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Telehealth Assessment in the Elderly Using the 4M's

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PERMISSION

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Abstract

COVID-19 has accelerated an already urgent need for telehealth in the United States. While health care systems have been providing telehealth for years, the number of providers and patients who need to participate in telehealth has ballooned overnight. Though telehealth has been in use for a while, the geriatric population seems to be disadvantaged, especially those who reside in rural settings. Due to increased COVID 19 cases among the elderly population in North Dakota, the Geriatric Workforce Enhancement Program (GWEP) allocated a grant to the University of North Dakota to promote telehealth in the elderly receiving homecare services in rural and urban areas of North Dakota. The project aim was to promote the use of telehealth to reduce the risk of exposure of Covid 19 among the elderly populations in rural and urban areas in North Dakota. Upon completion of the project, the advanced practitioners will have used video monitoring technologies to complete geriatric modified assessments consisting of medication, mobility, mentation, and what matters most (4Ms).

Background and Significance

COVID-19 has accelerated an already urgent need for telehealth in the United States. While health care systems have been providing telehealth for years, the number of providers and patients who need to participate in telehealth has ballooned overnight. This need will not disappear with the advent of a vaccine, treatment, and herd immunity for COVID-19. The world has entered a new era in which pandemics must be assumed to be a part of a new reality that patients and health care systems must be prepared. Though telehealth has been in use for a while, the geriatric population seems to be disadvantaged, especially those who happen to reside in rural settings. When comparing the use of telehealth from January through March of 2020, the use of telehealth visits increased drastically by the end of March by 50 % (CDC (Centers for Disease Control), 2020). Just as the new normal will undoubtedly include telecommuting because of what we have learned from our experiences during COVID-19, so will patients and providers expect telehealth to be our new regular patient's routine health care.

However, the extent of the absence of research frameworks on the best strategies to effectively address telemedicine applications to offer the elderly has dramatically impacted the existing technology. According to Majumder et al. (2017), academia has deliberately failed to investigate the telehealth spectrum for a long time, focusing on elderly patients. For the most part, most of the systems that have been introduced are skewed in favor of the health care organizations (Majumder et al., 2017). Elderly patients have been affected by the lack of a standardized telehealth model applicable to their health care needs. The methods applied at all the phases in the health care models rely on the test result of the findings conducted for other age groups. For example, the trial systems for all e-health products use young participants because of

their understanding of innovative technology (Cook et al., 2019. Overall, as the findings of several research activities indicate, most of the elderly population have low access to the use of telehealth compared to the other age groups (Jose Santana et al., 2015).

The overall impacts do not just extend to the elderly population but also their caregivers who have a very unpleasant experience using the technology. For instance, most of those who use the system experience a high error margin that prevents them from achieving maximum results using the telemedicine systems. However, when they must see the provider in person, they are more likely to receive quality and competent care versus when they use telemedicine. As a result of this system's inefficiencies, the communities continue to carry the burden of the elderly patients diagnosed with terminal ill conditions that require an immediate monitoring process by the health care service providers. In the same tune, as various research theorists avow, the health care service providers cannot meet the health care needs of the patient who are not able to make the required necessary hospital visits and are not able to use the telehealth systems available for them effectively. Nevertheless, due to research skewing, there have been new gaps leading to decreased usage of telehealth among elderly patients. As a result of these existing gaps its essential to conduct a research activity that focuses on how the health care systems may use telemedicine to improve the service delivery models for elderly patients in modern health care.

