

Telemedicine in Spine Surgery

Study design: Cross-sectional, anonymous, international survey.

Goals:

The COVID-19 pandemic has led to the rapid adoption of telemedicine in spine surgery. This study sought to determine the degree of adoption and global perspectives on telemedicine in spine surgery.

Methods:

An anonymous questionnaire was emailed to all members of AO Spine International, covering the participant's experiences and perceptions of telemedicine. Descriptive statistics were used to show the responses. Responses were compared between regions.

Results:

485 spine surgeons participated in the survey. Telemedicine use increased from <10.0% of all visits to >39.0% of all visits. The majority of providers (60.5%) made at least one telemedicine visit. The "telemedicine" format differed greatly by region: European (50.0%) and African (45.2%) surgeons used telephone calls more, while Northern (66.7%) and South American (77.0%) surgeons more he used a lot of videos

($P < 0.001$). North American providers used telemedicine the most during COVID-19 (> 60.0% of all visits). 81.9% of all providers "accepted/strongly agreed" telemedicine was easy to use. Participants agreed that imaging review, initial appointment, and post-operative care can be performed using telemedicine.

They tended to "accept" about it. Almost all surgeons (95.4%) preferred at least one face-to-face visit before the day of surgery.

Solution:

Our study noted significant geographic differences in the rate of telemedicine adoption and the telemedicine platform used. The results show a significant increase in the use of telemedicine, particularly in North America. Spine surgeons have found that telemedicine is suitable for imaging examination, initial visits, and follow-up visits, but the vast majority still prefer at least one face-to-face preoperative visit.

Telemedicine Use in Addiction Treatment: Current Practices and Organizational Practice Features

Telemedicine technologies can change substance use disorder (SUD) treatment delivery patterns and outcomes.

Study Purposes:

Objectives of this study (a) Evaluate relevance in using certain telemedicine practices in SUD treatment settings. (b) Evaluate usage rates of telemedicine practices in SUD treatment settings. (c) Determine whether organizational technology adoption behavior profile groups can be developed based on an organization's technology use characteristics. (d) Assess what organizational factors influence an organization's technology adoption behavior.

Specific objectives seek to build on the existing scientific foundation based on (a) diffusion of innovations, (a) going beyond existing technology adoption research that focuses primarily on the effectiveness of specific technology applications but does not explore adoption behaviors in SUD services. Addressing organizational factors associated with adoption and confirming how organizational factors such as (c) leadership style, staff cohesion, interdepartmental collaboration, organizational innovation history, etc. adding to the technology adoption literature by rejecting, and the level of internal turbulence influences technology adoption.

Materials and methods:

Design _ The study conducted a cross-sectional survey of institutional readiness for telemedicine technology interest, use, and technology adoption traits in SUD organizations in the United States. The study was approved by the University of Wisconsin Health Science Institutional Review Board.

Conclusion:

These data demonstrate that SUD treatment organizations in the United States are interested in greater use of telemedicine technology. The use of telemedicine in SUD treatment settings will likely begin with computerized assessments and messaging appointment reminders,

followed by the use of phone, video and mobile health applications. Organizations that pursue these goals will have demonstrated innovative trends in other enterprise applications and will have the highest level of leadership supporting the use of telemedicine. SUD treatment outcomes need to be improved and overdose deaths need to be reduced. Telemedicine could be a mode to achieve these desired goals, or at least provide new ways to treat SUD and provide healing aids.

Telehealth and Telemedicine in Infectious Diseases

In the last 20 years, telemedicine has effectively demonstrated its ability to increase access to care. This access has the ability to deliver quality clinical care and potential savings to the healthcare system. With increasing frequency, doctors, clinics and medical centers, it incorporates telehealth into teaching and research, as well as using modern telecommunications technologies to manage a wide range of acute and chronic conditions. Technologies encompassing telehealth, telemedicine, and mobile health (mHealth) are evolving rapidly, and the Infectious Diseases Association of America (IDSA) has produced this updated status statement to educate its members in the use of telemedicine and telehealth technologies.

Small animal general practice veterinarians' use and perceptions of synchronized video-based telemedicine in North America during the COVID-19 pandemic

Aim:

To evaluate small animal general practice veterinarians' use and perception of synchronized video-based telemedicine before and during the coronavirus disease 2019 (COVID-19) pandemic.

