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Review

Impact of Telehealth on Palliative Care and Pain Management in Primary Care

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Abstract

Primary health care focuses on the public's needs for a sustainable healthy existence without placing any financial burden on patients in order to ensure the highest degree of health and well-being and their equitable distribution. When pain management and palliative care are incorporated into primary healthcare, patients' quality of life and satisfaction improve. Palliative care includes supportive medical care for patients at any stage of disease with the goals of symptom relief, pain control, stress management, carer respite, and enhancing the quality of life. Globally, a wide range of technologies have been created to establish novel approaches to treating various chronic pain problems. Furthermore, utilising telehealth systems, which have been increasingly included in specialized palliative care over the past ten years and most recently during the COVID-19 pandemic, is one way to address the growing need for palliative care. Through the utilisation of a wide variety of public communication channels, telehealth can be employed for various primary healthcare goals. Telehealth is expected to be effective for conducting routine evaluations. reduced patient burden and missed appointments, as well as improved convenience and treatment of some chronic illnesses such as diabetes and hypertension. However, patients must get instruction and assistance in using this platform, with specific support made accessible for groups known to be at risk. Telehealth's role in primary care needs further elaborated study. The purpose of this research is to review the available information about the impact of telehealth on palliative care and pain management in primary care.

Keywords: *primary care, telehealth, palliative, pain*

Introduction

Primary healthcare is the first line of contact between patients and healthcare. Primary healthcare integrates care, prevention, promotion, and education to address the health needs of all patients at the community level. Operating in the local community and aiming to treat the health issues of all individuals is a fundamental component of basic health care. By reducing overall health care costs while enhancing access and population health, primary care enhances the performance of health systems. The goals of primary healthcare are similar to those of universal health coverage, which strives to ensure that everyone has access to necessary medical treatment as well as safe, effective, and affordable essential medicines and vaccines (1). Around the world, the incidence of non-communicable diseases and the prevalence of the aging population are both rising. Together, these issues place heavy pressure on the healthcare system and its providers, as well as contribute to the global under-promotion of the healthcare system. Therefore, for this reason, palliative care services must be accessible and available at all levels of the healthcare system. Access to early palliative care is improved by integration into primary care, which also helps with symptom control, cancer treatment compliance, quality of life, and overall satisfaction (2).

Palliative care is defined as an approach that enhances the quality of life for people with life-threatening illnesses and their families, including both adults and children. Through the early diagnosis, accurate assessment, and treatment of pain and other issues, whether physical, mental, or spiritual, it avoids and alleviates suffering, only 14% of the estimated 40 million people who require palliative care each year in the world actually receive it (3). The need for palliative care services is growing globally as a result of an increase in the number of people living with multimorbidity and life-limiting diseases. The implementation of early palliative care is linked to a higher quality of life. Utilising telehealth systems, which have been increasingly included in specialised palliative care over the past ten years and most recently during the COVID-19 pandemic, is one way to address the growing need for palliative care (4).

Globally, a wide range of technologies have been created to establish novel approaches to treating various chronic pain problems. Communication between healthcare practitioners and recipients is made easier by electronic-based technologies like telemedicine, which is frequently used interchangeably with telehealth, and E-health. Telemedicine makes use of communications and information technology to offer people healthcare services like monitoring patient treatment response and counselling who live far from medical professionals. Call centres, mobile devices, video conferencing, and web-based platforms can all be used to provide telemedicine healthcare services (5). At all levels of the health system, telehealth is increasingly being used as a practical means of delivering high-quality treatments. Through the utilisation of a wide variety of public communication channels, telehealth can be employed for various primary healthcare goals. Telehealth can offer scalable primary healthcare services both nationally and internationally owing to the opportunistic use of already-existing devices and platforms. However, there are obstacles to telehealth implementation in primary healthcare from a technical, organizational, and human perspective. There is still more to be done in terms of telemedicine's application in public health and primary healthcare, despite its growing use in secondary and tertiary healthcare services (6). The purpose of this research is to review the available information about the impact of telehealth on palliative care and pain management in primary care.

Methodology

This study is based on a comprehensive literature search conducted on June 15, 2023, in the Web of Science, PubMed/Medline and Cochrane databases, utilizing the medical topic headings (MeSH) and a combination of all available related terms, according to the database. To prevent missing any possible research, a manual search for publications was conducted through Google Scholar, using the

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reference lists of the previously listed papers as a starting point. We looked for valuable information in papers that discussed the information about impact of telehealth on palliative care and pain management in primary care. There were no restrictions on date, language, participant age, or type of publication.

