

# Readmissions NEWS

## Reducing Hospital Readmissions: A New Role for Patient Safety Organizations

By Carolyn M. Clancy, MD and Amy Helwig, MD, MS

**A**cross the U.S., hospitals are working to identify – and address – factors that lead to a high volume of readmissions.

This activity is being driven in large part by the Hospital Readmissions Reduction Program, which was enacted as part of the Affordable Care Act. The Act also calls on the U.S. Department of Health and Human Services to designate Patient Safety Organizations (PSOs), Quality Improvement Organizations (QIOs), and Hospital Engagement Networks (HENs) to help hospitals address and reduce unnecessary admissions.

Momentum is also building due to a proposed Federal rule that will reduce Medicare hospital payments by up to 1 percent to organizations with high 30-day readmission rates for acute myocardial infarction (AMI), heart failure (HF), and pneumonia. The final rule is scheduled to take effect on October 1, 2012.<sup>i</sup>

Hospital readmissions have serious cost and quality implications. Nearly one in five Medicare patients discharged from the hospital is readmitted within 30 days, one in three within 90 days, and more than half within one year of discharge, a major study found.<sup>ii</sup> Readmissions among Medicare patients within 30 days accounted for about \$15 billion of Medicare spending, much of it preventable, according to a Congressional advisory panel.<sup>iii</sup>

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## Reducing Readmissions: The Value of the Clinical Health Coach

By Jody Hereford, RN, BSN, MS, FAACVPR

**N**early half of all Americans live with chronic conditions.<sup>1</sup>

- Chronic illness accounts for 75-80% of health care spending including 96% of Medicare expenditures and 83% of Medicaid costs.<sup>1</sup>
- Costs associated with in-patient hospital stays and ER visits represent 83% of the cost of chronic disease.<sup>1</sup>
- 80% (and more) of health care is delivered by the patient in the home. AHRQ estimates that individuals with diabetes, for example, provide close to 95 percent of their own care.<sup>2</sup>

Successfully managing chronic conditions is a costly and complex process for both the provider and the patient and family caregiver(s). Yet, often it is chronically ill patients themselves who are called upon to manage the broad array of factors that contribute to their health. Hospitals, clinics, and providers face the common challenge of serving and caring for an increasing number of patients with chronic conditions, many with multiple chronic conditions.

- 30 -- 50% of patients leave their provider visits without understanding their treatment plan.<sup>3</sup>
- Hospitalized patients retain only 10% of their discharge teaching instructions.<sup>3</sup>
- Chronically ill patients receive only 56% of clinically recommended health care.<sup>3</sup>

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## Editor's Corner

**Raymond Carter, Senior Editor, *Readmissions News***

Each month we feature a brief profile of a different *Readmissions News* Advisory Board member. This month it is our pleasure to introduce Dr. Brian Jack, whose views on a variety of readmissions issues you can also read on the back page in the "Catching up with ..." segment.

**Brian Jack, MD**Professor and Vice Chair, Department of Family Medicine  
Boston University School of Medicine/Boston Medical Center  
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Dr. Brian Jack is Professor and Vice Chair of the Department of Family Medicine at Boston University School of Medicine / Boston Medical Center.

For his work relating to improving patient safety at hospital discharge (Project RED), he received the "Patient Care Award for Excellence in Patient Education Innovation" from the Society of Family Medicine in 2007 and the AHRQ "Patient Safety Investigator of the Month" in 2007.

He was also selected to HealthLeaders magazine's "People Who Make Healthcare Better" list, and in both 2010 and 2011 he was selected for the "Boston's Best Doctors" list by *Boston Magazine*. In 2012 his article describing Project RED in the *Annals of Internal Medicine* was included in the book "50 Studies Every Doctor Should Know".

He is a member of the "Select Panel on Preconception Care" of the Centers for Disease Control and Prevention (CDC). He also serves as co-chair of the Clinical Care Committee and co-editor of a supplement to the American Journal of Obstetrics and Gynecology describing the content of preconception care. For this last work he received the CDC "Partner in Public Health Improvement" award (only one award is given to an individual outside the CDC each year).

Dr. Jack has also been active in the worldwide development of primary care. He spent a sabbatical year in Budapest, Hungary in 1995, receiving a special citation from the mayor of Budapest. He served as a consultant to USAID, the World Bank, the US Department of State, and the Rockefeller and Kellogg Foundations on the development of family medicine in Lesotho, Albania, Jordan, Romania, and Vietnam. He is a founding member of the American Academy of Family Physicians Center for International Initiatives. Currently he is the clinical director of Kellogg foundation funded program in Lesotho in southern Africa.

Dr. Jack graduated from the University of Massachusetts Medical School and completed his residency training at Brown University and fellowship at University of Washington. He has authored over 90 peer reviewed papers for major medical journals, served on NICHHD, HRSA, AHRQ and CDC grant review panels and is currently PI on grants from HRSA, AHRQ, CDC, NIMHD, and PCORI.

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# Simple Methods of Measuring Hospital Readmission Rates

By Jeff Lemieux

**T**he definition of a 30-day readmission appears to be straightforward: Was a patient admitted to a hospital within 30 days of being discharged?

However, there are many complications that arise when measuring 30-day readmission rates using existing research datasets. For example, transfers from one hospital to another are rarely counted as readmissions. Transfers from nursing homes are usually counted, but not always. Admissions that occur on the same day as a discharge are usually counted as readmissions as long as there was no transfer code in the discharge record.

Moreover, there are technical counting issues. For example, consider a patient with four short hospital stays, all within one month. Should we count three 30-day readmissions? Or one? Or six? (Answer: under the standard definition, there were indeed **three** readmissions within 30-days of the prior discharge.)

