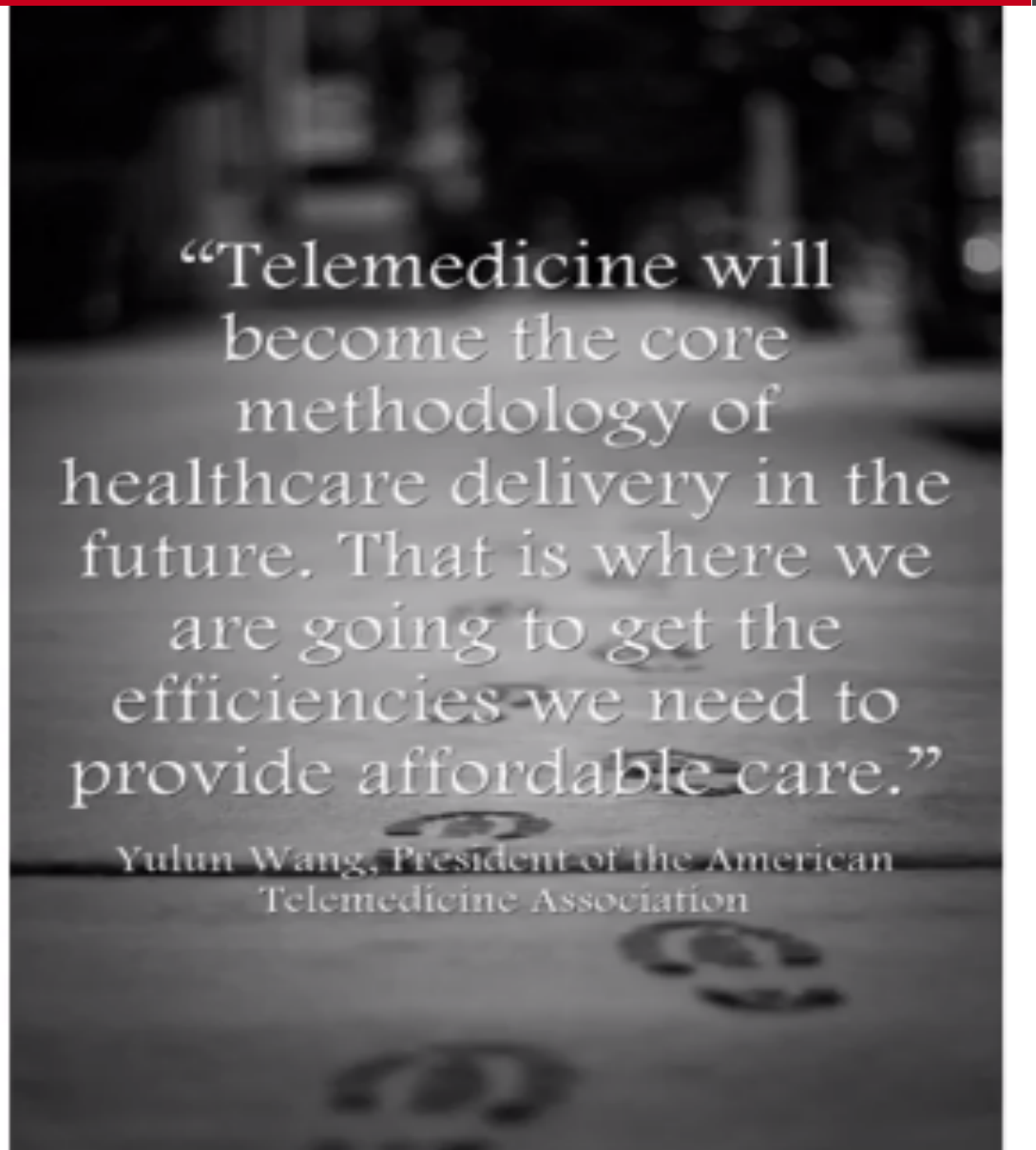


Figure 11. Teleimmersion in KiReS.

Where is it going?



Ressources

Webinaire en cyber sécurité
https://www.cyberswat.ca/

https://www.oeq.org/publications/occupation-ergotherapeute/articles-sur-la-pratique-professionnelle/9-lintervention-ergotherapique-a-distance.html

https://www.caot.ca/document/3717/T%20-%20Telehealth%20and%20E-Occupational%20Therapy.pdf

