

# HHQI National Campaign Best Practice Intervention Package

Home Telehealth *Simply Summer Series*

## Telemonitoring



## Acknowledgements

The Home Health Quality Improvement Organization Support Center (HHQIOSC) would like to thank everyone who contributed to the **Best Practice Intervention Package – Telemonitoring**. We would also like to acknowledge the following individuals and organizations for their contributions as our Technical Expert Panel.

***Sara Butterfield, RN, BSN, CPHQ, CCM***

Director, Upstate Healthcare Quality Improvement  
IPRO, New York QIO

***Rhonda Chetney, MS, RN***

Home Health Special Interest Group American Telemedicine Association  
Director of Clinical Operations, Sentara Home Care Services  
Chesapeake, VA

***Sheila Conneen, PhD, MPH, RN-C***

Home Health Quality Improvement Manager  
New Mexico Medical Review Association (NMMRA)

***Laura Dugan, BS, MA***

Communications Specialist, TMF Health Quality Institute  
Austin, TX

***Judy Lentz, RN, MSN, NHA***

CEO, Hospice and Palliative Nurses Association

***Terri Lindsey, RNC, BSN***

Project Manager, Virginia Health Quality Center

***Laurie Neander, MS, RN***

CEO, At Home Care, Inc.  
Oneonta, New York

***Ben Peirce, RN, CWOCN***

National Director, Clinical Practice, Gentiva Services

***Cheryl Reese, RN, BSN, MBA, COS-C, CCP***

Director of Clinical Informatics, Education and Telehealth, Presbyterian Home Healthcare  
Albuquerque, NM

***Pam Sensky, RN***

Clinical Quality Specialist  
Health Services Advisory Group, Arizona QIO

***Carol Siebert, MS, OTR/L, FAOTA***

Representative, American Occupational Therapy Association

***Rebecca Skrine, CCC-SLP, CHCE, COS-C***

Home Health Representative, American Speech-Language-Hearing Association

***Christine Stegel, RN, MS, CPHQ***

Performance Improvement Coordinator  
IPRO, New York QIO

***Karen Vance, OTR/L***

Representative, American Occupational Therapy Association

## HHQI Physician Advisor Members

***Eric Coleman, MD, MPH***

University of Colorado Health Sciences Center, Care Transitions Program

***Jay A. Gold, MD, JD, MPH***

Principal Clinical Coordinator and HCQIP Director, MetaStar, Inc.; Clinical faculty - Medical College of Wisconsin; Adjunct faculty: Marquette Law School

***Timothy Robert Gutshall, MD***

ER Staff Physician - Iowa Methodist Medical Center and Iowa Lutheran Hospital; Clinical Coordinator - Iowa Foundation for Medical Care

***Thomas F. Kline, MD, PhD, CMD***

Home Based Geriatric and Rehabilitation Medicine  
Canton, MA

***John N. Lewis, MD, MPH***

Medical Director - Health Care Excel of Kentucky; Internist/Epidemiologist; Greater Louisville Medical Society; Kentucky Medical Association

***Dennis Manning, MD FACP FACC***

Director, Quality and Patient Safety  
Department of Medicine, Mayo Clinic Rochester

***Joseph G. Ouslander, MD***

Professor of Medicine and Nursing; Director, Division of Geriatric Medicine and Gerontology  
Chief Medical Officer, Wesley Woods Center of Emory University; Director, Emory Center for Health in Aging; Research Scientist, Birmingham/Atlanta GRECC

***Jane C. Pederson, MD, MS***

Minnesota Medical Association; Minnesota Medical Directors Association; Minnesota Gerontologic Society

***Stephen Winbery, PhD, MD***

Medical Director Qsource (TN Quality Improvement Organization); ACP, ACMT

***Steven L. Yount, DO***

Medical Director - Bastrop Nursing Center, Lifeway Home Health and A-Med Hospice;  
Clinical Assistant Professor - Department of Family Practice - University of North Texas;  
Texas Medical Foundation - State Review Program Committee

---

## HHQIOSC Team

**Editor**

***Misty Kevech, RN, MS, COS-C***, Communications/Training Manager

**Contributing Home Health QIOSC Staff**

***Marian Essey, RN, BSN***, Director, Health Care Quality Improvement, HHQIOSC

***Donna Anderson, RN, PhD***, Subject Matter Expert

***Christine Bernes, RN***, Project Coordinator

***Eve Esslinger, RN, MS***, Project Manager

***Bonnie Kerns, RN, BSN***, Community of Practice Manager

***Lee Krumenacker, RN, BS***, Subject Matter Expert

***David Wenner, DO***, Medical Director

**Communications Staff**

***Shanen Wright***, Communications Manager

***Russell Hartman***, Communications Specialist

***Bethany Knowles***, Communications Specialist

***Krista Davis***, Senior Communications Specialist

**Communication QIOSC Staff**

***Tinabeth Burton***, Public Relations Consultant to the Communications QIOSC

***Jennifer Willey***, Communications Specialist

# Table of Contents

<b>ACKNOWLEDGEMENTS</b>	<b>2</b>
<b>TABLE OF CONTENTS</b>	<b>4</b>
<b>LEADERSHIP TRACK</b>	<b>5</b>
<b>Patient – Family Connection</b>	<b>24</b>
<b>Physician Connection</b>	<b>25</b>
<b>Managed Care Connection</b>	<b>28</b>
<b>NURSE TRACK</b>	<b>35</b>
<b>Success Stories</b>	<b>40</b>
<b>THERAPY TRACK</b>	<b>45</b>
<b>Success Stories</b>	<b>51</b>
<b>MEDICAL SOCIAL WORKER TRACK</b>	<b>57</b>
<b>HOME HEALTH AIDE TRACK</b>	<b>63</b>



## Best Practice: Telemonitoring

# Leadership Track



This material was prepared by Quality Insights of Pennsylvania, the Medicare Quality Improvement Organization Support Center for Home Health, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. Publication number :8SOW-PA-HHQ07.554 App. 7.30.07

## Leadership Section Objectives

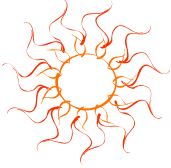
The Telemonitoring Best Practice Intervention Package is primarily designed for agencies that are either utilizing telemonitoring or are investigating/planning for implementation in the near future.

### Objectives

After completing the activities included in the Leadership Section of this **Best Practice Intervention Package – Telemonitoring**, the leader will be able to:

1. Define telemonitoring.
2. Evaluate the agency's current use of telemonitoring.
3. Identify how telemonitoring can be used effectively by a home health agency.
4. Describe two leadership applications for telemonitoring.
5. Identify resources for developing and sustaining a comprehensive and efficient telemonitoring program.

# Telemonitoring: Leadership Track



This sixth best practice intervention package, **telemonitoring**, is the final package of the **Simply Summer Series** that focuses on **telehealth**.

***Utilize telemonitoring effectively and efficiently to reduce acute care hospitalizations.***

## Building Upon the Foundation: Next Steps



Once you have established your foundation for reducing acute care hospitalization (ACH), such as implementing hospitalization risk assessments and emergency care planning, your agency can continue to add more advanced building blocks (additional interventions).

