Patient Safety Guidance for the

Virtual Visit

MANAGING RISK IN A NEW CARE SETTING

AMC | PSO

Ambulatory Virtual Care Visit

An 11-year-old child received initial evaluation and treatment for an infected finger in Urgent Care. Three days later, the child received an in-person follow-up visit with her pediatrician, followed by a virtual visit one week later with a nurse practitioner. The NP was new to providing virtual care and, during the visit, the video transmission failed before she was able to visualize the child's finger. There is no documentation that she asked the patient's mother to remove the dressing and describe the wound, provided education or instructions, or scheduled an in-person appointment to assess the finger. There was documentation that the NP advised the patient's mother to have the child continue the antibiotics that had been prescribed during the prior visit, and to call if there were any problems. Thirteen days later, the patient was diagnosed with osteomyelitis and ultimately required amputation of the affected finger.

Did the virtual visit contribute to this outcome?

ABOUT THIS DOCUMENT

Recommendations for *Patient Safety Guidance for the Virtual Visit* were developed under the auspices of the Academic Medical Center Patient Safety Organization (AMC PSO) Virtual Care Task Force. These consensus recommendations are for informational purposes only and should not be construed or relied upon as a standard of care. The AMC PSO recommends institutions review these guidelines and accept, modify, or consider alternatives based on their own resources and patient populations. Institutions should review and modify these recommendations as the field continues to evolve.

Executive Summary

To PROACTIVELY address emerging risks associated with the rapid increase in virtual visits accelerated by the impact of the COVID-19 pandemic, the AMC PSO convened the Virtual Care Task Force ("Task Force").

The Task Force began with a review of current literature, scientific evidence, guidance documents, and opinion statements from relevant sources. Further insights were gathered from subject matter experts from academic medical centers and community hospitals, primary care providers, and specialists in telehealth and patient safety. Subsequently, the interdisciplinary Task Force built a set of consensus-based and literature-supported recommendations that identified common patient safety risks associated with virtual care and then suggested mitigation strategies for those risks.

Reflecting the Task Force's aim, mission, and consensus opinion, this document offers guidance for clinicians and patient safety leaders in their efforts to provide the safest possible care to patients through a virtual platform.

Before offering virtual visits to patients, organizations should consider the following:

- modification to physical office processes such as registration, coordinating medical records, gathering images, and reconciling medication lists

- strategies to ensure the capture of information exchange between support staff and patients during virtual visits, such as increased utilization of patient portals to facilitate the completion of self-reported patient data

- creation of pre-visit tip sheets and checklists to assist the staff as they transition to a new virtual routine

- development of advance scripting for the team to address common questions such as whether or not a patient can record the session, and if other family members or caretakers will be present during the visit

- standard messaging to patients about appropriate locations/settings for a virtual visit

DEFINITIONS

Review of the literature identifies the use of various terms to describe virtual care (e.g., telehealth and telemedicine often are used interchangeably). The Task Force agreed to standardize terminology used in this document as follows:

Telemedicine refers to a direct clinical service provided on a communication platform that supports both audio and/or video two-way synchronous communication when the clinician and the patient are in different locations.

Telehealth refers to a broad range of health-related, remotely delivered, services including patient care, education, and remote monitoring (e.g., telestroke, teleradiology).[1]

Virtual Care is a broader term that includes both synchronous and asynchronous remote care.

Virtual Visit refers to the actual appointment during which the patient and provider are in different locations, communicating via computer, smartphone/tablet, or telephone.

GOALS AND SCOPE OF REVIEW

The Virtual Care Task Force convened under the privilege and confidentiality protections afforded to the AMC PSO by the Patient Safety Quality Improvement Act to identify and analyze potential patient safety risks associated with virtual care. The Task Force also planned to develop effective mitigation strategies that would help to inform best practices and improve patient safety in the virtual care setting. Specific goals included:

- Establish a framework to analyze potential and emerging patient safety risks associated with virtual care

- Identify contributing factors that may increase patient safety risks in virtual care

- Identify risk mitigation strategies to support safe and reliable virtual care

The Task Force has developed a guidance document describing best practices to inform the virtual care provided by clinicians in ambulatory settings. The Task Force recognized other factors are important to virtual care, including regulatory, licensing, coding, and insurance issues, but they were determined to be out-of-scope for this document.

TABLE OF CONTENTS

Introduction

In 1996, the Institute of Medicine (IOM) defined telemedicine as "the use of electronic information and communications technologies to provide and support health care when distance separates participants."[2] Leading up to 2020, there was recognition that the integration of telemedicine into traditional ambulatory and hospital-based practices could help to achieve improvements in care and reductions in cost. Unlike commercial fields that embraced disruptive innovation, the health care industry adapted to remote care at a slower pace.[3]

When the COVID-19 pandemic emerged in early 2020, an unprecedented demand arose for the remote delivery of safe and reliable assessments and treatment recommendations via computers, smart phones, and tablets (i.e., virtual care). Institutional and individual providers needed to initiate or accelerate their adoption of virtual care. They quickly pivoted from primarily office-based visits to create new care delivery solutions, and dramatically expand existing virtual care programs. Many providers with limited experience and training in the virtual delivery of care were required to adapt rapidly to new and unfamiliar technologies as part of their daily practice of medicine. Concurrently, institutions and individuals recognized that this sudden and unexpected expansion of virtual care potentially exposed patients to safety vulnerabilities.

The AMC PSO identified a need to address this unprecedented challenge and formed the Virtual Care Task Force. Co-facilitated by AMC PSO leadership and a subject matter expert in virtual care delivery, the Task Force comprised providers from a variety of disciplines and member institutions with interest and expertise in virtual care and patient safety. The Task Force also included a patient and family advisory council representative.

