

Commentary and Reflection Related to the Perspectives of Nurses Toward Telehealth Efficacy and Quality of Health Care

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Abstract

Telehealth nursing enabling communication with chronic disease patients has shown to improve medical outcomes for patients suffering from diabetes mellitus, chronic obstructive pulmonary disease (COPD), and chronic heart disease. Studies have been conducted to examine whether telehealth technology impacts the perceived level of internal service quality (SQ) delivered by nurses within a telehealth organization. Overall, the perspectives toward telehealth SQ researched through case studies showed positive results. The innovative role of telehealth nursing and related technology toward patient care was highlighted. Literature establishes how telehealth provides daily monitoring of patient health, which has the benefits of peace of mind, immediate feedback for patients, family, and caregivers, as well as the convenience of scheduling. This commentary not only reflects but also aims to analyze the effectiveness of the telehealth nursing interventions and reasons for the delayed implementation across United States. Improving and implementing telehealth methods in the case of chronic patients suffering from diabetes, COPD, and heart disease can lead to reductions in health-care errors and readmissions. Telehealth nursing has the potential of decreasing the length of hospital stay, at the same time improving satisfaction of care teams, while the patient management continues at home.

Keywords

telehealth, access to care, patient-centeredness, nursing, chronic diseases

Hindsight and Comments

The pace of adoption of telehealth appears to be slow, despite some documented success. Reasons why the health system is not embracing this success are complex but not entirely unexpected. In the article “Perspectives of Nurses Toward Telehealth Efficacy and Quality of Health Care: Pilot Study,” a pilot study was conducted to examine whether telehealth technology impacts the perceived level of internal service quality (SQ) delivered by nurses within a telehealth organization.¹ To address this research goal, the notion of telehealth nursing service quality (TNSQ) was empirically tested and validated with a survey instrument.

Previous studies show that agencies using telehealth have an average patient to nurse ratio of 15:1, as compared with non-telehealth agencies having a ratio of 11:1.^{1,2} It has been reported that telehealth nursing can make a tremendous difference in providing patient care, particularly in rural or underserved areas in states such as Nebraska, where there is generally a shortage of nurses and health-care services, as well

as resources can be limited.^{2,3} The responses to the interview and data gathered from the survey showed overall satisfaction with TNSQ.¹ The results from studies conducted in other states in the United States helps in reinforcing the positive role of telehealth in impacting patient care and providing alternative solutions to the management of chronic disease.^{1,3} The Visiting Nurse Association experience of implementing telehealth methods in the case of elderly patients suffering from chronic obstructive pulmonary disease (COPD) and heart disease was shown to be providing a better quality of life, as well as

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offering preventive services at a lower cost.^{3,4} Even though the pilot study results were positive, there are still road blocks toward the implementation of telehealth in Nebraska. Using telemedicine may have a positive impact on geographic access barriers, yet it could create digital (eg, connectivity or usability) or cultural (eg, perceived lack of understanding) barriers.^{4,5} Telehealth tools hold promise for in-home care management for elderly patients suffering from chronic diseases, but efforts to apply telehealth to this group should consider the social isolation and digital divide faced by this vulnerable population.

Studies conducted by the Veteran Health care system report that many patients felt detached from the impersonal nature of the telehealth intervention and valued social support from peers. These views were echoed by the veteran health-care staff.^{4,5} With changes in health-care delivery and reduced hospital lengths of stay over the past decade, family members are serving increasingly as health-care extenders.⁶ This reality must not be underestimated when incorporating technology into the home settings of adults with chronic diseases. Without the incorporation and education of family caregivers, adherence with treatment regimens and long-term care and recovery from severe disability may be compromised. All these reasons explain why the organizational implementation of telehealth has been slow, as not every patient is willing to receive telehealth nursing care.

The sample size of participants was restricted to 13, which was the number of telehealth nurses employed by the participating organization.¹ Nurses on the front lines are in a great position to help further develop the field by assessing what is currently working and where the health care gaps are. However, after contacting other nursing agencies in Nebraska, similar telehealth organizations were not found. Therefore, the study was not continued. Follow-up studies to see the future direction of telehealth interventions and chronic disease management in elderly home care will be important. Reflection on how the barriers of equipment incompatibility and inconsistency were improved, or what measures were taken or are planned to be taken to remove these issues, would be insightful regarding the implementation of telehealth nursing for chronic patients. Adding family members to a personalized telehealth support chat line is in the pipeline and future vision of many telehealth organizations.^{3,6} At the same time due to glucometer incompatibility in some patient's equipment, diabetic patients have been excluded from some telehealth organizations services.¹ It is also possible that researchers identify new barriers that may arise as access interventions are implemented.

Overall, the perspectives toward telehealth SQ researched through the case studies and ongoing trials are highlighting the positive role of telehealth.^{1,3} Telehealth is providing daily monitoring of patient health, which has the benefits of peace of mind, immediate feedback for patients, family, and caregivers, as well as the convenience of scheduling. Literature shows that innovative telehealth applications are solving many of the challenges faced by health-care sectors in United States related to chronic patients suffering from diabetes, COPD, and chronic heart disease, as this patient population usually are

reluctant to make outpatient visits on regular basis due to their chronic health issues.^{3,7} In the United States, Veteran Health Care programs are examples of an expanding repertoire of eHealth applications available to patients and health-care teams.⁷

Veterans' perceptions of physician communication (patient-centeredness, clinical competence, interpersonal skills) were not inferior to physician communication during in-person consultations, suggesting that veterans' found interactions conducted via telemedicine as satisfying as in-person interactions.^{5,8} Incorporating eHealth technologies including telehealth nursing programs into clinical practice to increase access to care, and to ensure the responsiveness of such technologies to the preferences and circumstances of patients, represents a profound opportunity to implement patient-centric health-care model and a significant shift in the way the services are delivered.⁸ Improving and implementing telehealth methods in the case of chronic patients suffering from diabetes, COPD, and heart disease are predicted to result in reductions in health-care errors, as well as readmissions.^{3,9} Telehealth interventions are hypothesized to decrease the length of hospital stay and improve satisfaction of care teams, while the patient management continues at home.^{1,9}

Declaration of Conflicting Interests

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Author Biography

Ayisha Bashir is a physician who completed her MS in Biomedical Informatics in 2016 with a concentration in Clinical Informatics. Her Master's Thesis, published in 2016, was titled *Perspectives of nurses towards telehealth efficacy and health care quality*. She joined the Department of Clinical & Translational Science at Creighton University in Spring 2018 to pursue her PhD. Her dissertation project is related to instability of carotid plaques.