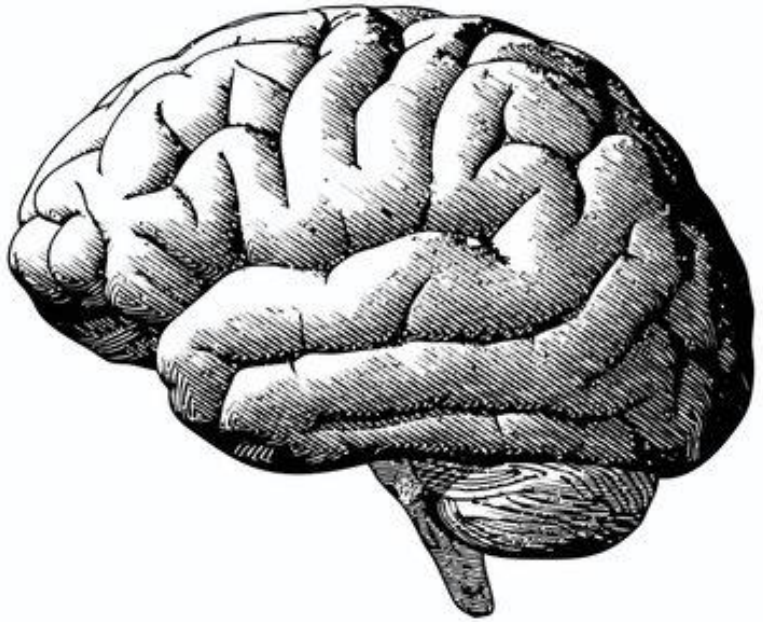
Ottawa Stroke Summit

Telerehabilitation is inferior to seeing the patient in person: A debate



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PRESENTER DISCLOSURE

- **Presenter:** Hillel Finestone
- **Relationships with commercial interests:**
  - **Grants/Research Support:** n/a
  - **Speakers Bureau/Honoraria:** n/a
  - **Consulting Fees:** n/a
  - **Other:** Current board member of Dementia Society of Ottawa and Renfrew County

MITIGATING POTENTIAL BIAS

- My role at the Dementia Society of Ottawa and Renfrew County has no bearing on this talk.

LEARNING OBJECTIVES

You will learn that it's great but that not all aspects of the history, physical examination & our assessments can be performed via telerehabilitation.

Introduction

New reality: I regularly assess patients virtually or via telerehabilitation, a term which has really come into its own since COVID-19.

THESIS: Assessing and treating our stroke rehabilitation patients **in-person** enhances our clinical abilities to deliver quality, optimal rehabilitation care to stroke patients compared to telerehabilitation.

Virtual rehabilitation

- Definition: use of information and communication technologies to deliver rehabilitation services from a distance.
- Services can include prevention, evaluation, monitoring, education, consultation, counseling, coaching, exercise, physiotherapy, occupational therapy, speech language pathology.
- Can be delivered in many settings via videos, text, email.
- **Great idea, but less effective compared to in-person.**

D. Gu, M. E. Dupre (eds.), Encyclopedia of Gerontology and Population Aging, June 2020 (Modification with addition of other sources)

Does Remote Rehabilitation Solve the Healthcare Access Conundrum?

Yes, access has improved.

BUT there are problems.

#1.1 Incomplete history

- History:
  - It is more difficult to explain to patients what is happening to them i.e., the nature of their stroke, or their stroke risk factors
  - Decreased ability to "read the room" i.e. sense the patient’s distress.
  - Patients are distracted by their environment, e.g. their phones/cats/other family members nearby.

#1.2 Incomplete physical exam

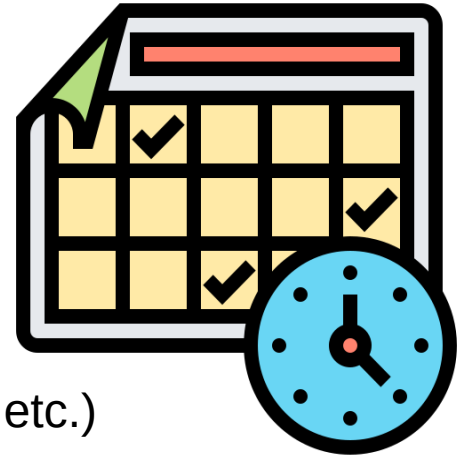
- **Physical exam:**
  - Vitals are harder to obtain
  - Inability to administer specific stroke tests (e.g., visual field testing, neglect syndrome, reflexes, sensation, spasticity/tone assessment)
  - Paper and pencil testing is more difficult (but possible)
- **Assessment:** Sophisticated issues like return-to-work, return-to-driving oft need in-person evaluation.
- **Fatigue?** Dr. Crawford looks at the patient after their "voyage" to the outpatient clinic. "Tells us a lot", she says

