American Telemedicine Association's
# Home Telehealth Clinical Guidelines

INTRODUCTION

The need for homecare is expanding dramatically. There is a surge in the number of older adults in the United States with the aging of the baby boomers.  People are living longer than ever before in history. They are better educated and are more comfortable with the use of technology.  Most people want to remain independent and live in their homes for as long as possible, yet greater numbers of persons are suffering from chronic conditions. At the same time, the health care industry is facing a critical shortage of public resources, as well as nurses and other health care personnel to care for our population. Health care providers are forced to do more with less, with decreasing reimbursements and increased focused on quality and clinical outcomes.

All of these factors pave the way for technology applications in re-engineering health care delivery processes, improving productivity and access to care, controlling costs, and improving clinical outcomes. Home telehealth applications provide the means to leverage health care processes that can improve access to care and facilitate collaboration among health care providers. Whether used to deliver care, provide information, monitor patient progress, or provide access to patient records, information technology can reduce cost and improve care.

Advances in telecommunication technologies used in health care over the last decade have expanded application possibilities. Home telehealth began with home health agencies providing virtual visits by collecting one or more personal vital signs, which were then sent to a remote monitoring station. Today, with the use of inter-active video and store and forward, applications in the home have expanded. In addition to remote monitoring of vital signs, services provided by home health agencies now include such diverse applications as hospice (palliative care), rehabilitation, case management, chronic disease management, virtual house calls, post-surgical follow-up and more.

ATA has produced the Home Telehealth guideline to encompass these differences and establish a set of universal principles guiding the development and deployment of home telehealth in the future.

## 1  Definitions of Terms

**1.1      Home Telehealth** – Home Telehealth encompasses remote care delivery or monitoring between a health care provider and a patient outside of a clinical health facility, in their place of residence (home or assisted living residence).  In many instances, the guidelines presented here may also apply to the use of telemedicine in schools or in the workplace.

**1.2      Interactive Home Telehealth** – Interactive Home Telehealth includes the utilization of two-way interactive audio video involving the patient and a health provider.  This service provides remote care delivery (i.e. assessment, education, data collection).  Interactive Home Telehealth may include devices collecting clinical data from the patient and delivered to the health provider.

**1.3      Telemonitoring** –Telemonitoring includes the collection of clinical data and the transmission of such data between a patient at a distant location and a health care provider through a remote interface so that the provider may conduct a clinical review of such data or provide a response relating to such data.  This includes the use of automated laboratory or other health monitoring equipment, as well as the manual entry of data.

**1.4      Self Monitoring** – The periodic and scheduled use of a device by the patient to obtain clinical data that is used by the patient to measure their own health status.  Commonly measured

data include blood pressure, glucose, weight and temperature.  These guidelines do not address self monitoring.

1.5 **Patient Encounters** – Home Telehealth may or may not involve a patient encounter.  A patient encounter is the communication of a set of information between a patient and a provider that establishes the plan of care, has the potential to change the plan of care, or implements the plan of care.  A videoconference between a health care provider and a patient can be a patient encounter.  The interactive transmission of a set of vital sign data from the patient to the nurse who can make a care decision is a patient encounter.  Encounters also may include therapy sessions to implement the plan of care.  The collection of patient vital signs at a remote site generally does not involve a patient encounter.

**2 Generic Guidelines** – The following guidelines apply to both Interactive Home Telehealth and Telemonitoring.

**2.1 Patient Criteria**

2.1.1 Inclusion/Exclusion Guidelines:  Patient inclusion and exclusion criteria should be established for every type of home telehealth program, detailing who is eligible and appropriate for each type of technology.

2.1.2 Patient enrollment and set up procedures must be established

2.1.3 Patient Informed Consent

2.1.3.1 Written informed consent should be obtained from the patient or designee before beginning the use of Home Telehealth.

2.1.3.2 Written informed consent must be included as a part of any clinical record.

2.1.3.3 The patient may terminate the use of Home Telehealth at any time without fear of loss of healthcare from health care providers, payers or other participating providers.

2.1.4 Patient Privacy and Confidentiality

2.1.4.1 Patient privacy must be maintained at all times while receiving Home Telehealth.  This includes provisions at the patient's location as well as the location receiving the patient's information.

2.1.4.2 Any collected data that is made available outside of the clinical environment must be presented in the aggregate

2.1.5 Patient/Caregiver/Home Assessment:

2.1.5.1 During a face-to-face encounter, a comprehensive patient assessment needs to be completed in order to accurately apply inclusion and exclusion criteria. A face-to-face visit may be completed in the home, hospital, office, clinic, school, etc.