All previous Best Practice Intervention Packages are available on the HHQI Web site [www.homehealthquality.org](http://www.homehealthquality.org)

## Best Practice Intervention Package Schedule

Month	Best Practice Topic	RN Contact Hours available	Therapy Certificate of Participation available
03/01/07	Hospitalization Risk Assessment	N/A	N/A
04/02/07	Patient Emergency Plan	1.25	N/A
05/01/07	Medication Management	2.0	N/A
06/01/07	Phone Monitoring and Frontloading Visits	1.5	1.2
07/02/07	Teletriage	1.7	1.0
08/01/07	<a href="#">Telemonitoring</a>	1.0	1.0
09/04/07	Immunization		
10/01/07	Physician Relationships		
11/01/07	Fall Prevention		
12/03/07	Patient Self-Management		
01/02/08	Disease Management		
01/01/08	Transitional Care Coordination		

## How to Use this Package

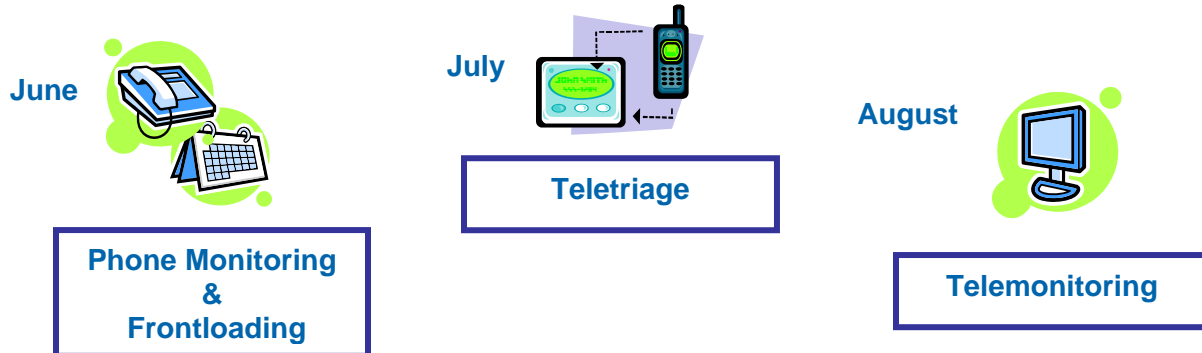


The **Telemonitoring Best Practice Intervention Package** is primarily designed for agencies that are either **utilizing telemonitoring or are investigating/planning for implementation** in the near future.

Your agency's current telemonitoring status	How to use this Best Practice Intervention Package - Telemonitoring
<ul style="list-style-type: none"> <li>❑ <b>NOT using telemonitoring</b></li> </ul>	<ul style="list-style-type: none"> <li>• Focus on implementing ideas from the <b>Phone Monitoring &amp; Frontloading Visits</b> Best Practice Intervention Package (<a href="http://www.homehealthquality.org">www.homehealthquality.org</a>) as a cost effective way to utilize telehealth</li> <li>• Keep this package as a resource for future use</li> <li>• Read the Leadership Track for informational purposes</li> </ul>
<ul style="list-style-type: none"> <li>❑ <b>Exploring purchase of telemonitors</b></li> </ul>	<ul style="list-style-type: none"> <li>• Review the Leadership Track to assist with telemonitoring implementation decision making</li> <li>• Utilize the <i>Home Telehealth Reference 2005</i> as a resource for assistance with developing a telemonitoring program (available on <a href="http://www.medqic.org">www.medqic.org</a>, under Home Health, Telehealth, Tools)</li> </ul>
<ul style="list-style-type: none"> <li>❑ <b>Using telemonitoring, but need to optimize to achieve maximum benefits</b></li> </ul>	<ul style="list-style-type: none"> <li>• Review the Leadership Track</li> <li>• Complete the agency self-assessment, review agency action items and select applicable activities to incorporate into agency practices and processes</li> <li>• Review connection pages and distribute individual pages to appropriate staff to understand their role in telemonitoring</li> <li>• Reference the <i>Home Telehealth Reference 2005</i> and <i>2006/2007</i>, and the <i>Home Telehealth Disease Management Series Toolkit</i> (<a href="http://www.medqic.org">www.medqic.org</a>)</li> <li>• Distribute the individual care provider tracks (Nursing, Therapy, Social Worker and/or Home Health Aide)</li> <li>• Encourage RNs and Therapists to apply for FREE contact hours or certificate of participation; copy certificates for agency education documentation</li> </ul>
<ul style="list-style-type: none"> <li>❑ <b>Using telemonitoring optimally, but need a few ideas to ensure efficiencies</b></li> </ul>	<ul style="list-style-type: none"> <li>• Review the Leadership Track</li> <li>• Complete the agency self-assessment, review agency action items for ideas to optimize practices and processes</li> <li>• Review connection pages and distribute individual pages to appropriate staff to understand their role in telemonitoring</li> <li>• Use the individual care provider tracks (Nursing, Therapy, Social Worker and/or Home Health Aide) for annual staff competencies</li> <li>• Remind RNs and Therapists to apply for FREE contact hours/certificate of participation</li> </ul>

## Telemonitoring: Leadership Track

# Simply Summer Series



The Home Telehealth *Simply Summer Series* (June-August) focuses on the three basic components of telehealth: phone monitoring, teletriage and telemonitoring. The series began with Phone Monitoring and Frontloading Visits and concludes with this month's package, **Telemonitoring**.

The Schedule for the Home Telehealth *Simply Summer Series* is as follows:

<b>June 2007</b>	Phone Monitoring and Frontloading Visits
<b>July 2007</b>	Teletriage
<b>August 2007</b>	<b>Telemonitoring</b>

### Consider combining telehealth interventions

- Agencies may employ **both telemonitoring and phone monitoring**. Agencies using telemonitoring may offer phone monitoring for patients waiting for monitors or for those patients who do not meet the patient selection criteria for telemonitoring.
- **Teletriage:**
  - o Is an **unscheduled, appropriate disposition** of health-related problems by skilled clinicians via telephone or electronic information processing technologies that have been initiated by the patient/caregiver (*Home Telehealth Reference 2006/2007*).
  - o Occurs at all home health agencies—every hour of every day!
  - o Consistent **teletriage processes support** effective phone monitoring and **telemonitoring**.

# Telemonitoring



## Telemonitoring 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. Telemonitoring is the more sophisticated type of home telehealth (*Home Telehealth Reference 2005*).
- 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

**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**.

## Benefits of telemonitoring:

- Provides for **timely intervention** when there is a decline in a patient's health status
- Improves patient **symptom surveillance** and outcomes
- Reinforces patient/caregiver **self-management** education and enables patient/caregiver to better understand his/her disease state
- **Decreases anxiety** in patients/families who are, at times, overwhelmed with caregiving issues
- Provides for **increased communication** with patients at risk for hospitalization
- Provides **real-time information to physicians** enabling informed decisions on medication and treatment modifications
- Encourages **active involvement of patient** as a member of the home care team
- Increases patient/caregiver satisfaction, as they feel better supported on non-visit days
- **Improves medication management** as patients see how medications immediately affect vital signs
- Permits patient visits to be provided as needed, **reducing clinically unnecessary visits**
- **Supports resource conservation**, especially staff allocation
- Provides for the reinforcement of **patient emergency care planning**
- **Increases agency efficiency** and **reduces costs** through decreased travel time and expense
- **Increases the agency's value** to patients/caregivers, physicians, hospitals and payors
- **Increases nurse caseload** without overly burdening clinical staff
- **Provides a marketing edge** from those agencies that are not using advanced technologies to manage care
- **Supports avoidable acute care hospitalization reduction activities**

# Telemonitoring



## Telemonitoring considerations for leadership:

### Scheduling

Utilize monitoring data to assist with making a clinical decision about when to schedule an onsite visit.

