Policy
ATA Practice Guidelines for Live, On-Demand Primary and Urgent Care

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Preamble

The American Telemedicine Association (ATA) is a membership-based organization composed of a diverse set of members including healthcare providers, academicians, program administrators, industry, and policymakers. ATA collaborates actively with related health professional organizations, as well as the public and private sectors in promoting the safe and effective use of telemedicine to promote the health and wellbeing of people.

ATA has embarked on a mission to establish practice guidelines in many areas of telemedicine practice to promote patient safety and uniformity and quality of services provided via telemedicine. The guidelines were developed by panels of experts in this field and are designed to assist providers of care in adhering to ethical standards and sound business practices. They are intended to serve as guides for patients and their caregivers in assuring their rights and protecting their health.

The development of these guidelines entailed a rigorous process of peer review and analysis to ensure their appropriateness, relevancy, consistency, and comprehensiveness. They were enacted after full review and approval by the Board of Directors. In view of changing circumstances and developments, these guidelines are reviewed periodically and updated as indicated.

Compliance with these guidelines alone will not guarantee accurate diagnoses or successful outcomes. The practitioner should rely on his or her best professional experience and expertise when faced with unexpected circumstances or new developments in technology. When this occurs, the practitioner is strongly advised to document his or her rationale in the patient record.

The framers of these guidelines do not purport to establish legal standards for telemedicine services but focus on the quality, safety, and effectiveness of telemedicine encounters.

Scope

These guidelines cover the provision of patient-initiated primary and urgent care services by licensed healthcare providers using real-time, interactive technologies, including mobile devices. Healthcare providers include individual practitioners, group and specialty practices, hospitals and healthcare systems, triage or call centers, and other licensed providers of telemedicine services. They do not address communications between healthcare professionals and patients via short message service, e-mail, social network sites, or online "coaching," or the use of telemedicine for primary care when facilitated by a provider connecting to another provider.

The guidelines address three aspects of service delivery: clinical, technical, and administrative. Under each set, the guidelines are classified into three levels of adherence: "**shall**" indicates required action whenever feasible and/or practical; "**shall not**" indicates a proscription or action that is strongly advised against; and "**should**" indicates a recommended action without excluding others. "**May**" indicates pertinent actions that may be considered to optimize the telemedicine encounter. These indications are found in bold throughout the document.

ATA urges health professionals using telemedicine in their practices to familiarize themselves with these guidelines and with other position statements or standards from their professional organizations and societies and incorporate them into telemedicine practice. They pertain to the United States when both patient and provider are within the United States. Others may use them at their discretion.

Introduction

Telemedicine enables providers to extend their reach and to improve their efficiency and effectiveness while still maintaining high-quality care and attention to patient safety. These guidelines pertain to telemedicine in primary and urgent care encounters initiated by patients. As with the practice of medicine in general, users must

adhere to strict ethical and professional standards to assure quality of care and patient safety. ATA has developed a series of guidelines including Core Standards for Telemedicine Operations.[1] This guideline focuses on the use of telemedicine services to connect providers and patients in the delivery of primary and urgent care.

The development of these guidelines followed a rigorous process of evidence review and expert assessment of more than 600 studies regarding the practice of telemedicine in primary and urgent care. Several studies within and outside the United States have demonstrated the safety, efficacy, and quality of telemedicine in primary and urgent medical care for uncomplicated conditions.[2–6] These studies report outcomes often on par with in-person encounters, high patient satisfaction, and reduced costs of care, depending on the attributes of the intervention and the metrics studied.[3–5,7–23]

Practitioners must be mindful of all relevant statutes and regulations when choosing to provide care to patients via telemedicine, and in particular when considering prescribing medications.

Telemedicine in the Practice of Primary and Urgent Care

For the purposes of this document, primary and urgent care is defined as the delivery of basic nonspecialty care outside a hospital emergency department when a patient is deemed in need of immediate medical attention. This type of care is typically unscheduled and episodic and is not always provided by the patient's regular primary care provider. Primary care typically implies a longer-term relationship between patient and provider, wherein the provider is usually familiar with the patient's health history.