Counting methods that fail to capture cascades of consecutive readmissions will understate readmission rates; methods that allow a particular admission to be counted as a readmission more than once will overstate readmission rates.)

## Method for Counting 30-Day Readmissions

	Admissio	Discharge	Days from Prior Discharge
	07/02	07/04	-
1	07/06	07/12	2
2	07/15	07/21	3
3	07/28	07/31	7

Once readmissions are counted, there are many ways to measure readmission rates. Readmission rates are usually reported on a per-admission basis – the readmission rate is the number of readmissions counted (by any method) divided by the total number of admissions.

However, it is often more meaningful to measure readmissions using the number of enrollees or the number of persons in the community as the “denominator.” For performance benchmarking and tracking, it may be more analytically meaningful to measure readmission rates on a per-person or a per-enrollee (for insured populations) basis rather than a per-admission basis.

After all, helping patients with chronic disease avoid complications and stay safe and healthy at home is the most important goal. Reducing the number of preventable complications and readmissions is a key indicator, but helping patients maintain their health and avoid unnecessary hospitalizations – so that they never become “eligible” for readmissions in the first place – may be an even higher priority.

**A per-person rate (regardless of insurance coverage) might be more helpful for communities trying to reduce their readmission rates for public health purposes.**

Moreover, it is possible for health plans and hospitals to reduce their count of readmissions, but still have an increase in their readmission rate on a per-admission basis. This could occur if a health plan or hospital system substantially reduced its overall admission rate of enrollees while also reducing their likelihood of readmissions.

A per-person rate (regardless of insurance coverage) might be more helpful for communities trying to reduce their readmission rates for public health purposes. A per-person or per-enrollee rate will almost always be lower than a per-admission rate because most enrollees in a health plan are not admitted to a hospital during a year.

Sometimes dataset limitations may restrict the types of readmissions that can be counted and the rates that can be computed. Medicare’s fee-for-service “limited” datasets for inpatient hospital claims did not have precise dates of service prior to 2010, only date ranges.

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## Simple Methods...continued

Thus, readmission rate calculations based on the number of days between discharge and readmission -- such as the typical 30-day readmission -- could not be calculated before 2010. (Some researchers have access to CMS' more detailed "research" datasets that have precise dates of service in earlier years, but the research datasets are not readily available to many researchers.)

The Agency for Healthcare Research and Quality (AHRQ) provides hospital discharge datasets via the H-CUP program in many states. These limited datasets also do not have precise dates of service. However, AHRQ has developed a solution: "revisit codes" provided in the data express the length of time between admissions and can be combined with the reported length of hospital stays to compute the day spans between discharge and readmission. This allows measurement of 30-day readmission rates even without knowing the dates of service.

Finally, some readmission rate measures may be suitable for certain purposes but not others. Since readmission measures and readmission rates can be defined very differently, we often chose the simplest, easiest-to-duplicate measure that is suitable for the research purpose at hand. We have occasionally used more complex measures developed by other researchers in order to update or replicate their results for comparison -- this allows an "apples to apples" comparison.

Since 2009, AHIP has published several studies of hospital readmission rates. The two most recent have appeared in the January 2012 issue of *Health Affairs* and February 2012 issue of the *American Journal of Managed Care* (AJMC).

For a fuller perspective, AHIP's reports usually compute readmission rates on both a per-admission and a per-enrollee basis. Per-enrollee comparisons may be further modified by using the enrollee's risk score or the number of major diagnosis codes associated with the patient as a divisor for the readmission rates.

Our reports often use a same-quarter readmission rate as a proxy for the standard 30-day readmission count when neither actual dates of admission and discharge nor AHRQ-style revisit indicators are available. AHIP's same-quarter readmission rate is computed as the number of admissions in a quarter less one. While the same-quarter readmission count is not as common as the 30-day count, it has the merits of being easy to calculate and can be computed from most publically available hospital discharge or claims datasets. Moreover, the same-quarter readmission counts and rates turn out to be fairly similar to and consistent with the 30-day rate.

We usually count readmissions on an "all-cause" basis. However, sometimes we limit the types of admissions that can be counted as readmissions, such as by excluding readmissions for rehabilitation, which may be scheduled or planned in advance. Likewise, we do not narrow the scope of "initial" admissions considered. For example, CMS currently counts readmissions only after admissions for pneumonia, heart failure, and heart attack, although this list is likely to be expanded in the future.

For comparability with other research, AHIP sometimes limits the period from which index discharges were tracked for possible readmissions. For example, the AJMC study of readmission rates in Medicare Advantage tracked discharges in the final quarter of the year and counted readmissions within that quarter, but also during the whole subsequent year. This was the method used by Dr. Steven Jencks and his colleagues in their landmark study of Medicare fee-for-service readmissions rates. For another set of calculations devised by Gerard Anderson of Johns Hopkins University, AHIP tracked index discharges in the first nine months of the year, with an allowance for subsequent readmissions during the final 90 days of the year.

For simplicity, most of the AHIP-published readmission studies with 30-day readmission rates do not exclude admissions occurring late in the year from either readmission or admission counts, regardless of whether there was "enough time" left in the year to fully count some potential readmissions. For example, we often tallied full-year admission counts (including admissions in December) in the denominator of a readmission rate, even though the patient could have had a 30-day readmission in January of the following year (outside the data period we had). However, in those cases, we were more concerned with comparisons among populations within a dataset, not with benchmarking against other research.

As a rule, AHIP's reports have attempted to use the broadest, simplest methods of counting readmissions and computing readmission rates for the purpose at hand, whether it is comparing two populations in a given dataset or comparing results from a particular dataset with other published research. In general, broader measures have larger numbers of observations and therefore have less "noise" or random variation.