- Telemonitoring encounters need to be formally scheduled and tracked
- A telemonitoring encounter is not an onsite encounter
- Determine how telemonitoring is scheduled for set up, removal and included in day-to-day activities (Set up and removal of telemonitoring unit may be part of an onsite encounter)
  - Set up/Removal—Decide which discipline will perform set up and removal and complete patient education
  - Encounters—Decide who is responsible for reviewing and responding to telemonitoring data (office nurse, case manager, designated triage nurse, etc.)

### Patient/Caregiver Selection Criteria

- Able to hear, answer and talk clearly on a telephone
- Accepts the use of telemonitoring
- Able to self-monitor
- Able to read and safely connect to and utilize a telemonitoring unit
- Access to electricity, phone line or other telecommunication media per vendor requirement



### Patient/Caregiver Exclusion Criteria to Consider

- Patient physically or cognitively unable to monitor AND does not have a caregiver
- Unsafe home environment (electrical, fire, water, infestation hazards)
- Patient is combative or has psychotic problems
- Patient is receiving daily skilled nursing visits

### Physician Orders

- Consult with state survey agency to determine the need for physician orders
- May include on Home Health Certification and Plan of Care (HCFA-485) or on physician order forms
  - Example “Daily home telemonitoring of weight, blood pressure, pulse oximetry”
  - Physician prescribed pre-established parameters (e.g. additional 40 mg lasix orally for 3 pound weight gain in 48 hours; notify physician if BP is greater than \_\_\_\_\_)



## Informed Consent

- Use of a separate informed consent form is recommended due to the complex nature of telemonitoring and the associated patient risks and responsibilities
- Use agency approved consent form (vendors usually have sample consent forms and a sample is provided in the *Home Telehealth Reference 2005*)

## Confidentiality

- Receive telemonitoring data and conduct telemonitoring follow-up calls in a private area where confidential patient information remains protected
- Use agency phones to prevent patients with caller ID from obtaining staff home or cell phone numbers



**Cell Phone Tip** – most cell phones will block caller ID by preceding the call with \*67

## Documentation

- Document home telemonitoring patient encounters via special documentation forms (or screens on computerized systems) or by utilizing an existing form or documentation system

## Staff Education and Competency

- Ensure all staff understand and comply with telemonitoring protocols and agency processes
- Include telemonitoring program goals into staff orientation



## Patient Education

- Benefits of telemonitoring
- Phone safety
- Self-monitoring coaching tips
- Understanding that the telemonitoring unit is not an emergency response system and does not replace emergency care

## Infection Control

- Cleaning and disinfecting of equipment should be done according to the manufacturer or vendor instructions
- Ensure that all staff who clean equipment understand and comply with agency telemonitoring infection control protocols

*“Telemonitors assist the health care team to work more efficiently, using objective and subjective data to improve patient oversight and outcomes.”*

Marie Ruhland, BSN, Director  
Hilo Medical Center Home Care

# Telemonitoring Agency Self-Assessment



Processes	Y	N
<b>Does your agency:</b>		
Have specific telemonitoring acceptance criteria?		
Have protocols specific for telemonitoring? (e.g. patient consents, infection control, documentation)		
Have defined telemonitoring job responsibilities? (e.g. Intake nurse or Case Managers complete daily telemonitoring data evaluation)		
Have a plan for: <ul style="list-style-type: none"> <li>○ Patients who do not meet criteria for telemonitoring, but would benefit from telehealth?</li> <li>○ Patients who meet criteria but there are no available telemonitors?</li> </ul>		
Utilize all available telemonitors? (Are telemonitors setting on shelves?)		
Encourage intake or admission nurses to evaluate new referrals for telemonitoring?		
Place monitors as early as possible in the episode?		
Evaluate for telemonitoring at all points of care, including recertification?		
Apply a visit frequency that reflects telemonitoring ? (e.g. using monitor data to determine need for onsite visit)		
Incorporate telemonitoring into the 485/Plan of Care?		
Staff Education and Involvement	Y	N
Is your leadership concerned with staff buy-in for telemonitoring?		
Have all staff been educated on agency goals for telemonitoring and benefits to patients and caregivers?		
Does staff appreciate the value of telemonitoring as an intervention to improve the quality of care provided?		
Are clinicians (including therapists, medical social workers and aides) promoting appropriate use of telemonitors?		
Have you identified a clinical nurse telemonitoring champion?		
Have you identified a physician telemonitoring champion? (e.g. agency medical director)		
Does your agency have a telemonitoring component in orientation?		
Does your agency have annual telemonitoring competencies specific for each discipline's telemonitoring responsibilities? (e.g. Home Health Aide—infection control with cleaning of telemonitors, if applicable; Nursing—patient education with telemonitors)		
Do you provide incentives for your staff to promote telemonitoring?		

<b>Evaluation</b>	<b>Y</b>	<b>N</b>
<b>Does your agency:</b>		
Disseminate physician surveys to obtain their input on telemonitoring data and value to their practice?		
Ask patients to evaluate their telemonitoring experience?		
Evaluate cost effectiveness of telemonitoring?		
Compare the hospitalization rate of patients with and without telemonitoring?		
Monitor the census of patients with telemonitors?		
Track the number of PRN visits per monitored patients?		
Collect anecdotal patient success stories?		
<b>Care Coordination</b>	<b>Y</b>	<b>N</b>
Are telemonitoring findings included in case conferences?		
Does your agency have a process for effectively and confidentially transferring or providing data to physicians in a timely manner?		
Is your agency actively marketing your telemonitoring program?		
Do you receive referrals based on agency telemonitoring program?		
Does your intake or admission staff communicate with existing referral sources/physicians/hospital discharge planners to identify patients for telemonitoring?		

