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LITERATURE REVIEW

PATIENT EXPERIENCE WITH TELEHEALTH SERVICES AND HEALTH EDUCATION

Introduction

Telehealth has existed for many years but just recently has become an essential service for many health centers as they work to safely maintain care for patients during COVID-19. The recent easing of policy barriers, specifically key changes in telehealth payment policies, and availability of Coronavirus Aid, Relief and Economic Security (CARES) Act funding have enabled health care providers to invest in telehealth equipment, training, and implementation. While much of providers' attention has focused on getting telehealth services up-and-running, it is equally important to ensure that services delivered using telehealth are patient-centered.

Understanding patient experience is a key step in ensuring the delivery of patient-centered care. Patients' experiences during health care visits or encounters for health education are driven by both clinical and non-clinical aspects of care. Patient experience can be influenced by every touch point of a visit, including, but not limited to, the ability to get a timely appointment, the physical environment, interactions with administrative and clinical support staff, wait time, and the quality of communication with the provider(s).

This literature review explores relevant research on how the use of telehealth technology impacts patient experience, with a definition of "telehealth" that encompasses all platforms used to connect a patient and a health service and/or health education provider for a remote visit (e.g., live audio-video conferencing, telephone-only consultation, asynchronous video, remote patient monitoring). This review also identifies strategies that providers and health systems might implement to improve patient experience delivered using telehealth modalities.

The authors recognize the inherent relationship between patient access and experience and provider experience, as well as the desire of many health care organizations to improve provider satisfaction and prevent provider burnout during these unprecedented times. Even though the review's search terms focused on patient experience when accessing health services and/or health education, findings related to provider experience with delivering care using telehealth also were gathered from articles that met the literature review's inclusion criteria.

METHODS

This literature review utilized a Boolean-term search of peer-reviewed journals in PubMed (MEDLINE). Although "patient experience" is distinct from patient satisfaction and patient perceptions, the review included articles that assessed all three terms, as they often are used interchangeably.

To ensure the review was timely and relevant all articles published before 2010 were eliminated, as well as any research conducted outside of the US. The search terms yielded 249 articles in total. Abstracts then were reviewed for suitability based on the research questions:

1. How does the use of telehealth technology impact patient experience of care when accessing health services and/or health education?
2. What are strategies for improving patient experience with care when health services and/or health education are delivered via telehealth technology?

Any articles that researched general use of telehealth, operational considerations, health outcomes only (and no aspect of patient experience or satisfaction), regulatory considerations, provider practice, or telehealth implementation and processes were excluded. After these exclusions, 73 articles remained.

KEY FINDINGS

PATIENTS OVERWHELMINGLY FAVORED TELEHEALTH VISITS FOR REASONS PRIMARILY RELATED TO CONVENIENCE

In total, 40 articles assessed aspects of access when measuring patient experience and satisfaction with telehealth, specifically aspects of access related to time and financial savings. Of these 40 articles, 23 examined factors related to convenience, specifically time savings; two examined cost savings associated with not having to travel to a health center; and 15 examined both aspects of access. Among these 40 studies, 32 had significant or noteworthy findings indicating that patients preferred telehealth in comparison to in-person visits because of convenience factors (e.g., time savings, not needing to travel).

> **How to use this information:**
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> *When marketing telehealth services, highlight convenience factors*

PATIENT EXPERIENCE AND SATISFACTION ARE INFLUENCED BY BOTH ACCESS AND QUALITY

How to use this information:

Integrate telehealth visits into your agency's continuous quality improvement processes, assessing the quality of telehealth visits the same way as you would in-person visits

Collect and monitor patient-reported outcome measures for services delivered using telehealth

In addition to assessing aspects of access, 30 of the 40 studies also incorporated measures of care quality in their assessments of patient experience. Findings from these 30 articles suggest that patient experience and satisfaction are impacted equally by aspects of access and care quality (i.e., patients place similar value on access and quality). Among these 30 articles, ten reported findings that patients placed greater value on access considerations; ten reported that patients placed greater value on quality; and ten reported access and quality as equally important factors to patients. Of note, among these 30 articles, "quality" often was determined by measurements of perceived quality of service delivery and patient perceptions of clinician expertise. Only six studies incorporated clinical outcome measures in their assessments of quality. While measures of perceived quality are distinct from clinical outcome measures, they are, nevertheless, very important and contribute to patients' retention in care, likelihood to return, and adherence to treatment regimens.

