



# Best Practice: Telemonitoring

# Therapy Track



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# Therapy Track



This Best Practice Intervention Package is designed to educate and reinforce to therapists the value of telemonitoring in reducing avoidable acute care hospitalizations.

## Objectives

After completing the activities included in the Therapy Track of this **Best Practice Intervention Package – Telemonitoring**, the learner will be able to:

1. Define telemonitoring and how this intervention can be used effectively by a home health agency
2. Describe how telemonitoring may reduce avoidable acute care hospitalizations
3. Describe two therapy actions that support telemonitoring

Complete the following activities:

	<b>Activity</b>	<b>Location</b>	<b>Estimated Time</b>
<input type="checkbox"/>	Read the Therapist’s Guide to Practical Application and review checklist for clinicians	Page 47	10 minutes
<input type="checkbox"/>	Listen to the podcast (audio recording): Telemonitoring for Clinicians	Page 50	15 minutes
<input type="checkbox"/>	View the patient vignette video	Page 50	15 minutes
<input type="checkbox"/>	Read the success stories	Page 51	10 minutes
<input type="checkbox"/>	<b>Complete the therapy evaluation &amp; post-test online for free certificate of participation for 1.0 contact hours</b> OR Complete the post-test (if not applying for certificate)	See below  Page 54	10 minutes
	<b>Total Time</b>		<b>60 minutes</b>

## FREE Certificate of Participation



PTs, OTs & STs completing all of the therapy track activities (see above table) from this Best Practice Intervention Package –Telemonitoring can apply for a certificate of attendance that may be accepted by your state or national association as continuing education hours. A PDF file is posted on [www.homehealthquality.org](http://www.homehealthquality.org) if you need to submit additional documentation.

**Complete above activities & complete evaluation/post-test online at <http://www.zoomerang.com/survey.zgi?p=WEB226QMOWPLQL>**

# Therapist's Guide to Practical Application

## Telemonitoring

**Purpose:** To assist therapists with understanding their role in telemonitoring as an intervention to support reducing avoidable hospitalizations

**Definition:** 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 electronic information processing technologies. The provider conducts a clinical review of the transferred data and provides a response relating to such data (*Home Telehealth Reference 2005*).

**Simply stated:**  
**Telemonitoring** is the **remote care** delivery between a patient in his or her place of residence and a health care professional **using electronic technology**.

Telemonitoring technologies may include:

- Remote monitoring, including pulse oximetry, vital signs, EKG, weight and blood glucose
- Messaging
- Video transmission, such as a demonstration of a new procedure or a digital image of a wound

### Practical Application:

- Assist with identification of patients that may benefit from telemonitoring
- Observe patient safety with ambulation to the telemonitor and stepping on to scale
- Assess patient's fine motor skills for applying telemonitoring peripherals (blood pressure cuff, stethoscope, etc.)
- Reinforce patient/caregiver education:
  - Purpose of telemonitoring
  - A telemonitor is not an emergency response system
  - Patient/caregiver responsibilities
  - Equipment safety
- Consider submitting vital sign data during therapeutic exercise session
- Know which of your patients has a telemonitor and when the telemonitor is removed from the home
- **Support patient/caregiver acceptance of telemonitoring; be positive!**





# Therapists and Telemonitoring Position Statements

## Speech Language Pathologists

The American Speech-Language-Hearing Association position statement is an official policy of ASHA for Speech-Language Pathologists providing clinical services via telepractice.



“Telepractice is the application of telecommunications technology to deliver professional services at a distance by linking clinician to client, or clinician to clinician for assessment, intervention, and/or consultation.”

It is the position of the American Speech-Language-Hearing Association that telepractice (telehealth) is an appropriate model of service delivery for the profession of speech language pathology. Telepractice may be used to overcome barriers of access to services caused by distance, unavailability of specialists and/or subspecialists, and impaired mobility. Telepractice offers the potential to extend clinical services to remote, rural, and underserved populations, and to culturally and linguistically diverse populations.”

(Available at [www.asha.org/policy](http://www.asha.org/policy))



## Occupational Therapy

The American Occupational Therapy Association Telerehabilitation Position Paper (AOTA) articulates the position of the AOTA regarding the use of telerehabilitation technologies by occupational therapists and occupational therapy assistants.

“Telerehabilitation is the clinical application of consultative, preventative, diagnostic, and therapeutic services via two-way interactive telecommunication technology. This document examines issues related to telerehabilitation and service provision, practitioner qualifications, ethics, and reimbursement. Occupational therapy practitioners are the intended audience for this document, although those who supervise or reimburse occupational therapy services also may find it helpful.”  
(For more information contact the AOTA)

## Physical Therapy

American Physical Therapy Association's (APTA) policy on telehealth states: "Physical therapy services may be provided via telehealth when consistent with Association policies, positions, guidelines, Standards of Practice for Physical Therapy, ethical principles and standards, and the Guide to Physical Therapist Practice."  
(For more information, go to [www.apta.org](http://www.apta.org) and select Governance.)



