sonamba®
being there

Issue 1:

Reducing Hospital Readmission Rates and Improving the Continuum of Care

pomdevices

bizdev@pomdevices.com
919-200-6538

© 2012 pomdevices, LLC.

sonamba
being there

Issue 1:

Reducing Hospital Readmission Rates and Improving the Continuum of Care

The Imperative to Reduce Costs

Every aspect of our nation's healthcare delivery system is being scrutinized, in an effort to improve healthcare outcomes, while reducing costs. For many healthcare traditionalists, providers and payers alike, these two goals are seemingly at odds. The prevailing notion is that better care requires incremental resources. But the facts would suggest that the current approach has significant room for improvement and cost reduction.

We need not look any further than the findings of the 2005 Medicare Payment Advisory Commission report[1-3] to realize that the "delivery of quality care" may require a much broader definition.

> **"In 2008, Medicare payments for hospital inpatient care represented 29% of all payments."**

That report revealed a 17.6% patient readmission rate within 30 days of discharge. A subsequent *New England Journal of Medicine* report[1-3] in 2009 cited a readmission rate of 19.6% for Medicare fee-for-service beneficiaries for the same 30-day period. And that rate soared to 56.1% within one year of discharge.

Onus is on Hospitals

While many factors, such as socio-economic stature and lack of follow-up care, contribute to these rates, their continual rise and ever widening absorption of the nation's annual budget has attracted the attention of the Congressional Budget Office (CBO). In 2008, Medicare disbursements for hospital inpatient care represented an alarming 29% of all payments.[1-3]

With the implementation of the Affordable Care Act (ACA) in 2010, addressing hospital readmission rates and bringing them under control has now been specifically targeted for action. Beginning this year (2012), 30-day readmission rates for patients suffering from myocardial infarction, pneumonia or heart failure must be reduced.

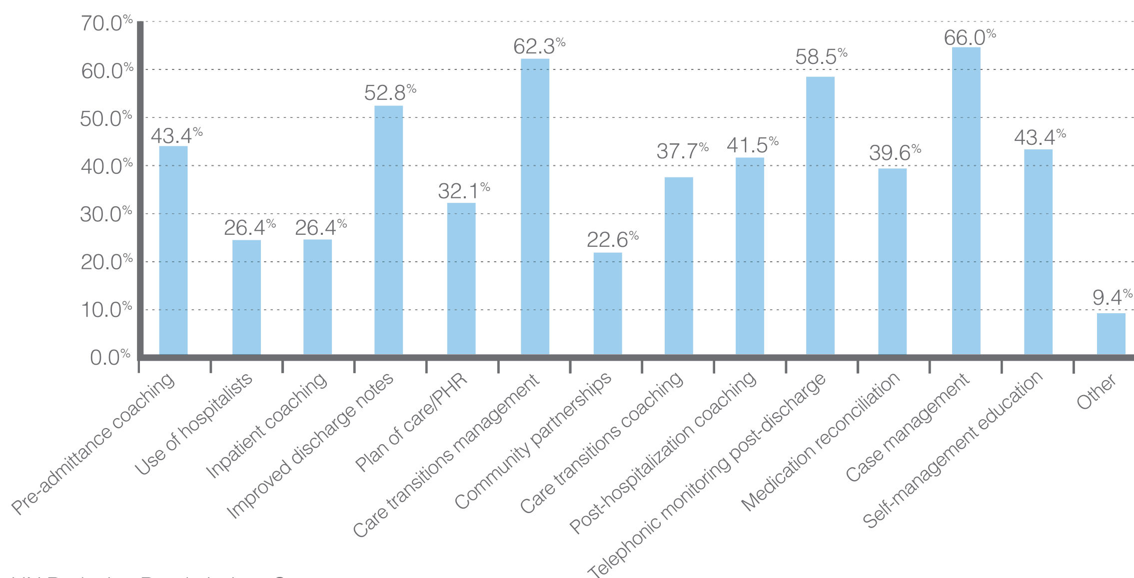
Going forward, higher-than-average readmission rates (excess readmissions) will result in fiduciary penalties for hospitals. The Centers for Medicare and Medicaid Services (CMS) will reduce payments for all Medicare admissions in proportion to the hospital's rate of excess re-hospitalizations for the targeted conditions. The maximum penalty is 1% for 2013, eventually rising to a ceiling of 3%.[4]

Simply put, hospitals must work harder to develop or implement novel solutions that reduce readmissions. In many cases that means embracing new approaches to extend a patient's continuum of care beyond the traditional domain of the hospital setting. Some hospitals across the US have begun working with home health care providers, nursing homes and family physicians to ensure better patient care and in turn, lower their readmission rates.