Both acute and chronic conditions may present with symptoms that range from mild to severe. Examples of acute medical conditions that may be managed effectively by video-based telemedicine and, as appropriate, other interactive technologies supported by peripheral devices and ancillary tests necessary to establish a diagnosis include uncomplicated cases of allergy/asthma, chronic bronchitis, conjunctivitis, genitourinary conditions, low back pain, otitis media, rashes, and upper respiratory tract infections.[3,5,6,9,10,24] Chronic medical conditions addressed by telemedicine within primary care practices may include mental illness and behavioral health, chronic obstructive pulmonary disease, congestive heart failure, diabetes, and hypertension.[8,11,12,25–31] The virtual medium is also an appropriate tool for consultations regarding prevention and wellness services such as immunizations, smoking cessation, diet, and physical activity.

Prescribing is generally accepted (given local and federal regulations) within the context of real-time videoconferencing sessions when information can be provided that approximates the in-person exam. Prescribing is also generally accepted based on telephone-only consultations with a patient where there is a prior relationship by the provider or with providers offering weekend coverage with access to the patient's medical record. However, for prescribing based on a telephone session with a patient with no prior relationship and no medical record, there are differences of opinion and few independent, validated studies. One recent study, conducted in a health system outside of the United States (in Denmark), concluded that prescriptions made during telephone consultations conducted under that system were feasible and that practitioners who had access to the patient's medical record were conservative in the encounters, being less likely to offer prescriptions when cases are severe or involve children,[32] with no differences in prescription rates between contacts due to new episodes and exacerbation of chronic disease. Antibiotics, analgesics, and medications for the respiratory system are the most commonly prescribed drugs.[32] Other published data, however, have demonstrated higher rates of prescribing for patients with complaints of urinary tract symptoms evaluated and treated via non–video-based visits without laboratory testing.[30] For isolated patients with no other means to access a provider, an audio-based consult may be the only alternative. The prudent practitioner should be aware of and follow all relevant statutes and regulations regarding the modality of technology used when choosing to provide care to patients via telemedicine, and in particular when considering prescribing medications.

Despite some overlap between acute and chronic diseases, there are several common attributes of primary/urgent care in traditional, in-person practice and video-based telemedicine, including timely service, a trust relationship, and opportunity for follow-up. These are identified in the primary care medical home model.[27,33,34] The Agency for Healthcare Research and Quality defines the medical home not simply as a location but as an organization that delivers the core functions of primary healthcare.[35]

Practice Guidelines

Many conditions lend themselves to a virtual visit as defined in this document. Currently there is a growing body of evidence regarding the effectiveness of video- and audio-based interventions for a variety of acute and chronic conditions seen in primary care, such as diabetes, asthma, heart failure, and hypertension.[5,6,8–12,25–31,34,36–38] Typically these include conditions for which there is a reasonable level of certainty in establishing a diagnosis and generating a treatment plan, especially when visual information coupled with access to a medical record with diagnostic studies and imaging is available.[5,19,30]

In general, conditions that are not suitable for telemedicine are those for which an in-person visit is required to evaluate the patient because of the severity of presenting symptoms, the necessity of haptic information, the need for protocol-driven procedures, or the need for aggressive interventions. Other circumstances that are not suitable for telemedicine include some patients with cognitive disorders, intoxication, language barriers, emergency situations that warrant escalation to an emergency room visit or 911, or when patients do not have the requisite technology to complete a virtual visit.

These practice guidelines identify primary and urgent care services that current information indicates can be provided safely and effectively using telemedicine. They are not intended to substitute for the independent medical judgment, training, and skill of the practitioner. Therefore, providers **shall** exercise their professional judgment when deciding whether or not to use telemedicine, taking into account the patient's condition, mitigating circumstances, available

resources, and their own comfort level and expertise in using tele-medicine. Providers **shall** be aware of all relevant state and federal regulations related to the use of telemedicine to include those that govern prescribing as it relates to the establishment of a doctor–patient relationship. In addition, practitioners **shall** be aware of relevant practice guidelines developed by the specialty societies as they relate to both in-person and telehealth practice.