Significance to Health Care and Nursing

As the world has evolved into this normal due to COVID 19, telehealth has finally gained its popularity. Telehealth benefits for healthcare settings and patients are expanding patient care, reducing virus exposure by reducing the number of patients who physically will be

visiting the health care system (CDC,2020). According to Vaportzis et al. (2017), the paradigm of elderly patient care relies on the regular hospital visits approach to treat patients' conditions in this age group. As a result, the health care system has not been able to harvest the benefits of the new tech-based health care designs because of the lack of research-based evidence forms of practices that inform policymakers and other relevant stakeholders' decisions. As a result, most of the patients do not receive the maximum quality of care telehealth offers. Greenhalgh et al. (2017) avow those studies on elderly care have hypothesized the adverse impact of the increased visits to medical facilities. Through the use of telehealth, there has been increased scholarly attention on the need to devise new strategies that help introduce home-based care models for elderly patients because they eliminate the risks associated with traditional hospital-based systems. However, through telehealth, elderly patients can receive treatment interventions from their homes' comfort (El-Miedany, 2017).

A study conducted by Bernocchi et al. (2016) demonstrated the importance of telehealth risk among the elderly and the reduction of readmission rate. With the emerge of Covid, Telehealth will help decrease the patient wait time and decrease the risk for exposure. As the healthcare delivery model changes, some of the currently using telehealth organizations will need to change some of their clinical measures and utilization and quality measures that meet their financial constraints to meet patients' demands. Nonetheless, telehealth is seen to meet financial restraints by lessening treatment costs while guaranteeing that the healthcare services offered to meet all patient populations' needs and demands regardless of their geographical areas to decrease face-to-face encounters (Koivunen & Saranto, 2018). Embracing telehealth will decrease providers' travel time and increase the number of patients that they can see.

Definition of Relevant Terms

1. Telehealth: refers to the delivery and expedition of health and health-related services such as provider and patient education, medical care, self-care, and health information services, through digital communication and telecommunications technologies.
2. The Elderly: these are individuals considered to be the age of 60 and older.
3. eHealth: refers to the implementation of information and communications technologies in the delivery of healthcare.
4. Patient-Centered health services refer to the provision of care that responds to and is respectful of individual patient needs, values, and preferences and ensuring that patient values guide all clinical decisions.

Theoretical Framework

For this scholarly project to work, there must be a clinical practice area modified to help support this new area. For example, providers who will be utilizing this technology will need to learn how and when to offer a telemedicine visit. These providers will also have to incorporate education into their patients' practice regarding this technology's benefits and drawbacks. Also, there must be education for the patients on the technological needs for this type of appointment. Patients will require a tablet with a camera and audio to allow for "face-to-face" interaction between the provider and patient. The Donabedian model will be used to guide this project. The Donabedian model is a conceptual framework for a project that focuses on the three main categories: structure, process, and outcome (Moran, Burson, & Conrad, 2020). The project structure is identified by the setting in which the project will be implemented. The process involves what will be done during the project and how the project will be delivered, and the

outcome is the piece of the project that will be measured, reviewed, and assessed (Moran, Burson, & Conrad, 2020).

The rationale for choosing this model is the fact that it addresses all areas of project implementation. The first portion of this model is an assessment of the study structure and implementation. The models will also address those who will be involved during the study and the implementation process. Lastly, the models address the project's outcome of measured, reviewed, and assessed. This model makes the most sense for this project because it lays out a general step-by-step framework from the beginning of implementation to the patients' returned data results. This model relates explicitly to this scholarly project because the Donabedian model emphasizes a focus on identifying upstream issues at a specific location, implementing a new process of telemedicine visits at this location, and evaluating the outcome from the process implementation.

Literature Review

A literature search was conducted from various medical databases accredited as having reliable sources for health care research. Some of the databases obtained from peer review sources include PubMed, PubMed Central (PM)**,** Cochrane Library, and the Science Direct. All the reviewed database base was accessed through the University of North Dakota Library. Each database was narrowed down with a filter refined search for only articles published from 2016 through 2021. The search was further narrowed down by using keywords such as Telehealth, Elderly Care, E-health in elderly care, and patient-centered health services that yielded over 10,000 articles. All articles were reviewed, and only 20 were selected since they met the search criteria. All articles published in 2014 and below were excluded, plus those that did not meet the study methodology. The search also included a sample of elderly patients with underlying

conditions 55 years and older who can sign a consent while excluding anyone below 55 years and cannot consent. This research's inclusion criterion requires a healthcare staff accompaniment who guides the researchers to the places where patients are situated.