While every hospital must evaluate strategies that best address their individual circumstances, the chart below (fig.1) outlines a list of initiatives that hospitals could plan to implement.

Fig. 1

Potential Strategies to Reduce Hospital Readmissions



Source: HN Reducing Readmissions Survey
November, 2009

The problem for many isn't the realization that something needs to be done. Its obvious that action must be taken. Both hospitals and patients will benefit in the long term. Rather, among a seemingly endless list of possibilities, the problem is identifying what to do first, second and so on. Funding aside, hospitals have limited resources and experience developing and implementing new programs or initiatives.

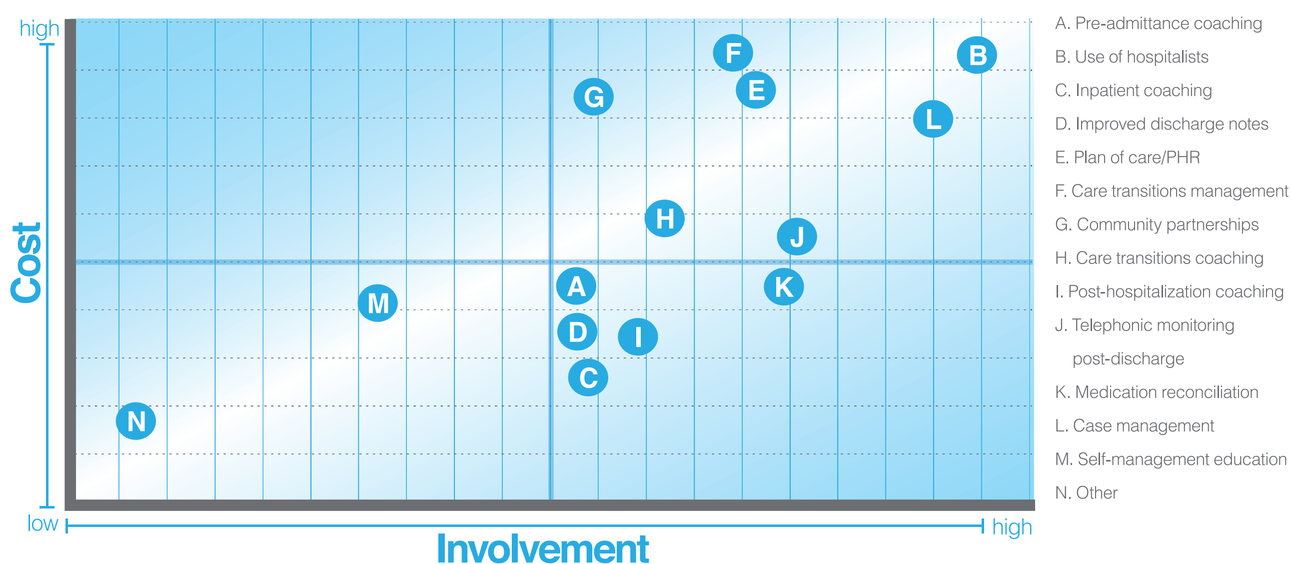
The key element in the strategies outlined by the HN Survey boils down to following the patient out of the hospital in various forms and a re-evaluation by providers along the care continuum. Both scenarios and their variations have been written about extensively over the past three years and all have their own merits. When considering which plan may work best, we suggest a careful, comprehensive evaluation of the programs currently in place. Looking at a hospital's potential initiatives through a broad lens will help focus attention on what's most actionable.

Methodology for Strategy Selection

Clearly this is a very complicated issue with myriad of possible solutions. The purpose here is to identify the strategies that may be most actionable in the near-term. This broad approach can be applied to the 13 strategies identified in fig.1 or any other options a hospital or provider may have. The idea is to plot each strategy or initiative on a grid as a means of comparison to the others (fig.2).

