

Readmissions NEWS

Readmission, Emergence, and Health System Optimization

By William H. Rice, MD

An emeritus professor of statistics from an Ivy League school was giving a lecture in Austin several years ago. Toward the end of his remarks he declared that no serious research was ever done at universities that have large, successful football programs. The audience sat silently for a few moments, not sure what to make of such a statement until, in a deep southern drawl, a voice from the back of the room asked, "Sir, just so I understand, are you insulting our football team or our research?"

Earlier in the day, after the professor had shown examples of elegant illustrations that "tell the story" of different data sets, I asked him if he had any illustrations to represent emergent aspects of complex data sets. He said he didn't believe that complex, non-linear systems existed, but that in systems that apparently have emergent behavior, we simply don't yet understand the system well enough.

On reflection, I should have asked him if he ever watched the weather channel.

How does this relate to the issue of hospital readmissions and the goal of identifying patients whose avoidable readmissions can be prevented? In the following paragraphs we discuss a readmission data set, compare it to a classic health population data set, and suggest that, because both systems have emergent behavior, readmission optimization likely requires adoption of the strategy that is a *sine qua non* for the optimization of other systems that have emergent behavior (like weather prediction).

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Tufts Medical Center: Reducing Heart Failure Readmissions through STAAR

By June Stark, RN, BSN, MEd

Tufts Medical Center is a 415-bed tertiary hospital in Boston, Massachusetts serving a diverse patient population, including the underprivileged and a sizable immigrant community, and therefore subject to higher than average readmissions rates.

Deciding to face the challenge of readmission prevention proactively, Tufts MC participated in the IHI STAAR project starting in 2009 and continuing into the present. The initial two years of the STAAR project resulted in a 50% all payer reduction in related readmissions among heart failure patients and a 1.2 percentage point absolute reduction in all-cause heart failure readmissions. This downward trend in heart failure readmission rates has gradually continued, to the point where the most recent CMS heart failure readmission report reveals that the Tufts MC rate is now "No different than the US National Rate."

In order to achieve these outcomes, Tufts MC implemented the majority of the IHI STAAR's improved care processes described in its *How-to Guide: Improving Transitions from the Hospital to Community Settings to Reduce Avoidable Rehospitalizations*. The interventions selected began at the point of hospital admission or readmission and continued through the patient's transition across the care continuum into the community.

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Modesto, CA 95350

Tel: 209.577.4888 -- Fax: 209.577.3557

info@readmissionsnews.com

www.ReadmissionsNews.com

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. Randall Krakauer from Aetna.

**Randall Krakauer, MD, FACP, FACP**

National Medical Director, Medicare

Aetna

Princeton, New Jersey

Dr. Randall Krakauer graduated from Albany Medical College in 1972 and is Board Certified in Internal Medicine and Rheumatology. He received training in Internal Medicine at the University of Minnesota Hospitals and in Rheumatology at the National Institutes of Health and Massachusetts General Hospital/Harvard Medical School, and received an MBA from Rutgers.

He is a fellow of the American College of Physicians and the American College of Rheumatology and Professor of Medicine at Seton Hall University Graduate School of Medicine. He is also past chairman of the American College of Managed Care Medicine.

Dr. Krakauer has more than 30 years of experience in medicine and medical management and has held senior medical management positions in several major organizations. He is responsible for medical management planning and implementation nationally for Aetna Medicare members, including program development and administration. He proposed and championed the use of embedded case managers as a way to improve management of chronic conditions and reduce hospitalizations among Aetna's Medicare Advantage members. The positive results from those early pilots have cemented Aetna's current interest in Accountable Care Organizations (ACOs).

An Opinion Piece: The Readmissions Rate Fallacy

Today's piece (July 20) in Kaiser Health News that [hospitals' readmissions rates are flat](#) appears to suggest various ongoing efforts to cut readmissions are failing and failing badly. According to the [Medicare data](#) used by Kaiser, the readmission rate for heart failure was 24.8% in 2008-10 and 24.7% in 2009-11 giving us the 0.1% decline cited by Kaiser. Comparing 2011 to 2008, this is a 0.3% difference, still not sufficient to convince us that there is a real change.