Discussion

As a result of the rising demand for high-quality end-of-life care, health care systems are already overburdened. Access issues, particularly after hours, can have an influence on a patient's quality of life and contribute to health inequities. Patients and families that live in rural and distant locations have even greater difficulties because services are less accessible after hours. When symptoms are not managed or controlled and the right care is not provided immediately, it is a cause of great concern and worry for patients and their families. Telehealth is one method for providing after-hours access to palliative care services. Telehealth is the use of telecommunication technologies to provide remote access to health care services and related procedures like health education (3). During the COVID-19 pandemic, telehealth has opened up numerous options for patients and physicians, administering healthcare without running the risk of contracting an infection from hospitalisation. As a result, both patients and professionals place a high value on it. Telehealth is expected to be effective for conducting routine evaluations. Patients must get instruction and assistance in using this platform, with specific support made accessible for groups known to be at risk (7).

Evidence from literature

In the treatment of patients with advanced cancer, telemedicine has a number of claimed advantages. These include expanded patient satisfaction and generalised enhanced access to interdisciplinary oncological and palliative care. Patients can get numerous services from a single place, saving both money and time on travel. Additionally, telemedicine can promote communication, provide continuity of care, and enable patients in remote areas to take part in clinical trials. Advanced cancer patients who use telemedicine tend to miss fewer visits. Palliative care patients with advanced cancer frequently have trouble getting to in-person outpatient appointments because of mobility challenges, dependence on the carer, and a heavy symptom load. In order to effectively control the severity of their symptoms, any new or changing symptoms, and obtain psychological support for both them and their families, these patients require brief interval follow-up consultations. Patients with advanced cancer can receive high-quality and timely palliative treatment through telemedicine without having to deal with the difficulties of in-person visits. Telemedicine is a novel and innovative method of delivering healthcare (8).

Steindal et al. described that the use of telemedicine in palliative home care appears to be practical, improving access to medical specialists at home and boosting feelings of safety and security. A sincere contact with medical providers appears to be made possible by the visual aspects of telehealth. However, there are conflicting findings regarding whether telehealth use enhances quality of life and reduces complicated symptoms. Therefore, future studies should look into how telehealth is used by patients with terminal illnesses other than cancer and those who are 85 years of age or older (9). Fernando et al. narrated that the burden of end-stage cardiovascular disease is increasing and access to the best evidence-based care, must be improved. For patients with cardiovascular disease, disparities are obvious in rural areas. There are practical rules for integrating clinical services. Integrating cardiac and palliative care services is necessary to identify the primary care lead, with heart failure nurses coordinating. In order to obtain the best and agreed-upon results, earlier communication about the illness implications, symptom burden, and care objectives is incorporated into the integrated model. When included into an integrated care paradigm, telehealth can benefit a rural population, but additional research on telemonitoring is necessary before generalizations about the function of this costly technology can be made. Plans for individual care can help everyone involved. Subcutaneous furosemide may help keep a patient at home, and

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with proper palliative care, the patient's home can serve as the place of death if that is what the patient wishes. As long as the care paradigm is unified to accommodate them, rural patients with end-stage heart failure can be successfully maintained at home. This includes coordination of the cardiac team's heart failure nurses, palliative care, and general practice support (10).

Contrarily, Powell and Silveira stated that for older persons who have multiple medical conditions or are fragile, tele-palliative care may be difficult. Many people struggle with technology. Others find it practically impossible to converse this way due to hearing and vision problems. While some others suffer from severe cognitive impairment that makes it impossible to get a thorough history or ensure that physician advice is followed appropriately. Therefore, the caregiver's participation in the virtual consultation is crucial for these patients. By advising that carers attend the appointment, healthcare professionals who are referring patients to palliative care can increase the success of the first visit. Since COVID-19, telemedicine has made many palliative care providers more reachable; nonetheless, older persons may struggle with technology and need carer engagement to use. Palliative consult teams now play a bigger part in the daily interaction with families who are unable to visit the patient and in offering emotional support to front-line staff members in the inpatient setting. These initiatives have received support from busy primary care physicians, but maintaining these improvements will be difficult (11). The number of patients requiring palliative care in primary care has increased as a result of medical developments, scarce resources, and changing demographics. District nurses can learn about palliative care through an interprofessional telemedicine educational programme, which is advantageous. However, programming must be interactive and tailored to different students' needs. Management and technology support are needed for key nurse jobs to maximise information sharing. Implied effects suggest increased need, particularly in the primary care sector, for palliative care services and education. The demand for palliative care in primary care is rising, which is driving a greater need for knowledge expansion in this field. However, there is little evidence on the use of telemedicine to train medical personnel in primary care, but very little is known about the viewpoint of district nurses who have received palliative care education via telemedicine (12).

