

2021

Telerehabilitation in knee arthroplasty, therapeutic alternative and ethical challenge

Carlos Bahamondes-Ávila

Universidad Mayor, Facultad de Ciencias, Escuela de Kinesiología. Temuco, Chile.,
carlos.bahamondes@umayor.cl

Bernarda Cifuentes Cea

Follow this and additional works at: <https://inicib.urp.edu.pe/rfmh>

Recommended Citation

Bahamondes-Ávila, Carlos and Cifuentes Cea, Bernarda (2021) "Telerehabilitation in knee arthroplasty, therapeutic alternative and ethical challenge," *Revista de la Facultad de Medicina Humana*: Vol. 21: Iss. 4, Article 29.

DOI: <https://doi.org/10.25176/RFMH.v21i4.3731>

Available at: <https://inicib.urp.edu.pe/rfmh/vol21/iss4/29>

This Letter to the Editor is brought to you for free and open access by INICIB-URP. It has been accepted for inclusion in Revista de la Facultad de Medicina Humana by an authorized editor of INICIB-URP.



TELEREHABILITATION IN KNEE ARTHROPLASTY, THERAPEUTIC ALTERNATIVE AND ETHICAL CHALLENGE

TELEREHABILITACIÓN EN ARTROPLASTÍA DE RODILLA, ALTERNATIVA TERAPÉUTICA Y DESAFÍO ÉTICO

Carlos Bahamondes-Ávila^{1,a,b}, Bernarda Cifuentes Cea^{1,b}

Mr. Editor

Acting as an alternative to the traditional treatment applied by kinesiologists, physical therapists or physiotherapists, telerehabilitation emerges, which as an emerging telemedicine field, is defined as a set of tools and procedures to develop the rehabilitation process remotely⁽¹⁾. With increasing support and evidence, it is used in a wide range of clinical conditions, providing an opportunity to people in rural and remote areas to obtain high-quality consulting and advice⁽²⁾. A main point of interest is people who underwent knee arthroplasty, the vast majority of whom are older adults, and who, while they remain in rehabilitation therapy, are in a state of fragility, demand the assistance of family members or caregivers and must assume costs and extra time to travel to be seen. For them, telerehabilitation is considered an effective alternative after hospital discharge, since similar results are obtained to conventional treatment in functional status and level of physical activity⁽³⁾ and, as it is developed with specialized clinical supervision, it reduces the costs of care maintaining an efficacy similar to traditional treatment at home or clinic⁽⁴⁾.

Now, incorporating this methodology into the clinical practice makes it necessary to use technology in interaction with people, for this it is imperative to consider potential access barriers that do not appear in the traditional relationship of therapist and patient, such as technological infrastructure, such as the bandwidth that allows video calls and having mobile devices or computers with an appropriate internet connection. Older adults' digital literacy level must also be considered, since interaction with screens, software or applications are the main means of clinical contact in this modality.

In addition, for the kinesiologist or physiotherapist, when leaving the traditional care structure, self-regulation and care for professional ethics is essential, particularly due to the differences or the legal vacuum that may exist in the digital development and public use of personal data in the countries of the South American context. Fortunately, in the health area, patient care procedures are regulated (example: Law 29414 in Peru, Law 20584 in Chile or Statutory Law 1751 in Colombia on the rights and duties of patients), where within the nature of confidential of clinical information, informed consent should be used prior to health care. Although the health-technology-legislation trident may be up and behind in terms of telemedicine applications, it is suggested to follow international recommendations that indicate that the protection of personal data, security in clinical use software and the informed consent of the patient are the three most important parameters for ethics in telerehabilitation⁽⁵⁾. Furthermore, the four principles of bioethics used in health care must continue to be applied: respect for autonomy, non-maleficence, beneficence and justice, promoting well-being and avoiding harm to people and informing of the procedures to be carried out in the therapies patients receive; We also observe that, in particular, telerehabilitation in people operated on with arthroplasties should provide care with a greater sense of

¹ Universidad Mayor, Facultad de Ciencias, Escuela de Kinesiología. Temuco, Chile.

^a MSc, PhD.