But don't write off those efforts yet as there may be a silver lining in the numbers. In fact some simple math suggests that a more meaningful measure of readmissions has fallen as much as 3%. Readmissions are calculated as a proportion of discharges. What if there are fewer admissions and therefore fewer discharges – in other words, if people who are less sick are being treated in out-patient settings more often rather than being admitted? If that is true then the denominator for the readmissions calculation (the # of discharges) will have dropped without a commensurate drop in the numerator (the # of readmissions).

So we thought it would be interesting to see what happens if we look at the change in admissions and factor that into the calculation. It turns out the [admission rate for heart failure](#) did indeed drop from 2.01% in 2008 to 1.84% in 2011 at a fairly consistent rate of about 3% a year. Had this admissions rate remained flat rather than dropping like this, we would have seen the readmission rate drop by an additional 3% per year. Now that's pretty good!

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The Per Bed Risk View: A New Understanding of HCAHPS and Readmissions Incentives

By Zach Silverzweig

Governments work in macroeconomics. Legislation is created to target industries, looking at state and national data to determine overall policy impact. Such was the case with the Affordable Care Act (ACA), which created Value Based Purchasing (VBP) and readmissions penalties for hospitals. Designed to help align hospital incentives around patient care, the Act ties the successful recovery of a patient to his/her perception of the quality of the hospital to Medicare and Medicaid reimbursements.

Since the enactment of the ACA, hospitals and outside firms have been estimating potential penalties tied to both 30-day readmissions and HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) scores. Given increasing consolidation in the hospital industry, and with 39% of hospitals running at a loss in 2011, even a small change to these reimbursement rates can lead to huge changes in staffing models at hospitals and ultimately affect the quality of patient care they are able to provide.

Traditionally, when looking at potential penalties tied to HCAHPS and readmissions, hospitals as well as state and federal governments look at the total at risk amount for their hospital or region. While this can be informative in giving executives a sense of total dollars at risk, it is not helpful in giving perspective on relative risk. Having insight into relative risk can help hospital leadership allocate its limited time and energy more effectively. It can help answer questions such as how important is patient satisfaction compared to other initiatives currently in progress? How do efforts to improve this metric fit into a budget with X-Ray machines that drive revenue?

In an attempt to help hospitals answer these questions, CipherHealth, a patient communication and engagement company that works with hospitals across the country, looked at potential penalties tied to HCAHPS and readmissions on a per bed basis rather than in aggregate, thus shedding light on hospitals' relative performance given their size and number of beds. CipherHealth believed that the metric of per bed risk was far more useful in identifying whether there were opportunities to decrease the penalties or even potentially receive rewards.

In order to calculate the per bed risk, CipherHealth used total three year projections for HCAHPS and readmissions penalties calculated as outlined in the ACA.¹ Calculations show that overall there are \$1.6B at risk in HCAHPS and readmissions penalties for all hospitals over the next three years. In addition, the average per bed risk for all states is \$2,523. The results from the per bed risk calculations for all states are shown in Figure 1. Interestingly, there is wide variation among states, with states such as New Jersey at a high-point of \$4,500/bed, while states such as Utah are leading the nation at \$1,200 per bed. Other interesting findings included the fact that in West Virginia, the statewide aggregate risk is quite low ranking 32nd when compared to the rest of the nation. However, at \$3,600, the average amount of per bed risk in West Virginia is among the highest state averages in the country at number three. In other states, such as California, the state ranks 2nd in terms of total risk amount, yet ranks 24th when analyzing per bed risk.