Sample:

550 participating veterinarian members of the Veterinary Information Network (VIN).

Procedures:

An anonymous online questionnaire was used to collect data on perceptions and concurrent video-based telemedicine use from VIN member veterinarians in small animal general

practice. Two emails were sent to all VIN members to distribute the web-based survey. For consistency, only responses from North American veterinarians who reported working in general practice in small animals were included in the analyses. Replies September 28, 2020 to October 21, 2020 gathered between.

Results:

There were 69,488 recipients and 680 participants (1.0% response rate), of which 550 had North American internet protocol addresses and reported working in small animals general practice. Not all participants answered all questions. Use of video-based telemedicine has increased significantly among respondents during the COVID-19 pandemic, with most (86/130 [66.2%]) reporting little or no difficulty in adopting video conferencing. Respondents also reported that telemedicine treatment took less time (61/135 [45.2%]) and resulted in less financial compensation (103/135 [76.3%]) than face-to-face consultation. Several participants reported concerns about legal issues and the potential inadequacies of telemedicine.

Results and Clinical Relevance:

Our results showed that a significant proportion of respondents included synchronized video-based telemedicine in their practice during the COVID-19 pandemic. Despite the low perceived difficulty in adopting videoconferencing telemedicine, many have planned to discontinue it for some clinical applications once the pandemic is over. More research is needed to elucidate perceptions and challenges in the successful use of veterinary telemedicine.

Opportunities and challenges for telemedicine in rural America

Rural communities chronically inadequate health care resources suffers from its deficiency. Few primary care practitioners and the need to travel long distances for specialized care have made it difficult for many rural residents to get the care they need when they need it. Telemedicine provides a tool to improve this situation. However, as is often the case, the potential of telemedicine has not been realized in rural America. Significant technical, regulatory, organizational and financial barriers have prevented rural communities from benefiting from technology. This article discusses these issues and offers a recipe for creating successful rural telemedicine programs.

Meeting the need for educational standards in telemedicine and telehealth practices

The first telemedicine standard developed, documented, and widely adopted was the radiology standard, which included the requirements and qualifications, as well as the technical and image transmission standards necessary for the practice of teleradiology. However, many other health professionals working full-time or part-time in telemedicine and telehealth (for example, telepsychiatry, telepathology, teletriage and tele-ophthalmology) also need and use special skills and knowledge. Currently, they gain these skills on the job and their skills may not be recognized. There should be performance standards and telepractice guidelines for professionals operating in telemedicine and telehealth.

The Use and Acceptance of Telemedicine in Orthopedic Surgery During the COVID-19 Pandemic

Background:

A major byproduct of the recent coronavirus disease 2019 (COVID-19) pandemic has been the rapid adoption of telemedicine in orthopedic practice.

Login:

The aim of the study was to assess the satisfaction associated with telemedicine and to determine how telemedicine is used by orthopedic surgeons in response to the social distancing efforts required by the COVID-19 pandemic.

Methods:

We developed a questionnaire to assess surgeon's perception of telemedicine during the COVID-19 pandemic. The questionnaire consisted of four main sections focusing on (1) surgeon characteristics and telemedicine use, (2) telemedicine for new patients, (3) telemedicine for routine follow-up patients, and (4) telemedicine for postoperative patients.

Results:

We collected 268 survey responses. Overall, 84.8% of surgeons used telemedicine, but only 20.5% of surgeons used it before the pandemic COVID -19. Overall satisfaction with telemedicine was 70.3% \pm 20.9%. Of those using telemedicine, 75% currently use it for new patients, 86.6% for routine follow-up, and 80.8% for current post-operative patients ($p = 0.01$). Compared to new patients, surgeons requiring familiarity and physical therapy for routine follow-up or post-operative patients

had higher satisfaction with performing examination maneuvers ($p < 0.0001$ for both). However, there were no differences between cohorts in satisfaction with imaging ($p = 0.36$). Surgeons felt they were more likely to continue using telemedicine for patients during routine follow-up or after surgery following the COVID -19 pandemic than for new patients ($p < 0.0001$).