Fig. 2

Step 1: Compare Current Care Transitions Initiatives/Strategies



Each intiative is placed on the grid relative to the others. Once placed, the strategies on the low cost/ low involvement quadrant represent the options that would use the fewest resources to implement.

Step 2: Address a Strategy's Potential Impact /ROI on Desired Outcomes

The next step is to address the potential impact the strategy may have on the desired outcome -- provide a return (impact patient readmissions) relative to its cost and complications. In some cases, actual data projections from existing programs or studies may be available. But for many, (i.e.-Community partnerships), the actual program structure and delivery are still in the development stage where such data does not exist.

The extent to which actual data is available also plays a factor in this assessment. Each strategy is given a score of 1-5 (1 = minimal impact, 5 = optimal impact) projecting the 'best case' contribution of each towards improving care and reducing readmission rates.

Solutions for Lowering Re-hospitalization Rates

Through the pioneering efforts of Eric Coleman M.D. and Mary Naylor, Ph.D, care transition management has been identified as a critical evidence-based strategy.[5] The principal argument for both authors is that care transitions must be in place as patients move from one health care practitioner or setting to another as their care needs change.

> **“Medication non-adherence alone contributes to 33 - 69% of medication-related hospital admissions...”**

Many of the initiatives brought forward so far (see fig.1) are directly related to this effort. The initial patient transition from hospital to home is being targeted by a majority of hospitals for improved care through meticulous and proactive discharge planning. The goal is to provide better communication with patients and their families/caregivers regarding their post-discharge regimen.

Medication non-adherence alone contributes to an overwhelming 33 - 69% of all medication-related hospital admissions[6] and a significant portion (up to 23%) of all nursing home admissions. Beyond adherence, the active involvement of a support network can also provide important motivational and emotional comfort to hasten a patient's recovery.

Potentially taking many forms, “Care Transition Management” is an ideal first step towards improved patient care and reduced readmission rates. Hospitals benefit from:

1. Minimal post-discharge involvement (relative to other options)
2. Shared responsibility shift to a care provider network (family, friends, caregivers)
3. A very actionable strategy (low cost/low involvement, high impact)

Telehealth Helps Fulfill Quality of Care

According to the American Telemedicine Association,[7] when used as part of a comprehensive program, home telehealth solutions help healthcare providers and caregivers extend beyond their normal reach into patients' homes. These solutions have produced equal or superior outcomes to approaches that rely solely on scheduled visits into the home. The primary benefit to caregivers and patients alike, is the ability to stay connected through ongoing communication. After the introduction of remote monitoring for patients suffering from grade 3-4 congestive heart failure, the mean hospitalization rate was reduced from 3.2% to 0.8%.

Promoting Effective Family/Caregiver Interventions to Improve Patient Healthcare Outcomes

Home monitoring can help hospitals ensure regimen compliance for their recently-discharged patients, as long as the solutions themselves are easy to understand and use. A home setting is nothing like a hospital environment with healthcare professionals and state-of the-art equipment. The initial tendency may be to implement solutions that are most familiar to the professional care provider (i.e. home versions of hospital products).

There are many questions with this approach; How much training is involved? Who will provide it? What is the equipment cost? Can a patient and their family use it properly? How quickly can it be implemented?

An alternative is to use consumer-proven monitoring technology specifically adapted for improving transition care and just as important, a device that brings family members into the circle of care. While there are quite a few products currently available on the market, ease of use and lower costs are key demands. Consumer-centric monitors are designed with the elderly and non-technology savvy users in mind. Critical feature sets include:

- Medication schedules and reminders
- Appointment reminders
- Vitals monitoring
- Two-way messaging

Remote set-up/monitoring: With remote monitoring in place, unscheduled visits to the hospital can be significantly reduced.

"With remote monitoring in place, unscheduled visits to the hospital can be significantly reduced."