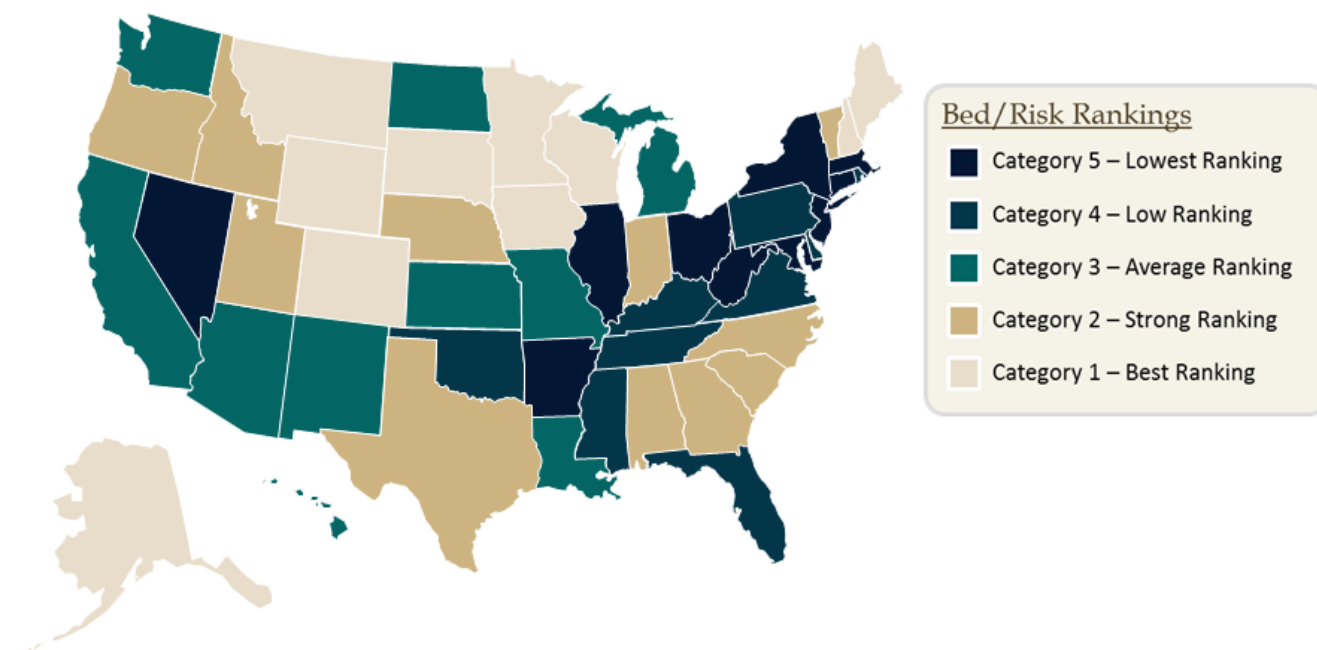


Figure 1 - State Map of Per Bed Risk Performance

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Readmission...continued

Before proceeding with a discussion of the predictive modeling of readmissions, let's first go back to the question of emergent behavior that the emeritus professor doesn't believe exists. Accepting his position requires accepting that a continuous, singular, non-variant rule set applies from the nano-scale to the cosmological scale. However, emergence is built into the most basic level of human biology because the "physiological transactions" of genes to produce proteins are not anywhere near a one-to-one process. As we know, proteins create the structures of life and are "produced" by genes, but the story isn't so simple.

Humans have about 25,000 protein-producing genes but have about a million different kinds of proteins because a myriad of "post-translational" processes combine small proteins to make large proteins, take large proteins and re-shape them, slice and dice all kinds of big proteins into smaller proteins, etc., so there is no one gene - one protein relationship in human biology. Thus, diet, lifestyle, toxins, environment, and a myriad of other factors create a functional epi-genome that by all practical observation fosters emergence in human biology (which is why, for instance, identical twins often do not have the same chronic diseases or get the same cancers).

On a macro scale, my favorite example of what for all intents and purposes meets the definition of emergence in a biologic system is when Grandpa with heart failure watches Monday night football, eats a bag of salty popcorn, and drinks two bottles of water. Grandpa will thereafter fall onto the "backside of the Starling curve," start a positive feedback loop of progressively worsening heart failure, and be in the emergency room next week. There is no way Grandpa's atomic-nano-genomic-proteomic structure would tell you that the Patriots were playing the Packers that Monday, and that Grandpa is from Wisconsin and never misses a Packers game. Thus, from the nano-scale to the macro-scale, emergence is a part of human biology and we shouldn't be surprised if tools required to optimize other systems with emergent behavior might also be a sine qua non for optimizing human health care systems such as readmissions and chronic disease.