Framework for Review

To address organizational/practice considerations for developing a safe virtual care program, the Task Force deconstructed virtual care into the pre-, intra-, and post-visit phases, then assessed the risks and developed strategies for each phase. The Task Force considered the six domains of quality outlined by the IOM in its landmark 2001 report, Crossing the Quality Chasm, as guidance for its discussions.[4] The six domains of quality are:

- Safe care: avoiding harm to patients from the care that is intended to help them

- Timely care: reduce harmful delays in accessing care

- Effective care: provide services based on evidence and avoid services of no benefit

- Efficient care: lower costs for patients and providers, including hidden costs of transportation and missed work, for both patients and caretakers

- Equitable care: deliver care and access that do not vary in quality by personal characteristics of the patient and provider, including age, sex, race, ethnicity, primary language, digital literacy, socioeconomic status, visual/cognitive impairments, and other social determinants

- Patient-centered care: deliver care that is respectful and responsive to the patient's individual preferences, needs, and values, and includes the patient's values in clinical decision-making.

The Task Force agreed that the application of these domains to virtual health care delivery would instruct its goals to help inform clinicians as they seek to provide accurate diagnosis and safe, reliable, care in the virtual setting.

The Task Force acknowledged that several other factors cited by experts—notably regulatory, licensing, coding, and billing issues specific to virtual care[5]—play an important role in the success of virtual care, but we determined them to be out of scope for this guidance document. Readers are referred to the Center for Connected Health Policy, which offers a state-by-state guide to telehealth laws (including those that address prescribing).[6] The best practice for providers to safeguard compliant practice, however, is to check their state licensing boards.

Organizational Preparation for Virtual Care

V IRTUAL CARE can increase access to diagnosis and treatment for most patients, with additional benefits such as minimizing infection risks/exposure and easing the management of chronic illness by providing access without the burden of traveling. Generally, virtual care has been met with patient approval, and organizations and individuals providing this option have an opportunity to learn more about the patient's experience with virtual visits.[7]

Of course, providers want this novel care delivery vehicle to produce benefits for patients and themselves. To meet that goal, they expect reliable, ubiquitous, and high-quality connectivity, including adequate bandwidth.[2] But virtual care also creates potential patient safety risks. This new modality itself may distract the clinician and patient from their clinical focus (comparable to the risk of distracted driving). Providers trying to conduct a clinical visit may be diverted from diagnostic and treatment priorities by the anxiety associated with any unfamiliar or malfunctioning technology. When the provider or patient (or both) experience increased stress and potential cognitive overload in trying to master a new technology, such distraction raises the potential for overlooking aspects of care that would be routine in a face-to-face encounter.
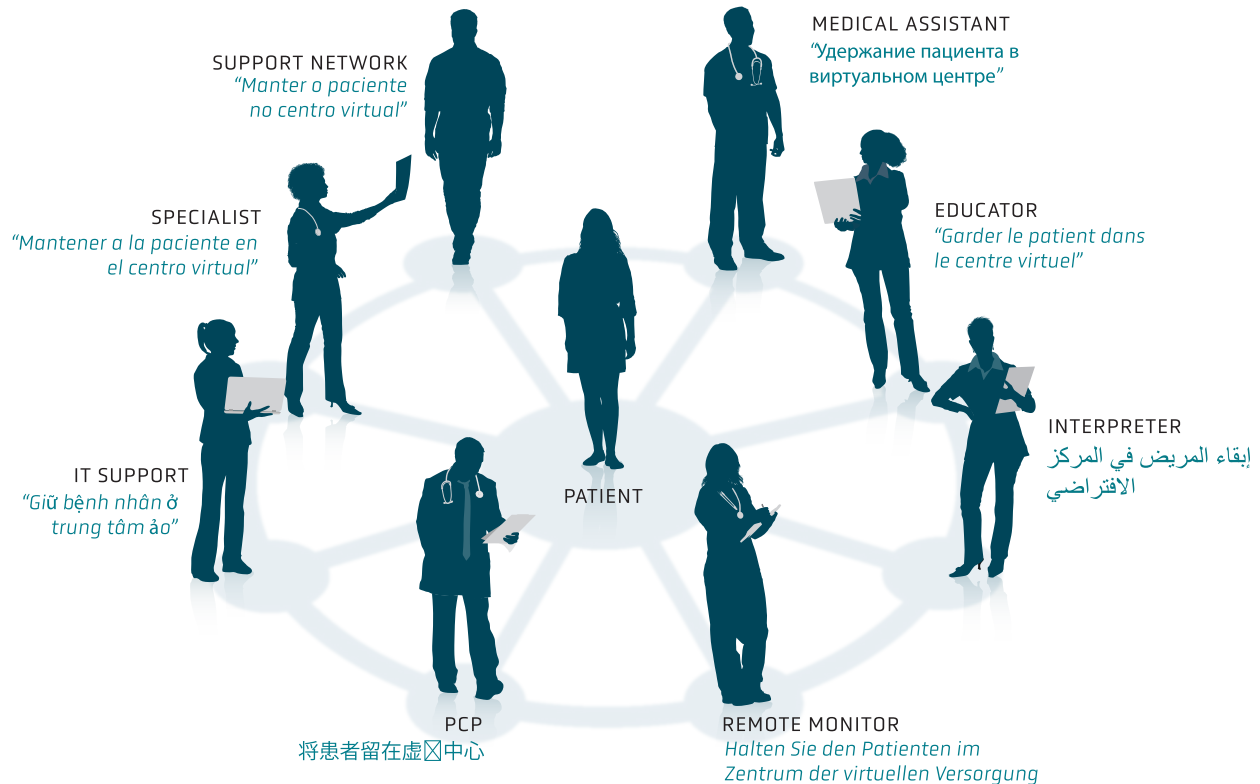
Distraction is a known driver of patient safety events.[8] Technological difficulties that interrupt video and audio transmission can lead to 1) gaps in diagnostic evaluation, 2) inadvertent privacy violations, 3) vulnerability to cybersecurity threats, and 4) overlooking essential elements of a care visit. Management of the technology is an essential foundational step for the safe care of patients and the reduction of risk.