Argument:

Due to the challenges posed by the COVID-19 pandemic, the use of telemedicine among orthopedic surgeons has increased significantly in recent months.

Conclusion:

Our study revealed that physicians' practice of telemedicine has increased significantly as a result of the COVID-19 pandemic, the majority of surgeons are satisfied with its use in their practice, and plan to incorporate telemedicine into their practice beyond the pandemic.

Neurosurgery and Telemedicine in the United States: Evaluation of Risks and Opportunities

Telemedicine, technological advances and evolving reimbursement policies has grown significantly in the last 20 years.

Methods:

We reviewed the general and peer-reviewed literature on telemedicine and neurosurgery, with particular attention to best practices, relevant state and federal policy requirements, economic considerations, and prospective clinical trials.

Results:

Despite technological advances, growing interest, and increasing reimbursement opportunities, telemedicine use remains limited because of concerns about the apparent need for telemedicine services, lack of universal reimbursement, lack of interstate licensing reciprocity, lack of universal access to key technologies, and similar concerns. Veterans Health, an agency of the U.S. Department of Veterans Affairs, represents an environment in which these concerns can be largely addressed and is a model for telemedicine best practices. Results from VA show significant cost savings and high patient satisfaction with remote treatment of chronic neurological conditions.

Overall, the economic and clinical benefits of telemedicine are

- 1) reduced patient travel and work time
- 2) Remote consultation with subspecialists such as neurosurgeons
- 3) Remote consultation to support triage and care in time-sensitive scenarios, including acute stroke care and "teletrauma."

Telemedicine is effective in many areas of healthcare, and neurosurgery will become more important in patient care. We support legislative advances to reduce barriers to the growth of telemedicine.

Global telemedicine research

The number and scope of telemedicine projects and practices worldwide are growing rapidly, with exponential expansions in national and international information infrastructures and the computer capabilities to support them. To monitor these rapid changes, the Public Service Communications Center (CPSC) in Arlington, VA, developed the Telemedicine and Information Technology in Healthcare: Project Monitoring Document (on behalf of the National Aeronautics and Space Administration (NASA).) This document is maintained by the CPSC and is updated frequently. In telemedicine and healthcare informatics, it follows the following areas: (1) existing major Federal grant and other aid programs and activities; (2) legislation influencing policy in these areas; (3) projects using various technologies across the USA; and (4) telemedicine projects/interests in other countries. This article is a survey of international (global) telemedicine activities outlined in this document.

The COVID-19 Pandemic and Rapid Implementation of Adolescent and Young Adult Telemedicine: Challenges and Opportunities for Innovation

This study focuses on the response to the Coronavirus Disease 2019 (COVID-19) pandemic.

describes the rapid implementation of telemedicine in an adolescent and young adult (AYA) medical clinic. While there are no specific application guidelines for AYA telemedicine, observations made during this practice may highlight the difficulties encountered and suggest solutions to some of these challenges.

Methods:

For a few weeks in March 2020, San Francisco California University of Adolescent and Young Adult Medicine, quickly replaced most face-to-face visits with telemedicine visits. This required logistical problem solving, the collaboration of all clinical staff, and a continuous reassessment of clinical practice. This article describes the observations made during these processes.

Results:

The number of telemedicine visits increased from zero to 97% of patient visits in one month. The number of monthly visits is comparable to one year ago. Your clinic while there are limitations to its ability to make health monitoring visits, many services for general health, mental health, reproductive health, eating disorders, and addiction treatment. Service providers, general mental health, reproductive health, eating disorders, and addressing specific challenges related to addiction services. Finding creative solutions to challenges. High-quality AYA telehealth. Opportunities for implementation and expansion were also identified. The COVID -19 pandemic is leading to widespread practice of telemedicine. telemedicine clinic. While it may seem feasible and acceptable to our patients, privacy, care, and safety are not guaranteed. There are unanswered questions about quality and health disparities. Guidelines are also needed.

Use of telemedicine for self-management of hypertension: a systematic review.

Hypertension is a chronic condition that affects adults of all ages. In the United States, one in three adults has hypertension, and only about half of hypertensives are adequately controlled. This costs the country \$46 billion each year in health care costs, essential medications and missed work days. The key to successful treatment is finding easier ways to manage this condition.