Overcomplicating the readmission measurement process in search of a mythical "perfect" measurement is unnecessary for most purposes. Simpler measures are easier to compute and explain, and will produce the most accessible trend data if preformed consistently from year to year. Simpler measures can work very well for comparison studies, such as comparing rates among different sets of patients, or across different geographic areas.

**Overcomplicating the readmission measurement process in search of a mythical "perfect" measurement is unnecessary for most purposes. Simpler measures are easier to compute and explain, and will produce the most accessible trend data if preformed consistently from year to year.**

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## Reducing Readmissions...continued

Hospitals and healthcare systems have relied in the past upon patients with chronic conditions entering and returning to the hospital as a primary source of revenue. However, ACOs, bundled payments, and disincentive/penalties of non-payment for readmissions are emerging as cost containment strategies from the government and other payers. Now, sharing risk and keeping individuals out of the hospital and emergency rooms will be rewarded as viable solutions. The implementation of new chronic care strategies becomes essential in the world of hospital economics.

Additionally, primary care and specialty clinics are faced with a sea change in structure and reimbursement, including pay for quality and new expectations for what is to occur during the patient visit. One leading study recently reported that it would take physicians an additional 7.4 hours per working day to provide all recommended preventive care to a panel of 2,500 patients. Additionally, it would take another 10.6 hours to manage all chronic conditions adequately. Clearly, there needs to be a set of new and efficient strategies that provide evidence based care and enhanced patient self management skills, while operating within a sustainable business model.<sup>5</sup>

The grim statistics above, coupled with the Institute of Medicine's call to action in *Health Professions Education: A Bridge to Quality*<sup>4</sup>, clearly point out that the needs of those living with chronic conditions are not being adequately met. Addressing these concerns requires the reform of systems of care including greater coordination and collaboration among health professionals. Additionally, it demands a shift in the way in which we talk with patients and families. The way in which we communicate with patients about their health substantially influences their personal motivation for activation and behavior change.

The reform of systems of care needs to:

- Engage interdisciplinary work teams that cooperate, collaborate, communicate, and integrate care
- Enhance coordination between providers of care
- Plan for and deliver better handoffs and transitions in care
- Implement planned and proactive patient encounters and the use of registries
- Integrate consensus guidelines into clinical decision-making
- Provide patient-centered care and enhanced self-management support
- Employ a shift towards coaching and away from teaching and telling

Patient action (and more often the case, patient inaction) including adherence to recommended treatment plans and related lifestyle behaviors is a critical component of health and clinical outcomes, including hospital admissions and readmissions. Clinical health coaching represents an approach to communications and education that focuses on patient-centered goals and values and recognizes preferences for how patients receive information. Trained coaches shift the conversation from the old-style of "teaching and telling" to a more patient-centered approach of "listening and engaging." Actively engaging the patient and family as participants in their own health moves them beyond just understanding and into real behavior change. Implementing effective communication and coaching strategies can lead to improvements in (1) adherence to treatment plans and lifestyle choices, (2) health literacy, (3) patient experience, and (4) health outcomes and quality of life.

Interventions that modify and improve health behaviors through health, disease, and care management programs have become a widely advocated and effective means to reduce health risks, improve self-management of chronic illness, reduce medical costs, increase productivity, and improve quality of life.<sup>6</sup> A review of the literature demonstrates that Motivational Interviewing (MI) outperforms traditional advice-giving in the treatment of a broad range of behavioral problems and diseases.<sup>6</sup> Generally, health care professionals do not receive appropriate instruction in health coaching best practice; as a result, they may use patient education or approaches that are counterproductive to the change process.<sup>6</sup>

**Generally, health care professionals do not receive appropriate instruction in health coaching best practice; as a result, they may use patient education or approaches that are counterproductive to the change process.**

The effective Clinical Health Coach, then, is a specially trained healthcare professional with skills in two big tent strategies: (1) the transformation of the conversation, or the ability to actively engage the patient and family as an active partner, moving them to better health and better outcomes; and (2) the transformation of care, or the ability to implement successful systems of care that improve care management and coordination. Hospitals and health care organizations are implementing innovative strategies to integrate these essential skills into clinical practice through the delivery of programs such as transitional care projects, cardiovascular and pulmonary rehabilitation, heart failure clinics, diabetes education, care and case management, and the like.

The Clinical Health Coach® Training Program offered by the Iowa Chronic Care Consortium is an example of a highly interactive learning experience designed for healthcare professionals who desire to attain skills in chronic care management through proactive, patient-centered strategies. The program builds on the philosophy that patients are the greatest untapped resource in shaping their own health.

Healthcare organizations are transforming to new models of care to address the fragmentation of services and limited care coordination. Within these new structures, there is an opportunity for an emerging role, the "Clinical Health Coach." Effective "Clinical Health Coaches" not only promote the highest and best use of physicians in the medical home, hospitals, and community clinics, but they are also skilled to actively engage individuals in reclaiming responsibility for personal behaviors that drive health outcomes.

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## Reducing Readmissions...continued

The bottom line is that if one chooses to be invested in changing outcomes, one needs to be invested in shifting the way we communicate with and engage patients in problem solving, self-management, and behavior change. This includes identifying and implementing effective systems of care where these skills will be effectively integrated into everyday clinical practice.