Transitioning to Virtual Care

In preparation for a transition to virtual care, an organization should evaluate the current state of staff preparedness for virtual visits, measured against established expectations. The process to close any readiness gaps should include:

- formal orientation and onboarding programs for providers that may include simulation exercises to train staff about the use of equipment and connection platforms

- education to raise awareness about technology risks, including security risks such as phishing and hacking

- collaboration and integration of IT support to assess overall function of the virtual platform as part of ongoing process improvement

Keeping the Patient in the Virtual Center

SUPPORT NETWORK
"Manter o paciente no centro virtual"

MEDICAL ASSISTANT
"Удержание пациента в виртуальном центре"

SPECIALIST
"Mantener a la paciente en el centro virtual"

EDUCATOR
"Garder le patient dans le centre virtuel"

IT SUPPORT
"Giữ bệnh nhân ở trung tâm ảo"

PATIENT

INTERPRETER
إبقاء المريض في المركز الافتراضي

PCP
将患者留在虚拟中心

REMOTE MONITOR
Halten Sie den Patienten im Zentrum der virtuellen Versorgung

Adapted from a visual concept of *Keeping the Patient in the Virtual Center* by Lee Schwamm, M.D. (2021). Massachusetts General Hospital, Boston.
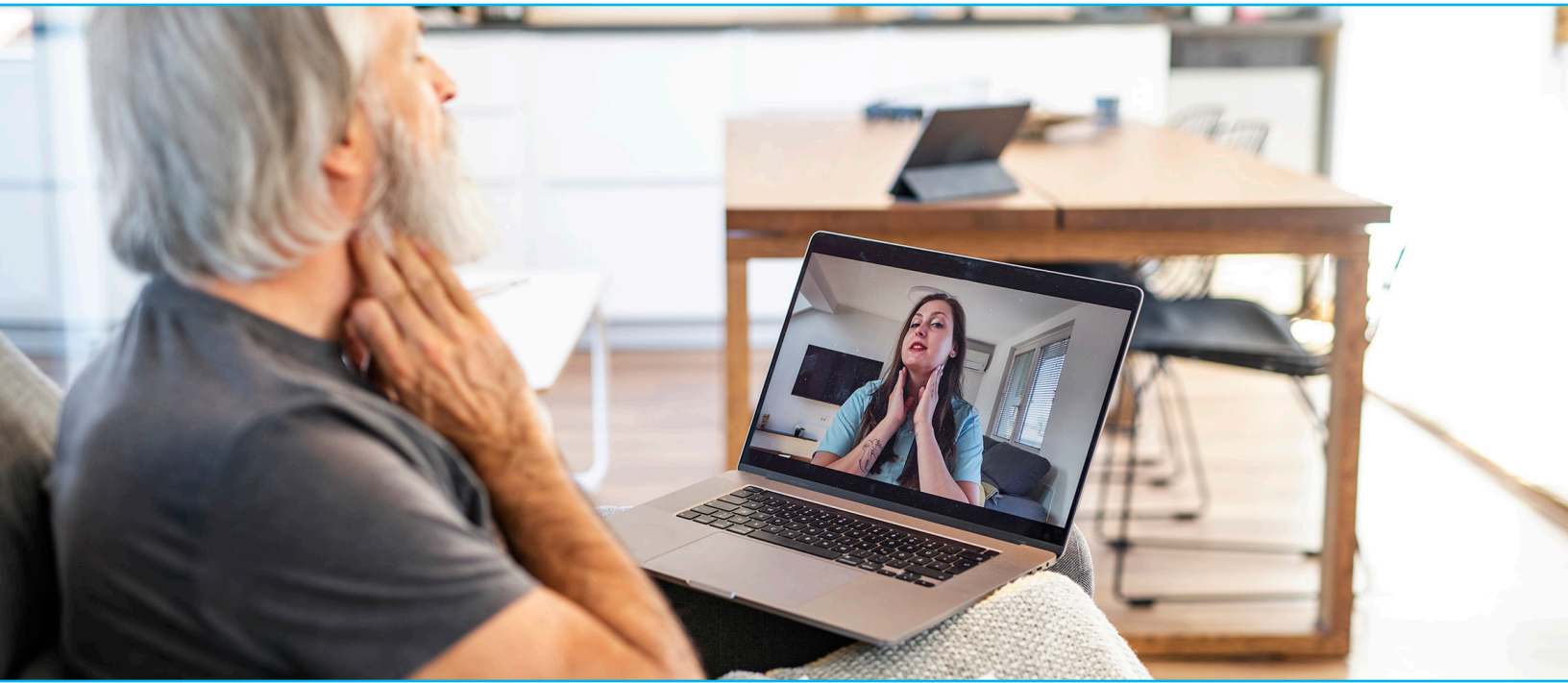
- affirmation of easy access to real-time IT support when transmission disruptions occur, and ongoing assistance in developing backup plans when brief or substantial technology failures occur

Staff Adaptation

Successful adaptation by the staff to the virtual setting will require analysis of all components of the traditional office encounter[2] as well as ongoing communication between support staff and the treating clinician in the virtual setting. The degree to which virtual visits align with in-person visits will determine how much the staff will need to adapt to their roles. Together, the team can assess what adjustments are needed for converting in-office workflows and communication channels to the virtual environment in order to capture the required elements of a care visit.