Thus, in systems where emergence is meaningful, data collection for optimization must be more focused on ongoing, regular collection of data rather than focused on collecting lots of data at less frequent intervals. If weather prediction was like health care, we'd say, "It's rainy today, please wear your rain coat for the next six months and we'll see how you're doing then."

How does emergence relate to predictive modeling in health care? About five years ago I attended an excellent Predictive Modeling Summit where Ian Duncan discussed "r squared," the statistical measure that quantifies the "fit" of a predictive model when later compared to patient-specific data. R squared essentially tells you what percentage of a population that did something THIS YEAR (like be among the highest decile of health resource utilizers) will also be in the high utilizer group NEXT YEAR. He taught us that the r squared for health actuarial data was about 0.3 using administrative (claims) data and that surprisingly, there is no substantial improvement when the actuarial model also includes clinical data. I was immediately struck by the similarity of failing to improve r squared in health predictive modeling to the idea that in weather prediction, one can gather more and more data today, but one can only improve weather prediction by collecting data over time. Thus, in systems where emergence is meaningful, data collection for optimization must be more focused on ongoing, regular collection of data rather than focused on collecting lots of data at less frequent intervals. If weather prediction was like health care, we'd say, "It's rainy today, please wear your rain coat for the next six months and we'll see how you're doing then."

Now let's get back to the discussion of readmissions.

As we embarked to study the readmissions at our local hospital, we decided to study all "index patients" seen over the most recent year (an index patient is defined as a patient who would, if readmitted, be reported on the Hospital Compare web site as a readmission). Thus, we went through a laborious exercise to precisely apply the CMS selection criteria and exclusions used to identify this patient population. In the study of our patients, we presumed that the sickest, most frail patients would generally go to a skilled nursing facility (SNF) after discharge, that a middle-severity group would go home with home health services after discharge (HH), and that the "least sick" of the population would be discharged home to self care. These three classes of patients (SNF, HH, and home-to-self-care) composed over 90% of our index patient population so we focused our study on just these patients (and excluded hospice discharges, discharges to LTAC facilities, and a few patients referred to inpatient rehab).

Before evaluating the data, we presumed that most readmissions would come from the sickest patients (i.e. those referred to SNFs), and the middle severity of patients (those with HH services) would compose the second largest group of readmitted patients, and we presumed that the least sick patients, those sent home to self care, would produce the smallest number of readmissions. That was our first assumption prior to looking at the data. Our second assumption was that minimizing readmissions likely required simply referring more patients to SNFs and HH (and, of course, improving med rec, assuring follow-up appointments were made, assuring discharges to all locations had good sharing of hospital data among the post acute care providers, etc.).

When we looked at the readmission data we discovered that only 30% of our readmissions were coming from our "sickest" population (i.e. those referred to SNFs), and we were stunned because this is precisely consistent with the r-squared that we see in actuarial population health predictive modeling, where only 30% of this year's high resource consuming patients are also high resource utilizers next year. If the r-squared for a large population also matched the r-squared of a readmission population, we wondered if an r squared of 0.3 in health predictive modeling is explained by the chaotic/emergent nature of the system.

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Readmission...continued

A chaotic system is a system whose essential construct is that the system has a "sensitive dependence on initial conditions." A system that has a "sensitive dependence on initial conditions" is one where a seemingly meaningless difference in an initial condition causes large changes to the overall system.

We know this as the "butterfly flapping its wings creating changes in global weather" models that were first appreciated in the 1960's. One could also describe a system with emergent behavior as analogous to one with a "sensitive dependence on initial conditions" and thus we posit that emergent behavior of health populations is consistent with the view that health populations behave as chaotic systems.