SonambaPro: The Low Risk/Low Cost Solution for Patient Wellbeing Monitoring

SonambaPro has an intuitive interface and a consumer-oriented look and feel for use in the home. It's lifestyle-oriented design and functionality is easy for both seniors and acute care patients to use. A hospital's discharge regimen can be pre-programmed into the unit, while any adjustments or updates to a patient's Sonamba can be done by the caregiver when needed remotely — via an online web portal.

SonambaPro Provides:

- Automated medication and appointment reminders for patients
- Activity of daily living monitoring
- Vitals measurement monitoring
- Emergency notifications
- Cellular connectivity = plug and play
- Social communications
- Remote access via iPhone app or secure web portal for family members/caregivers
- Digital photoframe functionality; family members/ caregivers can send new photos remotely
- Hospital-oriented Alert Administration Portal for managing alerts from large numbers of hospital-managed SonambaPro's in patient's homes

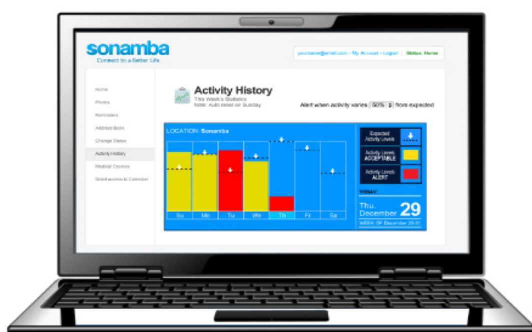
SonambaPro can be a cost-effective component of a hospital's care transition program— providing timely feedback and a communication channel between the patient, healthcare provider and the patient's family.

Introducing SonambaPro

When it comes to lowering rehospitalization rates, a patient's family can provide timely intervention for effective outcomes.

Sharing responsibility for the care of a patient with their family, reducing costs and healthcare admin workloads, and above all, empowering families to work in tandem with healthcare providers efforts and optimizing their service offering is a primary goal. SonambaPro can help in the reduction of readmittance rates— providing families with timely alerts and the ability to remotely monitor a patient's medication adherence and wellbeing, even if they're far away, via mysonamba.com.

Patients' wellbeing can be monitored remotely by their families via the mysonamba.com web portal.



Look ma, no wires: adaptable, seamless connection to a range of vitals measurement devices.

SonambaPro can collect vitals readings/data from Bluetooth-enabled, FDA-certified measurement devices including blood pressure cuffs, weight scales, glucometers and spirometers.

SonambaPro is preset using the reminders feature to alert the patient when its time to collect a vitals measurement. SonambaPro then syncs with the vitals device, records measurement readings and displays measurement. The readings can be viewed remotely by family members/ caregivers via the mysonamba.com web portal.

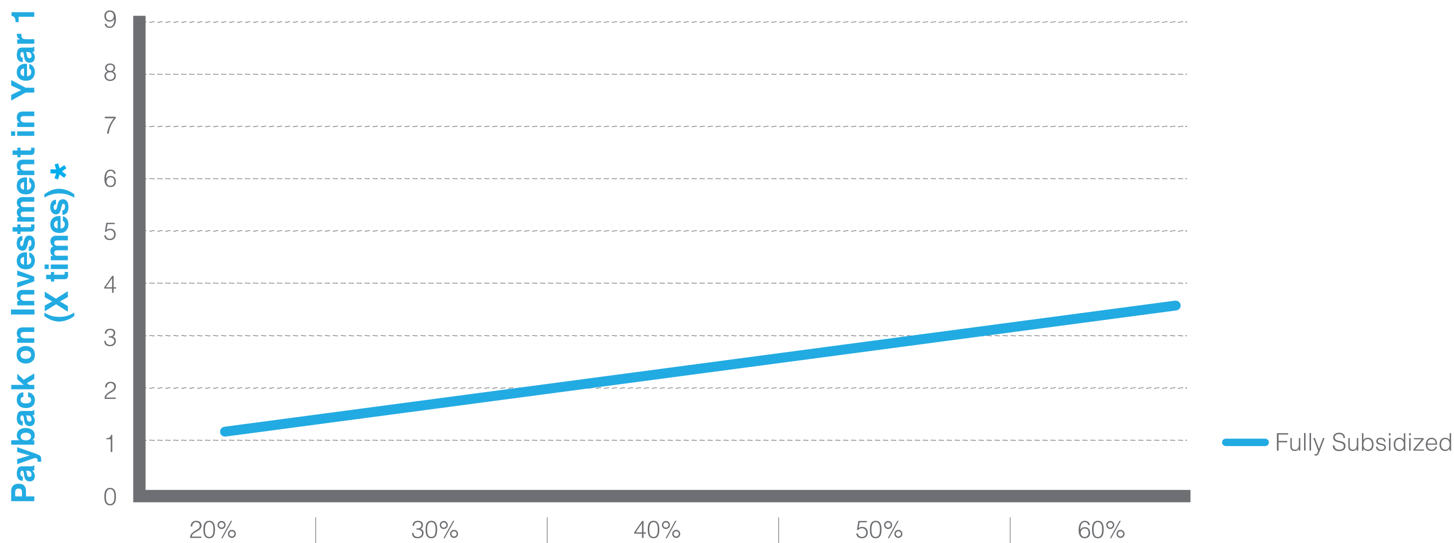
Automated medication & calendar reminders.