Summary of Search/Literature Synthesis

Modern technology has led to a transformative agenda in the 21st-century health care system. All aspects of contemporary health have been transformed, including diagnosis, assessment, and patient monitoring systems. The new systems of health operations rely heavily on IT-based systems technology to complete tasks. According to El-Miedany (2017), as a result, the operational efficiency paradigm has dramatically improved, including the accuracy of diagnosis, value-based care, and medical practices for patients. The gains of modern technology such as e-health, telemedicine, and Electronic Health Record (HER) systems have become the cornerstones that have revolutionized how the contemporary health care models meet patients' health care needs (De Grood et al., 2016). The figure below illustrates some forms of Telehealth that organizations use to improve patients' health care services.

However, despite the gains made in the modern health care paradigm, there has been a rising concern among multiple service providers on the issues that emerge due to the adoption of these technologies (Jose Santana et al., 2015). Numerous research studies indicate that there is limited evidence on the best ways to make the recent technological advancement work effectively for the benefit of the patients and eliminate any forms of adverse risks that they may pose to the patient, especially among the elderly group of patients (Greenhalgh et al., 2017). The digital era is driven primarily by innovative technology that offers the young generation an opportunity to utilize technology to meet their day-to-day needs, including health.

Bernocchi et al. (2019) conducted a randomized controlled trial study to determine the feasibility and efficacy of a 6-month tele-rehabilitation home-based program designed to prevent falls in older adults with one or more chronic diseases such as respiratory, cardiac, neuromuscular, and neurologic returning home after in-hospital rehabilitation for their chronic condition. In the study, patients were eligible for selection if they had experienced a fall during the previous year or were at high risk of falling. Bernocchi et al. (2019) established that a 6-month tele-rehabilitation home-based program integrated with nursing or medical tele surveillance was practical and feasible in preventing falls in older chronic disease patients with a high risk of falling.

A similar randomized controlled trial was conducted by Giordano et al. (2016) to evaluate the effects of a home-based intervention program delivered by a multidisciplinary health team. The home tele-management program was proposed to older adults affected by chronic diseases at high risk of falling at hospital discharge. The findings by Giordano et al. (2016) indicated that Telehealth improved the management of the participant's chronic disease and reduced the risk of falls by half. Elderly patients are highly likely to experience falls and experience further mobility decline due to having fallen; therefore, it is urgent to identify evidence-based interventions to reduce the risk of falls and related injuries in people with cognitive impairment.

Additionally, Esfandiari et al. (2021) conducted a systematic review to analyze evidence on the impact of telehealth interventions compared with usual care or no intervention for the elderly with pre-frailty or frailty for quality of life (QOL), physical function, and frailty. The researchers looked for randomized controlled trials (RCTs) in PubMed, MEDLINE, Embase, CINAHL, PsycINFO, Cochrane, and SPORTDiscus. According to Esfandiari et al. (2021), the

low certainty evidence indicated positive effects for the mental component and function of QOL favoring telehealth interventions.

The studies indicate that modern technology gains such as e-health, telemedicine, and Electronic Health Record (HER) systems have become the cornerstones that have revolutionized how the contemporary health care models meet patients' health care needs. The findings were consistent in all the studies indicating that Telehealth played a critical role in improving healthcare access among patients, especially the elderly. These findings point to the possibility of Telehealth reducing the risk of exposure of Covid 19 among the elderly populations in Spirit Lake Reservation in North Dakota.