^b Kinesiologist

Cite as: Carlos Bahamondes-Ávila, Bernarda Cifuentes Cea. Telerehabilitation in knee arthroplasty, therapeutic alternative and ethical challenge. Rev. Fac. Med. Hum. October 2021; 21(4):885-886. DOI 10.25176/RFMH.v21i4.3731

Journal home page: <http://revistas.urp.edu.pe/index.php/RFMH>

Article published by the Magazine of the Faculty of Human Medicine of the Ricardo Palma University. It is an open access article, distributed under the terms of the Creative Commons License: Creative Commons Attribution 4.0 International, CC BY 4.0 (<https://creativecommons.org/licenses/by/4.0/>), that allows non-commercial use, distribution and reproduction in any medium, provided that the original work is duly cited. For commercial use, please contact revista.medicina@urp.pe

justice, since it allows more equitable access, quality care is distributed in a better way and elements of discrimination are eliminated such as rurality, limited number of places for face-to-face care or the impossibility of traveling by public transport with walking sticks or technical aids.

It is worth mentioning that telerehabilitation, although it simplifies some steps in physiotherapeutic care, does not eliminate professional management from the process nor does it reduce the control, guidance and development of the treatment plan, where decisions around it must continue to be made through supervision clinic, patient feedback and the evolutionary state of the lesion. For this, personal, professional and social responsibility are essential in correctly deploying this process, as well as in the appropriate use of technology. Finally, this

type of professional benefits must comply with the legislative framework of each country, even when, and in response to the pandemic derived from the SARS-CoV-2 virus, legal conditions have been accelerated and created to facilitate access to health, avoid vulnerabilities or continue the care of patients in prolonged treatments⁽⁶⁾.

Telerehabilitation must solve the technological challenge and meet the clinical physical therapy objectives in arthroplasty, with high therapeutic adherence, permanent supervision and solid ethical guidelines, but also seek its way to remove access barriers and facilitate digital inclusion in the South American population, in such a way as to apply this therapeutic alternative in a friendly, intuitive and understandable way for users, especially if they are older adults.

Authorship contributions: Bahamondes-Ávila and Cifuentes Cea have participated in the conception and design of the article, writing and approval of the final version.

Financing: Self-financed.

Conflict of interest: The authors declare no conflicts of interest.

Received: August 14, 2021

Approved: September 13, 2021

Correspondence: Carlos Bahamondes-Ávila

Address: Avenida Alemania 0281. Universidad Mayor, Facultad de Ciencias, Escuela de Kinesiología. Temuco, Chile.

Telephone: 223336318

Email: carlos.bahamondes@umayor.cl

BIBLIOGRAPHIC REFERENCES

1. Rogante M, Kairy D, Giacomozzi C, Grigioni M. A quality assessment of systematic reviews on telerehabilitation: what does the evidence tell us? *Annali dell'Istituto superiore di sanita*. 2015;51(1):11-8.
2. Senbekov M, Saliev T, Bukeyeva Z, Almabayeva A, Zhanaliyeva M, Aitenova N, et al. The Recent Progress and Applications of Digital Technologies in Healthcare: A Review. *International Journal of Telemedicine and Applications*. 2020;2020:8830200.
3. Shukla H, Nair SR, Thakker D. Role of telerehabilitation in patients following total knee arthroplasty: Evidence from a systematic literature review and meta-analysis. *J Telemed Telecare*. 2017;23(2):339-46.
4. Prvu Bettger J, Green CL, Holmes DN, Chokshi A, Mather RC, III, Hoch BT, et al. Effects of Virtual Exercise Rehabilitation In-Home Therapy Compared with Traditional Care After Total Knee Arthroplasty: VERITAS, a Randomized Controlled Trial. *JBJS*. 2020;102(2).
5. Özden F, Lembarky Y. The Ethical Necessities and Principles in Telerehabilitation. *Journal of Health Services and Education*. 2020;3(2):35-7.
6. PAHO. COVID-19: Digital health facilitating telerehabilitation. In: Department of Evidence and Intelligence for Action in Health D, editor. 2021.