Goal:

Telemedicine is a solution to reduce the number of doctor visits for chronic conditions.

Is to be used. Research on the impact of using tele-health in healthcare settings is limited. There are potential benefits to implementing tele-health programs for patients with chronic conditions. The purpose of this study was to weigh the facilitators and barriers to the use of tele-health.

Methods:

To gather information on self-management of hypertension through the use of telemedicine, systematic searches of the CINAHL Complete Index of Nursing and Allied Health Literature through the Elton B Stephens Company (EBSCO) and PubMed (which queries MED-LINE) were conducted.

Results:

Results identify facilitators and barriers to implementing hypertension self-management through tele-health. The most common facilitators include better access, improved health and quality, patient knowledge and engagement, technological growth with remote monitoring, cost effectiveness, and increased convenience. The most common barriers include lack of evidence, difficult to maintain self-management, lack of long-term consequences/more scope of care, and long-term commitment to additional workload.

This review provides guidance to health care professionals in identifying best practices for implementing new procedures and incorporating telemedicine procedures into their practice. Understanding the facilitators and barriers to implementation is important, as is understanding how these factors impact the successful implementation of telemedicine in hypertension self-management.

The Application and Usefulness of Telemedicine During the COVID-19 Pandemic: A Scoping Review

Objectives:

To provide rationale and guidance for its implementation to overcome the limitations associated with the worldwide pandemic, the COVID-19 pandemic

Identify and summarize the available literature on accelerating the use of telemedicine.

Methods:

We conducted a scope review through different search strategies on MEDLINE and Google Scholar to identify available literature reporting data on the application and usefulness of various telemedicine modalities during the current pandemic. We have summarized the included studies in an explanatory way according to the field and the way of application.

Results:

We included 45 studies that met the selection criteria. Approximately 38% of the studies were conducted in the United States (USA), followed by 15.5% in India and 15.5% in China. Most studies (73%) were cross-sectional studies based on historical records. Except for 1 study published in Spanish, all publications were written in English. Most reports focused on the use of telemedicine for outpatient care, followed by in-hospital care.

Solution:

The COVID-19 pandemic has spurred the use of telemedicine, a tool that has changed the delivery of medical services. Overcoming challenges for patient care during the pandemic

Various application modes are useful for its benefits are specific to different medical applications. Such benefits, combined with guidance and reported experience, should invite health systems to work towards the effective and comprehensive implementation of telemedicine in a variety of fields.

Telemedicine and the rural dementia population: a systematic review

Telemedicine is a timely solution to the limitations that COVID -19 social distance has imposed on traditional methods of health care delivery. Geriatric populations affected by dementia need better access to health care, especially in rural areas. Therefore, the aim of this systematic review is to examine the impact of telemedicine on health outcomes of older people with dementia in rural areas.

Methods:

A systematic review was conducted using Ovid Medline, Web of Science, and ACM Digital Libraries. The key words for article selection were (Telemedicine OR Telehealth) AND (Rural) AND (Age* OR Elderly*) AND (Dementia) and (Telemedicine) AND (Rural Health OR Rural Population OR Hospitals, Rural OR Rural Health Services) AND (Elderly OR Ageing) AND (Dementia OR Multiple Infarct Dementia OR Vascular Dementia OR Frontotemporal Dementia). Of the 94 articles identified, 79 (84.0%) were scanned, 58 (61.7%) were evaluated, and 12 (12.8%) were included.

Results:

The studies had different populations. Two were conducted in Australia, five in Canada, one in Korea, and four in the United States. The studies used a variety of cognitive tests and reported mixed results in terms of differences in patient performance on face-to-face versus telemedicine consultation assessments. Overall, both patients and physicians were satisfied with telemedicine; however, there were mixed results regarding the reliability of the cognitive tests and the infrastructure required. In the telemedicine group, scores for convenience, satisfaction, comfort, and recommendation of telemedicine were high, and physicians indicated they would use telemedicine again.

Solution:

The test conditions and availability of telemedicine do not provide conclusive results on whether telemedicine can improve dementia management in geriatric individuals.

Telemedicine in pediatric cardiology: a scientific statement from the American Heart Association.

