

# Table of Contents

**Reducing Avoidable Hospitalizations Through Telehealth and Medication Management ..... 2**

**Phone Monitoring and Medication Management.....3**

**Telemonitoring and Medication Management.....6**

**References .....8**



# Home Telehealth: The Medication Management Connection

## Reducing Avoidable Hospitalizations Through Telehealth and Medication Management

Home telehealth has been identified as an intervention to reduce avoidable hospitalizations. Improving medication management is reported to be one of the top strategies employed by high performing home health agencies to achieve and sustain favorable hospitalization rates (Briggs® National Quality Improvement/Hospitalization Reduction Study 2006). Emerging technologies address the **combined power** of home telehealth and medication management to achieve improved patient outcomes.

- ◆ Medication-related complications play a significant role in the hospitalization of older adults and are a contributing factor in accidents and illnesses that lead to hospitalization. (Briggs 2006)
- ◆ Patients with greater than nine medications have at least 22 percent incidence of medication errors which contribute to adverse reactions and hospitalization. (Ahrens et.al, 2002)
- ◆ From 10-31 percent of all hospitalizations and perhaps 45 percent of re-admissions among the elderly can be attributed to medication related complications. (HMO Workgroup on Care Management 2002)
- ◆ A study by the Veteran's Administration demonstrated a 30 percent improvement in medication compliance after telehealth implementation. (Ryan, et. al 2003)
- ◆ A 25 percent improved medication adherence was observed in a study with chronic medical patients using telehealth. (Cherry et. al 2003)

The *Home Telehealth Reference 2005* defines two types of telehealth: phone monitoring and telemonitoring. Medication management can be supported through either type of home telehealth.



## **Phone Monitoring and Medication Management**

Phone monitoring is the scheduled remote care delivery of monitoring in which scheduled patient encounters, via the telephone, occur between a health care provider and a patient or caregiver.

An effective phone monitoring encounter for medication management should include:

- ◆ Assessment questions specific to medication management
- ◆ A current list of all prescribed and over the counter medications

The following table is an example of potential medication management phone assessment questions. These should be individualized to include patient specific medication management and adherence issues and to meet the needs of a home health agency's unique patient population.



## Medication Management Phone Monitoring Tool

Date \_\_\_\_\_

Time \_\_\_\_\_

Patient \_\_\_\_\_ Med Rec # \_\_\_\_\_ Caller \_\_\_\_\_

<b>Assessment Questions</b>	<b>Patient/Caregiver Response</b>
What medicines have you taken today?	
What medicines will you take before dinner?	
What medicines will you take at bedtime?	
Do you ever forget to take your medications?  If yes, what do you do if you forget?	
Can you tell me how many refills you have left for that medication?	
Are you taking any new medicines since the nurse/therapist last saw you?	
Which doctor gave you that prescription? When?	
What pharmacy filled that prescription?  Does that pharmacy fill all prescriptions?	
Are you taking any different non-prescription products since the nurse/therapist last saw you? If yes, what are they and why?	
Do you ever take anything for pain?	
Are you experiencing any symptoms that you think might be related to your medicines?	
Are you having any problems paying for your medications?	



## Phone Monitoring Medication Management Plan of Action/Follow-Up

Date \_\_\_\_\_

Time \_\_\_\_\_

Patient \_\_\_\_\_ Med Rec # \_\_\_\_\_ Caller \_\_\_\_\_

Date	Action	Status

\*This is a sample form. Home health agencies are encouraged to modify to meet the needs of their unique patient population.

## Telemonitoring and Medication Management

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. New telemonitoring solutions to medication management in the home setting are evolving.

- ◆ Automated phone calls or interactive voice responder (IVR) systems automate the basic concept of phone monitoring. The patient receives pre-set phone reminders. For example, at 9:00 a.m., the patient receives a call. “Have you taken the green and yellow pill? Press 1 if yes or 2 if no.”
- ◆ Medication reminder systems transmit event data to a central station allowing a clinician to interact with the patient for medication teaching and adherence coaching. Some products have a screen to ask questions and guide the patient to open certain containers at certain times. Others use voice commands and visual cues to alert the user at the correct time to take their medication, the number of pills and the appropriate bottles. The access to these systems can be connected to phone lines to upload compliance data to a central station or designated contact person.
- ◆ Monitored medication-dispensing systems alert off-site monitoring stations of patient non-adherence by means of a coded telephone message. These systems consist of a medication storage compartment that holds from a one-week to a one-month supply of tablets or capsules. The device may simply release the designated scheduled dosage or it may display patient instructions on a small LED screen.

Providers of telemonitoring medication management systems claim medication adherence levels as high as 98 percent. Explore options available through various telehealth vendors to support improved medication management and acute care hospitalization rates.



**Is my agency efficiently and effectively utilizing technology for medication management?**



**Telehealth and Medication Management Agency Self Assessment**

<b>HHA Assessment Questions</b>	<b>Yes</b>	<b>No</b>	<b>Comments</b>
Is my agency providing phone monitoring or telemonitoring to patients that have had adverse events related to medications?			
Is my agency providing phone monitoring or telemonitoring to patients that have newly ordered medications with risks for side effects?			
Is my agency providing phone monitoring or telemonitoring to patients taking more than nine medications?			
Is my agency providing phone monitoring or telemonitoring to patients that have had adverse events related to medications?			
Is my agency providing phone monitoring or telemonitoring to patients that have been identified as having non-adherence factors?			

***Develop your Telehealth Medication Management action plan based upon the results of your self-assessment:***

**Telehealth Medication Management Action Plan**

<b>Date</b>	<b>Action</b>	<b>By Whom</b>	<b>Status</b>

## References

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