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**The bottom line is that if one chooses to be invested in changing outcomes, one needs to be invested in shifting the way we communicate with and engage patients in problem solving, self-management, and behavior change.**

### References

1. <http://www.cdc.gov/chronicdisease/resources/publications/AAG/chronic.htm>. Verified 07-12-2011.
2. <http://www.ahrq.gov/qual/ptmgmt/ptmgmt.pdf>. Verified 07-12-2011
3. Bodenheimer, T. Transforming Practice, N Engl J Med 359;20, November 13, 2008.
4. Greiner A, Knebel E; Institute of Medicine (U.S.). Committee on the Health Professions Education Summit. Health Professions Education: A Bridge to Quality. Washington, DC: National Academies Press; 2003.
5. Bodenheimer, T, Building Teams in Primary Care – Lessons Learned, California HealthCare Foundation, July 2007. <http://www.chcf.org/~media/Files/PDF/B/PDF%20BuildingTeamsInPrimaryCareLessons.pdf>
6. Health Sciences Institute. Health Coaching Performance Assessment A New Tool for Benchmarking & Improving Effectiveness. 2011.

## The Role of the PSO...continued

While not every readmission can be prevented, clinicians, quality improvement experts, and policymakers agree that frequent readmissions, especially among patients with chronic conditions, reflect poor care coordination. As a result, patients are vulnerable to repeated hospital stays, often resulting in worsening outcomes.

### Readmissions: A Widespread Problem

Higher-than-average readmissions for Medicare patients with AMI, HF and pneumonia are not limited to certain types of hospitals or to specific regions of the country. Instead, they occur in hospitals of different sizes and in virtually all States, according to data reported to Hospital Compare and analyzed by CMS.<sup>iv</sup>

**Nationally, a total of 138 hospitals were found to be in the worst quartile on all three readmission rates, according to an evaluation by CMS.<sup>v</sup> An additional 438 hospitals had readmissions rates in the worst quartile on two of the three conditions; these hospitals were located in every State except Alaska.**

Nationally, a total of 138 hospitals were found to be in the worst quartile on all three readmission rates, according to an evaluation by CMS.<sup>v</sup> An additional 438 hospitals had readmissions rates in the worst quartile on two of the three conditions; these hospitals were located in every State except Alaska. All told, 631 hospitals had readmission rates in the worst quartile on two or more conditions.

### PSOs: A Key Resource to Help Reduce Readmissions

Over the past several years, the Agency for Healthcare Research and Quality (AHRQ) has funded evidence-based research that has led to the creation of tools, resources and technical assistance to help hospitals understand and address the factors leading to high readmissions.

AHRQ also administers the PSO program, which was created as part of the Patient Safety and Quality Improvement Act of 2005. PSOs allow clinicians and health care organizations to voluntarily report, share, and learn from patient safety information without fear of legal discovery. Currently, 77 PSOs are listed by AHRQ and operate in 31 States.<sup>vi</sup>

All hospitals can work with PSOs to reduce unnecessary readmissions, regardless of whether they have been identified specifically by CMS as having higher-than-average readmission rates. (Hospitals can also work with QIOs, which are State-based organizations that work under contract with CMS, and with HENs, which help identify solutions and spread to partner hospitals. HENs were created as part of the Partnership for Patients, a public-private collaboration sponsored by HHS to address and develop best practices to reduce the incidence of adverse events.)<sup>vii</sup>

Tools, resources, and technical assistance available to PSOs, hospitals, and clinicians to reduce high readmission rates include:

**Common Formats:** Common Formats are the common definitions and reporting formats that allow health providers to collect and submit standardized information about patient safety events.<sup>viii</sup>

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## The Role of the PSO...continued

AHRQ, together with the Federal Patient Safety Work Group, is developing a Common Format for Readmissions that will allow hospitals to aggregate data on the characteristics of patients who have been readmitted. These include factors such as the actions taken at the index hospitalization to prevent a readmission, risk factors for readmission, length of stay, presence of an adverse event, location of discharge setting, and the like. Using the standardized Common Format, hospitals can compare their data to others and identify patterns that could lead to fewer readmissions and improved outcomes. The beta version of the Common Format for Readmissions is scheduled to be published later this year.

**Project RED:** AHRQ-funded research by AHRQ grantee Brian Jack, MD, at Boston University Medical Center, showed that patients who are discharged from the hospital with a clear understanding of their after-care instructions were 30 percent less likely to be readmitted within 30 days or visit the emergency department than patients who lacked this information.<sup>ix</sup>

Key elements of Project RED (short for the Re-Engineered Discharge) include:

- Educating the patient about his or her diagnosis throughout the hospital stay;
- Making appointments for follow-up and testing;
- Confirming the medication plan and making sure the patient understands it; and
- Contacting the patient two to three days after discharge to identify and resolve any problems.

To date, more than 260 hospitals have received technical assistance to use Project RED in whole or in part; it is now available as a training program.<sup>x</sup>

**Project BOOST:** AHRQ also funded a research project by Mark V. Williams, MD, now at Northwestern University Feinberg School of Medicine, Chicago, on how to improve the hospital discharge through medication reconciliation and education.

Findings from that project helped inform the development of Project BOOST (Better Outcomes for Older adults through Safe Transitions). This is a national initiative to reduce readmission rates by providing clinicians with resources and expert mentoring, enhancing patient and family education and improving the flow of information among health providers in the inpatient and outpatient setting. Preliminary data from hospitals that have implemented Project BOOST for at least six months show a 21 percent reduction in 30-day all-cause readmission rates. A toolkit is available through the Society of Hospital Medicine, whose quality improvement section was designated by AHRQ as a PSO in 2011.<sup>xi</sup>

**MATCH Toolkit:** An AHRQ-funded web site developed in collaboration with Northwestern University Feinberg School of Medicine and The Joint Commission demonstrated how a sound medication reconciliation process must involve all caregiver disciplines, become integrated into daily workflow, and have the support of leadership to be successful.