Advances in technology and broadband are revolutionizing current medical practice.

Created. The field of pediatric cardiology is no exception, relying on rapid diagnosis and cardiac imaging to identify infants and children with potentially life-threatening cardiovascular disease. As the relationship between telemedicine and pediatric cardiology has progressed, the need has arisen to create a large and comprehensive document that examines all the different aspects of telemedicine in pediatric cardiology. For more than a decade, a large body of literature has been published describing individual experiences and practices, but there is no comprehensive statement or document outlining this rapidly evolving field.

Specific areas explored in this document include neonatal and fetal teleechocardiography, implications for community sonographer training, pulse oximetry programs, quality improvement initiatives and credentialing criteria, and remote electrophysiologic monitoring. The document also includes an overview of teleconsultation and teleosulation, direct-to-consumer and home monitoring programs, and the use of telemedicine and pediatric cardiology in the ICU. It also details the legal, policy, and judicial aspects of telemedicine, as well as information on financing and reimbursement.

Many terms are used interchangeably in the literature; a brief description will assist readers of this document. The term telemedicine is defined as the use of technology to bridge distances in any field of medicine; telemedicine, a specific technology for performing clinical medicine remotely.

Is the application. The term telecardiology is defined as the broad application of telemedicine, especially in the field of cardiology, with tele-echocardiography being the most commonly used application in this field.

Telemedicine in the COVID -19 era: a narrative review based on current evidence

During the recent COVID -19 pandemic, healthcare providers were encouraged to increase their use of telemedicine and to use telehealth platforms for many of their clients with chronic diseases. Because of the epidemic itself, nearly every country in the world was placed under emergency quarantine. In this article, we review the literature on the use of telemedicine during the COVID -19 pandemic. We then identified the use of telemedicine in various countries around the world and assessed future steps to increase the use of eHealth technologies. As a result of COVID -19, the eHealth agenda, particularly telemedicine, has gained momentum in many countries. COVID -19 is impacting people's daily lives and posing challenges to the management of healthcare facilities for both infected

and uninfected patients. Much of the rapid increase in the use of telemedicine can be attributed to previous pandemics.

This can be attributed to advances made in the field in response to COVID -19, particularly in developed countries. Given the lack of effective treatment options, large numbers of unvaccinated individuals, social distance, and quarantine measures, telemedicine is the safest and most convenient way to engage with patients and physicians. Despite this readiness, many hurdles still need to be overcome for the telemedicine system to function properly and efficiently across countries.

Transforming Gastroenterology Care with Telemedicine

Healthcare is changing rapidly, so we must change over time to develop more efficient, practical, cost-effective and, importantly, high-quality methods of patient care. We teach medical students that optimal patient care requires face-to-face interaction to gather information about the patient's history and perform the physical examination. With this

However, the management of many patients, particularly those with chronic diseases, does not always require a physical examination. Telemedicine offers the opportunity to leverage technology while harnessing the progressive drive for efficiency and value, but it also requires the belief that excellent patient care is not always delivered in person. Telemedicine may include various aspects of patient care tailored to be delivered remotely, such as telemonitoring, tele-education, telecounseling, and telecare. These

all evaluated in gastroenterology practice and demonstrated feasibility and patient preference, but mixed results regarding patient outcomes

has given. By combining telemedicine tools and new models of care, we can redesign chronic disease management to include fewer face-to-face visits when patients are well, but increase the reach of patients who need to be seen. This change leads to higher value care by improving the care experience, reducing costs and improving the health of the population.

can open. Barriers include fear of refunds, licensing, and litigation. However, if we hope to meet the needs of patients in our changing healthcare system, telemedicine must be incorporated into our strategy.

Telemedicine Interventional Radiology during the Pandemic

COVID –19 Implementation of the program:

Objective:

To evaluate the clinical, operational, and financial impact of using telemedicine services at an academic interventional radiology facility during the 2019 coronavirus disease outbreak and identify potential barriers to equitable telemedicine access for patients.

Methods:

Evaluation and management (E&M) data were reviewed over a 104-week period from September 2019 to August 2021. Data regarding visits were recorded, including visit type, billing provider, patient demographics, Current Procedure Terminology code charged, and refund received. The zip code for the patient's primary residence was matched with the median household income from the US Census Bureau.