I. PRELIMINARY CONSIDERATIONS

A. Regulatory and licensure requirements. Providers **shall** follow federal, state, and local regulatory and licensure requirements related to their scope of practice and **shall** abide by state board and specialty training requirements. Providers **shall** ensure that the patient is physically located in a jurisdiction in which the provider is duly licensed and credentialed. Providers **shall** practice within the scope of their licensure and **shall** observe all applicable state and federal legal and regulatory requirements.

B. Informing and educating the patient. Prior to the initiation of a telemedicine encounter, the provider or designee **shall** inform and educate the patient (either in writing or verbally) about the nature of telemedicine service compared with in-person care. This **shall** include discussion of the nature of a telemedicine encounter, timing of service, record keeping, scheduling, privacy and security, potential risks, mandatory reporting, the credentials of the distant site provider, and billing arrangements. The information **shall** be provided in simple language that can be easily understood by the patient. This is particularly important when discussing technical issues like encryption or the potential for technical failure.

More specifically, this information **shall** include the limits to confidentiality in electronic communication, an explicit emergency plan (particularly for patients in settings without access to clinical staff), a process by which patient information will be documented and stored, the potential for technical failure, procedures for coordination of care with other professionals, a protocol for contact between visits, prescribing policies including local and federal regulations and limitations, and the conditions under which telemedicine services may be terminated and a referral made to in-person care.

Finally, the provider or designee **should** set appropriate expectations regarding the telemedicine encounter, including, for example, prescribing policies, scope of service, communication, and follow-up. To reduce the risk of overprescribing, the provider **shall** follow evidence-based guidelines and all federal, state, and local regulations.

C. Physical environment. The provider **shall** determine the minimal acceptable levels of privacy, lack of distraction and background noise, and other environmental conditions that may affect the quality of the encounter, in particular when video-based services are offered. The provider's and the patient's room/environment **should** ensure privacy to prevent unauthorized access. Seating and lighting **should** be designed for both comfort and professional interaction. Both

provider and patient **should** be visible and heard. Patients receiving care in non-traditional settings **should** be informed of the importance of reducing background light from windows or light emanating from behind them. Both provider and patient cameras **should** be placed on a secure, stable platform to avoid wobbling and shaking during the videoconferencing session. To the extent possible, the patient and provider cameras **should** be placed at the same elevation as the eyes with the face clearly visible to the other person.

D. Referrals and emergency resources. The provider **shall** have an emergency or contingency plan that is communicated to the patient in advance of the telemedicine encounter.

The provider **should** be familiar with, or have access to, available medical resources in proximity to the patient in order to make referrals or request transfers when indicated.

E. Cultural competence. Telemedicine providers and their staff **shall** deliver services in a culturally competent manner that takes into account the patient's age, disability status, ethnicity, language, gender, gender identity and sexual orientation, geographical location, language, religion, and socioeconomic status.

Provider and patient or patient/representative **should** be able to converse in a language comfortable and familiar to both parties, allowing the provider to obtain a clear history and the patient/representative to understand the recommendations provided. If necessary, a translator (or signer for deaf/hearing impaired patients) **should** be used.

II. TELEMEDICINE MANAGEMENT OF THE PATIENT

Telemedicine providers **shall** determine the appropriateness of telemedicine on a case-by- case basis, whether or not a telemedicine visit is indicated, and what portion of the examination must be performed and documented in conformance with appropriate standards in evaluating the patient. Wherever possible, diagnostic interventions **should** be supported by high-quality evidence. Where evidence is lacking, providers **shall** use their professional judgment, experience, and expertise in making such decisions. Conditions for use of telemedicine are likely to change to reflect new evidence from future research and the evolution of the enabling technology.

Telemedicine providers **shall** be cognizant of establishment of a provider–patient relationship in the context of a telemedicine encounter, whether using synchronous or asynchronous modes of communication/interaction makes a difference, and they **shall** proceed accordingly with an evidence-based standard of care. If not previously established, a provider–patient relationship **may** be established where the provider is guiding the process of care. The provider **shall** use his or her professional judgment and conform to all state and federal regulations in determining whether a provider–patient relationship has been established and whether it is sufficient to proceed with an encounter and make diagnostic and treatment decisions including prescribing. In the event the patient does not have a primary care provider, the provider **should** recommend options to assure continuity of care for the patient. Provider practices

should establish standard operating procedures and workflows for telemedicine visits consistent with prevailing norms.