*“Although implementing a telemonitoring service can be costly to an agency, the long-term benefit is well worth the cost. If an agency is looking at long-term visibility in the community with a higher model of care than the rest of the pack, they have to telemonitor.”*

Joan Plessmeyer, CEO, president and owner  
 Los Robles Homecare Services  
 Thousand Oaks, California

# Home Telehealth Protocol for Telemonitoring



**Purpose:** To provide telemonitoring guidelines for home care agencies

**Policy:** Implement telemonitoring with patients as supported by their clinical condition and agency patient selection criteria, including emergency plan, in the event of a disaster

**Procedure:** Agency leadership will establish guidelines that outline the process for telemonitoring that include, but are not limited to the following:

**Patient selection criteria:**

Diagnoses  
Hospitalization risk assessment score  
Ability to self-monitor  
Ability to read and safely connect to and utilize a telemonitoring unit  
Electricity, phone line or other telecommunication media per vendor requirement

**Clear direction and job description** for staff who review and respond to telemonitoring data

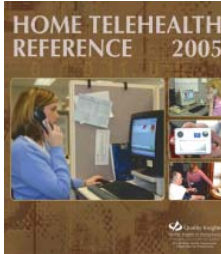
**Agency-specific telemonitoring documentation** guidelines

**Evaluation** criteria & parameters:

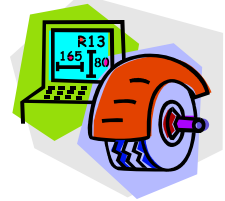
- Monitor utilization: Are patients receiving telemonitors per agency patient selection criteria?
- Is telemonitoring documented per agency guidelines?
- Correlate outcomes: Evaluate recently hospitalized patient records. Did they meet the criteria for 'at-risk' for hospitalization? If so, was telemonitoring implemented?

# Telemonitoring

Don't re-create the wheel... utilize the *Home Telehealth Reference 2005* for telemonitoring forms and guidelines.



Available on MedQIC  
***Home Telehealth Reference 2005***  
or go to  
[www.homehealthquality.org](http://www.homehealthquality.org)  
For Home Health Agencies, Resources



**The following telemonitoring templates are available in the *Home Telehealth Reference 2005*:**

<input type="checkbox"/> Home Telehealth Patient Selection Criteria
<input type="checkbox"/> Home Telehealth Patient Encounter Documentation Forms
<input type="checkbox"/> Telemonitoring Informed Consent Form
<input type="checkbox"/> Telemonitoring Employee Orientation Checklist
<input type="checkbox"/> Employee Telemonitoring Skills Checklist: Basic System Information
<input type="checkbox"/> Employee Telemonitoring Skills Checklist: Telemonitoring Unit
<input type="checkbox"/> Telemonitoring Patient/Caregiver General Instruction Sheet
<input type="checkbox"/> Patient Telemonitoring Skills Checklist
<input type="checkbox"/> Telemonitoring Infection Control Policy
<input type="checkbox"/> Telemonitoring Patient Satisfaction Survey

# 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

## Do you have telemonitors that are not in use?

### Solutions:



**Provide Incentives  
for Staff**

**Can be for:**

- individual
- entire staff
- team that has used the monitor effectively



**Consider All Patients  
as Potential Candidates  
for Telemonitoring**

- Scrutinize all referrals; almost every patient can benefit from daily vital sign monitoring, especially in those vulnerable first 2-3 weeks post-hospitalization
- Evaluate patients for telemonitoring at all points of care, including resumption of care and recertification



**Communicate!  
Communicate!!  
Communicate!!!**

- Communicate goals of telemonitoring program within the agency from the beginning
- Include all disciplines in telemonitoring discussion
- Orient new staff
- Provide demonstration for staff
- Make telemonitoring part of every patient discussion
- Share monitoring utilization rates, acute care hospitalization rates and patient successes with physicians

# Leadership Telemonitoring Leadership Action Items



## ***Processes:***

- Review current processes for telemonitoring
- Establish patient selection and exclusion criteria for telemonitors
- Ensure that processes for telemonitoring include patient selection criteria and patient education
- Prioritize patients at high-risk for hospitalization for telemonitoring
- Review job descriptions and roles to outline which staff are responsible for reviewing/responding to telemonitoring data and for setup, removal and cleaning
- Establish a telemonitoring protocol, including screening and early placement of monitors (e.g. 48 hours from SOC)
- Update the agency emergency plan in the event of a disaster to include telemonitoring patients
- Develop a plan for patients not receiving telehealth, such as phone monitoring and frontloading
- Establish a process for effective, confidential and timely transfer or provide data to physicians in a timely manner
- Include evaluation for monitor at referral, resumption of care and recertification
- Review retrospective and concurrent data to determine agency-specific ACH risk factors (tally reports) to assist in determining type of telemonitoring
- Establish visit frequency to include telemonitoring
- Utilize the *Home Telehealth Reference 2005* for sample polices, procedures and forms ([www.medqic.org](http://www.medqic.org))
- Develop evidence-based disease management protocols that incorporate technology
- Develop a marketing plan to promote telemonitoring with referring physicians (utilize Home Telehealth brochure for physicians – pages 26-27)
- Develop standing order protocols and review with physicians to gain buy-in, acceptance and willingness to partner with agency to manage patient outside of emergency department

## ***Staff Education and Involvement:***

- Educate staff on agency goals for telemonitoring and benefits to patients/distribute the Telemonitoring Checklist for Clinicians
- Establish expectation that telemonitoring will be incorporated into the 485/Plan of Care when appropriate
- Provide staff education to inform clinicians of any change in telemonitoring processes
- Use the “Do you have telemonitors that are not in use?” document (previous page) to stimulate discussion with middle management about promoting your telemonitoring program
- Ensure that orientation and annual competencies adequately review telemonitoring processes/use the discipline-specific care tracks
- Ask staff to share individual patient success stories as a result of telemonitoring
- Encourage staff to brainstorm to improve processes for telemonitoring

### ***Staff Education and Involvement (continued):***

- Establish an expectation that staff will promote telemonitoring as an important component of quality care and service
- Identify a nurse or team telemonitoring champion or utilize a dedicated team
- Create an incentive program to promote telemonitoring
- Encourage participation in agency's technology committees and ongoing education on technology updates (e.g. journals, association e-newsletters)
- Encourage networking among peers to determine best practices for telemonitoring

### ***Evaluation:***

- Monitor (chart audits or patient interviews) to evaluate if telemonitoring follows protocol
- Monitor telemonitoring census and utilization of existing monitors
- Survey physicians regarding telemonitoring satisfaction
- Include telemonitoring in patient satisfaction survey
- Share results of evaluation at staff meetings or through other means of communication
- Meet with individuals who do not comply with telemonitoring protocols
- Identify barriers that may keep staff and patients from wanting to use telehealth (e.g. language, fear of technology, perceived cost, information overload)
- Reward clinicians who value and adhere to processes
- Develop tracking system to monitor PRN visits and hospitalization rates of patients with and without telemonitoring

### ***Care Coordination:***

- Case conference any patient who could be a potential telemonitoring patient
- Discuss optimum visit schedule including patient telemonitoring support
- Case conference patients who have telemonitors; share successes when early intervention is provided because of telemonitoring data or even hospitalization of patient is prevented
- Educate and collaborate with physicians about home telehealth, patient benefits and your agency's program (include a demonstration)
- Market success of telemonitoring program to referral and potential referral sources
- Demonstrate the effectiveness of telemonitoring to physicians by asking to manage one of their "tough patients"

*"Strategies implemented by successful agencies to advance telemonitoring include vision and ownership of the program by administration, including designation of a telehealth champion."*

Dawn Murr-Davidson, RN, Director of Branch Operations  
VNA Community Care Services, Lancaster, PA

## Suggestions for leadership involvement

### Home health administrators can:

- Establish policies and directives for telemonitoring
- Incorporate telemonitoring implementation into hospitalization risk assessment
- Determine the specific patient populations that need to be targeted
- Define roles and responsibilities to assure optimization of telemonitoring
- Establish adoption of technology as a component of annual performance review criteria
- Plan strategies to market the agency's telemonitoring program
- Volunteer to participate in telemonitoring studies or present and publish agency results