The revolution has become a core tenet of how the whole health system operates and achieves optimum efficiency. However, for the elderly patient segment, the academic spheres, and the health practitioners' paradigm have ignored the issues associated with the advanced age group, which has progressively affected the overall impact of how these new inventions help to improve the health issues among this population (Majumder et al., 2017). Precisely, the research paradigm requires undertaking a research activity to explore how these new forms of technology may help improve elderly patients' assessment procedures using telemedicine when they cannot visit the health care organizations. Explore how the medical practices for elderly patient care may be improved to facilitate effective patient-centered care interventions using telemedicine technology. Consequentially, the primary focus will be to explore the strategies to increase elderly patients' ability to receive very high-quality health care services using these forms of technology.

Elderly patients face many health complications that have become very detrimental to how they access quality-patient-based health care services. Notably, while the other population segments enjoy a high proficiency in innovative technology to ensure that they access quality health care, the elderly populations continue to be deliberately sidelined in the overall health care system (Khamis et al., 2017). The academic spheres must undertake such initiatives that help build on the existing knowledge on the various ways that the elderly population segment may benefit from these modern forms of e-health. The existing framework needs to ensure that all forms of innovations provide practical solutions to all populations' patients without discrimination. Precisely, the latest technological advancements must not just focus on serving one patient group but ensure that all the patients receive the kind of care that guarantees that the treatment plans address the underlying health issues that exist among them.

Boland et al. (2016) conducted a randomized control trial with 20 patients aged 65 years and older at a teaching hospital in Ireland to compare the Beers criteria and Screening Tool of Older Persons' Prescriptions/Screening Tool to Alert to Right Treatment (STOPP/START) in terms of the tools' impact on the incidence and identification of potentially inappropriate medications (PIMs) among older adults. The findings indicated the Beers Criteria to be highly effective in identifying PIMs and reducing polypharmacy among older adults; however, the STOPP/START showed slightly more superior in identifying PIMs in this population (Boland et al., 2016).

A similar study was conducted in China to compare the Beers Criteria with the STOPP criteria in assessing and identifying PIMs among older adults. This retrospective cross-sectional study with 6,337 participants showed the Beers Criteria had a higher detection rate of PIMs and were more sensitive in assessing PIM use (Li et al., 2017). Despite these two studies' conflicting

results, both studies show that the Beers Criteria is an effective and reliable tool for screening and identifying PIMs in the geriatric population 65 years and older.

Zeenny et al. (2017) conducted a cross-sectional observational study comparing frequency rates as per the Beers Criteria 2003 and 2012 version. The study consisted of 248 patients aged 65 years and older. The study results did determine that a high prevalence of PIMs was identified utilizing both the 2003 and 2012 versions of the Beers Criteria (Zeenny et al., 2017). Though, the study results identified the Beers Criteria of 2012 to be the more effective version of this tool in identifying PIMs due to its significantly higher percentage of PIM identification among the sample in comparison to the 2003 version; 45.2% with the Beers Criteria 2012 versus 27% with 2003 (Zeenny et al., 2017). Unlike the 2003 version, the effectiveness of the Beers Criteria of 2012 in PIM identification is associated with its classification of PIMs in the following three categories: 1) PIMs and the classes of medication to avoid in the older adult population, 2) PIMs and medication classes to avoid in older adults with specific disease and syndromes that the medication may cause exacerbation, and 3) medications to be used with caution in the older adult population (Alhmoud, Khalifa, & Bahi, 2015; Zeenny et al., 2017).

PICOT Question

In any scholarly study, it is crucial to develop a research question based on the PICOT format. The PICOT question for this study is as follows: Will the promotion of telehealth in conducting assessments for the elders in their home versus going to the provider's office reduce the risk of COVID-19 exposure?