Results:

During the study period, a total of 14,754 physician and medical treatments were provided, of which 10,056 were delivered via telemedicine. Twenty-two percent of visits were conducted with interactive video, and the remainder with audio only. Female patients were more likely than male patients to use interactive video visits (20.4% versus 23.7%, $P < .001$). Patients who benefited from video visits (mean age 58.1 years, SD = 14.0) were more likely than patients who used voice calls (telephone) only.

(mean age, 62.5 years, SD = 13.3) were significantly younger. Privately insured patients and those living in areas with higher median household income were more likely to benefit from interactive video visits ($P < .001$). Professional E&M patients' monthly income ranged from 23.3% to 53.2% of the highest prepandemic levels (mean 37.7%).

Solution:

Telemedicine services enabled rapid recovery of the volume of medical and nursing care during the study period. Further work is needed to identify potential barriers to implementing increased use of video visits.

Telemedicine and pediatric obesity treatment:

Pediatric obesity is more common in rural areas, but rural families may not have access to pediatric obesity treatment programs. New technologies, particularly the use of telemedicine, have proven effective in other behavioral areas such as psychiatry. The article reviews the literature on the use of telemedicine in the treatment of pediatric obesity and describes a tertiary pediatric obesity telemedicine program. We conducted a systematic review of the literature from 1990 to 2011 using the following criteria: pediatric age group, overweight or

obesity care or treatment, and use of telemedicine technology. Of the 2873 abstracts identified, four met all inclusion criteria; all published after 2008. Limited evidence indicates that telemedicine is a promising approach for pediatric weight management, especially for rural families with limited access to treatments. We also teach important lessons learned from a pediatric obesity treatment clinic serving rural families via telemedicine. Few studies have examined the use of telemedicine for the treatment of pediatric obesity, but available data support this method for treating rural patients. There are several unique key factors that influence the successful delivery of a pediatric obesity telemedicine treatment program. This review identifies a potential avenue for extended therapy and highlights the need for further research. Few studies have examined the use of telemedicine for the treatment of pediatric obesity, but available data suggest this method to treat rural patients.

supports. There are several unique key factors that influence the successful delivery of a pediatric obesity telemedicine treatment program. This review identifies a potential avenue for extended therapy and highlights the need for further research.

highlights. Few studies have examined the use of telemedicine for the treatment of pediatric obesity, but available data support this method for treating rural patients. There are several unique key factors that influence the successful delivery of a pediatric obesity telemedicine treatment program. This review identifies a potential avenue for extended therapy and highlights the need for further research.

A Global Perspective on Telemedicine for Parkinson's Disease

Telemedicine programs are particularly suitable for evaluating patients with Parkinson's disease (PD) and other movement disorders, especially since many of the physical examination findings are visual. Telemedicine uses information and communication technologies to overcome geographic barriers and increase access to healthcare. It is particularly beneficial for rural and underserved communities that have traditionally suffered from a lack of access to healthcare. There is growing evidence of the feasibility of telemedicine, cost and time savings, satisfaction and outcomes for patients and physicians, and its impact on patients' morbidity and quality of life. Additionally, given the unusual current situation with the COVID-19 pandemic, telemedicine has presented an opportunity to meet the ongoing healthcare needs of Parkinson's patients. Reducing face-to-face clinic visits and exposure of people (among healthcare workers and patients) to a range of infectious diseases, including COVID-19. However, several challenges still exist in the widespread implementation of telemedicine, including limited performance of parts of the neurological examination, limited technological know-how, fear of losing a personal connection, or restlessness associated with transmitting sensitive information. Meanwhile, facing the new wave of the COVID-19 pandemic, patients and clinicians are gaining increased experience in telemedicine, facilitating access to specialized multidisciplinary care for PD. This article summarizes and reviews the current state and future aspects of telemedicine from a global

perspective. and exposure of humans (among healthcare workers and patients) to a range of infectious diseases, including COVID-19. However, several challenges still exist in the widespread implementation of telemedicine, including limited performance of parts of the neurological examination, limited technological know-how, fear of losing a personal connection, or restlessness associated with transmitting sensitive information. On the other hand, facing the new wave of the COVID-19 pandemic, patients and