Before offering virtual visits to patients, organizations should consider the following:

- modification to physical office processes such as registration, coordinating medical records, gathering images, and reconciling medication lists

- strategies to ensure the capture of information exchange between support staff and patients during virtual visits, such as increased utilization of patient portals to facilitate the completion of self-reported patient data

- creation of pre-visit tip sheets and checklists to assist the staff as they transition to a new virtual routine

- development of advance scripting for the team to address common questions such as whether or not a patient can record the session, and if other family members or caretakers will be present during the visit

- standard messaging to patients about appropriate locations/settings for a virtual visit

Metrics

Organizations may ultimately wish to establish metrics with objective markers of provider competency in managing technology and other aspects of virtual care by using the Ongoing Professional Practice Evaluation and Focused Professional Practice Evaluation. The organization will be able to identify clinicians who encounter barriers and help them to develop skills to establish competency. In addition to licensed providers, the organization may consider developing comparable competencies for medical assistants who are now involved in virtual care.

Finally, safety reporting systems can be enhanced to include tags specific to technology-related issues and other aspects of virtual care that contribute to adverse or near-miss events. The safety reporting system serves as an early warning system to identify trends that may create patient safety vulnerabilities associated with technology failures. As with other types of adverse event reporting, safety culture considerations are important here, in order to create an atmosphere that encourages reporting and avoids "shame and blame" for those providers who encounter difficulties.

Pre-visit Considerations

Is Virtual Care the Patient's Best Option?

Extenuating circumstances, such as the COVID-19 pandemic, may render virtual visits the only option for non-emergency care. When in-person care is an option, however, the provider should assess which visit location is best for this patient at this encounter.

Prior to deciding whether a virtual visit is appropriate, the provider should ask how s/he would evaluate this patient during an in-person encounter. The provider should determine whether a virtual visit is a safe and reliable substitute, and weigh this against any risk of harm or other adverse outcomes for a patient to travel to the office.

Another key consideration is whether the patient has access to adequate equipment or can manage the technology necessary for a successful virtual visit. Those with digital access may find it difficult to communicate adequately in the virtual setting, due to language barriers. Some patients may feel so awkward using the technology that they are unable to focus enough to express concerns, ask questions, or to attend to the clinician's recommendations for treatment. Conducting a "dry run" before the actual appointment may offer a valuable

opportunity to address any patient concerns and improve the efficiency of the visit.

A virtual visit may also be safer, improve the quality of care, and be preferred by patients who require more frequent visits, or who have conditions that inhibit face-to-face encounters, such as:

- depression, anxiety, autism, agoraphobia, or other behavioral health issues
- compromised immunity
- chronic degenerative conditions or disabilities that challenge mobility
- caregiving responsibilities that prevent or inhibit travel

For other patients, virtual care may not be the right choice. For example:

- patients who present with an acute condition, or a new complaint for which physical examination and tests are necessary for an accurate diagnostic workup[9]
- Patients who require cancer surveillance involving laboratory testing and imaging

Virtual care for the chronically ill patient may be a better option than a face-to-face encounter. Virtual visits for patients with chronic illnesses such as heart failure, diabetes, or asthma provide an opportunity to develop tailored patient education, permit a provider to utilize online screening tools in the virtual waiting room, perform risk assessments, and improve access to specialists. For some patients, it may offer the opportunity to meet with the PCP and the specialist jointly, in consultation, that often is too difficult to schedule in person.

Preparing the Virtual Office

Clinicians offering virtual visits should attempt to recreate the in-person experience as closely as possible. As with in-person visits, plans/systems should verify the patient's:

- name and date of birth
- location during each virtual visit (documented in the visit note)
- cell phone number (at the start of any virtual visit in the event of transmission failure)
- emergency contact information, to ensure the ability to reach the patient's family or caretaker in the event of an emergency during a virtual visit

When enrolling a patient for the initial virtual visit, document this information in a prominent location within the electronic health record (EHR). The provider/organization should consider how to reach emergency services within the patient's geographical location (which may require a 10-digit local number) and note the emergency department closest to the patient's location (additional planning for behavioral health emergencies are discussed below).

Prior to the clinical portion of a virtual visit, in coordination with the clinician, the support staff can help a patient prepare, by having him/her test the technology to be sure they know how to access the platform before the visit starts and explain the virtual waiting room (if applicable). Patients are likely to become confused and anxious if left in a virtual waiting room without guidance or instruction about the anticipated delay, whom to call with difficulties, etc. Providing explicit instructions that appear on the screen of a virtual waiting room, or in a pre-visit message to address when the visit will begin and what to do in the event of a problem, can alleviate patient concerns. Sending a tip sheet to the patient in advance of the visit with instructions, the practice telephone number, and IT assistance (if available) can provide additional support.

Pre-visit preparation also can serve to have the patient:

- acknowledge that there may be a need for the patient to remove articles of clothing (based on type of visit)
- prepare for any potential intra-visit activity such as standing up and walking across the room to test gait, stability, or assess orthostatic hypotension
- send any visit-relevant photos to the provider or medical assistant prior to the visit

- have medication bottles in the room during the visit for reconciliation

- create a prioritized list of questions to enhance the success of the visit

- learn how to use the patient portal to message the clinician privately and securely about follow-up questions or sensitive topics.

Some institutions have developed short videos or created new roles, known as digital navigators, to help patients prepare for a virtual visit. The Agency for Healthcare Research and Quality has developed a website to guide patients preparing for any type of encounter, including virtual visits.[10]

Setting the Boundaries of a Virtual Visit

Providers have noted patients conducting virtual visits from a coffee shops or gas stations; scrolling through their cellphone mid-appointment, cooking, or playing video games while on screen with the provider.[11] Such locations and behaviors are disruptive and may lack privacy (especially if the patient is using public wi-fi). All patients should be reminded during virtual visit scheduling or preparation of the expected protocols for a private and effective appointment.