Purpose of the DNP Project

At the beginning of the pandemic, primary care clinics at the Sandford area in North Dakota had just a trickle of daily telehealth encounters. Over time, these encounters increased, primarily for the youngest seniors (65 – 70 years old). Due to increased Covid 19 cases among the elderly population in North Dakota, the Geriatric Workforce Enhancement Program (GWEP) allocated a grant to the University of North Dakota to promote telehealth in the elderly receiving homecare services in rural and urban areas of North Dakota. Upon completion of the project, the hope that more health care workers in the rural setting of North Dakota will be utilizing Telehealth in conducting patient assessment at the patient's home and make a referral to help with health promotion among the underserved populations. The project aim was to promote the use of Telehealth to reduce the risk of exposure of Covid 19 among the elderly populations in rural and urban areas in North Dakota. By the end of the project, the advanced practitioners will have used video monitoring technologies to complete geriatric modified assessments consisting of medication, mobility, mentation, and what matters most (4Ms).

Project Goal

The researcher will promote the use of telehealth technologies to reduce the risk of COVID-19 through increased telehealth technology use. Since this is a grant project, some of the actual grant goals include the promotion of the use of telehealth technologies to reduce the risk of COVID, enhance readiness to respond to COVID-19 through telehealth technologies, provide access to telehealth technologies to limit the spread of COVID, and provide access to telehealth technologies to limit the spread of COVID-19 (GWEP, 2020).

Objectives

Create a Geriatrics-based telehealth team via Geriatrics Workforce Enhancement Program (GWEP) academic partners

1. Educate community stakeholders on how to use telehealth
2. Train telehealth ambassadors on home-based Geriatrics telehealth
3. Deliver the annual wellness exam by telehealth teams with pandemic–enhanced education.
4. Tele-mentor primary care providers and direct care health workers about COVID-19
5. Educate older adults on the use of telehealth

Design and Methods

Population

The intended population sample for this study is elderly patients residing in the rural setting of North Dakota, who might be more affected using these telehealth systems. The estimated age of 55 years and above with underlying medical conditions.

Sampling Type

This research study involved various inclusion criteria where the publication dates are included; the study designs are suitable and signify quality results. The selected participants were clients of the Home Care Agency or a Quality Service Provider (QSP) agency. The selected participants had the ability to verbally give their consent. This research included sources of evidence-based articles from five years, while those from periods of a year older than that period

were excluded from the research. The search also excluded elderly patients with no underlying medical issues and those younger than 55 years. This research's inclusion criterion required a healthcare staff accompaniment who guided the researchers to the places where patients are situated. Consequently, the study used two varying groups.

a) A qualitative technique report reviewed the recommendations, outcomes, and knowledge gaps for the research quality.
b) The identification methods determine Telehealth's effectiveness in treating elderly patients by focusing on the patient experience on these systems and patient care safety.

Recruitment

The home health care agency manager identified potential participants who were receiving services from the agency and recruited the participants based on private and protected records such as medical records, educational or employment records. The Telehealth introduction for participants was delivered to the potential participant by a QSP or home health caregiver before the initial visit to allow the elder to decide whether they wished to be involved, and it provided information on the project. The researchers did not have access to the participant's medical records, and the medical information obtained was self-reported from the participant.

Study Design

Due to the study's nature, the author applied a mixture of qualitative and quantitative-based data collection. The rationale for using both methods is that such a combination is more impeccable than separate qualitative and quantitative data collection. Besides, combined qualitative and quantitative methods help address the more complex situation (Kreutzer et al., 2010). Another reason for using the mixed method, apart from comprehensiveness, is that it

increases the confidence in finding. Data that is collected using methods are more reliable than the one that is collected using either method. Besides, a mixed method can involve an evaluation by ensuring that the other's strengths offset one data setback. The selected design method is appropriate for this study since different methods will be employed to correct data, such as interviews via zoom and post and pre-survey questionnaires.

Sample size

The estimated sample size for this study was 10-15 elders between ages 55 years and older with underlying medical conditions residing in rural and urban settings of North Dakota.

Setting

The research was conducted in the elder's homes in a North Dakota urban area. Four Doctors of Nursing Students completed the assessment via zoom. To prepare patients for the use of Telehealth, a caregiver from the homecare agency assisted the elders in navigating an electronic device during a Modified Geriatric Wellness Assessment.