Clinicians gain increasing experience in telemedicine, facilitating access to specialized multidisciplinary care for PD. This article summarizes and reviews the current state and future aspects of telemedicine from a global perspective. and exposure of people (among healthcare workers and patients) to a range of infectious diseases, including COVID-19.

to remain. However, several challenges still exist in the widespread implementation of telemedicine, including limited performance of parts of the neurological examination, limited technological know-how, fear of losing a personal connection, or restlessness associated with transmitting sensitive information. Meanwhile, facing the new wave of the COVID-19 pandemic, patients and clinicians are gaining increased experience in telemedicine, facilitating access to specialized multidisciplinary care for PD. This article summarizes and reviews the current state and future aspects of telemedicine from a global perspective. Several challenges still exist in the widespread implementation of telemedicine, including limited performance of parts of the neurological examination, limited technological know-how, fear of losing a personal connection, or restlessness about transmitting sensitive information. On the other hand, facing the new wave of the COVID-19 pandemic, patients and

and
Clinicians gain increasing experience in telemedicine, facilitating access to specialized multidisciplinary care for PD. This article summarizes and reviews the current state and future aspects of telemedicine from a global perspective. Several challenges still exist in the widespread implementation of telemedicine, including limited performance of parts of the neurological examination, limited technological know-how, fear of losing a personal connection, or restlessness about transmitting sensitive information. Meanwhile, facing the new wave of the COVID-19 pandemic, patients and clinicians are gaining increased experience in telemedicine, facilitating access to specialized multidisciplinary care for PD. This article summarizes and reviews the current state and future aspects of telemedicine from a global perspective. Facing the new wave of the COVID-19 pandemic, patients and clinicians are gaining increased experience with telemedicine, facilitating access to specialized multidisciplinary care for PD. This article

summarizes and reviews the current state and future aspects of telemedicine from a global perspective. Facing the new wave of the COVID-19 pandemic, patients and clinicians are gaining increased experience with telemedicine, facilitating access to specialized multidisciplinary care for PD. This article provides a global perspective on the current state and future aspects of telemedicine

The impact of clinical pharmacy services through telemedicine in an outpatient or inpatient setting: a systematic review.

The use of telemedicine allows pharmacists to expand the range of clinical interventions and connect them with patients and providers, but the overall impact of these services has not been adequately studied.

Objective:

To determine the impact of telemedicine interventions by clinical pharmacists on clinical outcomes, subsequently defined as clinical disease management, patient self-management, and compliance in outpatient or inpatient settings.

Methods:

A literature search of Medline, SCOPUS, and EMBASE from database inception to May 2016 was conducted. The generic terms "telemedicine," "telehealth," and "telephone" were used along with "pharmacist" or "pharmacy" and "telepharmacy." The search and extraction process followed PRISMA guidelines. Results were reviewed for pharmaceutical interventions and examined for studies conducted in our outpatient settings. Studies with nonclinical outcomes (ie, distribution or product preparation) and studies without a comparison group were excluded. Final studies were categorized by the types of outcomes reported: clinical disease management, patient self-management, and compliance.

Results:

Only 34 studies measured clinical outcomes compared with a comparator, which was consistent with the research question. The majority used scheduled maintenance models (n = 29). The telephone was the most common communication method (n = 25). The most common interventions used were pharmacist-led telephone clinics (n = 10). Most studies focused on chronic disease management in adults, including hypertension, diabetes, anticoagulation, depression, hyperlipidemia, asthma, heart failure, HIV, PTSD, CKD, stroke, COPD, and smoking cessation.

had an effect, and one reported negative results. Scheduled (72.4%, 21/29) and continuous (100%, 2/2) models had higher rates of positive effects than sensitive/reactive (25%, 1/4) models.

Telehealth clinical pharmacy interventions in the outpatient or inpatient setting, primarily via telephone, have an overall positive impact on outcomes related to clinical disease management, patient self-management, and compliance with chronic disease management. Common features of the studies that demonstrated a positive impact included the use of continuous or planned models with frequent monitoring and interventions over the telephone. The identified studies did not examine the benefits or cost-effectiveness of video-over-phone, both of which are useful aspects for future studies.