Before the patient arrives, the provider should consider what s/he wants to accomplish during this visit, how much time this will require, and how to set the visit agenda with the patient. Of course, asking the patient about his or her expectations for the visit is an integral part of setting the visit agenda. As stated previously, the provider should assess whether these visit-specific goals are appropriate for a virtual care encounter.

Providers should ensure the same level of privacy and professionalism that would occur in their office during a face-to-face visit by:

- looking at the office from the patient's perspective on the screen

- considering the provider's dress and matching it to in-office attire (avoid complex patterns that may distort the video image)

- displaying the provider's name badge so it is visible to the patient on the screen

- maintaining situational awareness of who is in the office, and when the provider's audio and video are on/off. A "hot mic" can lead to an inadvertent HIPAA violation and embarrassment to the patient and provider.

- having a neutral, professional background, without signs of clutter or disorganization

- assessing lighting and eye contact; position the camera at eye level, with head and upper third of torso visible

- considering whether body language is open, with head nods in response to the patient, leaning in to reflect careful attention when the patient is speaking, arms uncrossed, etc.

- asking a colleague or family member to listen to the provider's speaking voice on a virtual platform can help to assess how the volume and intonation come across to the patient

- objectively observing the provider to assist in the identification of any habits (e.g., fidgeting or excessive gesticulating, that become more noticeable on a screen)

- closing all the windows on the computer except the platforms being used for the visit to avoid distraction

- suspending notification alerts during the visit

Webside Manner

Adapting one's interpersonal style to the virtual encounter can be improved by developing what has become known as a "webside manner."[12] This begins with the provider resisting the urge to check email, Google, etc., even if doing so is intended for the patient's benefit. Virtual care is not a replacement for in-person care, but rather a continuation of the existing provider/patient relationship.[5]

When a virtual visit involves giving the patient difficult news, the provider should consider carefully, in advance, what can be communicated and whether it's possible for this patient to be emotionally supported while receiving that information in a virtual setting. Some institutions have adapted an oncology protocol for giving bad news, known as SPIKES (Setting, Perception, Invitation, Knowledge, Empathy/Emotion, and Strategy/Summarize). This strategy was developed to break down complex conversations about serious news to improve communication during in-person conversations and may be utilized during a virtual visit.[13]

Permitting a moment of silence during difficult conversations may be a way to demonstrate empathy in a virtual office, but it may be misconstrued by the patient as a technical problem, so utilizing a head nod or another physical gesture may be helpful to reflect your response when you are silent. This permits the provider to observe the patient and lets the patient know the provider is listening and responding. The provider also should remember to check in frequently to see whether the patient is able to understand and absorb difficult news and continue the conversation.

Managing the Virtual Care Visit

Welcoming the patient to the virtual practice in advance of the visit with an introduction and checklist enhances the likelihood of success. When the patient arrives, acknowledge the "virtual" nature of the encounter, ask the patient how s/he feels about it, and reassure the patient that the team will provide him or her with support to make the visit as comfortable as possible. If appropriate, offer the patient the opportunity to have someone else to join the visit. Assessment of the patient's comfort level and technological ability sets the stage for the virtual visit and permits the provider to consider patient-specific barriers (if any) and whether they can be managed.

A key component of managing the visit itself is to clarify and align provider and patient expectations. Some patients may not understand the virtual encounter is an actual clinical visit; a preliminary statement at the start of the visit may be helpful. Clarification of these differences and how they may affect the ability to complete the clinical examination and treatment is important. If the provider's expectations do not align with the patient's, an initial discussion about what can and what cannot be accomplished will frame the visit boundaries.

Setting expectations about privacy, appropriate locations for a virtual visit, how much time is available, and the patient's ability to discuss issues openly are essential. Assessment of visual and auditory barriers, language issues, and possible cognitive decline in elderly patients

also is important. If the patient clearly struggles, the provider may want to consider converting to an in-person appointment, or whether the patient is open to alternatives that may include having a family member or caretaker present to assist the patient.

Provider attention to non-verbal patient behaviors will help both the patient and provider to engage more completely. The provider may improve patient engagement by:

- asking the patient what is helping or hindering them in the virtual setting
- making full use of the patient's clinical history in advance of the appointment by utilizing the patient portal to gather completed patient forms and questionnaires

A collaborative approach will improve the patient's ability to share concerns more easily and can help patients adjust to interacting on the virtual platform. During a video visit, the provider may find clues about the patient's ability to provide self-care, including clutter or ambient temperature issues that might not arise during an in-person encounter. It also may provide an opportunity to understand the patient's psychosocial needs. For example, a provider may see or hear evidence of possible neglect or abuse in the background. Should this occur, it is important to consider whether a VNA or social service consult may be helpful or whether mandatory reporting is necessary.

Post Visit and Follow Up

THE POST-VISIT phase may be the most vulnerable part of the virtual process because it differs so dramatically from an in-person encounter and increases the potential for gaps in care. Unlike the face-to-face visit, when there is an opportunity for a "door handle" conversation as the patient is departing, at the end of a virtual visit the patient may be confused or unaware of how the clinician will arrange for specialty consultations, how to fill prescriptions, and how to make a follow-up appointment for the next steps in treatment. This phase of the visit should be carefully reviewed by the clinical team to develop a virtual work flow that identifies roles and processes for follow up. The use of closed-loop communication is especially important. Educating patients about the patient portal to help them use this valuable tool can help to ensure successful follow-up care.