2.1.5.2 Patients who require special assistance must be identified prior to installing a Home Telehealth tool.  Organizational policy and procedures need to be developed and implemented to manage language or physical barriers in order to assure that these patients are not discriminated against.

2.1.5.3 During a face-to-face visit, the caregiver will be evaluated to determine their willingness and ability to assist the patient in Home Telehealth encounter as appropriate.

2.1.5.4 During a face-to-face visit, an assessment must be conducted to determine access to utilities and safety concerns appropriate for equipment installation.

2.1.6 Patient Plan of Care – Care plans are developed differently for different needs such as disease management, rehabilitation, remote vital sign collection, interactive home care, etc.  The format and requirements may differ depending on the service provided but the following principles should always be followed.

2.1.6.1    The patient's plan of care will be developed in collaboration with the patient and all appropriate providers.  The plan of care will include Home Telehealth encounter frequency.

2.1.6.2    The use of Home Telehealth must be included in the Plan of Care and customized based upon specific needs identified for each patient.

2.1.6.3    The patient's physician and/or health care provider should be informed of Home Telehealth.  A physician order may be obtained as appropriate.

2.1.6.4    Home Telehealth may be incorporated into critical pathways.

2.1.7    Patient Education

2.1.7.1    Patients or their designees should receive training on equipment to be used in monitoring and managing their health care needs prior to their use of any Home Telehealth equipment.

2.1.7.2    Education about the home telehealth equipment should include:  proper handling, storage, operation, and electrical connection, phone requirement if any, cleaning.

2.1.7.3    Additional information should include any peripherals to be used, the purpose of each peripheral and their proper use, frequency of monitoring, and/or visit schedule.

2.1.7.4    Clear, simplified written information regarding procedures to operate and maintain equipment must be provided.  Such information may include diagrams and pictures, to facilitate the appropriate place and use of peripheral equipment and available in different languages as needed.

2.1.7.5    Patients must be given clear written instructions as to who to call in case technical problems arise with the medical equipment.

2.1.7.6    Safety instructions should be given to patients and reviewed at installation and future times as necessary.

2.1.7.7    Education and training should be used to empower patients about appropriate self-care.

2.1.7.8    Written instructions must be provided to patients for after-hours care when or if appropriate.

2.1.7.9    Patients need to be informed in writing of the difference between using Home Telehealth and an emergency medical response system to avoid a potential delay in need for "911" emergency care.

2.1.7.10    Patients or their designated caregiver must demonstrate the ability to use and maintain the equipment according to organizational policy.

2.1.8    Performance Improvement - Organizations providing patient care must have plans to measure quality of and satisfaction with care.

2.1.8.1    Patient satisfaction regarding Home Telehealth should be a part of the Performance Improvement Process.

2.1.8.2    Provider satisfaction regarding the use of Home Telehealth should be a part of the Performance Improvement Process.

**2.2        Health Provider Criteria**

Organizations provide Home Telehealth as a tool that enables health care providers to improve care delivery and empower patients to actively participate in their care.

2.2.1    Home Telehealth Providers

2.2.1.1    Home Telehealth may be provided by a licensed health care provider including but not limited to:

- Registered Nurses
- Pharmacists
- Physical Therapists

- Social workers
- Speech Therapists
- Physicians
- Psychologists
- Occupational Therapists
- Licensed Practice Nurses
- Nutritionists
- Nurse Practitioners

2.2.2　　Provider Education

2.2.2.1　　Home Telehealth providers as listed in this section must be trained and competency validated in performing Home Telehealth with the technology being used by the organization.

2.2.3　　Administration

2.2.3.1　　In case of equipment failure, a procedure to ensure prompt patient contact and measures to ensure continuity of care must be in place (i.e. conduct an in-home visit, go to the Emergency Room, etc.).

2.2.3.2　　The patient's medical record will comply with organizational standards for documentation.

2.2.3.3　　Each state will determine reciprocity regarding interstate Home Telehealth practice.

2.2.3.4　　Providers of Home Telehealth should provide evidence of HIPAA compliance.

## 2.3　　Technology Criteria

2.3.1　　Patient/Patient need

2.3.1.1　　The type of technology used should be based on the patient's clinical needs and functional ability to use the equipment and the availability and cost effectiveness of the technology to meet these needs.

