



Telemedicine: Center Quality and Safety

*Patient selection, training are key to
addressing unique risks.*

There has been an unprecedented explosion in the use of telemedicine services during the COVID-19 pandemic due to efforts to protect patients and providers from risk of virus infection.

In an April *NEJM Catalyst* survey, more than 80% of U.S. health system executives reported using telehealth in some form. A Harris Poll survey of patients in April found that nearly one-third of Americans have now tried telehealth, up from only 8% a year ago, and that 80% of those patients like it.

Telemedicine is a different approach to medical practice, which also presents unique safety and quality risks that health systems must address to ensure that they provide the best care possible. Health system leaders have a role to play in encouraging appropriate measurement, establishing the necessary infrastructure and support, ensuring adequate training for providers, and appreciating what is known and unknown about this mode of care delivery. To jump into telemedicine means being willing to learn as you go.

The Challenge of Safety and Quality

For instance, to date there's little research on safety and quality in telemedicine. What exists often considers care outcomes in the context of

chronic disease management—especially with the use of telemonitoring, defined as remote monitoring of symptoms and vitals, for conditions like heart failure and diabetes. There is some research that certain health outcomes are comparable or better with telemedicine (e.g., blood pressure management, glycemic control) and specific modalities such as teleconsult, teleICU and video visits appear safe and effective.

Other aspects of telemedicine being studied pertain to access to care and convenience. These include findings and observations that telemedicine:

- Reduces the burden of patient travel, which can be acute both for rural patients who live far from a health system and for urban patients who may need to rely on complex public transportation.
- Reduces the need for patients to take time off work and find childcare, which can serve as a barrier to access.
- Allows for family members who are geographically remote to join visits.
- Increases patient comfort by reducing anxiety caused by a foreign and stressful hospital or clinic environment.
- Gives providers insight into the patient's home and allows for easier

care in areas like medication reconciliation (given a patient will have their medicines at home).

- Promotes shorter waiting times for visits because providers are able to see more patients in a “video clinic” setting, given potentially shorter turnaround time between patients.
- Increases access to specialty care if the patient does not live close to the provider.

At the same time, telemedicine poses some safety risks. For example, providers may have more difficulty identifying nonverbal cues, which can serve an important diagnostic purpose. Also, without appropriate training for providers, the telemedicine visit may lack adequate structure and could result in conversations that miss key questions about a patient's symptoms, self-care or treatment plan. Technological barriers can result in interrupted communication, which can lead to a shortened visit, or a visit with an interrupted flow of information, which results in key information being missed.

Establishing Safe, High-Quality Telemedicine

To ensure telemedicine provides high-quality and safe care for patients, healthcare leaders can focus on four elements to support good practice.

1. Select patients carefully.

Telemedicine is not suitable for all patients or all types of care. Selecting patients for whom telemedicine is most appropriate is essential for both patient safety and high-quality care. Providers need to identify patients in an individualized manner, with input from each patient, and resources should be offered if hardware or internet access limitations create barriers. Many types of care (e.g., return visits for chronic patients), many forms of behavioral healthcare (e.g., routine therapy with nonacute patients), and some types of physical therapy (e.g., for patients with mobility constraints that make office visits challenging) are strong matches for telemedicine, but providers must make the ultimate decision on which modality is best for each patient. Carefully developed clinical pathways that take into account clinical evidence, patient preferences and views, and available technology can also help guide this process.

2. Offer robust training for providers.

Telemedicine is similar to but not exactly the same as other kinds of clinical care. Providers need training in structured communication, use of technology, and appropriate documentation and billing to ensure that they are ready to make the most of telemedicine visits, and that they can conduct them effectively. Training in how to conduct a physical exam via telemedicine and how to use data from telemonitoring is also essential. For example, at Wake Forest Baptist Health, Winston-Salem, N.C., one practice organized group “trial run” telemedicine visits to give providers some practical experience before conducting visits on their own.

3. Establish support processes to ensure smooth interactions.

Health systems should establish processes to provide technical support for both providers and patients, to troubleshoot technical problems as they arise, as well as language interpretation if needed. This type of support increases patient and provider confidence in the use of technology.

4. Measure key indicators such as utilization and satisfaction.

Telemedicine may not require a wholly separate set of measures than those most health systems are already tracking. But some telemedicine-specific measures are necessary to understand its impact, effectiveness, quality and safety.

- **Telemedicine utilization:** Does telemedicine disproportionately benefit some patients more than others? Such data can help identify any potential barriers to utilization for some groups of patients and help health systems address equity concerns—a key dimension of quality.
- **Stratified outcomes by modality:** Though a complex endeavor, health systems should study whether similar patients who receive care in person versus via telemedicine have different clinical outcomes. For example, do low-risk obstetric patients who use telemedicine frequently have different birth outcomes than low-risk patients who elect in-person care? Stratifying quality and safety data in this way also increases the research base to measure and inform telemedicine safety and efficacy.
- **Patient and provider satisfaction:** Research to date supports overall patient satisfaction with

telemedicine. However, it’s crucial to continue tracking patient satisfaction to understand the long-term effects of telemedicine and whether certain groups of patients may face challenges in telemedicine encounters. Patient and provider satisfaction serve as foundational elements of quality to track telemedicine’s impact.

Though the COVID-19 pandemic stimulated the rapid implementation of telemedicine, many providers will continue using telemedicine as part of their practice going forward. The future success of telemedicine depends largely on continued regulatory and payment change, which supported the initial uptake in utilization since the beginning of the pandemic. In the near term, health system leaders should invest in establishing the infrastructure to support the quality and safety of telemedicine services rapidly brought online, and anticipate a future in which telemedicine plays a much larger role in care delivery than it ever has previously. ▲



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