Extra Time

Given the nature of virtual appointments, and providers facilitating the entirety of the appointment, some clinicians have increased the time scheduled for each visit to include the management of tasks typically handled by a medical assistant, nurse, or other clinician. The clinician also becomes responsible for the follow-up plan at the end of the visit. It is important to have clear follow-up instructions for the patient, family, and the clinical staff about the next steps in arranging care.
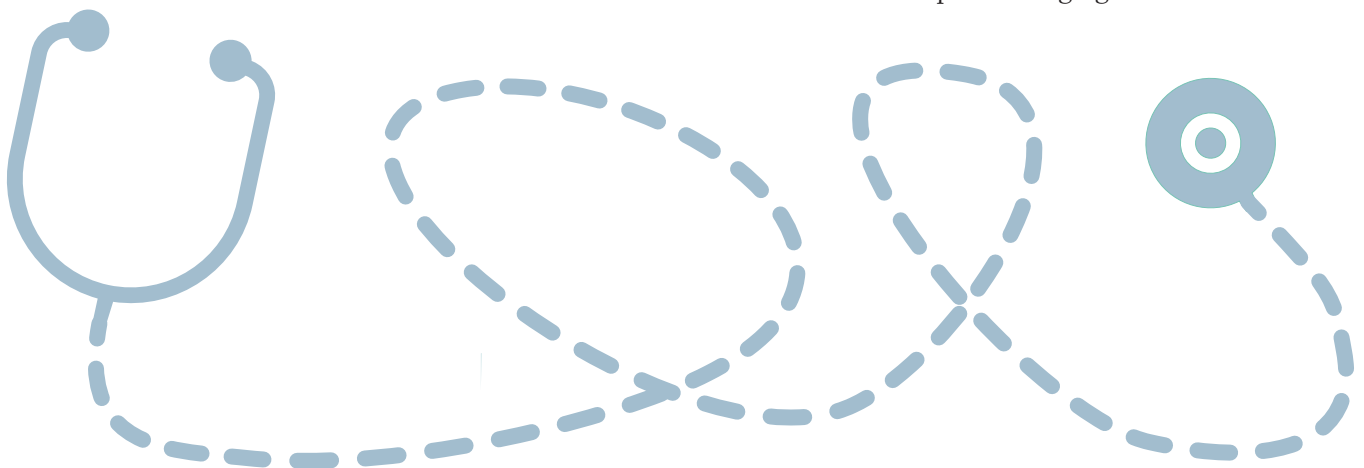
Patient Consent Considerations

T HE INITIAL virtual visit with a patient should include a discussion that describes differences between virtual and in-person care and explains both the benefits and possible limitations specific to virtual care. Providers should be familiar with virtual health consent requirements where they practice, as state laws vary. An important component of the discussion about virtual care is an explanation of how a provider determines whether it is necessary to convert a virtual visit to an in-person encounter.

Explain, at the outset, that this is a clinical decision based upon the provider's medical judgment because virtual visits have limitations, and at times, an accurate diagnosis and safe treatment require an in-person examination. Providers may seek assistance in making such assessments.[14] In addition to discussing benefits and limitations of virtual care, a provider should be aware that if a discussion about a patient's decision to proceed with a specific treatment would be documented in a signed informed consent form during an in-person encounter, then the provider should develop a plan for how to manage this during the virtual appointment.

When Patients Decline In-person Care

When a situation arises in which the clinician determines an in-person encounter is necessary, the provider should explain the limitations of a virtual appointment for that individual and provide the patient with an opportunity to have his/her questions satisfactorily addressed. One example of this scenario would be when a patient declines a provider request to come for an in-person visit as part of the patient's cancer surveillance, in order to perform a physical exam, and to obtain imaging and blood work.

The patient may resist the recommendation for an in-person appointment for a variety of reasons: fear of infection, physical inability to travel, or lack of resources for childcare and parking that an in-person visit would entail. If the patient resists a recommendation for an in-patient visit, the provider should be prepared to explain why it is important, offer alternative options such as VNA or urgent care (if appropriate and available) and describe the risk for potential, adverse consequences of the patient's refusal. In addition, the provider should accurately and succinctly document the substance of this conversation in the EHR and identify any other individuals who were present. The provider can ask the patient to schedule a follow-up conversation to revisit the decision and send a follow-up letter to the patient.

Special Considerations

Equitable Access

Health care professionals agree that the many advantages of virtual care with video depend upon adequate internet access and video-capable devices. Without this, existing disparities may continue and even worsen, or new disparities may emerge. Requirements for equitable access to virtual care include adequate broadband internet services to provide a stable connection, sufficient devices to make those connections, and patient comfort in using those devices.

Disparities exist in access to virtual care by the elderly. In 2018, it was noted that 26% of Medicare beneficiaries lacked digital access.[15] Dr. Kenneth Lam of the University of California San Francisco commented that virtual clinics for the elderly may be analogous to having a physical clinic up a flight of stairs with no ramp or elevator.[16] Evidence of racial inequities in virtual care also are apparent. One author noted that Black and Hispanic adults are less likely than whites to own a computer or have high speed internet at home.[17]

A recent study about patient characteristics associated with telemedicine access during the pandemic found significant inequities present among patients in accessing necessary telemedicine care. Patients of older age, Asian race, and non-English language as the patient's preferred language were independently associated with fewer completed telemedicine visits; older age, Black race, Latin ethnicity, and lower household income were associated with lower video use. There were similar findings across specialty visits.[18]

Another example of the effect of disparities upon virtual care can be found by examining differences in the use of patient portals. As previously discussed, patient portals offer great potential to improve patient access, engagement, and participation in health care, but the use of portals has not been evenly distributed. Low-income, Black, rural, and older adults repeatedly show lower use rates.[19]

Technology is not the only barrier. Ongoing issues related to health literacy, and social and geographical barriers, also contribute to unequal access to virtual care. These barriers render a notable portion of the patient population unable to directly benefit from technological advances.[19]