Findings from the Medications at Transitions and Clinical Handoffs (MATCH) project led to the creation of a toolkit, a step-by-step guide to improving the medication reconciliation process.<sup>xii</sup> The toolkit also incorporates the experiences and lessons learned by health care facilities that have implemented MATCH strategies.

## Conclusion

Prodded by financial incentives to treat and discharge patients to less-costly settings, hospitals have done exactly that. While patients and quality improvement professionals have long raised concerns about high readmission rates, their concerns could not generate the wave of activity now under way in hospitals across the U.S.

With their expertise in data collection and interpretation, outreach, and education, PSOs stand to play a major role in helping hospitals identify and address unnecessary readmissions. As Medicare launches its new payment policy, quality of care and financial incentives are now on an equal footing.

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## References

<sup>i</sup> Medicare Program; Hospital Inpatient Prospective Payment Systems For Acute Care Hospitals, Centers for Medicare & Medicaid Services, May 11, 2012. Available at: <https://www.federalregister.gov/articles/2012/05/11/2012-9985/medicare-program-hospital-inpatient-prospective-payment-systems-for-acute-care-hospitals-and-the> Accessed May 31, 2012

<sup>ii</sup> Jencks SF, Williams MV, Coleman EA. "Rehospitalizations among Patients in the Medicare Fee-for-Service Program," *New England Journal of Medicine*, vol. 360 (April 2, 2009), pp.1418-1428.

<sup>iii</sup> Medicare Payment Advisory Commission (MedPAC), *Report to Congress: Promoting Greater Efficiency in Medicare*, June 2007, Chapter 5. See: [http://www.medpac.gov/documents/June07\\_EntireReport.pdf](http://www.medpac.gov/documents/June07_EntireReport.pdf) . Accessed May 31, 2012

<sup>iv</sup> Centers for Medicare & Medicaid Services. Readmissions Reduction Program. Available at: <https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html> . Accessed May 31, 2012.

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## Thought Leader's Corner

Each month, *Readmissions News* asks a panel of industry experts to discuss a topic of interest to the hospital community. To suggest a topic, write to [Editor@ReadmissionsNews.com](mailto:Editor@ReadmissionsNews.com).

### Q. "What specific tools are being implemented to identify patients at high risk of a readmission?"

"We use three tools: (1) The Hospital Care Summary and Post Hospital Plan of Care and Treatment Plan (Discharge Summary), completed 98.7% of the time in the past 40 months, in which the attending physician designates whether in his/her judgment the patient is a high risk for readmission; (2) SETMA's predictive modeling based on business intelligence analytics, contrasting patients readmitted and those not readmitted on the basis of: gender, age, morbidities, co-morbidities, ethnicity, socio-economic status, length of hospital stay, time from discharge to follow-up, was a care-coaching call received the day following discharge, lives alone, barriers to care (economic, other limitations), care transitions audit completed at time of discharge, BMI, habits (smoking, alcohol), home health, hospice or other ancillary services; and (3) the Department of Care Coordination's documentation of patient needs and liabilities and support services made available to the patient at home."



**James (Larry) Holly, MD**

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San Antonio, TX

"At the Geisinger Health System, we have implemented a screening tool aimed at stratifying readmission risk. The goal of the readmission risk tool is the identification of low risk patients who were unlikely to be readmitted. The tool was designed using baseline data from 2006 and 2007 with an eye toward negative predictive value. The tool asks twelve weighted yes or no questions. The domains include: age, diagnosis, admission source, previous admissions, socioeconomic issues, medication type and number of medications and the patients view of their health.

The tool was subsequently piloted and then fully implemented in the electronic health record, tasking emergency department and floor nurses the shared accountability for completion. The tool is reliably completed over 85% of the time. In testing with over thirty-five thousand patients at two hospitals in 2009 and 2010, the readmission risk tool negative predictive value was near 91%. The knowledge gained from the tool minimizes the use of scarce resources, such as home care, on over one third of the Geisinger Health System's patients who are unlikely to be readmitted."



**John Bulger, DO, FACP, FACC**

Chief Quality Officer  
Geisinger Health System  
Danville, PA

"The literature suggests that clinicians are not able to predict reliably which patients will be readmitted. A systematic review published last year by Kansagara and colleagues concluded that most predictive models also perform rather poorly at identifying high-risk patients. The authors called for improvements in model design by including hospital and health system-level factors, and by differentiating between avoidable and unavoidable readmissions.

However, one model in their study that did have a high predictive accuracy was an automated tool developed at the Parkland Health and Hospital System in Dallas, TX. This model is designed for patients with heart failure and is run using a combination of clinical and non-clinical data that have been extracted from the EMR. It predicts both mortality and readmission within 30 days with good discriminative ability (C statistics of 0.86 and 0.72 respectively.) That said, high-risk heart failure patients have a relatively high risk of re-admission to start with, so predicting their re-admissions is an easier prospect than predicting re-admissions for (say) a group of patients with asthma. Much more work remains to be done in this area.



**Ian Duncan FSA FIA FCIA MAAA**

Vice President, Clinical Outcomes & Analytics and Head of Research  
Walmart Co.  
Deerfield IL 60015



## Thought Leader's Corner

"Given the recent surge of interest in reducing preventable readmissions, hospitals and health systems have begun using a variety of tools to identify patients at high risk of readmission. Where information technology capabilities are advanced enough, computerized risk prediction models are being tested and in some instances have been deployed in clinical areas with high rates of readmission. Most such models are based on a form of mathematical modeling called 'logistic regression' that estimates a percent readmission risk for each patient which can be compared with baseline readmission rates for a specific clinical service to determine whether a patient is high risk or not based on predetermined thresholds.

