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Telemedicine in Schizophrenia

Stacy H. Williams

University of Texas at Tyler, swilliams76@patriots.uttyler.edu

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Telemedicine in Schizophrenia Care

Dr. Colleen Marzilli

The University of Texas School of Nursing

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Executive Summary

Schizophrenia is a chronic neurological brain disorder that affects approximately 2.6 million adults in the United States alone. This condition affects twenty million people worldwide according to the World Health Organization. “Patients with schizophrenia often die at a considerably younger age than the rest of the population,” (Wallace, 2017). The treatment of this condition is complex because of the array of different symptoms and presented behaviors. Treatment consists of targeting the symptoms. This is done with medication and psychotherapeutics treatments. ‘Despite continued therapeutic advances, the life expectancy of patients with schizophrenia is reduced by approximately 10-25 years compared to that of healthy individuals,’ (Patel et al, 2014).

“Medication nonadherence is main reason for relapse and hospitalization,” (Schultz et al, 2019). According to the NCBI, nonadherence in schizophrenia patients is about 50%. This nonadherence is partly due to the symptoms of the disorder. Some schizophrenics suffer from severe paranoia and distrust. This will cause patients to stop taking medication and stop treatment. This behavior will lead to an increase in symptoms, a poorer quality of life, and in many cases homelessness. This population is a strain on their families and the medical system. Schizophrenia costs society more than \$155 billion annually (Wander, 2020). An additional treatment monitoring modality needs to be implemented to further aid in the patients care and decrease the costs of rehospitalization. Telemedicine has opened a wide range of monitoring opportunities for schizophrenia patients. There I recommend the implementation of telemedicine

in the form of weekly phone calls, video chats, and/or text messages to monitor and assess the patient's wellbeing before a hospitalization is required.

1. Rationale

“The term schizophrenia was first used in 1911 by a Swiss psychiatrist, Eugen Bleuler. It comes from the Greek roots schizo (split) and phrene (mind),” (MentalHelp, 2020). Of all the serious mental illnesses, schizophrenia has the highest incidence of rehospitalizations. This group of people has a higher rate of comorbidities and a greater risk of early death. Cook et al (2020) states, that in addition, those with schizophrenia also had significantly longer index hospitalizations, and a significantly greater number of medical comorbidities than those with bipolar or major depressive disorders. This costs the United States billions of dollars annually. The treatment of schizophrenia has changed over the years and has shown some improvements. Yet even with improvements, schizophrenic patients suffer from poor quality of life and comorbidities brought on mainly due to the mental disorder.

“The demonstrably greater impact of lifestyle, social, and clinical factors on the physical and mental health of adults with schizophrenia compared to other diagnoses of SMI suggests that changes in community-based infrastructure are needed in addition to transition interventions,” (Cook et al, 2020). Society is changing at rapid rate. EKG can now be taken with a watch. Vital medical information can be obtained remotely in real time. Yet the treatment of mental health is the generally delivered in the same way. This is the rationale behind the intervention of incorporating telemedicine in the treatment of schizophrenia.

2. Literature Review

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There have been many articles and experiments conducted to test the theory of adding telemedicine and most of them had promising results. In an article by Ye et al. (2017) nursing staff implemented out of hospital follow up care using home visits and telephone calls to monitor and improve care. The results were significant in the improvement of medication adherence, disease knowledge, and recurrence rate. With the improvements seen in the control group, the overall quality of life in these patients improved.

In another article written by Schultz et al. (2019) conducted a clinical trial utilizing telephone assessment to improve medication adherence. “We showed that our telemedicine intervention for patients with severe mental illness could partly compensate for a critical gap in medical care,” (Schultz et al. 2019). Kashow et al. (2012) found promising results using telemedicine to monitor suicidal tendencies in schizophrenia patients.

Treisman et al. (2016) states Mobile devices, digital technologies, and web-based applications—known collectively as eHealth (electronic health)—could improve health care delivery for costly, chronic diseases such as schizophrenia. Treisman acknowledges that although pharmacological and therapeutic treatments are mainstay, telemedicine is a very useful resource to monitor, assess, support, and prevent relapse and rehospitalization. “eHealth could potentially transform health care delivery for patients with schizophrenia by enabling early symptom recognition and intervention disseminating information at diagnosis and beyond; integrating care and extending service accessibility; and supporting medication adherence, patient engagement, self-management, and rehabilitation,” (Treisman et al, (2016).

The above as just a few examples of articles on positive results of using telemedicine in the care of schizophrenia. There was not one form of telehealth that greater outweighed the others. Be it telephone, video conferences, or text messages, telehealth has a multitude of useful benefits

for not just patients with schizophrenia, but all patients as a whole. For the schizophrenic patient their overall health can be addressed not just their mental health. Since this population has such a high comorbidity rate, telehealth is an effective and cost-effective tool.

3. Stakeholders

The obvious stakeholders in this intervention are medical staff. This would include the management, doctors, nurses, social workers, and medical record workers. The not so obvious stakeholders would be the patients, the family members of the patients, and the local community. The medical system is a stakeholder in how schizophrenia places such a burden on local community resources. This disease casts a wide net on who it touches.

4. Expected Outcomes

The expected outcomes of this intervention are the obvious stated increase of medication adherence and decrease of rehospitalization. A by product of the expected outcomes is the increase in the quality of life of these patients. Another would be the decrease of burden of the healthcare facilities. If schizophrenic patients received better and more consistent treatment, it is expected to follow that the number of homeless due to mental disorder will decrease.

5. Data Collection

The data collection method used was a search of several scholarly databases such as PsycNet, PsycInfo, and Pubmed. The intervention will employ data collection through social worker outreach, nursing weekly interactions of family members and patients, and the hospital records of other affiliated medical facilities. The patient's medication pickups will be monitored with the pharmacy. This will check when the patient picked up medications, the amount of medication picked up and the amount on hand at the time. This will give an idea of adherence. There will

also be data collected on symptoms. The team will want to record any changes in symptoms. Some question to be asked are when was the last time the patient heard voices? When was the last time they experienced visual hallucinations? The answers to these questions will attempt to be corroborated with family members or other medical staff if possible.

Other data collected will be how the patient responses to various forms of telemedicine. It would be beneficial to know which venue is most effective, such as telephone, text, or video. Knowing this information will enable the treatment team to develop a more personalized treatment plan for each patient.

6. Costs of Implementation

The costs of this implementation would be minimum since most of the needed hardware and already exists at most facilities. The only real costs will be the time needed for training. Most of the staff already carry out these tasks in some form so this implementation is merely a new way to do the same job. So basically, there is very little monetary cost to the facility and the benefits are great in both monetary and social benefits.

Conclusion

Telehealth, telemedicine, eHealth, or virtual healthcare are all the same set of tools called by different names. This unique set of tools enables healthcare staff to have a further reach to touch the lives of patients who normally would not receive treatment due to location, transportation, and/or financial hardships. Many family members struggle to get patients out of the house and to the clinic to no avail. Yet getting the same person to sit at the computer in the comfort of their own environment is much more likely. This is a tremendous breakthrough in healthcare and can

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aid in the monitoring and treatment of mental health. It is recommended that our facility utilize this innovation for the care of our patients.

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