If health systems can be characterized as having a "sensitive dependence on initial conditions," it follows that the sine qua non for optimizing other chaotic systems may also be a sine qua non for optimizing health care systems. The sine qua non for optimizing weather prediction is that data must be gathered repetitively. More data gathered in fewer time intervals is less predictive than less data collected more often. Hence, in a health system, one might suggest that optimization requires repetitive measurements as a central construct of the optimization scheme.

The "pearl" of wisdom in this discussion is that repetitive monitoring (repetitive interactive clinical evaluations) is an optimization construct for not just readmissions, but for essentially all complex medical problems across the spectrum of chronic diseases. Unlike disease management, which historically uses higher intensity, more costly resources to monitor the sickest patients in a population, the non-linear model of health care suggests that monitoring an entire population is required to optimize the care of that population and without monitoring, the largest part of an optimization opportunity for patient population is missed.

The monitoring needed for optimizing readmissions, chronic diseases, and other complex health problems in most cases requires nothing more than an automated voice response system made available via a copper wire telephone because, as we learned the first day of medical school, "When all else fails, ask the patient. They know how they are doing."

The good news is that with smart phones, consumer-faced telemedicine, self-monitoring, and simple phone-based interaction, very low-cost whole-population monitoring is now possible.

The monitoring needed for optimizing readmissions, chronic diseases, and other complex health problems in most cases requires nothing more than an automated voice response system made available via a copper wire telephone because, as we learned the first day of medical school, "When all else fails, ask the patient. They know how they are doing."

Finally, remember that the value of repetitive monitoring is to identify a signal that can be acted upon to prevent a readmission or to identify a chronic disease patient whose evolving clinical exacerbation can be addressed today by taking an extra dose of a 17 cent pill in order to avoid the need for a \$17,000 hospitalization next week.

Conclusions:

1. Health care systems exhibit emergent behavior.
2. Emergent behavior is similar to behavior that has a sensitive dependence on initial conditions.
3. A system that exhibits a sensitive dependence on initial conditions is a chaotic system.
4. Approaches that optimize one type of chaotic system likely optimize other types of chaotic systems.
5. Repetitive interactive clinical evaluations are a sine qua non for optimizing complex health care problems, including avoidable readmissions, chronic disease, and other complex health problems. This is because they are analogous to the repetitive measurement of weather prediction metrics that are the sine qua non of effective weather prediction.
6. Unlike traditional disease management, optimizing health systems with emergent behavior requires very low cost, whole population monitoring that in most cases requires nothing more than asking the patient how they are doing. The goal of this monitoring is to reveal the signal of an unexpected clinical development at the earliest possible time and the r-squared parameter in predictive modeling suggests that we miss 70% of the optimization opportunity if we fail to monitor the whole population.
7. Health care predictive modeling is accurate, but not patient-specific. Predictive modeling helps us confidently say something like, "5% of our population will be high utilizers next year." However, the r squared for that population of 0.3 tells us that only about 30% of high utilizers this year will be also be high utilizers next year (i.e. 70% of next year's high utilizers were not high utilizers this year). Thus, predictive modeling is accurate, but not patient specific. We posit that disease management programs that focus on predictive modeling sub-groups will always leave about 70% of the optimization opportunity "on the table."

When we looked at the readmission data we discovered that only 30% of our readmissions were coming from our "sickest" population (i.e. those referred to SNFs), and we were stunned because this is precisely consistent with the r-squared that we see in actuarial population health predictive modeling, where only 30% of this year's high resource consuming patients are also high resource utilizers next year.

Dr. William Rice is Senior Vice President for Clinical Innovation in the Central and West Texas Division of Hospital Corporation of America in Austin, Texas. He can be reached at bill.rice@stdavids.com.

The Per Bed Risk View...continued

In addition to looking at geographic variation, CipherHealth also ran analyses between the states and hospitals with the highest per bed risk and other demographic information, including median income, health spend per capita, and percent uninsured. No correlation was found between per bed risk and any of these demographic factors, furthering the point that per bed risk is a new and independent way to measure relative risk for hospital executives.