### Clinical managers can:

- Be a telemonitoring champion to encourage staff buy-in
- Assist clinicians with selecting patients for telemonitoring
- Ensure that telemonitoring of patients is included in case conferencing
- Be a telemonitoring champion to physicians and help them see the significance to improving patient care
- Acknowledge clinicians that demonstrate value of telemonitoring

### Quality improvement leadership can:

- Educate all staff regarding telemonitoring principles, processes and applications
- Create a standardized positive and effective presentation of technology to providers and patients
- Monitor to determine if telemonitoring is being used with appropriate patients
- Monitor data to indicate success of reducing acute care hospitalization
- Share patient case studies and/or success stories that describe how these interventions prevented hospitalizations

## Leadership Action Plan

Using the Leadership Action Items (previous three pages), request that your leadership team members select and prioritize **two to four items** that they want to implement or modify. Remember, you will have four weeks to review, plan and implement some key action items, since another important best practice intervention will be released at the beginning of the following month. Some items may take longer to implement than four weeks, but a project plan should be developed to implement the action items timely. You may choose to add more action items after accomplishing your priority action items.



If you are not ready to implement action items at this time, download and save the materials and plan a more appropriate time to implement.

Date	Action	By Whom	Status
	Review care discipline tracks to determine what portions of this <b>Best Practice Package – Telemonitoring</b> you choose to use and how you want to utilize them.		

# Implementation Tools: How to Use Telemonitoring

## **Patient & Family Connection**

- Distribute to staff who create telemonitoring materials or provide education to staff to read this connection page and then evaluate the agency's current education programs and materials

## **Physician Connection & Home Telehealth Brochure**

- Utilize this connection page with the brochure at an administration or management meeting to initiate a brainstorming session to formulate a marketing plan for your physicians

## **Managed Care Connection**

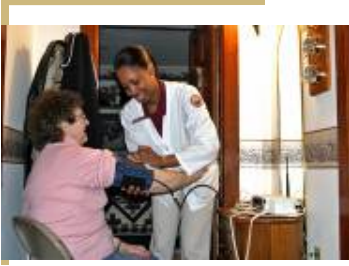
- Use this document as an educational tool for leadership and managers to consider the benefits that telemonitoring can provide to the agency and patients for your managed care population

## **Telemonitoring Awareness Poster**

- Use campaign posters as visual reminders of Home Health Quality Improvement (HHQI) interventions to reduce avoidable hospitalizations
- Display all telehealth series posters together (Phone Monitoring & Frontloading Visits, Telerriage and Telemonitoring)

## **Success Stories**

- Insert one of the stories in your agency newsletter for staff
- Read at staff meetings, distribute in mail boxes, post on bulletin boards



## Patient – Family Connection

### Self-Management

### Telemonitoring

#### **Patient Concerns about Telemonitoring:**

- “What will the equipment look like? How big will it be?”
- “I can’t use a computer, so how can I use telemonitoring equipment?”
- “What should I do if I can’t get it to work?”
- “Can it hurt me?”
- “Can your agency see me all the time? Does it work like a hidden camera?”
- “If I break it, do I have to pay for it?”
- “Will I keep the equipment after the nurses stop visiting?”
- “Does my doctor get all the information from the machine?”
- “If I start using it and don’t like it, can I give it back?”
- “Will I have to pay for this service?”

#### **Solutions:**

**Written telemonitoring materials (e.g. pamphlets, brochures, patient education)**

- **Use lay language; avoid medical jargon**
- **Address patient fears and myths**
- **Provide pictures of elderly patients using the monitor**
- **Include patient testimonials**
- **Describe patient benefits**

**Educate clinical staff in effective approaches to introducing telemonitoring to patients/families**

- **Use good communication skills (speak slowly, calmly and in lay language, avoiding medical jargon)**
- **Address all patient questions (use the above list as a starting point)**
- **Evaluate if the message sent about telemonitoring was the message received**
  - **Example: Patient hears “That machine will check on me.” Rather than “This monitor should give me peace of mind while I am getting better.”**

# Physician Connection

## Telemonitoring



Emphasize with physicians—**telemonitoring** is a **tool** to **manage chronic diseases and at-risk patients**



**Key:** Combine telemonitoring with patient-specific parameters and prn proactive orders (standing orders\*)  
**Standing Orders + Telehealth = ↑ Efficiency for Every Health Care Provider**

**\* Check with state standards for guidance on standing orders.**



### What the doctor said...

“Physicians do not want to be inundated with data. Must individualize patient parameters and then let the physician receive useful information.” Joseph G. Ouslander, MD

“Telemonitoring data needs to be adjusted at the patient level. Physicians will need to actively participate to set goals to patient specific parameters.” Dennis M. Manning, MD, FACP, FACC

“The concept of standing orders is inherent in telemonitoring... to increase efficiency in the process.” Timothy R. Gutshall, MD

“The primary care physician needs to understand that telemonitoring allows for more frequent assessment of the patient; and what a home health agency can do related to telemonitoring. Demonstrate the telemonitors to physicians.”  
Jane C. Pederson, MD, MS



**Consider the following potential benefits and negatives when marketing and educating physicians about telemonitoring:**

#### Telemonitoring benefits for physicians:

- ❑ **Improved management of chronic disease**
- ❑ **Decreased calls to the physician from the patient**
- ❑ **Decrease in acute care hospitalizations by early identification of symptoms**

#### Telemonitoring negatives for physicians:

- ❑ **Lack of trust by physician in the technology**
- ❑ **Data overload**
- ❑ **Increase in contacts from home health agencies**

*“We now have physicians who regularly view their patient’s data online. Doctors are now requesting that units be placed in their patient’s homes so they can view or receive data instead of referring them to the emergency department.”*

-Vickie Lynch, RN, BSN, MSB, Home Health Director, Good Samaritan Home Care, Preston, MN

# HOME TELEHEALTH... BENEFITS FOR PATIENTS & PHYSICIANS

The Centers for Medicare & Medicaid Services (CMS) has identified that the improvement priority for home health care agencies is to reduce avoidable acute care hospitalizations.

**Physicians** are key partners in this endeavor. When physicians define clear-cut parameters for identified patients, home health agencies are better prepared to educate, enforce and monitor patient adherence behaviors and respond quickly to potential problems.

Home telehealth programs benefit physicians and their patients through increased patient adherence to treatment plans, the development of self-care management skills, **fewer physician phone calls**, decreased avoidable hospitalizations and improved patient satisfaction and outcomes.

(agency name) is pleased to provide:

(specify type(s) of telehealth programs) for patients on service.

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_



# Home Health...The Requirements

- Home health agencies must be Medicare certified to provide services
- **Home health care services must be ordered by a physician**

## Who is Eligible for Home Health?

### Medicare Home Health Criteria

Medicare and Medicare Advantage Organizations provide home health care benefits to patients meeting the following criteria:

- Patients must need at least one of the following:
  - intermittent skilled nursing care
  - physical therapy
  - speech language pathology or
  - continue to need occupational therapy.
- Patients must be homebound, or normally unable to leave home unassisted. To be homebound means that leaving home takes a considerable and taxing effort. The need for adult day care does not prevent patients from receiving home health
- Medicare will also cover home health aide services for personal care and medical social services for counseling and community resources for qualified patients.