Most health systems, however, have yet to develop this degree of sophistication and rely instead on simplified, paper-based versions of such models that have been crafted into 'risk scoring' tools that generate a numerical score which can be compared against predetermined thresholds to categorize patients as high versus low risk. Examples of such risk scoring tools include the Society of Hospital Medicine project BOOST's [8Ps](#) and the [LACE index](#). Regardless of the tool chosen, health systems continue to struggle with integrating information about readmission risk into effective planning for care transitions."



**Omar Hasan, MBBS, MPH, MS, FACP**

Medical Director, Continuum of Care Strategies  
Hospitalist Physician, BWF Hospitalist Service  
Brigham and Women's Hospital  
**Boston, MA**

"Tufts Medical Center has been involved in the IHI STate Action on Avoidable Rehospitalizations (STAAR) initiative since 2009. The IHI has identified four pillars for readmission avoidance: Perform Enhanced Admission Assessment, Provide Effective Teaching/Learning, Conduct Real Time Patient/Family Centered Handoff Communications, and Ensure Post-Hospital Care Follow-up.

Focusing on readmission avoidance of heart failure patients, all four of the IHI pillars were incorporated into our care delivery model on one pilot cardiology unit. Particular attention was provided to the first pillar, enhanced admission assessment. Our strategy was to initiate a dual approach comprised of the completion of a patient 'admission risk assessment tool' and on readmission, the completion of a 'readmission tool' with patient and family. For both of these assessment processes, we used pre-existing assessment tools.

The admission assessment tool was developed by the Center of Case Management and the 'IHI Readmission Tool' was the second tool utilized. Examples of both tools are available either on the internet or by request. The responsibility for acquiring the risk and readmission assessment was given to the case manager. The case managers are in a prime position for the completion of these tools as transition of care experts; they are able to immediately apply information obtained during either assessment process towards the formation of the patient's discharge plans.

After, the first year of STAAR, Tufts Medical Center observed a 50% reduction in same cause HF readmission during a seven month period. Implementation of the "Enhanced Assessment" was associated with this reduction in readmission and is presently, being implemented across 100% of our patient admissions and/or readmissions."



**June Stark, RN, BSN, MEd**

Director of Case Management and Social Work  
Tufts Medical Center  
**Boston, MA**

"Michigan hospitals use a variety of tools to identify patients at high risk for readmission. Some of these tools are: the LACE index, which quantifies the risk of readmission or death; BOOST 8 P tool; Triage Risk Screening Tool (TRST) used to identify elder emergency department patients at risk for ED revisits, hospitalizations, or nursing home placement within 30 and 120 days following ED discharge, etc. Some hospitals have also modified some of these tools to include various elements, e.g., lives alone, to enhance the assessment. The tools utilized depend on ease of implementation and identification of high risk patients.

MPRO, Michigan's Quality Improvement Organization, through its State Action on Avoidable Rehospitalizations (STAAR) and care transitions initiatives, has identified that those Medicare beneficiaries who are admitted or readmitted to a hospital two or more times in the previous three months are at the highest risk for readmission. An analysis of Michigan Medicare claims found that 89% of readmitted patients fit this description. By simply asking the patient how many times they have been hospitalized in the last three months provides a quick, easy assessment of those at highest risk for readmission."



**Nancy D. Vecchioni, RN, MSN, CPHQ**

Vice President Medicare Operations  
MPRO, Michigan's Quality Improvement Organization  
Farmington Hills, MI

## Thought Leader's Corner

"Avoidable readmissions are a current pain point for healthcare organizations. In response, late last year IBM introduced a solution called IBM Content and Predictive Analytics (ICPA). This solution is focused on helping healthcare organizations garner clinical and business intelligence to impact care coordination, improved workflow, and optimal outcomes. Intelligence is facilitated by applying [natural language processing](#) to unstructured data (80% of the information in an enterprise) such as notes, discharge summaries, and text based results, and then answering a question via predictive analytics, e.g., which factors indicate those patients at the highest risk for CHF readmission? IBM teamed up with [Seton Healthcare Family](#), in Austin Texas to test ICPA. Seton operates 38 facilities that serve 1.9 million residents in an 11-county area. IBM and Seton are looking at identifying high risk Congestive Heart Failure patients who are most likely to be readmitted within 30 days of discharge. With access to discharge summaries, physician notes, and EKG reports, it is possible to identify trends and discrepancies in data while predicting which patients were at highest risk for readmission."



**Michelle Blackmer**  
Product Marketing  
IBM Content and Predictive Analytics  
Chicago, IL

## INDUSTRY NEWS

### HealthAffairs

#### Hospital "Observation" Status Increases

In the June issue of *Health Affairs* researchers from Brown University noted a sharp increase in the number of Medicare fee-for-service patients in "observation" status in hospitals vs. an inpatient admission. From 2007-2009 the ratio of observation to admissions increased 34%. Such a status greatly increases the out-of-pocket cost of patients and creates not only ill will but actual lawsuits. Observers wonder if part of the reason might be to avoid the stay counting as an admission (and potentially punishable readmission) under new Medicare penalty rules.



#### Michigan Checklist Reduces Readmissions

Doctors from St. Joseph Mercy Oakland Hospital in Pontiac, MI presented a poster session at the American College of Cardiology annual meeting touting impressive results from a simple checklist used at discharge for heart failure patients. A randomized controlled trial of 96 such patients found significantly better results for both 30-day and six-month readmissions in the checklist group.



#### Planned Readmissions for ECT-Treated Patients

An Australian study looked at the effect of planned readmissions on readmission risk for electroconvulsive therapy (ECT)-treated patients. Initial analyses revealed that ECT-treated patients were at greater risk of readmission compared to patients not treated with ECT. However, after accounting for *planned* readmissions, the differences were not significant. Thus, not accounting for planned readmissions can overstate hospital readmission rates for ECT-treated patients.