Telemedicine management of the patient **may** involve establishment of a diagnosis and treatment plan, or it **may** result in a referral to a medical facility for further evaluation and/or treatment.

Clinical protocols **should** be developed for live, on demand services. Such protocols are beyond the scope of these guidelines, and practitioners are advised to review specialty society guidelines and the evidence published in the peer-reviewed literature. However, protocols **should** include the following components:

- Named condition and corresponding ICD code
- Scope of condition amenable to treatment by telemedicine based on medical evidence or, at a minimum, precedent for successful management based on peer-reviewed guidelines or expert opinion
- The mode of intervention required to diagnose and treat the condition (i.e., under what circumstance and regulatory framework is telephonic care adequate, is videoconferencing required, are peripheral devices needed or other diagnostic tests, or is an in-person visit needed)
- Documentation required to appropriately assess the patient's condition, including history and any video-based examination including required components needed to visualize, demonstrate, or test
- Parameters under which the condition can be treated
- Parameters under which the condition may not be treated and require referral to alternate modes of management
- Parameters under which prescribing can and cannot be done.

A. Patient evaluation. Patient examination should be commensurate with the level of assessment required to manage a patient, taking into consideration the technical quality and extent of information that **may** be elicited remotely. This evaluation **should** be supported by clinical history, access to the patient's medical record where possible, diagnostic data (e.g., obtained via self-report or access to store-and forward databases) and laboratory test results, and peripheral devices for patient physical examination when appropriate.

Audio-based evaluation **may** be used for consultation, if and only if the evaluation, diagnosis, and treatment of conditions can be made reliably on the basis of complete medical history, with a full understanding of presenting symptoms reported by the patient or caregiver, and be consistent with established clinical protocols, state and federal laws, and regulations related to audio-based evaluations, in particular when such evaluation results in prescribing.

The telemedicine provider **should** obtain all the data necessary for a diagnosis and treatment plan. Necessary items include:

- Identifying information
- Source of the history
- Chief complaint(s)
- History of present illness (including location, description, size, quality, severity, duration, timing, and context-modifying factors)

- Associated signs and symptoms
- Past medical history
- Family history
- Personal and social history
- Medication review
- Allergies including medication, nature, and severity of reaction
- Detailed review of symptoms
- Provider-directed patient self-examination to include the use of peripheral devices as appropriate.

Documentation **shall** be performed following each patient encounter and **shall** be maintained in a secure, Health Insurance Portability and Accountability Act (HIPAA)-compliant form and location (e.g., paper/fax, server, cloud).

Following every visit, the provider **shall** communicate results of the encounter to the patient's primary care provider or other specialty providers using secure methods (e.g., e-mail/fax, secure e-mail, transmission to electronic medical record), as well as to the patient, unless the patient has requested a limitation on such communication. An appropriate disposition **shall** also be discussed with the patient including any required follow-up and discussion of clinical signs that would signify a significant escalation. Laboratory tests, including diagnostics ordered in the usual course of evaluation, **shall** be followed up in a timely manner with the patient and any additional providers as needed.

B. Physical examination. The provider **shall** perform a virtual physical examination as indicated by the patient complaint and medical history and other relevant information reported by the patient, conforming to the standards of medical practice and provided by a credentialed and qualified practitioner. This examination **may** include a demonstration or an explicit physician-guided self-examination, which, as appropriate, **may** include peripheral devices. Where additional diagnostic testing is required to confirm the diagnosis, the provider **shall** recommend to the patient that such testing be performed in accordance with standards of medical care.

III. QUALITY

The provider **shall** employ a coordinated quality improvement program or clinical oversight process.

A. Quality review. Quality review **should** be conducted on a periodic basis to identify specific risks and qualify failures. It **should** include assessment of:

- equipment or connectivity failures
- number of attempted and completed visits
- patient and provider satisfaction with the virtual visit
- patient or provider complaints related to the virtual visits (e.g., via surveys)
- measures of clinical quality such as whether the visit was appropriate for a virtual encounter
- recommendations consistent with appropriate standard of care.

