



Best Practice: Telemonitoring

Nurse Track



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Nurse Track

This best practice intervention package is designed to educate and reinforce to nurses the value of telemonitoring in reducing avoidable acute care hospitalizations.

Objectives

After completing the activities included in the Nurse 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 nursing actions or applications that support telemonitoring

Complete the following activities:

	Activity	Location	Estimated Time
<input type="checkbox"/>	Read the Nurse's Guide to Practical Application and review checklist for clinicians	Page 37	10 minutes
<input type="checkbox"/>	Listen to the podcast (audio recording): Telemonitoring for Clinicians	Page 39	15 minutes
<input type="checkbox"/>	View the patient vignette video	Page 39	15 minutes
<input type="checkbox"/>	Read the success stories	Page 40	10 minutes
<input type="checkbox"/>	RNs: Complete the nursing evaluation and post-test online for free CNEs	See link below	10 minutes
<input type="checkbox"/>	LPNs: Complete the nursing post-test	Page 43	(10 minutes)
	Total time for completion		60 minutes



FREE CNEs for Registered Nurses

RNs may apply for free 1.0 CNEs for completing all of the nursing track activities (see above table) from this Best Practice Intervention Package – Telemonitoring

Complete above activities & complete evaluation/post-test online at:
<http://www.zoomerang.com/survey.zgi?p=WEB226QMR5PLUV>



Nurse's Guide to Practical Application Telemonitoring

Purpose: To assist the nurse with attaining the maximum potential for using 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:

- Identify patients that will benefit from telemonitoring; use the hospitalization risk assessment **and** clinical judgment
- Consider patient/caregiver abilities for telemonitoring including acceptance of the telemonitor, ability to self-monitor and to safely connect to and utilize a telemonitoring unit
- Assess the patient's home; most homes can be adapted to telemonitoring equipment and may only require minor revisions to ensure safe and successful remote care delivery
- Include patient/caregiver in a developing schedule for transmission of telemonitoring data
- Educate patient/caregiver:
 - Purpose of telemonitoring
 - A telemonitor is not an emergency response system
 - Patient/caregiver responsibilities
 - Equipment safety
- Notify the physician, family and all involved staff of the discontinuation of the telemonitoring program. Patients can be discharged from the program at their own request, by physician order or by the determination of the field staff and managers.
- **You are the best marketer for promoting telemonitoring. Be positive! Share successes!**



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 recordings) link is located at www.homehealthquality.org/hh/hha/interventionpackages/telemonitoring.aspx

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 can burn the audio file to a CD or MP3 player

*A podcast is a digital media file, often an audio recording, placed on 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.

Telemonitoring Patient Vignette

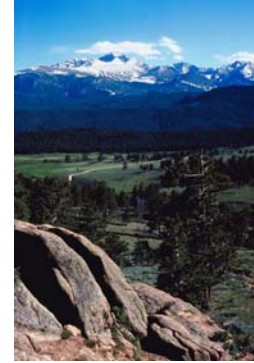
Title	Description	Link
Patient Vignette #3	This touching 10-minute video captures the essence and the value of telemonitoring through an interview with a patient.	www.homehealthquality.org Audio-Video page (in the blue box to the right)



Success Stories

Alpine Home Care's Rural Patients Get Help from Telemonitoring

Alpine 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.

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.



Nursing Post-Test Telemonitoring

Clinician name: _____

Date: _____

RNs – May apply for 1.0 FREE CNEs by following directions on page 36

Directions: Choose the ONE BEST response to the following questions. Circle the 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 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. The following is a list of factors that will assist with identification or prioritizing patients for telemonitoring **except**:
 - A. Hospitalization risk assessment
 - B. High-risk diagnosis
 - C. Frequent hospitalizations
 - D. New or multiple medications
 - E. Patient/caregiver must have computer skills
4. Telemonitoring can positively affect a patient's status by all of the following **except**:
 - A. Assisting clinicians with early detection of changes in clinical status, resulting in early interventions
 - B. Eliminating physician visits
 - C. Assisting with reducing avoidable acute care hospitalization and keeping patients at home
 - D. Increasing patient/caregiver active participation in own health care

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.