EQUITABLE ACCESS
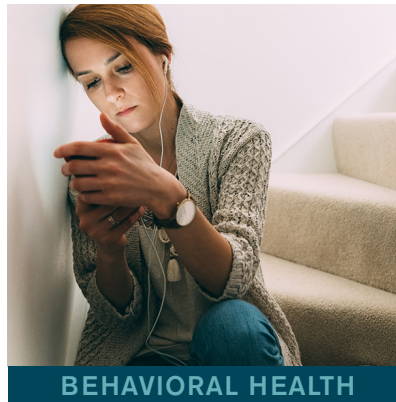
BEHAVIORAL HEALTH

PEDIATRICS

Telephone Only

Many patients are limited to participating in virtual visits by land line or non smartphone. When assessing the ability of a patient who has only a basic telephone to access a remote care visit, the provider must consider the adequacy of this modality for diagnosis and care, especially if visualization of the patient is necessary. An important distinction to consider is the difference between a telephone call and a telephone visit. Telephone calls are a common practice in medical care and tend to be brief in nature. Telephone virtual visits are meant to be replacements of in-person visits and include the elements typically associated with a visit. By communicating with patients in an audio-only method, providers are accepting

a lesser form of digital communication and may be perpetuating access barriers to disadvantaged populations.

Identification and mitigation of disparities will require research and cooperation by the government and health care institutions to address this pervasive problem of ensuring access to virtual care for all. Research efforts to target effective care delivery via telemedicine, with an appropriate design of telemedicine platforms to address audio, visual, and motor impairment, as well as language barriers and broadband coverage, would be a start in understanding how to increase use of virtual care in this population.[20]

Behavioral Health

Virtual care of the behavioral health patient has the advantage of reaching populations for whom in-person care is difficult or impossible. Patients in rural locations, elderly patients with depression, women with newborns and small children who experience post-partum depression, and other underserved populations can benefit from virtual care. Behavioral health virtual care requires the same preparation and process as other virtual visits, with some added considerations. The provider's analysis of whether virtual care is appropriate may have to take

place during the patient's initial virtual visit. At that time, the provider can assess the patient's presentation and preliminary diagnosis in order to direct the decision about whether virtual care is appropriate. Careful consideration of risks of suicide or violence is especially important in the assessment of whether virtual care is appropriate.

Virtual care can be especially helpful for behavioral health patients who have social anxiety or other diagnoses that make in-person visits difficult. Over a series of visits, the clinician may be able to help the patient advance to an
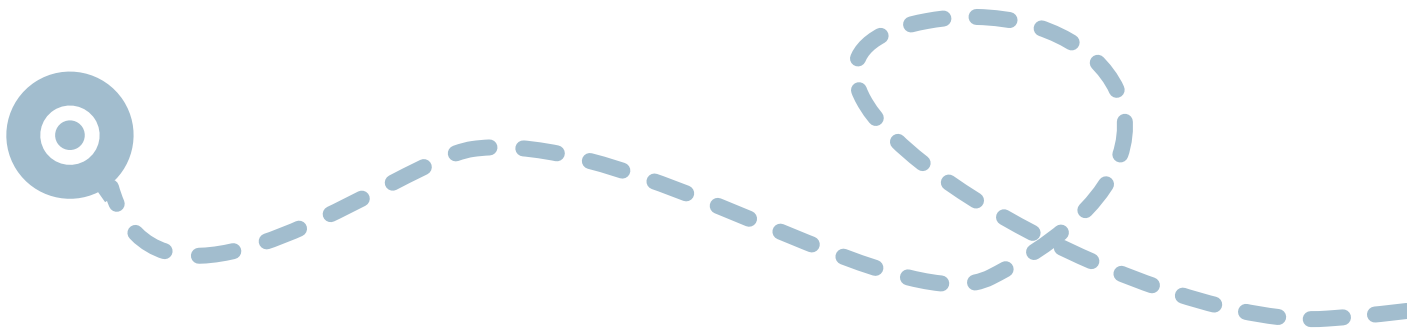
in-person appointment (once a therapeutic alliance has been established). Virtual care also may permit more frequent contact, when clinically indicated, to check for medication side effects, and offer opportunities for adjunct patient services such as collaborative treatment planning, psychoeducation, and psychopharmacology consultations. For many patients requiring frequent, recurring visits, virtual care reduces time away from work or other obligations and may increase visit compliance.

Transitioning patients to virtual care in behavioral health requires special attention to privacy and security in both individual and group therapy settings. The patient and provider should:

- evaluate the privacy of their physical spaces

- verify patient identification and location at the beginning of every session

- develop and implement a structured safety protocol in departmental policies

- update emergency contact information regularly

- identify and document the emergency department with psychiatric services near the patient's location

- confirm privacy checks and secure transmission by both provider and patient at every meeting and document this in the EHR

- ensure careful management of the links that patients use to access virtual care platforms, to ensure HIPAA compliance

- confirm that no one will record or transmit any part of the session (especially important for any group sessions).

As with all patients, a discussion with the behavioral health patient about the differences between virtual and in-person care is important. This is an opportunity to explain the benefits and limitations of virtual care, and to clarify that the provider may determine that an in-person visit is necessary.

Additional Safety Considerations

Managing a psychiatric emergency during a virtual visit also requires careful advance planning. Providers who encounter psychiatric emergencies during virtual therapy sessions should develop a safety protocol and work flow, prepared in advance, to manage these circumstances. If the clinician is required to initiate an involuntary evaluation for possible commitment, s/he should be able to easily access a downloaded involuntary commitment form to fax to local law enforcement. Depending on the relative locations of the patient and the provider—e.g., if the patient is a great distance from the provider—calling 911 may not connect to the patient's area. During the intake process, some providers find it helpful to document the 10-digit local telephone number of law enforcement closest to the patient's location.