Unless there is an external requirement for recording a virtual visit, the provider **may** opt not to record the visit. If he or she chooses to record the encounter for quality or training purposes, it **shall** comport with appropriate consent and privacy/security measures (see Technical Guidelines below).

B. Provider training and mentoring. Provider orientation and training should entail a thorough review of history-taking skills and physical examination skills as they pertain to the evaluation of a patient through telemedicine. Providers **shall** know current local and state laws as they pertain to telemedicine practice. They **shall** obtain the necessary training and education for themselves and/or staff to ensure maintaining technical and clinical competence in accordance with their discipline. Providers **should** conduct several "dry run" visits with test "patients" to become familiar and comfortable with the technology of virtual visits and be generally familiar with the nature of the technology the patient is using to direct and assist with minor technical questions and potential problems that may arise. The provider **should** also be familiar with and proficient with a satisfactory default mode for patient engagement should technology fail during a patient encounter. Those new to telemedicine are encouraged to identify a mentor to observe during telemedicine encounters. This can also be done *post hoc* by a video recording. Proctored visits **should** include a variety of conditions and modes of encounter (e.g., phone, Web, mobile). Protocols regarding indications when care should be escalated, and provision for escalating patients when necessary to alternate modes of care should be established, documented, and communicated as part of the provider orientation process. The effectiveness of these guidelines should be assessed routinely by the provider entity as part of the standard quality review process.

IV. ETHICAL CONSIDERATIONS

Practicing at a distance requires the same attention and adherence to professional ethical principles as would an in-person encounter. Telemedicine providers **should** incorporate ethical statements and policies into their standard operating procedures.

The following are the ethical guidelines for health professionals who are engaged in telemedicine:

- A practitioner **shall** uphold the code of ethics for his or her profession and be aware of the codes for other professional disciplines.
- A practitioner **shall** abide by all federal, state, and jurisdictional laws and regulations and institutional policies.
- Telemedicine **shall not** be used as a means of preferentially avoiding in-person encounters based on geographic location, socioeconomic status, disease or disability, gender, gender preferences or sexual orientation, behavioral factors, ethnicity, religion, etc. An exception to this rule **may** be the avoidance of in-person visits during epidemics or pandemics to avoid the spread of infectious disease.
- Payment made by the patient **should not** be conditional on receiving a certain diagnoses or particular treatment, such as receipt of a prescription.

- Providers **should** abide by a strict conflict of interest policy that deters the use of telepractice for the sole purpose of enhancing income.
- Providers **shall**:
  ○ Apprise patients of their rights when receiving telemedicine, including the right to suspend or refuse treatment
  ○ Apprise patients of their own responsibilities when participating in telemedicine
  ○ Inform patients of a formal complaint or grievance process to resolve ethical concerns or issues that might arise as a result of participating in telemedicine
  ○ Discuss the potential benefits, constraints, and risks (e.g., privacy and security) of telemedicine
  ○ Inform patients and obtain their consent when students or trainees observe the encounter.
- Providers **should** have a policy in place concerning the disclosure to patients of technology or equipment failures during service sessions and the contingency plans in case of technical failure and **should** document such events in the patient's health record.

V. EMERGENCIES

A. Definition of emergent conditions. An emergent condition is an illness or injury that poses an immediate threat to a person's life or long-term health. Such conditions are outside the scope of a primary and/or urgent care telemedicine practice.

B. Emergent patient evaluation and referrals. The provider **shall** assess a presenting patient's condition to determine severity and acuity of the patient's condition and, when indicated, refer the patient to the appropriate level of care accessible to the patient. The telemedicine provider **shall** be responsible for triaging the patient to the appropriate level of care (e.g., primary care provider, specialist, urgent care, emergency department). Providers **may** consider incorporating standard triage protocols in their telemedicine practices.

C. Documentation of emergent encounters. The provider **shall** document the process for treating emergent situations, which **may** include phoning the receiving facility in advance of the patient's arrival.

Providers **shall** document all referrals to emergency medical services (Dialing 911), including the medical indication/basis for the recommendation, and nature of the problem.