#### Video Ethnography Reduces Readmissions

According to a new paper from the Kaiser Permanente Care Management Institute, the readmission rate for heart failure patients at a Kaiser hospital in Southern California dropped from 13.6 percent to 9 percent in six months with the aid of video ethnography as part of the care transition.

The process, which involves video recording patients and their caregivers during their stay, identifies care gaps and potentially misunderstood communications. Feedback to hospital staff then corrects any problems before they impact outcomes such as readmissions. The process is especially helpful for end of life, frail elderly, and multiple chronic condition patients.



#### Costs of SSIs after Hip and Knee Replacements

A study presented at the 39th annual Educational Conference and International Meeting of the Association for Professionals in Infection Control and Epidemiology reported that rehospitalizations due to surgical site infections (SSIs) from hip and knee replacements cost \$65 million. The figure includes SSI-related readmissions as well as all cause readmissions for those patients who experienced an SSI during their initial hospital stay.



#### Early Release at Busy Hospitals Increases Readmissions

University of Maryland researchers publishing in the *Health Care Management Science* journal found that discharge decisions were being made with bed capacity and surgical schedules in mind. Readmissions within 72 hours were higher when a hospital was at 94% capacity or higher or on days when more surgeries were scheduled. Better planning and more flexible use of empty beds could help, they suggest.

## INDUSTRY NEWS



### Home Care, Socioeconomic Factors and Readmits

At the American Heart Association's Quality of Care and Outcomes Research Scientific Sessions 2012, Harvard School of Public Health researcher Dr. Karen Joynt presented a study noting that availability of home care and socioeconomic factors are key determinants of possible hospital readmission, especially among the poor and elderly. The study confirms the need for community-wide approaches in addition to hospital strategies.



### Accessing Real Time Data via HIE Reduces Admissions

The May issue of the *Journal of the American Medical Information Association* includes a study by Dr. Mark Frisse and colleagues, who studied emergency department encounters at 12 Memphis hospitals between July 2007 and September 2008 in which HIE data were accessed. They found that nearly \$2 million was saved with HIE data use, with reduced admissions accounting for 97.6% of the total savings.

### Catching Up With...continued from page 12

**Readmissions News:** In a previous *Thought Leader* segment we asked about the appropriateness or financial penalties vs. incentives and/or public reporting. Some argued that the metrics were imperfect or the strategy misguided. Others supported penalties as a wake-up call. Where do you come out on this issue?

**Brian Jack:** My view is that readmission reduction is a three-legged stool. Hospitals, community-based organizations (CBOs), and primary care practices all have an important role. In the current environment, hospitals must implement hospital based readmission reduction programs, but that this is just one aspect of an effective readmissions reduction effort. Under ACOs, where the three legs of the stool are incentivized to work together, financial penalties are likely to result in more highly integrated approaches to readmission reduction and are more likely to succeed. In determining optimal readmission rates we must consider what is best for the patient, and this is often community specific. In a community that has poorly integrated CBOs and poor access to timely post-hospital care, the best care might be to re-hospitalize a patient. Alternatively, in a health system with well developed CBOs and access to care, safe care can be provided outside the hospital. CMS has it right with section 3026 and other programs that provide incentives for hospitals and CBOs to work together to build the networks needed for optimal readmission rates.

**Readmissions News:** How does Project RED's relationship with Engineered Care for clinical consulting services work? Are there any restrictions because of the previous Federal funding? What does the new web portal promise?

**Brian Jack:** We partnered with Engineered Care because we were unable to respond effectively to the enormous number of requests that we had from hospitals to assist then with RED implementation. Engineered Care provides consulting services and successfully adapted the software that we used in our research studies to create the "After Hospital Care Plan". The new software is now user friendly, and has been integrated into a variety of hospital IT systems. Engineered Care can be reached by email at [projectred@engineeredcare.com](mailto:projectred@engineeredcare.com).

**Readmissions News:** Finally, tell us something about yourself that few people would know.

**Brian Jack:** Our group now has underway a RCT to test whether or not RED plus an intensive post-discharge mental health intervention will reduced readmissions for patients who screen positive for depressive symptoms vs. those who receive RED alone. We are also starting a new project funded by the Patient Centered Outcomes Research Institute (PCORI) to study readmission from the perspective of the patient, family and community providers. Stay tuned for results.

### The Role of the PSO...continued

<sup>v</sup> Centers for Medicare & Medicaid Services. Community-based Care Transition Program. Overview: Fourth Quartile, Hospitals by States. Available at: [https://www.cms.gov/Medicare/Demonstration-Projects/DemoProjectsEvalRpts/downloads/CCTP\\_FourthQuartileHospbyState.pdf](https://www.cms.gov/Medicare/Demonstration-Projects/DemoProjectsEvalRpts/downloads/CCTP_FourthQuartileHospbyState.pdf).

Accessed May 31, 2012.

<sup>vi</sup> Agency for Healthcare Research and Quality. Patient Safety Organizations. Available at: <http://www.pso.ahrq.gov/index.html>.

Accessed May 31, 2012.

<sup>vii</sup> Partnership for Patients. Healthcare.gov. Available at: <http://www.healthcare.gov/compare/partnership-for-patients/index.html>.

Access June 4, 2012.

<sup>viii</sup> Agency for Healthcare Research and Quality. Common Formats. Available at: <http://www.pso.ahrq.gov/formats/commonfmt.htm>.

Accessed May 31, 2012.