LOWER LEVELS OF PERCEIVED QUALITY OF CARE WERE ASSOCIATED WITH EQUIPMENT ISSUES AND AUDIO QUALITY

Twenty studies examined the quality of patient-provider communication in their assessments of patient experience and satisfaction with telehealth visits. Nineteen of the 20 studies all identified two common factors that most frequently impacted visit satisfaction: (1) sound and video quality (as influenced by internet connection and equipment); and (2) user and provider comfort with technology. These two factors directly correlated with satisfaction scores, with lower levels of patient and provider comfort with technology and technology issues correlating with lower satisfaction scores. Furthermore, dissatisfaction with technical aspects of a visit was the most common – and often only – cited disadvantage of telehealth referenced.

How to use this information:

Dedicate time before the visit to assist patients with set up, and identify and troubleshoot technical difficulties

Produce step-by-step written instructions on set up for patients

How to use this information:

Enhance provider comfort and skill with using technology through training and ongoing mentorship

TELEHEALTH VISITS ALLOWED PATIENTS TO ACCESS HIGH-QUALITY PROVIDERS AND SPECIALISTS TO WHICH THEY TYPICALLY MAY NOT HAVE ACCESS

Twenty-one articles measured patients' perceived quality of providers and/or care received. These articles reported that patients' ability to access high(er) quality providers and/or specialists via telehealth technology was correlated with higher levels of patient satisfaction. Furthermore, of the 21 articles, 17 indicated that patients perceived receiving high-quality care (overall) with telehealth visits. These studies revealed themes such as telehealth having the distinct advantage of allowing patients to access high-quality providers and specialists in remote and rural areas, where access to health care can be difficult.

> **How to use this information:**
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> *Emphasize the specialization of health care providers in marketing content and how telehealth allows patients to access specialized care that otherwise may not be available*

TELEHEALTH CARE DELIVERY RESULTED IN INCREASED EFFICIENCY, WHICH HAS THE POTENTIAL TO ENHANCE REVENUE AND REDUCE COSTS

Of the nine articles that assessed provider experience with delivering care using telehealth, two reported that use of telehealth modalities had a positive impact on financial outcomes because providers experienced fewer cancellations and missed appointments with telehealth visits. Furthermore, six articles reported that use of telehealth modalities had a positive impact on productivity; discussion in these articles referenced how higher productivity (often the result of shorter appointments) had the potential to increase providers' capacity to see more patients, which, in turn, could lead to increased revenue. Three of the nine articles explicitly measured efficiency (e.g., average cost per patient, time spent per health visit) in their assessments of provider satisfaction with telehealth visits; the remaining nine studies inferred that providers benefitted from increased productivity.

> **How to use this information:**
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> *Address no-shows and late cancellations for telehealth visits the same way you would for in-person visits—through reminders and scheduling scripts that stress the importance of early cancellations*

THE QUALITY OF PROVIDER-PATIENT RELATIONSHIPS WAS HIGHLY DEPENDENT ON TECHNOLOGY WORKING

Of the ten studies that explored the extent to which providers were able to establish strong provider-patient relationships during telehealth visits, four cited that faulty technology limited providers' ability to foster meaningful interactions and build relationships with patients. Meanwhile, three articles cited that, with working technology, establishing such strong provider-patient relationships was possible, most notably through building trust.

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How to use this information:

Build trust with the patient by giving them a sense of what to expect during a telehealth experience, including potential technology issues that may arise and the back-up plan for addressing the patient's needs

How to use this information:

Develop telehealth protocols for providers that reference best practices for communication and etiquette tips and expectations

In the four articles exploring challenges related to technological issues, authors suggested that providers might benefit from having a backup plan for following up with patients by telephone when technology fails, allotting time to set up and run though technology with patients before the visit (possibly scheduling an in-person visit for patients using telehealth over an extended amount of time), and maintaining open communication with patients to adjust expectations and troubleshoot issues that may arise.

THERE IS LIMITED RESEARCH ON THE RELATIONSHIP BETWEEN PATIENT EXPERIENCE WITH TELEHEALTH AND CLINICAL OUTCOMES

Six studies assessed both patient satisfaction and experience with telehealth and quality of care by comparing self-care and treatment adherence and clinical outcomes among patients that received telehealth-based care versus in-person care. Four of these studies found that there were no between-group (i.e., telehealth versus in-person) differences related to outcomes; one reported statistically significant improvements in outcomes among the telehealth group; one reported nonsignificant increases in favorable outcomes among the telehealth group. Additional research is needed to better understand how positive patient experience with telehealth might contribute to improved clinical outcomes, especially studies with larger, more representative samples.

As a first step, it is important for health care providers to consider how they might begin to measure aspects of quality and access for telehealth visits. Such data will help document successes, as well as monitor gaps in care that telehealth may create or exacerbate. It also could serve as a tool for quality improvement.

How to use this information:

Document potential gaps in care that telehealth may create or exacerbate, and monitor this data over time as part of continuous quality improvement processes

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