Providers **should** document the location of the patient at the start of the encounter.

Providers **should** document any extenuating circumstances or adverse events, be they technical or clinical, that occurred during the encounter.

Documentation **should** adhere to all medical–legal standards of care and, if appropriate, insurance requirements for future review and audit.

VI. FOLLOW-UP

As noted previously, follow-up is a critical aspect of patient safety and continuity of care and **should** include the following:

A. Knowledge of the patient's healthcare network. The provider should have knowledge of the patient's healthcare network whenever possible, to be able to facilitate timely access to recommended specialty consultations or referrals.

B. Provision of clinical reports to referral sources. The provider, to the extent possible while being remote, **shall** make available relevant clinical reports to the referral institution or specialist absent a request by the patient to the contrary.

C. Transmission of home monitoring and electronic data. If feasible, the provider **should** facilitate transference of any home monitoring or electronic data and discuss with the patient how and if such data will be stored.

D. Patient requests for records. The provider **shall** establish an explicit process for patients to request copies of their telemedicine encounters at their request and to facilitate specialty care, where indicated.

VII. SPECIAL POPULATIONS

Virtual visits can be conducted with patients with unique needs such as those with communication disorders, mental or physical disabilities, sensory disorders, or special needs related to age, gender, culture, rare diseases, or location of care. Some **may** need a translator or facilitator that calls for nonmedical personnel during the visit. These populations often require special considerations to ensure their engagement in the care process and follow-up and their needs are met appropriately. For instance, telemedicine providers in the United States **shall** be in compliance with the American Disabilities Act of 1990 and other legal and ethical requirements, described elsewhere. A useful reference to identifying and responding to these populations can be found in the ATA Practice Standards for Video-Based Online Mental Health Services.[39]

A. Pediatric. The literature contains examples of clinically effective pediatric telemedicine programs.[15–20,40] Such pediatric encounters require the presence and/or active participation of a caregiver or facilitator, including parent/guardian, nurse, and/or childcare worker. In certain cases involving adolescents with behavioral or mental health issues, a facilitator would not remain in the room for part of or for the entire duration of the visit. Nonetheless, the practitioner **shall** obtain consent from the parent or legal representative of the child as required by law in the respective jurisdiction. If the parent/guardian is not present at the time of the visit, a process **shall** be established for prompt communication of the results of the visit with the parent/guardian.

B. Geriatric. Here again, the literature contains examples of clinically effective geriatric telemedicine programs.[26,41] The evidence indicates frequent monitoring for chronic diseases tends to reduce the need for office visits and transportation, as well as reduce stress and increase access to care for homebound patients.[39,42–44] Providers also report benefits from the ability to observe the patient in his or her home environment.[44–49]

In designing a system for virtual geriatric visits, providers **should** consider the special needs of the elderly, including vision and hearing difficulties and limited physical dexterity or mobility. These **should** be taken into account when designing and choosing equipment and systems. In cases where a patient demonstrates substantial confusion or anxiety during a telemedicine encounter, the practitioner **should** exercise judgment concerning the continuation or termination of the visit. The presence of facilitators, family members/caregivers, and nurses would facilitate the process and ultimate decision making. However, providers **should** have the patient affirm consent to that person's participation in the visit. A practitioner should obtain the patient's consent regarding the presence/participation of facilitators. In cases of questionable mental competency, practitioners **should** ensure appropriate consent from a legal proxy or representative. In circumstances where the patient is in a care facility or senior living community, a trained technician **may** assist in collecting relevant clinical information, including medical records, lab or diagnostic testing, and access to caregivers and staff.

In managing patients with dementia, providers should ask for the patient's durable power of attorney for healthcare decisions and use that as the legal guardian.

C. Locus of care. The literature contains examples of clinical effectiveness of successful telemedicine programs in a variety of settings, including patient homes, childcare centers, schools, chronic care facilities, the workplace, and prisons.[6,26,27,33,36,37,41] All legal and regulatory requirements and ethical considerations **shall** be used in these settings.

Technical Guidelines

I. SECURITY AND PRIVACY

Providers and healthcare organizations **shall** comply with privacy and confidentiality requirements stipulated by HIPAA and other applicable laws. They should also familiarize themselves with security arrangements for their systems and their limitations.