For hospital executives, in the face of increasing acquisitions of independent hospitals by larger health systems or integrated delivery networks (IDNs), it is interesting to look at per bed risk across health systems as well. While no national trends emerged when conducting this analysis, CipherHealth found numerous states where hospital's inclusion in a system had a large impact on HCAHPS and readmissions per bed risk.

Fourteen states were identified where inclusion in a system had a positive impact in reducing average per bed risk. These states were typically more rural, with lower median incomes. For the majority of states, inclusion in a system had a negative impact on per bed risk.

The system with the best performance on a per bed risk basis was Intermountain Health Care based in Salt Lake City, UT. Intermountain Health Care, which has fifteen acute care facilities across multiple states, has recently been recognized for its cutting edge approach to controlling costs and improving quality through its use of technology and data driven decision support, which can improve clinical outcomes.ⁱⁱ

As hospital leaders at both the system and individual hospital level look to find ways to assess relative or aggregate risk, there is a key metric that drives performance across a wide variety of hospital statistics: patient acuity. Higher quality hospitals, which have a better reputation for high quality performance, tend to attract sicker patients, and therefore patients who may be more likely to be readmitted. These hospitals may therefore be subjected to higher readmission penalties, something that would not be reflective of the quality of the hospital.

As an example of the fact that penalties are not adjusted for patient acuity, Beth Israel Deaconess Medical Center in Boston, MA has a per bed risk of almost \$5700/bed, well above the national average. However, this is one of the most highly regarded hospitals in the country. Beth Israel has received awards such as ranking as one of the best hospitals by *US News & World Report*, being selected as a Thomson Reuters Top 100 hospital, and numerous other quality, satisfaction, and disease specific awards reflecting its exceptional outcomes.ⁱⁱⁱ The readmissions penalties by CMS seem to place an unfair burden on higher quality hospitals that have a higher acuity patient population.

Despite the exclusion of patient acuity in looking at penalties, overall CipherHealth's study suggests that looking at per bed risk rather than at total risk can shed new insight on where the risk lies for hospitals and where there are opportunities for improvement. For hospital executives facing everything from RAC audits to Value Based Purchasing to Meaningful Use to ICD10, it is critical to be able to prioritize the various hospital initiatives and focus on key projects that can drive both short and long-term ROI.

In addition, as penalties tied to Value Based Purchasing begin to extend beyond clinical performance and patient satisfaction and begin including outcome and efficiency metrics in 2014 and beyond, relative risk becomes increasingly important. However perhaps most important is that beyond financial reward for hospitals that are able to reduce per bed risk, there are additional rewards in the ability of hospitals to create a better line of communication with their patients, which leads to better patient outcomes.

Zach Silverzweig is Co-Founder of CipherHealth, based in New York City. He may be reached at zsilverzweig@cipherhealth.com.

References:

i "H.R. 5894--112th Congress: Patient Protection and Affordable Care Act Education and Outreach Campaign Repeal Act of 2012." GovTrack.us (database of federal legislation). 2012. May 15, 2012 <http://www.govtrack.us/congress/bills/112/hr5894>

ii "Awards & Recognition." Awards & Recognition. Intermountain Healthcare, 2012. Web. 15 May 2012. <<http://intermountainhealthcare.org/about/overview/awards/Pages/home.aspx>>

iii "Awards and Honors." Beth Israel Deaconess Medical Center. N.p., 2012. Web. 15 May 2012. <http://www.bidmc.org/AboutBIDMC/AwardsandHonors.aspx>.

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Tufts Medical Center and STAAR...continued

All members of the healthcare team were involved in the delivery of these care processes, with the cardiac case manager functioning as the coordinator. Utilizing case management in this role proved to be an asset, as this specialty has an in-depth understanding and experience with transitioning patients and their families across the care continuum. In addition, the case manager adapted quickly to the new roles and functions associated with the STAAR program and contributed further by having a vision for ongoing and future transitional directions and interventions for patients/families.