#2 Telerehabilitation therapy/training is weaker

- Therapists have more difficulty instructing patients in real time, providing second-by-second instruction e.g., while walking down a hallway or in patient's home.
- Patients reported benefiting from instructions but that 'ACTIV was not physio'. **(Saywell 2020)**
- Tools that therapists often use e.g., 6 min walk test, Dynavision are harder to administer
- Patients may not have sufficient equipment as in a traditional gym
- Safety issues for exercise due to lack of supervision (e.g., fall from chair during transfer)

A six-month telerehabilitation programme delivered via readily accessible technology is acceptable to people following stroke: a qualitative study, Saywell 2020, New Zealand

#3 Appointment scheduling mishaps



- **Organizational** *(reported by clerk, Bruyere Stroke Rehab Outpatient clinic)***:**
  - Additional steps to arrange appointments (confirming email addresses, sending invites, etc.)
  - Emailed invites bounce back, get sent to spam folder, require added confirmation that it was received
- **Patients:**
  - Don't answer their phones
  - Report that they don’t always have access to a computer for virtual appointments
  - Don’t understand how to use programs like Zoom or Teams or have difficulty joining the meeting
  - Forget or lose invite, mix up dates
  - Are too aphasic/cognitively impaired to document the appointment (if family members not available, system does not work)

Summary of Why Telerehabilitation Sucks

Inability to wholly interact and physically examine patients creates difficulty establishing a doctor-patient relationship.

Telerehabilitation limits the major components of physical exam - visual fields, sensory exam, spasticity/tone

It is more difficult to engage patients when they are behind screens than in person. In person, it's easier to appreciate verbal and physical cues regarding patient's (dis)comfort or comprehension of their medical situation.

Organizing appointments is wearing on staff.

Seeing the patient in-person should be your first choice.

Rebuttal

- Telerehabilitation offers great potential as a replacement for or, as an addition to, current therapies. THEREFORE, we should conduct
  - i) studies that compare telerehabilitation versus conventional therapy; that is, treatment delivered face-to-face, or
  - ii) studies that provide telerehabilitation in addition to conventional therapy
- Evaluation of cost-effectiveness should be prioritized and incorporated into future studies.
- Mixed-methods research should be done to further information about the usability of telerehabilitation technologies, participant satisfaction with the intervention, and challenges associated with recruitment of participants.

Rebuttal

- Which patient groups are most likely to benefit from telerehabilitation? Still unclear:
  - Whether people living in remote areas may benefit and whether people that require enhanced support or rehabilitation on discharge or those many years post-stroke would benefit from a short-term program of rehabilitation.
  - Which types of therapies are best suited to telerehabilitation. Health professionals may find it difficult to adapt their practice to provide services via information and communication technologies, particularly when 'hands-on' assessment or treatment is typically involved.
  - If some therapies that do not typically involve 'hands-on' assessment (e.g., speech therapy or counselling), those may be best suited to telerehabilitation.

References

- "Virtual care in Canada: Progress and potential", The Canadian Medical Association, February 2022
- "The State of virtual care in Canada as of Wave three of the Covid-19 pandemic"), Will Falk, Health Canada, 2021
- Interim consensus statement, Canadian stroke best practice recommendation advisory committee, in collaboration with the Canadian Stroke Consortium and the Canadian partnership for stroke recovery
- Duncan PW, Bernhardt J. Telerehabilitation: Has Its Time Come? Stroke. 2021 Aug;52(8):2694-2696. doi: 10.1161/STROKEAHA.121.033289. Epub 2021 Jul 1. PMID: 34192896.
- Telerehab Safety (Communications with Meiqi Guo, MD & team – UHN Toronto Rehab Institute)

Telerehabilitation safety:

The existing literature tells us:

- Adverse events during Telerehab research studies are low in number, and the majority are mild and unrelated to the intervention

Healthcare providers tells us:

- Safety events are rare. Non-physical harm is important to consider in the definition of safety

The medical records tells us:

- Telerehabilitation for patients with stroke and ABI, based on the experience at one academic rehab center, appears to be safe

(Communications with Meiqi Guo, MD & team – UHN Toronto Rehab Institute)

Telerehabilitation policies

- Major issues:
  - A framework for pan Canadian quality-based virtual care governance is needed.
  - Standards, set by medical regulators, should support the provision of competent virtual care.
  - Funding for virtual care service should be available as part of the publicly funded healthcare system.
  - Providers and patients must be guided on the appropriate use of virtual care.

Source: "Virtual care in Canada: Progress and potential", The Canadian Medical Association, February 2022; "The State of virtual care in Canada as of Wave three of the Covid-19 pandemic"), Will Falk, Health Canada, 2021.

Telerehabilitation policies

- Fees must be assigned by provincial, territorial government in collaboration with the virtual care providers.
- Private corporations' effect on the delivery of virtual care needs to be analyzed in terms of patient follow-up, ordering tests, and cost to the system.
- "For a variety of reasons, virtual care is not appropriate for some people, so there is a need for joint decision-making between patient and provider to determine the best mode of care, whether in person, virtual or hybrid".
- *Source: 2022 - Interim consensus statement, Canadian stroke best practice recommendation advisory committee, in collaboration with the Canadian Stroke Consortium and the Canadian partnership for stroke recovery*