Description of Survey / Tool

For the researcher to obtain the required data, the survey was conducted on two separate visits. On the initial visit, lasting 30 – 45 minutes, the participants were asked to answer Modified Geriatric Wellness Assessment questions. The wellness assessment question included demographic, past medical history, what matters the most, psychosocial, mentation, mobility, and medications. Mentation was assessed using a PHQ-2 (Patient Health Questionnaire 2) and

PHQ 9, depending on the initial score. The PHQ assesses depression. The Mini-Cog was used to assess cognitive impairment for all selected participants.

Mobility was assessed using the TUG (Timed Up and Go) (Timed Get Up and Go); which measures the elder's functional mobility. The alternative assessment for mobility was the Elder Mobility Scale (EMS). The EMS is used for an elder who has difficulty with mobility. The researcher will use the 2019 BEERS criteria for a medication review if the elder has identified specific side effects and contraindications of medications during the medication review. Electronic devices were provided to the participants that were utilized for the study. A pre-and post-survey was administered regarding attitudes about telehealth and technology perception and usage. The pre-survey took approximately 10 minutes before the assessment started. The survey results will assist the researcher determine what could affect the outcomes of the study.

Procedure for Implementation

This project was implemented due to the gaps that exist in providing Telehealth in the geriatric population. With the new guidelines due to COVID, the grant was granted to help address gaps in Telehealth in rural areas of North Dakota. The team involved with implementing this study at a rural North Dakota reservation and a home health agency in Fargo and Grand Forks, ND (North Dakota), were University of North Dakota nursing students enrolled at the College of Nursing and Professional Disciplines. Three students are Adult-Gerontology Nurse Practitioners and one Family Nurse Practitioner in the Doctor of Nursing Program (DNP.)

Outcomes

In this research, the most anticipated findings are that most of the elderly patients do not have access or enough knowledge to utilize modern telehealth technology. The telehealth technology in elderly healthcare is imperative to monitoring and assessing health status and progress in elderly patients who cannot attend the healthcare facilities' assessment and monitoring sessions. Essentially, in examining the impact of telehealth systems among elderly patients, the home-based systems have been preferred to offer better health opportunities for patients than visiting healthcare facilities. Potential benefits to participants include increased knowledge of the benefits of technology and telehealth, increased access to healthcare services, and increased compliance to health regimens. The project will benefit the geriatric community and individuals by increasing the knowledge and use of telehealth by under-resourced populations in rural and Indian counties and better health metrics for older adults receiving geriatrics telehealth. The goals and objectives of this study are reliable and measurable.

Data Analysis and Interpretation

The purpose of the study was to promote telehealth technologies usage among the underserved population to reduce the risk of COVID-19 exposure among the elderly populations in receiving home health services in North Dakota by completing a quality assessment of the elderly at their homes. This research was conducted in the elder’s homes in the Grand Forks area and four Doctors of Nursing Practice Students (DNP) completed the assessment via zoom.

Results

The project was evaluated using a pre-survey to get the participants' understanding and usage of telehealth. Five participants were involved in the project and 40% (two out of five) of the participants indicated that they had previously used telehealth services. This means that three out of the five participants (60%) had never used telehealth previously. Additionally, 40% (two out of five) of the participants were comfortable with using the telehealth technology on their own. On the other hand, a follow-up post-survey to evaluate the participant experiences of the telehealth project was also administered. The results of the post-survey indicated that 80% (four out of five) of the participants reported that they felt that they received the same level-of-care or higher level-of-care when compared to physically going to the provider's office or location. Further, assessment questionnaire tools were used to record the assessments. 80% (four out of five) of the participants indicated that they were satisfied with the telehealth services and would use the technology again.