The Tufts MC initial transition processes began with the case manager completing a "risk assessment" at admission to establish the degree of risk for the patient's readmission. The risk rating scale ranged from low to medium to high risk of readmission. If the patient was already a readmission, then both the patient and family were assessed using the IHI Readmission Tool to determine the reason for the patient's return to the hospital. Obtaining this information early in the patient's stay allowed the case manager, working with the entire healthcare team, to plan the elements of the hospital stay and the discharge/transition goals in order to avoid future readmissions.

Throughout the stay, communication among healthcare team members was key. Tools included care coordination rounds in the morning and evening to share the patient's progress and use of the "White Board" in the patient's room. The patient teaching tools were validated with the Home Care agencies to assure that the patient/family education was consistent with continuity from the hospital to the community.

This process of validating the teaching tools by multiple care setting was felt to be a vital element of this program. A nutrition consult was made mandatory, based on findings identified during the IHI Readmission Tool assessment process, together with a pharmacist consult for patients taking multiple medications. The Home Care Liaisons communicated with the case manager and if appropriate the patient/family throughout the hospital stay.

A PCP visit was scheduled for all patients prior to discharge by the case manager, with appointments scheduled within seven days post-discharge. The transition "handoff" occurred on the cardiac patient care unit, usually the 48 hours prior to discharge and again at the point of discharge. The transition goal was set so that 100% of the heart failure patients were discharged with home care, which included cardiac telemonitoring. Post-discharge calls were completed by the case manager for the "highest risk" patients, with the number and frequency of the calls determined according to the needs of the patients.

Tufts MC has experienced successes participating in the IHI STAAR project. Implementing many of the IHI recommendations, while weaving in Tufts own innovations and experiences, has created desirable outcomes that have benefited patients and their families. This experience confirms that the IHI STAAR interventions are effective and appropriate to be tested in a variety of healthcare settings.

Among the lessons learned are that readmission rates can be reduced for heart failure, but variations in the results can occur over time and are common. The Tufts MC experience demonstrates that the case manager's role is vital in operationalizing this program, and that the IHI STAAR interventions are important assets to any readmission avoidance program.

June Stark, RN, BSN, MEd is Director of Case Management and Social Work at Tufts Medical Center in Boston, MA. She can be reached at jstark@tuftsmedicalcenter.org.

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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.

Q. The recently updated 2008-2011 readmissions data published by CMS on Hospital Compare suggest that hospitals are not making much progress. Is this an accurate assessment or a reflection of how the metrics are constructed?

"I would like to join the growing number of researchers in recommending that the current methodology for measuring readmissions be modified to focus only on those that could have been avoided, so as not to penalize institutions for events beyond their control. Estimates of avoidable readmissions vary. The oft-cited MedPac figure of 75% was based on the rather liberal 3M 'PPR' logic which flags cases meeting their definition of a 'plausible clinical connection' between the admission and readmission, but meta-analytic summaries report most published estimates as falling between 15 – 59%.

Other recommended changes to this metric require moving from a 'per admission' to a 'per person' unit of analysis, more appropriately risk-adjusting the illness burden of different institutions' patient populations, and ensuring that individuals who did not survive 30-days post-discharge are removed from the denominator. Only when we have an accurate measure of avoidable readmissions will we be able to assess a hospital's relative success."



John Parker

Informatics Scientist in Health Economics & Outcomes Research
Blue Cross Blue Shield North Carolina
Durham, NC

"Although the metrics are plausibly constructed, hospitals may not have yet experienced sufficient incentives to invest in reducing readmissions. As noted in a recent *New England Journal of Medicine* editorial, hospitals seeking increased volume benefit financially from readmissions more than avoiding proposed penalties by reducing readmissions. Moreover, efforts to enhance the discharge process require some investment.

To reduce readmissions effectively, hospitals need to partner with their inpatient providers to identify patients at risk for readmission so that creative collaborative strategies can be used to intervene on these patients prior to discharge. There is a significant role for hospital-based pharmacists in improving patient education regarding medications, some of which are high risk for adverse events. Ensuring adequate follow-up is also key to getting patients connected with their outpatient care. All of these components require human capital, time, and motivation from all levels of hospital personnel."