Thank you

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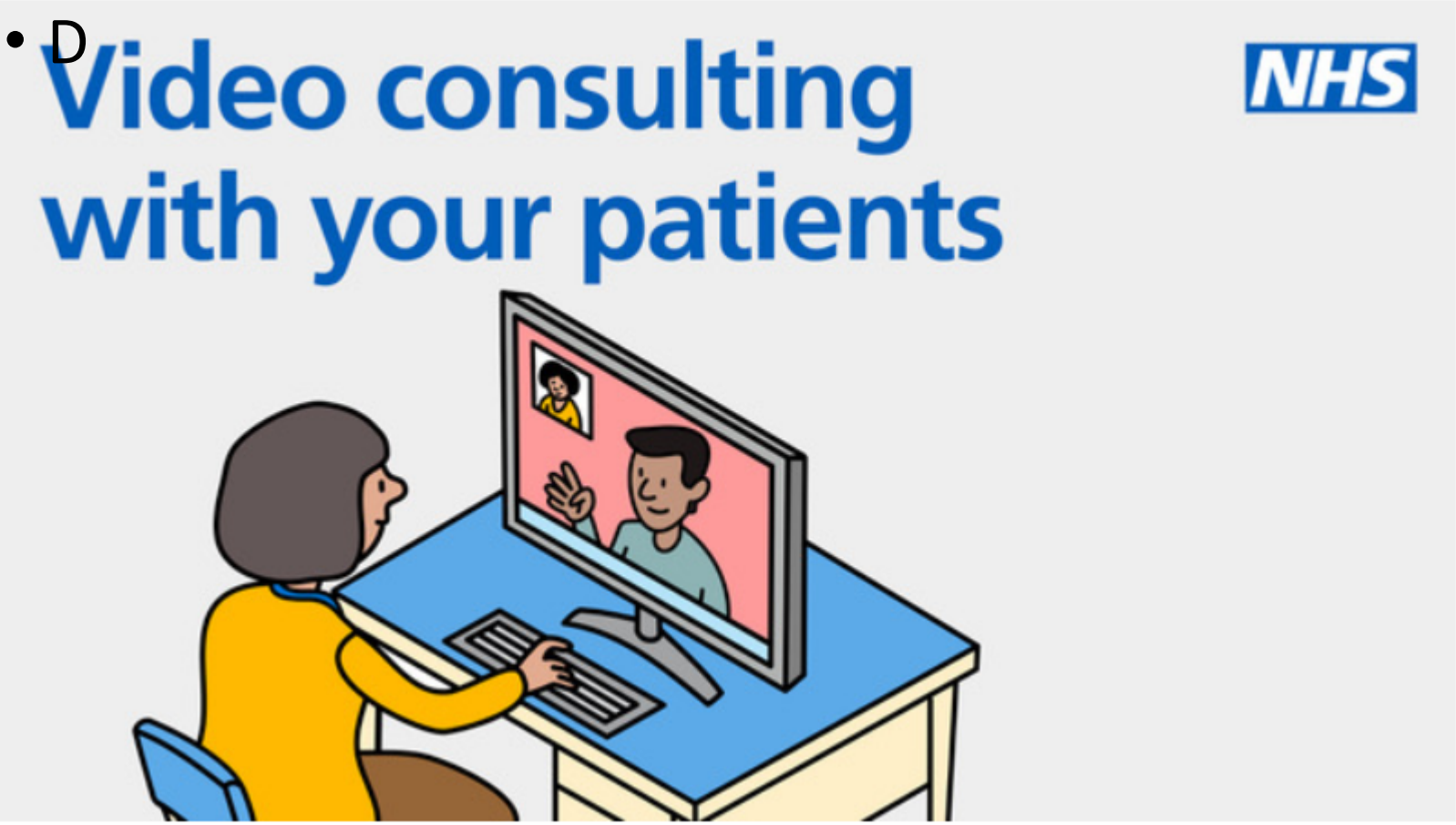
Step by step

- D



Step by step

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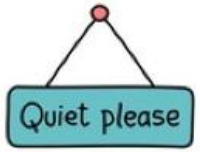
Starting a video consultation

1

Send an email or letter to the patient with instructions before the consultation

2



Use a private, well-lit room where you will not be disturbed

3

Have the patient's phone number ready in case you cannot connect

4

If possible, have two screens so you can take and read notes on one and talk to the patient on the other

5

At the start of each day, test the equipment to make sure it all still works

NHS
Barts Health
NHS Trust

6

Initiate the consultation by inviting or calling the patient by video software

7

If you can see and hear each other, start by waving and ask how the patient is doing

8

Reassure the patient that a video consultation is just like a regular consultation

9

Reassure the patient that the call is confidential and secure

10

For the first video appointment, take and record consent

11

If you have a colleague with you, introduce them

Step by step

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Communicating in a video consultation

12

It works the same as face to face, but there may be glitches, e.g. audio delays or blurry images

13

You don't have to look at the camera. Looking at the screen is fine.

14

Inform patients when you are otherwise occupied, e.g. taking notes

15

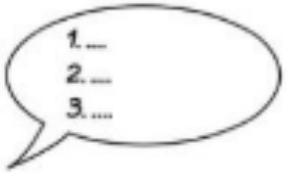
Inform patients they can use the screen camera to show things, e.g. area of pain

16

Record the notes as you would in a traditional face-to-face apointment

Closing a video consultation

17



Summarise the main points of the consultation to make sure nothing is missed

18

Ask the patient whether they want to have the next appointment over a video call

19

If the patient has no more questions, you can say 'goodbye' and end the call

Funders

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Contributors

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