Validity

The data collection methods included questionnaires and interviews, while the technique was random sampling. The participants were distributed in various places; thus, the responses had varying opinions. This method was significant since it is unbiased in its distribution, although it required more volunteers and took much time. Further, the data extraction was conducted by four advanced practice doctoral students, a pharmacist, a group of medical students, and two other groups involved in the research study. The relevant research articles with relevant information were selected, while the ones which included irrelevant data were excluded for quality assessment.

Possible Influences on Results

Due to the small sample size (five participants), the results could be less accurate because smaller sample sizes are less representative of the entire population. A small sample size has an impact on the reliability of survey results because it causes more variability, which can lead to bias. The standard deviation of a population determines variability; the standard deviation of a sample determines how far the true results of the survey may differ from the results of the sample that was collected. The higher the standard deviation as a result of a small sample size, the less accurate the results will be, because smaller sample sizes become less representative of the entire population.

Implications and Future Directions

From the research, 40% (two out of five) of the participants indicated that they had previously used telehealth services while 40% (two out of five) of the participants were comfortable with using the telehealth technology on their own. Further, the post-survey revealed that 80% (four out of five) of the participants reported that they felt they had received the same level-of-care or higher level-of-care when compared to physically going to the provider's office or location. Additionally, 80% (four out of five) of the participants indicated that they were satisfied with the telehealth services and would use the technology again. The findings of this study are similar and support the findings by other research that telehealth improves access to healthcare among the elderly. There was a significant increase in the number of participants who would use telehealth again. In-line with the findings of other studies on the impact of telehealth on healthcare delivery among the elderly, the participants also indicated that they felt they received the same level-of-care or higher level-of-care when compared to physically going to the provider's office or location.

The Donabedian theoretical model of Structure, Process, and Outcome evaluation is a useful and validated method for assessing the safety and quality of a service innovation. The use of telehealth to reduce the risk of COVID-19 exposure among the elderly populations influenced the quality of care delivered in this study, further validating the framework and the interdependence of the Structure, Process, and Outcome elements of the Donabedian theoretical framework.

The findings of this study demonstrate the need to promote the use of telehealth services to reduce the risk of COVID-19 exposure among the elderly populations in in North Dakota. There is also a need to deliver the annual wellness exam by telehealth teams with pandemic–enhanced education and increase accessibility to healthcare services. Further, the collaboration of clients & caregivers with health care providers, establishment of reimbursement policies to support telehealth, provision of adequate training and support to staff and the provision of funding opportunities to promote rural telehealth services contribute to telehealth efficacy.

The most difficult challenge for future research in the use of telehealth is identifying the barriers and facilitators in health providers and patients. Future research should be conducted to determine the effects of telehealth solutions on efficiency indicators and hospital performance. Furthermore, more global research is needed to determine how to implement telehealth in primary care. Researchers can also investigate the efficacy of telehealth approaches on healthcare costs and outcomes, particularly in the field of home nursing for the elderly, who are high-risk members of the community.

Conclusion

This study provides a comprehensive review on the use of Telehealth to reduce the risk of exposure of Covid 19 among the elderly populations in North Dakota. The findings of the study demonstrate that the use of telehealth by the elderly populations lead to improved access to healthcare delivery and reduced risk of COVID-19 exposure since the elderly can receive care from their homes. Based on the study's findings, telehealth has the potential to solve many of the key challenges in providing health services during the COVID-19 outbreak. Furthermore, telehealth can assist us in avoiding direct physical contact, reducing the risk of COVID transmission, and finally providing continuous care to the community. The study had two limitations. First, the small sample size has an impact on the reliability of survey results because it causes more variability, which can cause bias. Second, there may be other studies on this topic in the literature that escaped my attention and analyses, despite my best efforts to employ a comprehensive search strategy and cover a wide range of evidence from around the world. Future studies can be done on the use of telehealth in the field of psychiatry because it does not necessitate in-person visits. Other future research could also focus on assessing patient and provider satisfaction with telehealth services.

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