<sup>ix</sup> Jack BW, Chetty VK, Anthony D et al. A Reengineered Hospital Discharge Program to Decrease Rehospitalization: A Randomized Trial. *Annals of Internal Medicine*. 2009 Feb 3; 150(3) 178-187.

<sup>x</sup> Agency for Healthcare Research and Quality. Project RED (Re-Engineered Discharge Training Program). Available at: <http://www.ahrq.gov/qual/projectred/>.

Accessed May 31, 2012.

<sup>xi</sup> Society of Hospital Medicine. Quality Initiatives for Hospitalized Patient Care. Available at: [http://www.hospitalmedicine.org/ResourceRoomRedesign/RR\\_CareTransitions/CT\\_Home.cfm](http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/CT_Home.cfm).

Accessed May 31, 2012.

<sup>xii</sup> Agency for Healthcare Research and Quality. Medications at Transitions and Clinical Handoffs (MATCH) Toolkit for Medication Reconciliation. Available at: <http://www.ahrq.gov/qual/match/>. Accessed May 31, 2012



## Catching Up With ...

**Brian Jack, MD** is Professor and Vice Chair of the Department of Family Medicine at Boston University School of Medicine / Boston Medical Center. He is perhaps best known today as the driving force behind Project RED, the hospital re-engineered discharge initiative, but he has also had an active role in promoting good primary care on the international scene. He talks about Project RED and its related consulting service, "talking" to Louise, non-hospital factors in readmissions, incentives vs. penalties, and himself.

### Brian Jack, MD

- Professor and Vice Chair, Department of Family Medicine, Boston University School of Medicine / Boston Medical Center (1997-Present)
- Clinical Director, Lesotho-Boston Health Alliance (LeBoHA) (2005-Present)
- Consultant, Vietnam Family Medicine Development Project (2001-Present)
- Among many honors: "Boston's Best Doctors" list, *Boston Magazine* (2010, 2011); Research Paper of the Year, Society of Teachers of Family Medicine (2010); *HealthLeaders* magazine annual "People Who Make Healthcare Better" list (2009); CDC Partner in Public Health Improvement Award (2008); Patient Care Award for Excellence in Patient Education Innovation from the Society of Family Medicine (2007); AHRQ "Patient Safety Investigator of the Month" (2007)
- BA from Clark University, Worcester, MA; MA Brown University; MD University of Massachusetts Medical School

**Readmissions News:** *You and Project RED, the re-engineered discharge initiative, go back a long way. Was there some particular event or other impetus back in 2003 that led you and AHRQ to begin dissecting the discharge process and finding the essential elements for success?*

**Brian Jack:** The idea for Project RED emanated mainly from my clinical work. Supervising residents in the hospital, we often knew who was likely to be readmitted but yet we didn't provide the coordination, education, or services needed to help them to better care for themselves when they were back home. Also, in my office practice I would often see a post-hospital follow-up visit and I would not have any information about what happened in the hospital. This would lead to unnecessary tests, and I remember several occasions when patients were sent back to the hospital -- when simple communication could have prevented this. I said then -- "we can do better than this." There is now ample scientific evidence documenting the deficiencies of hospital discharge procedures and processes.

In the early 2000s AHRQ was instrumental in defining the agenda for the patient safety movement. The purpose of one of the early funding mechanisms called the "Challenge grants" was to identify a patient safety opportunity. With 38 million discharges a year and well documented high rates of post discharge adverse events, I knew then that the transition from hospital to home was a great opportunity to improve patient safety. When patient safety research collided with CMS hospital payment reform, efforts to reduce hospital readmission indeed became the "perfect storm" of patient safety.

**Readmissions News:** *There was a recent study that found that patients preferred "talking" to Louise, your virtual health coach avatar, rather than a real doctor or nurse. Did this surprise (or offend) anyone? Was it the cool technology? The unlimited time? The plain language?*

**Brian Jack:** We knew early on that the main push back for implementing RED would be about the efficiency of implementation. Development of "Louise" -- our embodied conversational agent that teaches our "After Hospital Care Plan" -- would save precious hospital staff time, teaching information specifically tailored for that patient in clear language with empathy and fidelity. Plus, she confirms understanding through "teach back".

Our data shows that after using the Louise system, more patients prefer Louise than a doctor or a nurse to provide discharge educations. When we ask why, the answer is always the same: "Doctors and nurses are always in a hurry. Louise always has time, and she makes sure that I understand safety."

**Readmissions News:** *A number of hospital leaders and researchers point out the importance of factors beyond a hospital's control -- especially race, income, and other sociodemographic factors -- in impacting potential readmissions. Are your Project RED toolkits accounting for this kind of diversity and cultural competency?*

**Brian Jack:** A great deal of research is being done to try to identify those patients likely to be readmitted, since efficiency is improved if we can target those patients most likely to be readmitted or those most likely to benefit from our intervention. Most current prediction models use administrative data, but few examine variables associated with overall health and function, illness severity, or social determinants of health. Our research team showed that in our safety net hospital, those patients with low health literacy, low levels of activation, depressive symptoms, substance abuse, homelessness, no primary care provider, and male gender were all associated with significantly higher rates of readmission when controlled for other factors.

While many providers provide excellent cross-cultural care, language barriers and cultural diversity are still associated with worse care and preventable rehospitalization in many organizations. In our toolkit we address issues of cross-cultural health care encounters involving a broad array of patients with diverse health beliefs, language preferences, cultural norms, and health seeking behaviors that occur every day across the country.

The RED toolkit contains a detailed section called "*How to Deliver RED to Diverse Populations*". The draft tool kit is available on our website for download at <https://www.bu.edu/fammed/projectred/>. The final toolkit will be available from AHRQ in the next few months.

*continued on page 11*