For additional information on home care services and availability, please contact:

\_\_\_\_\_  
(Agency Name)

\_\_\_\_\_  
(Address)

\_\_\_\_\_  
(Phone #)

# HOME TELEHEALTH THE PHYSICIAN CONNECTION



**Home** telehealth programs are being implemented across the nation as an intervention to support reduction of avoidable hospitalizations.

Home telehealth includes:

- Triage
- Phone monitoring
- Telemonitoring

**Physicians** play a key role in successful home telehealth through collaboration with home health agencies to establish patient specific monitoring parameters.



## TELETRIAGE

**Teletriage** occurs when:

- a patient or caregiver contacts the home health agency by phone with a problem and/or question or
- information is submitted electronically via a telemonitor.

Agency staff then **triage** the patient based upon the information received to determine the best course of action.

Effective teletriage promotes:

- appropriate patient interventions,
- optimal outcomes,
- patient/family satisfaction and
- efficient utilization of resources.

**Teletriage** may include:

- symptom assessment,
- education/counseling,
- home treatment advisement
- referral to a physician or hospital,
- disease management specific interventions, or
- crisis intervention.

Appropriate teletriage is supported by having pre-established parameters *established by the physician.*



## PHONE MONITORING

**Phone monitoring** is used to decrease avoidable acute care hospitalizations and to enhance patient self-care management behaviors through scheduled phone encounters. Patients selected for phone monitoring are targeted for monitoring based upon a specific diagnosis or are otherwise at risk for frequent hospitalizations.

**Phone monitoring** calls are provided in addition to home health on-site visits to encourage and monitor patient self-care management skills and symptom status

You may see “**phone monitoring**” on your patient’s plan of care as a supplemental service provided to improve patient clinical outcomes.



## TELEMONITORING

Telemonitoring requires the use of technology beyond the telephone. Telemonitoring includes the collection and transmission of clinical data between a patient and a home health care provider.

The home health agency completes a clinical review of the transferred data and provides a response as needed. Successful telemonitoring relies on **physician** direction in establishing patient-specific baseline parameters.

**Monitored data may include:**

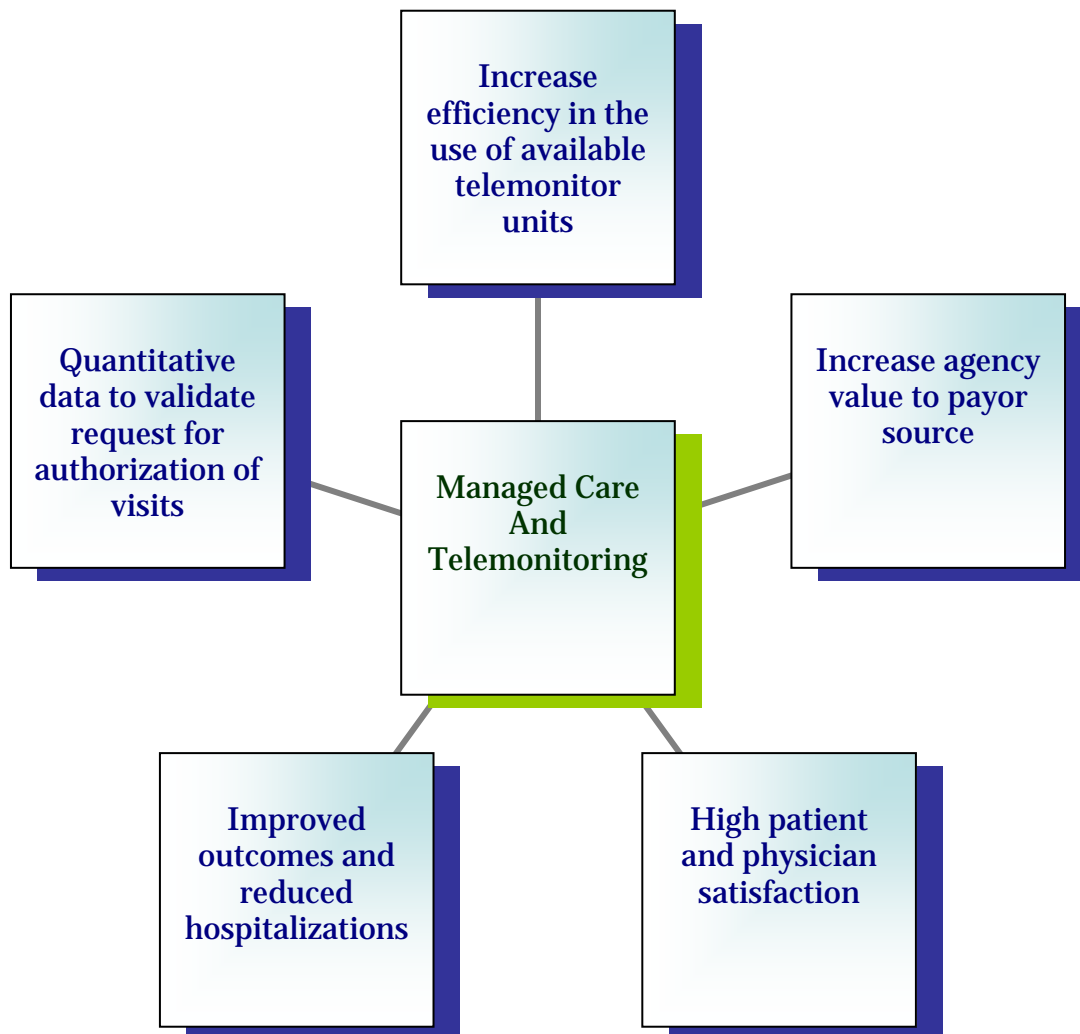
- vital signs
- weight
- oxygen saturation,
- blood glucose levels
- wound status



# Managed Care Connection

## Telemonitoring

Managed care may not reimburse directly for telemonitoring. Work with managed care payors to negotiate rates for telemonitoring for patients at-risk for hospitalization. However, consider benefits that telemonitoring can provide to your agency and patients for your managed care population without reimbursement.



## Leadership Success Story

### **California Home Health Agency Lowers Acute Care Hospitalization Rate through Telemonitoring Service**

Joan Buck-Plassmeyer, CEO, president and owner of Los Robles Homecare Services in Thousand Oaks, California, began evaluating telemonitoring systems in 2003. Plassmeyer faced the challenges of providing high quality care to the more complex patients leaving the hospital sicker and quicker. Considering the possibility of obtaining daily vital signs, including blood pressure, pulse, and temperature, weight and pulse oxygen level, for the more complex patients through a remote device in the home appeared to hold merit. With the nursing shortage, this technology provided an alternative means of obtaining consistent vital information without sending a nurse to obtain this information. Shortly thereafter, the decision was made to invest in purchasing 25 telemonitor devices along with the Central Station.