Pain and fatigue that go untreated can lower quality of life, prolong disability, and worsen psychological anguish. Throughout the cancer care continuum, managing pain and fatigue is a primary goal, and treatments to treat these symptoms should be incorporated into standard treatment. Patients with pain and exhaustion who are self-motivated and have high baseline information and psychosocial demands may respond better to telemedicine intervention. The participants' distinct educational experiences also suggest that there may be a need for education that is specifically tailored to their needs. To evaluate the effectiveness of this programme in a more discerning, engaged population, larger-scale research are required (13). Cooke et al. described that reduced patient burden and missed appointments, as well as improved convenience and treatment of some chronic illnesses such as diabetes and hypertension, are advantages of telehealth. Although, loss of contact, increased miscommunication, and less thorough care exchanges are some of the difficulties associated with telehealth. The COVID-19 epidemic boosted the use of telemedicine in primary care safety net clinical systems for the management of opioid use disorder and chronic non-cancer pain. There are significant obstacles to telehealth, but it is unclear how these obstacles affect the urban safety net, primary care clinicians, and their patients. Patient burden, communication and technological obstacles, pain management, opioid abuse, and medical complexity should all be taken into account when deciding whether to maintain or increase telemedicine (14).

Geraghty et al. reported that The Internet intervention SupportBack seemed to possibly promote lower back pain self-management. The stated advantages centred on reassurance and continued support for implementing

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behavioural changes. The addition of telephone support from a physiotherapist improved the patient's experience and the intervention's potential usefulness even further (15). Dario et al. stated that delivering therapies for low back pain has become a viable alternative with the emergence of telehealth. Evidence of moderate quality shows that current telehealth therapies alone do not reduce pain and disability in chronic lower back pain any more than minimum interventions do. Applications and telehealth as an addition to typical care are still being investigated in modern telehealth media (16). Justino et al. described that although there have been improvements in recent years, the analysis of scientific production has shown that palliative care practises in primary healthcare are still in their development and, when they do occur, they have limitations such as discontinuity of care, complexity and/or difficulties in palliative care at home, distinctive features of palliative care with high-cost needs, infrastructure, a scarcity of visits by health professionals, limited multidisciplinary approaches, and inadequate infrastructure (17). The role of telehealth in primary care for the management of chronic pain and palliative care is not well defined in literature and strongly necessitates further research to elaborately study the impact of telehealth especially post-COVID-19 era as the present literature is scarce and limited mostly to pandemic times.

Conclusion

The quality of life and satisfaction of patients are improved when pain management and palliative care is included into primary healthcare. Telehealth has shown promising effects in this regard as several benefits including better patient compliance and satisfaction are reported however, the available evidence is limited and requires findings and research of long-term population-based studies to generalize the impact of telehealth in this regard.

Disclosure

Conflict of interest

There is no conflict of interest

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Ethical consideration

Non applicable

Data availability

Data that support the findings of this study are embedded within the manuscript.

Author contribution

All authors contributed to conceptualizing, data drafting, collection and final writing of the manuscript.

References

1. Guan WJ, Ni ZY, Hu Y, Liang WH, Ou CQ, He JX, et al. Clinical Characteristics of Coronavirus Disease 2019 in China. N Engl J Med. 2020;382(18):1708-20.

2. Wu Z, McGoogan JM. Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention. JAMA. 2020;323(13):1239-42.

3. Agdamag ACC, Edmiston JB, Charpentier V, Chowdhury M, Fraser M, Maharaj VR, et al. Update on COVID-19 Myocarditis. Medicina (Kaunas). 2020;56(12).

4. Berlin DA, Gulick RM, Martinez FJ. Severe Covid-19. N Engl J Med. 2020;383(25):2451-60.

5. Sagoschen I, Keller K, Wild J, Munzel T, Hobohm L. Case Fatality of Hospitalized Patients with COVID-19 Infection Suffering from Acute Respiratory Distress Syndrome in Germany. Viruses. 2022;14(11).