This **shall** include appropriate disclosure to patients about sharing their personal healthcare information (PHI). Providers **shall** document medical records as thoroughly as if the patient participated in an in-person visit. Storage of medical records **shall** be accomplished using methods that are compliant with all laws pertaining to medical record storage. Access to patient information **shall** follow standard HIPAA privacy provisions. If an intermediary or third-party entity is engaged for the collection, storage, transmission, or processing of PHI, a Business Associate Agreement should be executed as stipulated under HIPAA.

Patients **shall** consent prior to any recording of the encounter, and such recording **shall** be available for the patients upon request. Release of such recordings data **shall** require written patient

authorization or court order in a legal proceeding. Access to the recordings **shall** only be granted to authorized users and **should** be protected from accidental or unauthorized file sharing and/or transfer.

Data security **shall** be assured by prevailing encryption methods, including FIPS 140-2, known as the Federal Information Processing Standard. Providers **should** familiarize themselves with the technologies available regarding computer and mobile device security and **should** share such information with their patients as appropriate. Special attention **should** be placed on the privacy of information being communicated via mobile devices.

Mobile devices used for clinical purposes **shall** require authentication for access to them, as well as timeout thresholds and protections when lost or misplaced. Mobile devices **should** be kept in the possession of the provider when traveling or in an uncontrolled environment. Unauthorized persons **shall not** be allowed access to sensitive information stored on the device or use the device to access sensitive applications or network resources. Providers **should** have the capability to remotely disable or wipe their mobile device in the event it is lost or stolen. Videoconference software **shall not** allow multiple concurrent sessions to be opened by a single user. Should a second session be attempted, the system **shall** either log off the first session or block the second session. Session logs stored in third-party locations (i.e., not on providers' or patients' access device) **shall** be secure, and access to these logs **shall** only be granted to authorized users.

Protected health information and other confidential data **shall** only be backed up to or stored in secure data storage locations. Cloud services unable to achieve HIPAA compliance **shall not** be used for PHI or confidential data.

II. COMMUNICATION BETWEEN ORGANIZATIONS

Providers of telemedicine **shall** meet the same standards for communication between patient and provider, and between provider and other organizations, as those for in-person encounters.

III. REMOTE MONITORING DEVICES AND DATA

Numerous studies in the United States and elsewhere have confirmed the reliability and effectiveness of remote monitoring.[45–49] This evidence reveals the benefits of remote monitoring in reducing hospitalization/re-hospitalization, greater patient compliance with medication management, timely diagnosis and initiation of treatment, and improved health outcomes.

The provider **should** be aware of data trends or current evidence in remote monitoring to the extent possible. Data gathered from remote monitoring **should** be incorporated into the visit record.

When using a personal computer (including laptops, tablets, and other mobile devices), both the provider and patient devices should, when feasible, use professional-grade or high-quality cameras and audio equipment. Devices **shall** have up-to-date antivirus software and, if feasible, a personal firewall installed (at least on the provider's device). Providers should ensure their personal computer or mobile device has the latest security patches and updates applied to the operating system and any third-party applications.

A. Provider organizations. Provider organizations **should** provide adequate resources for hardware, software, and network management, including installation, maintenance, troubleshooting, and replacement, as well as effective security arrangements. Special attention **shall** be paid to verify the secure and reliable networks, including successful information exchange.

B. Connectivity. Connectivity **shall** have adequate bandwidth, resolution, and speed for clinical consultations. Bandwidth **shall** be set at a minimum bandwidth of 384 kilobits/s in both the downlink and uplink directions. Resolution **shall** be set a minimum of 640×360, and speed at 30 frames/s. Where practical, providers **may** recommend preferred videoconferencing software and/or video and audio hardware to the patient. The provider and/or patient **may** use link test tools (e.g., bandwidth test) to pretest the connection before starting their session. Each party **should** use the most reliable connection method to access the Internet, including wired (e.g., Ethernet) connections when available. The videoconferencing software **should** be able to adapt to changing bandwidth environments without losing/dropping the connection.