With the help of her administrator, Sheila Shea, Plassmeyer initiated the use of the telemonitoring devices for patient with selected diagnosis and conditions. Immediately, the staff noticed that by monitoring patients, and having the patient involved in their own care, Los Robles had better patient self care management participation. Patients became more proactive about their health care plan and more willing to make any needed adjustments to improve their own health.

When Los Robles receives a new patient, staff determines on a case-by-case basis whether the patient is a good candidate for telemonitoring. Once chosen for telemonitoring, a nurse delivers the telemonitoring unit to the patient and performs a demonstration and practice transmit test. If family is involved in the patient's care, those relatives are also involved in the walk-through.

The device speaks slowly, loudly and clearly to the patient and can be programmed with ten different languages and 50 questions, such as "do you need your clinician to call you" or "are you experiencing more pain than yesterday." Patients check-in as instructed by their physician for daily weight checks and answer questions about their medications and how they feel. Answers are transmitted directly to Los Robles Homecare, via modem and satellite, so that information can be documented. As red flags appear, nurses call the patient to find out if there is a problem.

"We once noticed a patient had gained eight pounds in a single day," shared Shea. "Our nurse who received the data became concerned and called the patient back. After discussing the situation with the patient, we found out he had been holding his cat when he did his morning weigh-in. He was most appreciative that we called to check on him. Telemonitoring is literally the eyes and ears in the patient's home."

## Leadership Success Story (cont.)

Patients are generally thrilled with having the telemonitoring device in their homes. Telemonitoring offers consistent data since it is recorded at the same time each day. Once the data is reviewed by a clinical nurse, appropriate interventions can be implemented if the results are out of parameter for the patient. It may require a nurse visit to the patient to check medication compliance, or a re-check of the vital sign in a few minutes, or a telephone conversation with the physician regarding the findings. These interventions can result in addressing the issues quickly and prevent an emergency room visit. Overall, telemonitoring plays a large role in preventative healthcare.

“Patients today are more complex, often having multiple concerns or symptoms, like diabetes and hypertension,” stated Plassmeyer. “Caring for patients is very different today than ten years ago. We now have patients coming home from the hospital still unstable, which without daily surveillance can contribute to patients being re-admitted to the hospital. Through telemonitoring, we can keep sick patients at home, rather than seeing them hospitalized repeatedly.”

Los Robles saw a significant drop in their acute care hospitalization (ACH) rate. After 12 months of implementing telemonitoring, the agency’s ACH rate was 21 percent, well below the national average at the time. In 2005, it dropped even lower, to 18 percent. The more obvious impact has been the change in patients – and their family members – taking an active role in their healthcare plan. Since patients are monitored daily, the system has helped them see the results of complying with their diet, medications and activity.

Educating the community on the benefits of telemonitoring is the next step for Los Robles Homecare Services. Plassmeyer is working closely with local hospitals on the practice of telemonitoring and how this could provide for continuity of care. “Our intent is to offer community service seminars to teach patients how to self-manage their chronic conditions such as congestive heart failure or chronic obstructive pulmonary disease. We have found that when patients become active in self-management, they tend to live healthier life styles since they recognize through their own vital sign surveillance what affects their physical health.”

Although implementing a telemonitoring service can be costly to an agency, Plassmeyer thinks the long-term benefit is well worth the cost. “If an agency is looking at long term visibility in the community with a higher model of care, they have to invest in the telemonitoring program.” Plassmeyer stated. “People are living longer and the cost of health care is rising. Teaching patients how to monitor their own health status could definitely affect how they stay living healthy in their own home environment.”







*Joan Buck-Plassmeyer, Los Robles Homecare Services, provided data in this article.*

# Think Telemonitoring...



## for Patients at Risk for Hospitalization!

**Telemonitoring can reduce  
avoidable hospitalizations by:**

-  Increasing symptom surveillance
-  Detecting early changes in health status
-  Improving patient self-management
-  Prompting patients to seek earlier medical attention
-  Providing real-time data to the physician
-  Creating opportunity for early interventions



## Additional Resources

### [American Telemedicine Association](http://www.americantelemed.org/)

[www.americantelemed.org/](http://www.americantelemed.org/)



The Home Telehealth and Remote Monitoring Special Interest Group (SIG) supports the expansion and utilization of telehealth, remote monitoring and disease management applications in the patient's place of residence. This SIG sponsors tutorials, courses, educational workshops and seminars and a web page that provides important information and numerous documents and reports in support of this field.



### [Telemedicine Information Exchange](http://tie.telemed.org/default.asp)

[tie.telemed.org/default.asp](http://tie.telemed.org/default.asp)

“An unbiased and all-inclusive platform for information on telemedicine and telehealth.” This includes information about practicing telehealth and telemedicine in each state. Also includes the status of licensure and reimbursement as well as active programs and relevant organizations.

### [HRSA Health Resources and Service Administration](http://www.hrsa.gov/telehealth/)

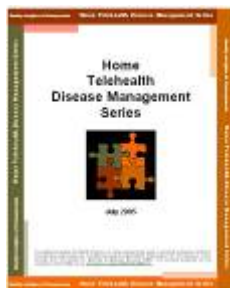
[www.hrsa.gov/telehealth/](http://www.hrsa.gov/telehealth/)



HRSA promotes the use of telehealth technologies by administering telehealth grant programs; providing technical assistance; developing telehealth policy initiatives to improve access to quality health services; promoting knowledge exchange about "best telehealth practices." The **Telehealth Grantee Directory** is located here.

### [Home Telehealth Disease Management Series](http://www.medqic.org)

[www.medqic.org](http://www.medqic.org)



The Home Telehealth Disease Management Series provides clinicians with a package of tools to improve the management of heart failure, COPD, cancer, and diabetes through the incorporation of telehealth. Each disease topic includes **patient selection criteria**, **decision support tool**, **patient encounter documentation tool**, patient self-care workbook, and staff education guide including phone assessment guides.

# Telemonitoring

## Post-Test Answer Keys

Each track of the Best Practice Intervention Package has a post-test that providers may choose to complete after reviewing the track and completing the activities.

For the Telemonitoring package, the post-tests are found on the following pages:

Nurse Track – page 35

Therapy Track – page 45

Medical Social Work Track – page 57

Home Health Aide Track – page 63

Use the answer keys below to score the post-tests included with the **Best Practice Intervention Package - Telemonitoring**.