SonambaPro reminds patients of their medication routines, as well as post-discharge checkup appointments. Reminders can also be sent to family members' cellphones. SonambaPro's private social networking capability can ensure family members are in the loop for timely interventions.

SonambaPro Functionality - Helping with post-acute care transitions and lowering readmission rates:

500+ Bed Hospital – Potential Payback

(Payback in just months after investment)



% Reduction in Readmissions as a Result of SonambraPro

(SonambaPro is given to 100% of acute care patients in a fully subsidized scenario for 90 days after discharge)

*** Payback is calculated in number of times (X times) return on invested capital in Year 1 alone (i.e. 3=300%)**

FOR MORE INFORMATION, CONTACT US:

pomdevices

866.514.0325

bizdev@pomdevices.com

pomdevices, LLC, 5802 NC HWY 55, Suite 102, Durham, NC 27713

Sonamba and SonambaPro are Registered Trademarks of pomdevices, LLC

References:

1 - 3. Stone, Hoffman. Medicare Hospital Readmissions: Issues, Policy Options and PPACA. *Congressional Research Service Report, 2010.*

4. Healthcare and Information Management Systems Society (HIMSS). *Reducing Readmissions. Top Ways Information Technology Can Help, 2012.*

5. California Healthcare Foundation. *Navigating Care Transitions in California: Two Models for Change, September 2008.*

6. McDonnell PJ, Jacobs MR. Hospital Admissions Resulting From Preventable Adverse Drug Reactions. *Ann Parmacotherapy, 2002.*

Kruger KP, Felkey BG, Berger BA. The Pharmacist's Role in Treatment Adherence. Part 4: Do Adherence Interventions Really Have an Impact. *US Pharmacist, 2005.*

Osterberg L, Blaschke T. Adherence to Medication. *New Eng J Med 2005.*

Krueger KP, Berger BA, Felkey B. Medication adherence and persistence; a comprehensive review. Advances in Therapy. 2005.

Senst BL, Achusim LE, Genest RP, et al. Practical approach to determining costs and frequency of adverse drug events in a health care network. *Am J Health Syst Pharm. 2001.*

7. ATA. ATA's federal Policy Recommendations for Home Telehealth and Remote Monitoring. *American Telemedicine Association, 2006.*

Additional References:

Nelson, PhD. Hospitalists Should Jump on the Transition-of-Care Train Now to Help Solve Rehospitalization Problems. *The Hospitalist, 2011.*

Halfon MD, Eggli MD, Pretre-Rohrvach MD, Meylan MSc, Marazzi PhD, Burnand MD. Validation of the Potentially Avoidable Hospital Readmission Rate as a Routine Indicator of the Quality of Hospital Care. *Medical Care, 2006.*

Berenson MD, Paulus MD, Kalman BA. Medicare's Readmissions-Reduction Program — A Positive Alternative. *The new England Journal of Medicine, March 2012.*

Shelton. Hospitals Face Medicare Penalties for Readmissions. *Chicago Tribune, January 2012.*

Craver. Harvard Study Focuses on Hospital Readmission Rates. *Winston-Salem Journal, December 2011.*