6. Shi S, Qin M, Shen B, Cai Y, Liu T, Yang F, et al. Association of Cardiac Injury With Mortality in Hospitalized Patients With COVID-19 in Wuhan, China. JAMA Cardiol. 2020;5(7):802-10.

7. Cizgici AY, Zencirkiran Agus H, Yildiz M. COVID-19 myopericarditis: It should be kept in

http://dx.doi.org/10.52533/JOHS.2023.30704

mind in today's conditions. (1532-8171 (Electronic)).

8. Pirzada A, Mokhtar AT, Moeller AD. COVID-19 and Myocarditis: What Do We Know So Far? (2589-790X (Electronic)).

9. Imazio M, Klingel K, Kindermann I, Brucato A, De Rosa FG, Adler Y, et al. COVID-19 pandemic and troponin: indirect myocardial injury, myocardial inflammation or myocarditis? Heart. 2020;106(15):1127-31.

10. Wang D, Hu B, Hu C, Zhu F, Liu X, Zhang J, et al. Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus-Infected Pneumonia in Wuhan, China. JAMA. 2020;323(11):1061-9.

11. Priyadarshni S, Westra J, Kuo YF, Baillargeon JG, Khalife W, Raji M. COVID-19 Infection and Incidence of Myocarditis: A Multi-Site Population-Based Propensity Score-Matched Analysis. Cureus. 2022;14(2):e21879.

12. Basso C. Myocarditis. N Engl J Med. 2022;387(16):1488-500.

13. Ammirati E, Lupi L, Palazzini M, Hendren NS, Grodin JL, Cannistraci CV, et al. Prevalence, Characteristics, and Outcomes of COVID-19-Associated Acute Myocarditis. Circulation. 2022;145(15):1123-39.

14. Bemtgen XA-O, Kaier K, Rilinger J, Rottmann F, Supady A, von Zur Mühlen C, et al. Myocarditis mortality with and without COVID-19: insights from a national registry. (1861-0692 (Electronic)).

15. Global Burden of Disease Study C. Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990-2013: a systematic analysis for the Global Burden of Disease Study 2013. Lancet. 2015;386(9995):743-800.

16. Siripanthong B, Nazarian S, Muser D, Deo R, Santangeli P, Khanji MY, et al. Recognizing COVID-19-related myocarditis: The possible pathophysiology and proposed guideline for diagnosis and management. Heart Rhythm. 2020;17(9):1463-71.

17. Keller K, Sagoschen I, Konstantinides S, Gori T, Munzel T, Hobohm L. Incidence and risk factors of myocarditis in hospitalized patients with COVID-19. J Med Virol. 2023;95(3):e28646.

18. Luk A, Clarke B, Dahdah N, Ducharme A, Krahn A, McCrindle B, et al. Myocarditis and Pericarditis After COVID-19 mRNA Vaccination: Practical Considerations for Care Providers. Can J Cardiol. 2021;37(10):1629-34.

19. Guo T, Fan Y, Chen M, Wu X, Zhang L, He T, et al. Cardiovascular Implications of Fatal Outcomes of Patients With Coronavirus Disease 2019 (COVID-19). JAMA Cardiol. 2020;5(7):811-8.

20. Maestrini V, Birtolo LI, Francone M, Galardo G, Galea N, Severino P, et al. Cardiac involvement in consecutive unselected hospitalized COVID-19 population: In-hospital evaluation and one-year follow-up. Int J Cardiol. 2021;339:235-42.

21. Inciardi RM, Lupi L, Zaccone G, Italia L, Raffo M, Tomasoni D, et al. Cardiac Involvement in a Patient With Coronavirus Disease 2019 (COVID-19). JAMA Cardiol. 2020;5(7):819-24.

22. Puntmann VO, Carerj ML, Wieters I, Fahim M, Arendt C, Hoffmann J, et al. Outcomes of Cardiovascular Magnetic Resonance Imaging in Patients Recently Recovered From Coronavirus Disease 2019 (COVID-19). JAMA Cardiol. 2020;5(11):1265-73.

23. Rajpal S, Tong MS, Borchers J, Zareba KM, Obarski TP, Simonetti OP, et al. Cardiovascular Magnetic Resonance Findings in Competitive Athletes Recovering From COVID-19 Infection. JAMA Cardiol. 2021;6(1):116-8.

http://dx.doi.org/10.52533/JOHS.2023.30704