### **Nursing Post-Test Answers:**

1. C
2. A
3. E
4. B
5. E

### **Therapy Post-Test Answers:**

1. C
2. A
3. E
4. A
5. E

### **Medical Social Worker Post-Test Answers:**

1. C
2. A
3. E
4. A
5. E

### **Home Health Aide Post-Test Answers:**

1. A
2. D
3. E
4. A
5. E



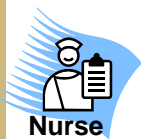


# Best Practice: Telemonitoring

# Nurse Track



This material was prepared by Quality Insights of Pennsylvania, the Medicare Quality Improvement Organization Support Center for Home Health, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. Publication number :8SOW-PA-HHQ07.554 App. 7.30.07



## 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:

	<b>Activity</b>	<b>Location</b>	<b>Estimated Time</b>
<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"/>	<b>RNs: Complete the nursing evaluation and post-test online for free CNEs</b>	<b>See link below</b>	10 minutes
<input type="checkbox"/>	LPNs: Complete the nursing post-test	Page 43	(10 minutes)
	<b>Total time for completion</b>		<b>60 minutes</b>



## 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 <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 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.	<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.*

---

## 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.**



# Best Practice: Telemonitoring

# Therapy Track



This material was prepared by Quality Insights of Pennsylvania, the Medicare Quality Improvement Organization Support Center for Home Health, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. Publication number :8SOW-PA-HHQ07.554 App. 7.30.07



# 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.

---

## 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.*

---

### 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.*



## Therapy Post-Test Telemonitoring

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

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.**





# Best Practice: Telemonitoring

# Medical Social Worker Track



This material was prepared by Quality Insights of Pennsylvania, the Medicare Quality Improvement Organization Support Center for Home Health, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. Publication number :8SOW-PA-HHQ07.554 App. 7.30.07



## Medical Social Worker Track

MSW

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

### Objectives

After completing the activities included in the Medical Social Worker 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 social worker actions or applications that support telemonitoring

Complete the following activities:

	<b>Activity</b>	<b>Location</b>	<b>Estimated Time</b>
<input type="checkbox"/>	Read the MSW Guide to Practical Application	Page 59	10 minutes
<input type="checkbox"/>	Listen to the podcast (audio recording): Telemonitoring for Clinicians	Page 60	15 minutes
<input type="checkbox"/>	View the patient vignette video	Page 60	15 minutes
<input type="checkbox"/>	Complete the MSW post-test and give to your manager	Page 61	10 minutes
	<b>Total Time</b>		<b>50 minutes</b>



# Medical Social Worker's Guide to Practical Application Telemonitoring

**Purpose:** To assist social workers 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 will benefit from telemonitoring; perhaps possible patients were not identified at start of care
- Consider patient's abilities for telemonitoring which include hearing and ability to talk clearly on a telephone
- Patients identified as high-risk for hospitalization often have concerns requiring social worker intervention and will also benefit from telemonitoring
- If needed, assist with finding an alternative capable caregiver to assist with telemonitoring
- Reinforce patient/caregiver education:
  - Purpose of telemonitoring
  - A telemonitor is not an emergency response system
  - Patient/caregiver responsibilities
  - Equipment safety
- Knowing which of your patients have a telemonitor and when the telemonitor is removed from the home
- **Support patient/caregiver acceptance of telemonitoring; be positive!**





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

### Telemonitoring Audio 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 audio recording related to telemonitoring	The podcast (audio recording) link is located at <a href="http://www.homehealthquality.org/hh/ha/interventionpackages/telemonitoring.aspx">www.homehealthquality.org/hh/ha/interventionpackages/telemonitoring.aspx</a>

There are several ways to listen to the 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.

---

## 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)

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

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



## Medical Social Worker Post-Test Telemonitoring

**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 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. Medical Social Workers can actively participate with telemonitoring by:
  - A. Reinforcing patient/caregiver education
  - B. Identifying potential candidates
  - C. Identifying alternative caregivers to assist with telemonitoring
  - 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. The Medical Social Worker can encourage patients/caregivers to be more active in their care.
  - 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.**





# Best Practice: Telemonitoring

# Home Health Aide Track



This material was prepared by Quality Insights of Pennsylvania, the Medicare Quality Improvement Organization Support Center for Home Health, under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. Publication number :8SOW-PA-HHQ07.554 App. 7.30.07



## Home Health Aide Track

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

### Objectives

After completing the activities included in the Home Health Aide 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
2. Describe how telemonitoring may reduce avoidable acute care hospitalizations
3. Describe two home health aide actions that support telemonitoring

Complete the following:

	<b>Activity</b>	<b>Location</b>	<b>Estimated Time</b>
<input type="checkbox"/>	Read the Home Health Aide's Guide to Practical Application	Page 65	5 minutes
<input type="checkbox"/>	Listen to the telemonitoring podcast (audio recording) with discussion questions	Page 66	30 minutes
<input type="checkbox"/>	View the patient vignette video	Page 66	15 minutes
<input type="checkbox"/>	Complete the home health aide post-test and give it to your manager	Page 67	10 minutes
	<b>Total Time</b>		<b>60 minutes</b>



# Home Health Aide's Guide to Practical Application Telemonitoring

**Purpose:** To assist home health aides with understanding their role in telemonitoring

**Definition:** Telemonitoring is the electronic collection of patient health information (vital signs, blood sugar, oxygen level, weight) and sending this information to a distant location.

## Practical Application:

- Help identify patients that will benefit from telemonitoring; perhaps possible patients were not identified at start of care
- Understand the home health aide role in telemonitoring at your agency per your agency's protocol which may include:
  - Delivery
  - Set-up & removal
  - Cleaning
- Assist patient with self-monitoring activities, such as ambulating to the telemonitor, getting on the scale, etc.
- Reinforce patient/caregiver education:
  - Purpose of telemonitoring
  - A telemonitor is not an emergency response system
  - Equipment safety
- Know which of your patients have a telemonitor and when the telemonitor is removed from the home
- **Support patient/caregiver acceptance of telemonitoring; be positive!**





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

Listen to the podcast (audio recording) to learn more about telemonitoring

Title	Description	Link
Telemonitoring for Home Health Aides	A 10-minute audio recording related to telemonitoring	The podcast (audio recording) link is located at <a href="http://www.homehealthquality.org/hh/ha/interventionpackages/telemonitoring.aspx">www.homehealthquality.org/hh/ha/interventionpackages/telemonitoring.aspx</a>

There are several ways to listen to the 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.

### Discussion Questions

You may complete these discussion questions together in a group setting (monthly team meeting) or just think about them if you are doing this as a self-study.

- What can the home health aide do to help with telemonitoring?
- Can you think of a patient that **may have benefited** from telemonitoring?
- Can you think of a patient who you think **would benefit** from telemonitoring?
- What are some examples of things you can do to help a patient with a telemonitoring unit?
- What can you do to promote buy-in for telemonitoring with your patients?

### 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)

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

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



## Home Health Aide Post-Test Telemonitoring

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

1. Telemonitoring is the electronic collection of patient information and sending this information to a distant location.
  - A. True
  - B. False
  
2. Areas that Home Health Aides may be asked to assist with telemonitoring include:
  - A. Delivering, picking-up or cleaning agency monitors
  - B. Identifying patients who would benefit from telemonitoring
  - C. Reminding patients when it is time to connect to the monitor
  - D. All of the above
  
3. Telemonitoring encourages the patient/caregiver to actively participate in self-monitoring activities. Each patient's activities will be specific to the patient, but some examples of self-monitoring measurement include:
  - A. Vital signs – blood pressure, pulse, respirations, temperature
  - B. Weight
  - C. Pulse oximetry (check oxygen level)
  - D. Blood sugar
  - E. All of the above
  
4. Some patients may have a fear of getting an electric shock when using the equipment, but telemonitoring equipment **is safe** to use as instructed.
  - A. True
  - B. False
  
5. Home Health Aides can support telemonitoring by:
  - A. Reporting abnormal signs and symptoms or declines in patient status
  - B. Reporting non-adherence
  - C. Reinforcing patient/caregiver education
  - D. Assisting with self-management development activities
  - E. All of the above

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