In the event of a technology breakdown, causing a disruption of the session, the professional **shall** have a backup plan in place. The plan **shall** be communicated to the patient prior to commencement of the encounter, and it **should** be included in the general emergency management protocol.

The plan **should** include calling the patient via telephone and attempting to troubleshoot the issue together. It **may** also include referring the patient to another provider or completing the encounter by voice only.

Professionals and patients **may** opt to use cameras that pan, tilt, and zoom for maximal flexibility in viewing.

Administrative Guidelines
I. VERIFICATION OF SERVICE ELIGIBILITY

Prior to any telemedicine encounter, the provider or staff **shall** determine the appropriateness of telemedicine for the specific encounter and also gather information on medical history, presenting symptoms/problems, reimbursement method, and usual provider.

II. PROVIDER AND PATIENT IDENTITY VERIFICATION

The provider **shall** introduce him- or herself and any attendant personnel (e.g., residents, fellows, students) to the patient and document those present. The patient **should** announce those in attendance at his or her end (e.g., guardian, family). This information **shall** become part of the encounter document.

The full name and credentials of the provider and the full name of the patient **shall** be verified by birth date, address, and insurance status.

III. PROVIDER AND PATIENT LOCATION DOCUMENTATION

The provider **shall** document the location of the patient and the communication tools. The locations of the provider and patient **may** require documentation for reimbursement and licensing purposes.

Most states require that licensure requirements are based on the location of the patient when service is rendered. Therefore, providers **shall** be aware of the state where the patient is located at the time of service to assure they are licensed in that state.

Emergency management protocols are entirely dependent on where the patient receives services.

IV. CONTACT INFORMATION VERIFICATION FOR PROVIDER AND PATIENT

Contact information **shall** be obtained from the patient including address of usual residence, address at time of consultation, telephone, mail, and e-mail addresses. Similarly, provider contact information **shall** be exchanged with patient including telephone, practice address, and e-mail. It is not necessary for the health provider to reveal his or her specific location to the patient, especially if the provider is located at home at the time of service.

V. CREDENTIALING AND LICENSING

All providers **shall** abide by the same local and regional credentialing policies as required for a traditional in-person visit as mandated by state and federal law.

Providers **shall** abide by all qualifications of licensure, board eligibility, or certification as required for traditional in-person visits according to by state and federal laws. The scope of care provided **shall** be consistent with the provider's level of training (e.g., MD/DO, ARNP, PA, RN, etc.). Providers **should** be cognizant of oversight requirements and auditing standards that **may** be applied to telemedicine patient visits as if the patient visit occurred in person. Where telemedicine/ telehealth laws require or permit different credentialing, compliance **shall** be maintained with those provisions.

VI. ORGANIZATIONAL POLICIES AND PROCEDURES

Healthcare organizations **should** develop and implement organizational policies and procedures governing the use of telemedicine. Providers **shall** adhere to all applicable laws and regional and local practice as to Patient Informed Consents and Disclaimers. As part of organizational policies and procedures, healthcare entities **should** promulgate standards for patient and provider verification and authentication.

VII. CODING AND DOCUMENTATION

Coding and medical record documentation **should** be accurate in reflecting the content of the medical visit rather than enhancing reimbursement.

Medical record and procedure coding **should** follow prevailing coding practices based on state and national guides such as the American Medical Association Coding Requirements.

A. Electronic medical record. Providers **shall** generate and maintain an electronic medical record (when feasible) for each patient for whom they provide remote care. All communications with the patient (verbal, audiovisual, or written) **should** be documented in the patient's unique medical record on par with documentation standards of in-person visits.

B. Access to analytics and clinical information at point of care. The provider should ensure that the patient's clinical record is available during or prior to a visit whenever possible and that sufficient time is allotted to update the patient history, if possible with the patient's primary care provider or other relevant healthcare entity.

C. Payment and billing. Prior to providing patient services, the patient **shall** be made aware of the patient's cost of the service to be provided, if any. Arrangement for payment should be completed prior to the delivery of the service. Special consideration must be made for Medicare patients participating in telemedicine care. Providers **shall** follow Medicare rules (such as the Medicare Opt Out election) for billing patients outside of standard Medicare reimbursement.

Disclosure Statement

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