# Telemonitoring Checklist for Clinicians

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 electronic information processing technologies. The provider conducts a clinical review of the transferred data and provides a response relating to such data.

## Telemonitoring Checklist

### Patient selection criteria

- Accept use of telemonitor
- Able to self-monitor
- Able to read and safely connect to telemonitor

### Confidentiality

- Receive data and follow-up in private area

### Scheduling

- Schedule and track encounters
- Include patient in scheduling data transmission times

### Documentation

- Always document!
- Use agency approved form

### Patient Education

- Why telemonitoring
- Call schedule
- Phone safety
- Self-monitoring
- Not an emergency response system



## Telemonitoring = Reducing Avoidable Hospitalizations

- Increases symptom surveillance
- Improves patient self-management
- Detects early changes in health status
- Provides real-time data to the physician
- Offers better communication with patients at high risk for hospitalization
- Enables patients to learn more about managing their acute/chronic condition
- Prompts patient to seek earlier medical attention



## Telemonitoring Multi-Media Activities Podcast\* (Audio Recording)

### Telemonitoring Podcast (Audio Recording) Instructions:

Listen to the podcast (audio recording) to learn more about reducing avoidable acute care hospitalizations with telemonitoring.

Title	Description	Link
Telemonitoring for Clinicians	A 15-minute podcast (audio recording) related to telemonitoring	The podcast (audio recording) link is located at <a href="http://www.homehealthquality.org/hh/hha/interventionpackages/telemonitoring.aspx">www.homehealthquality.org/hh/hha/interventionpackages/telemonitoring.aspx</a>

There are several ways to listen to the podcast (audio recording):

- Visit the link above and listen directly through the Web site.
- Download the podcast (audio recording) by right-clicking on the audio file and selecting "Save Target As...". This will save the file to your hard drive. Once you have saved the file, you can listen to it on your computer or you can burn the audio file to a CD to listen to in your car or stereo.

\*A podcast is a digital media file, often an audio recording, placed on by the Internet and made available to the listener on their home computer or personal digital recording device for convenience. There is no change from previous references to "audio recordings" except the name. You may continue to download and listen to recordings as you have in previous months.

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## Telemonitoring Patient Vignette

Title	Description	Link
Patient Vignette #3	This touching 10-minute video captures the essence and the value of telemonitoring through an interview with a patient.	<a href="http://www.homehealthquality.org">www.homehealthquality.org</a> Audio-Video page (in the blue box to the right)



## Success Stories

### Alpine Home Care's Rural Patients Get Help from Telemonitoring

**A**lpine Home Care, an agency with five offices in southwestern Colorado, viewed its rural location, high altitudes and high percentage of patients with lung disease due to local uranium mining and heavy tobacco use as reasons to consider telemonitoring for its patients.



Sharon Mitchell, RN and Administrator at Alpine, says she always recognized that telemedicine is not a tool to replace nursing, but rather a way to make better use of a nurse's time when visiting a patient. Alpine's Nurses sometimes drive as long as three hours over dirt roads to visit patients. While telemonitoring "doesn't usually reduce the number of visits," says Mitchell, it helps "identify issues and ensure that nurses are doing the appropriate interventions when they are visiting, making their time more efficient."

About five years ago, the agency purchased 52 telemedicine units. Mitchell says Alpine staff attended trade shows and set up a committee to determine the agency's needs in advance. Because of the mountainous local geography, Alpine chose a telemonitoring system that uses a phone line but has a satellite connection, so it doesn't interrupt phone calls. Alpine pays for the satellite use.

System set up is done by the nurses in the home, and they teach patients and family caregivers how to use the systems. Mitchell says there may be a few glitches at first, but with written and verbal instructions, most patients can manage the system. "They become very attached to the machines," she adds.

With as many as 50 percent of patients on oxygen and having some form of chronic lung disease, the systems are excellent at monitoring oxygen needs and lung capacity. Alpine's telemonitors also track:

- Weight gain and fluid retention in congestive heart failure patients
- Blood pressure
- Temperature
- Oxygen saturation
- Heart rate
- Pulse
- EKG – small sample
- Blood sugar
- Medication management



## Success Stories (cont.)

Mitchell notes that doctors were slow to get on board, but now they are accepting, and some actually call to request the machine.

“It was a huge financial investment and no reimbursement,” says Mitchell. “But we broke it out by costs and preventing bad outcomes, and we felt that [introducing telemedicine] raised the bar for patient care and that was important to us.”

Staff comments regarding the telemonitoring units include:

- “Polypharmacy is huge and telemonitoring can help keep the meds straight. You can document how inaccurate the patient is with his or her meds. We see teaching opportunities for patient safety. That level of medication management is a cost savings when you think about how many hospitalizations happen due to inaccurate medication management.”
- “If we get a ‘null packet’ – when no data is transmitted – we immediately contact the patient. Did they fall? Did they expire? If we cannot reach the patient, we will do an emergency check, and this has saved lives.”
- “‘Annie’ was in the hospital every four or five days because she was very fragile and sensitive to weight gain. We were able to manipulate meds to keep her out of the hospital for six months. This was a huge success story, and her family was very supportive.”