2.3.2　　Organizational Criteria

2.3.2.1　　Organizational policies and procedures should be developed and followed regarding equipment quality control standards.

2.3.2.2　　Procedures must be written and in place to clean and maintain equipment (per organizational health and safety codes and infection control standards) at installation, while in the patient's home and on return to organization.

2.3.2.3　　Installation kits should be developed with written instructions for the staff and should include supplies if needed.

## 3　Interactive Home Telehealth Guidelines

These guidelines are specific to the use of Interactive Home Telehealth.

### 3.1　Patient Criteria

3.1.1　　Patient Privacy and Confidentiality

3.1.1.1　　Patients should not be viewed through the video or heard through audio without their knowledge or prior written consent.

3.1.1.2　　If other telehealth personnel or visitors come into the audio and/or video-receiving site, the patient must be made aware of their presence, and patient's approval must be obtained for such personnel to participate in the Interactive Home Telehealth encounter.

3.1.1.3　　If a third remote site is participating in the Interactive Home Telehealth encounter the patient must again be aware and approve of such participation.

3.1.1.4　　Patient photographs cannot be used without the patient's written permission.

3.1.1.5     Patient data may not be viewed at the central station or other remote networked location without the Clint's prior written consent.

3.1.2     Patient Plan of Care

3.1.2.1     An Interactive Home Telehealth encounter frequency order needs to be incorporated into any plan of care.

3.1.2.2     Each TeleHealth encounter should be documented according to organizational policy.

3.1.2.3     Changes in telehealth frequency will be treated like changes in other parts of the plan of treatment and should be approved by the physician and/or health care provider.

3.1.2.4     After hours telehealth encounters can be accomplished by on-call or after hour's staff, call center staff, or emergency room staff.

3.1.2.5     If data is obtained during the Home Telehealth encounter, the data must be placed in the patient's chart.

## 4  Telemonitoring Guidelines

These guidelines are specific to the use of telemonitoring.

### 4.1     Health Provider Criteria

4.1.1     Health provider

4.1.1.1     Organizations use data monitoring to monitor patient parameters and to initiate a plan of care when parameters deviate from the norm. Organizations should develop guidelines, policies and procedures to be used regarding the monitoring of patient parameters and what to do if data deviates from the norm.

4.1.2     Organizational guidelines and policies should:

4.1.2.1     Establish the method for monitoring each data element enumerated in the data definitions.

4.1.2.2     Include reference to the frequency of monitoring, the mode of monitoring, as well as the timing, frequency and method of data capture and transmission (e.g., Will the glucose data be uploaded daily, weekly, immediately?)

4.1.2.3     Define procedures to review and respond to the monitored data.

4.1.2.4     Address definition of acceptable values and actions in response to out of range values.

4.1.2.5     Expected timeliness of response to patient data

4.1.2.6     Define policy for off-hours coverage of uploaded data and the use of automated alert systems.

4.1.2.7     Clarify the policy regarding the inclusion of monitored data in the patient's longitudinal medical record/EMR.  The policy will include the personnel or organization that decides on the inclusion of data in unclear cases.  The policy will state the inclusion of data in the EMR based on clinical significance, anticipated future value, or other factors.

4.1.3     Procedures for handling "unwanted events" should be established and available for all involved persons.

4.1.4     A process should be developed to ensure competencies in the delivery of health care through data monitoring technology.

### 4.2     Technology Criteria

4.2.1     The data elements being monitored will be clearly defined.

4.2.2     All clinically relevant distinctions will be made in the definitions.  These distinctions may include automated capture vs. manual entry, type of instrumentation, etc., and may include other distinctions in method or data source if clinically important.

4.2.3     Monitored parameters should be available for manual and computer based analysis both separately and together.

4.2.4        Every change made at the remote monitoring equipment should be logged with a date and the ID of the user who performed the operation.

4.2.5        Data should be date and time stamped and protected from tampering as compliant with HIPAA.

4.2.6        Use of Sensor Technology

    4.2.6.1        If a detached remote sensor is employed for a home communications unit the following is required:

        4.2.6.1.1        Indication of out of range for wireless operation

        4.2.6.1.2        Indication for low battery status

        4.2.6.1.3        Indication that the sensor is working properly

    4.2.6.2        The sensors should not damage or irritate the patient's skin, and should not irritate the patient during sleep.

    4.2.6.3        The sensors should not contain elements that pose a danger if chewed, licked or otherwise manipulated by the patient.