Providers also may want to consider how to develop a backup plan that would permit a clinician to contact a colleague in the event of an emergency during the virtual treatment session, especially when the provider is conducting a group session. If a second form of communication is available, the provider should keep it close at hand.

Pediatrics

A pediatric virtual appointment usually—but not always—includes the patient's parent or guardian, to whom facilitation and education are directed. Keeping the parent or guardian at the forefront is necessary during the pre-, intra-, and post-visit phases of the virtual visit. Aligning expectations should begin before the visit by providing guidance to the parent/guardian about enrolling the patient in a patient portal or sending instructions in advance of the meeting about the platform to be used. Most likely, log-in information for virtual visits will be tied to the parent/guardian, not to the minor patient. Preparing the parent/guardian and patient about what to expect at the virtual appointment should include information about any equipment they should have available for the visit (e.g., paper and crayons to evaluate mobility), instructions about what steps to take if they encounter connectivity issues when trying to access the virtual platform, what they should expect after a virtual visit, and how to schedule follow up. Parental/guardian contact information should be reviewed and updated regularly, and the provider should confirm the location of the patient and parent/guardian at the start of each virtual visit. The provider also should be aware of emergency services nearest to the patient's location and how to contact them.

Setting clear expectations about appropriate virtual visit locations may require some education (e.g., trying to squeeze in an appointment around soccer practice or during a drive home is not acceptable). Providers may need to anticipate barriers unique to pediatrics (e.g., a newborn who is not awake during the visit) and how to manage them.

Privacy and Consent Issues

How to address unique privacy and consent issues, especially with older minors, should be planned to ensure appropriate safeguards. Before proceeding with sensitive patient conversations, the provider should consider what is the safest and most reliable method to maintain patient confidentiality while the patient is at home. Examples when such a situation might arise include a gynecology follow-up appointment of a minor girl or an adolescent boy struggling with behavioral development. Pediatric providers should be prepared to manage sensitive conversations about contraception, abortion, sexually transmitted diseases, suicide prevention, or behavioral counseling. When an older minor patient is seen virtually, the parent should either be in the same location with the patient or be easily available by phone. Providers should be aware of laws governing consent for minors, as states vary. In some states, patients 18 years or older can be seen without the parent, and patients between 13–18 may have private appointments for behavioral health and gynecology.

Measuring Quality and Safety of Virtual Care

THE DEVELOPMENT of metrics to assess the quality of virtual care is an ongoing process. Meaningful measurement of virtual care processes might include:

- collecting, aggregating, and analyzing safety reports of adverse or near-miss events in which virtual care technology was a contributing factor

- defining criteria to determine when a virtual visit vs. an in-person visit is recommended

- inclusion of adverse events relating to virtual care as part of the Morbidity and Mortality review process

- shared case reviews including all parties to virtual care, (e.g., employing Patient Safety Quality Improvement Act privilege and confidentiality protections where providers are members of a Patient Safety Organization)

- patient satisfaction surveys geared to the virtual visit

- review and analysis of cybersecurity issues

Summary

A WORLD-WIDE PANDEMIC has thrust many care providers into virtual care, requiring them to adapt quickly to the new challenges of this approach. While virtual care clearly offers many benefits to patients and providers, careful preparation will improve patient safety and reduce risks related to this modality for care delivery. The increased use of telemedicine during the pandemic has exposed the continued existence of disparity and equity issues that must be examined and addressed in order for virtual care to be accessible to all populations, including those marginalized by insufficient connectivity, poor bandwidth, lack of appropriate devices to conduct a virtual visit, the presence of pre-existing socio-economic barriers, and physical or cognitive barriers exacerbated in the virtual arena. While efforts are underway to address these important access issues, there needs to be an infusion of resources and collaboration between private and public partnerships to conduct additional research and implement corrective action.

As stated recently by Dr. Joseph Kvedar and other prominent telemedicine leaders, "[t]he challenges for the telemedicine researcher, providers, and advocates are to derive the right lessons from this [pandemic] experience, ensure the appropriate guardrails are in place, and secure the necessary evidence for building the health system of the future."[20]

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About the AMC PSO

In 2009, the Patient Safety and Quality Improvement Act (PSQIA) was enacted to create a culture of safety by providing federal privilege and confidentiality protections for information that is assembled and reported to a PSO, or developed by a PSO, for the conduct of patient safety activities.

The act promotes the sharing of best practices and knowledge to continuously improve the quality of patient care. Before the PSQIA, legal protections for quality activities were limited in scope and existed only at the state level.

The PSQIA encourages voluntary reporting. Identification of common, systemic errors can be achieved more effectively through the aggregation of information reported from providers across the health care delivery system.

In 2010, The Risk Management Foundation of the Harvard Medical Institutions Incorporated formed a component entity, the Academic Medical Center Patient Safety Organization (AMC PSO) to function as a national convener of clinicians and health care organizations to collect, aggregate, and analyze data in a secure environment in an effort to identify and reduce the risks and hazards associated with patient care.

Our objectives:

- Create a bridge between themes driving malpractice activity and factors seen in real-time data with a particular focus on high severity/high significant events seen in root cause analyses

- Convene member organizations in response to real-time events and bring context to patient safety issues by providing a secure venue for discussion

- Translate learnings gleaned from our convening sessions and data analyses into focused clinical interventions that can improve quality, reduce costs, and decrease liability

- Reach beyond data reporting and generate actionable responses that can inform the development of best practice recommendations

- Inform institutional patient safety efforts by pinpointing the areas of highest risk and vulnerability to help guide organizational patient safety initiatives