Mitchell concludes, “I would love to really push these harder. My goal would be to have 100 units out there and in constant use. Telemonitoring is a great tool for early intervention – to keep a patient from getting so sick. I would love to have more buy-in from doctors and the payers.”

*Sharon Mitchell, Alpine Home Care, provided data in this article.*

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### County Agency “Sells” Telehealth Vision to Board of Health, Staff, Doctors

“I remember when the first doctor asked us if we could do an IV at home, and I said we would never be able to do that,” says Leslie Larsen, Home Care Supervisor at Polk County Home Care in Wisconsin, who has been with the agency since 1976. “I eventually ate those words. People want to be at home, and nothing is a substitute for good nursing, but I know now that technology can help us keep people at home.”

Polk County is in rural Wisconsin but with close proximity to Minneapolis. According to Larsen, it has a higher number of elderly than other counties in the



## Success Stories (cont.)

state, and the number of home care nurses employed by the agency is declining due to county budget constraints.

The agency, surviving under the umbrella of a public health agency after the onset of PPS, and despite caring for the very chronically ill, is positioned on the leading edge of home care, using telemonitoring since 2003.



It took a while to get there. Six months, in fact, just to convince the county Board of Health that telemonitoring equipment was a good use of funds, says Larsen. After the board approved the purchase, Larsen and a start-up committee selected nurses who were excited about the idea of telemonitoring and assigned the units first to those staff members. Those nurses could then champion the benefits of the new system to other nurses.

“We had some [staff] that were more in tune to the benefits of being able to monitor their patients seven days a week. Out of ten nurses, I had two champions and eight that were concerned that telemonitoring could replace them. In retrospect, I would have spent more time up front getting more staff buy in, but instead we spent considerable time figuring out the finances,” Larsen reflects.

“Telehealth allows us to be very efficient,” says Larsen. “It used to be that we were paid for every visit. Now we needed to find a way to work smarter and manage patients better.” The agency leases 35 units and has one central monitoring station that is manned by the same person as estimated 85-90 percent of the time to cover Polk County’s caseload of approximately 120-140 patients per month.

Larsen also targeted select doctors to win over first. “I initially concentrated on one clinic that I thought would accept telemedicine and spent time with them developing a program I could market to the doctors. I got wonderful buy in from them. Now they order telemonitoring when their patients come out of the hospital. It was definitely helpful to concentrate on the easier physician adapters when starting our program.”

“We had one patient who had suffered multiple strokes and was able to be home because of the wonderful care her husband provided. We placed a telemonitoring unit in her home. The husband was so proud that he could actually do something proactively to monitor her care. He would call and notify us of her status,” Larsen recalls. “Our problem today is that we don’t have enough units. Patients would love to keep them after we discharge them because they provide reassurance.”

Larsen’s vision persists. “I would like to have the telehealth interface with point of care laptops. When we get to that point it will be absolutely better the patient, and the doctor will have that info at their fingertips. Technology is a good thing.”

*Leslie Larsen, Polk County Home Care, provided data in this article.*



Clinician name: \_\_\_\_\_

## Therapy Post-Test Telemonitoring

Date: \_\_\_\_\_

**Therapists can apply for a certificate of attendance to use toward continuing education for 1.0 continuing education hours – following directions on page 46**

**Directions: Choose the ONE BEST response to the following questions. Circle your answer that identifies the ONE BEST response.**



1. Telemonitoring includes all of the following **except**:
  - A. Clinical data collection
  - B. Data transmission between patient at a distant location and a health care provider through electronic information processing technologies
  - C. Patient self-monitors blood glucose and records results into a daily log that are reported to the clinician on the next visit
  - D. Provider conducts a clinical review of the transferred data and provides interprets the findings
  
2. Most home care patients could qualify as a candidate for telemonitoring. Structured, effective screening should be done to identify those patients who would benefit most from telemonitoring. Several key areas to assess are: the acceptance of telemonitoring; ability to perform self-monitoring activities; and ability to read, safely connect and utilize a telemonitoring unit.
  - A. True
  - B. False
  
3. Therapy can actively participate with telemonitoring by:
  - A. Reinforcing patient/caregiver education
  - B. Obtaining vital signs or pulse oximetry with the monitoring unit during a visit to assess patient's response to exercises or a treatment
  - C. Evaluating fine motor skills for applying the telemonitors unit or the peripherals (attachments)
  - D. Reporting any identified issues or barriers to supervisor or nurse
  - E. All of the above



4. Telemonitoring can promote enhanced self-management skill development by the patient/caregiver. If a patient/family has difficulty in performing a self-management activity (e.g. blood pressure, pulse oximetry) a referral to therapy (PT, OT, or ST) may be appropriate.
  - A. True
  - B. False
  
5. Patient education should include the following:
  - A. Purpose of telemonitoring
  - B. Telemonitoring is not to be used as an emergency response system
  - C. Specific patient/caregiver responsibilities
  - D. Equipment safety, care and use of equipment including cleaning
  - E. All of the above

**Answers to Post-Test are located in the Leadership Section page 33.**