Amit Patel, MD

Hospitalist, Northwestern Memorial Hospital
Mentor, Project BOOST
Chicago, IL

"The data lag on Hospital Compare gives the impression that hospitals are not making an impact on reducing readmissions. Many hospitals initiated their readmission reduction efforts in late 2010 as a result of the looming disincentive. Hospital Compare is a rolling three-year aggregate rate in which the earliest year drops off while the most current year of complete data is added in July. It will probably take two years before the impact of readmissions initiatives appear on Hospital Compare, reflecting an aggregate rate for 2010-2013.

We know that impacting readmissions does not occur overnight because of the complexity of care transitions/coordination. In order to be successful, it takes community partnerships with acute and post-acute care providers, physicians, community based organizations and patients/family/care givers to impact readmissions successfully. One entity cannot do it alone."



Nancy D. Vecchioni, RN, MSN, CPHQ

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

Thought Leader's Corner

"Improving a summary measure such as 30-day readmissions requires the concerted effort of multiple initiatives spread across diverse entities over several years. Although CMS began publicly reporting readmissions data more than three years ago, only recently have provider organizations begun focusing on improving readmissions in earnest. As more and more provider organizations start forming 'accountable care organizations' and taking on 'risk contracts' with payers, we should expect an improvement in performance on this important metric. The fact that CMS only reports on readmissions for three medical conditions also makes it difficult to interpret performance trends broadly."



Omar Hasan, MBBS, MPH, MS, FACP

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

"Few challenges to healthcare are as complex as is the effective reducing of re-hospitalizations, and few challenges demonstrate the absence of collaboration and coordination between the various constituencies in healthcare delivery as does re-hospitalization. In SETMA's experience two metrics significantly impact re-admission rates: 'did the patient receive a care coaching telephone call within 24 hours of discharge' and 'was the patient seen by the primary care health home within 3-6 days of discharge.'"

The hospital cannot make either of these happen without a collaborative effort and/or a coordinated effort with the primary care attending physician. As long as the hospital emergency department is seen as the most effective safety net by patients and their families, and/or as long as there is not effective communication and access between the primary care provider and the patient, preventable re-hospitalizations will continue to take place.

No patient should leave the hospital without an assessment of their risk of re-hospitalization having been made and, if the patient is high risk, without an action plan being executed to meet the patient's needs to prevent re-hospitalization. The hospital may need to serve as the convener of dialogue between primary care, consumers, emergency department staff, home care agencies, social service agencies, and hospital staff members to improve care transitions and communications so that the patient's default position is not 'let's just go back to the hospital.'"



James (Larry) Holly, MD

CEO
Southeast Texas Medical Associates (SETMA), LLP
Beaumont, TX

"This measure is going to be difficult to impact. First, it is a rolling three-year measure. Many efforts to reduce readmissions started in the past 12-18 months, or are just launching now through Hospital Engagement Networks or QIO technical assistance programs from CMS. So, a look-back for the past three years is just not reflective of current efforts. Second, the risk adjustment methodology is based on CMS claims data and is not replicable by providers – a classic case of 'you can't manage what you can't measure.' Third, the measure includes readmissions to other hospitals. That's a great idea and I fully support it, but this is not information that providers currently are managing to. In sum, the three-year time window, the risk adjustment methods based on claims data, and the inclusion of readmissions to any hospital preclude this measure from being a measure of choice for providers actively engaged in quality improvement."



Amy Boutwell, MD, MPP

Founder and President
Collaborative Healthcare Strategies
Boston, MA

"Our preliminary study of all-cause readmission rates in Medicare's fee-for-service program shows that rates did not fall in the 2008 to 2010 period. So that would support the CMS findings. We did find some differences in trends on a community-by-community basis. Our results should be published later this year."



Jeff Lemieux

Senior Vice President, AHIP Center for Research
AHIP
Washington, DC

INDUSTRY NEWS



Hospitals Not Doing All They Can

A Commonwealth Fund supported research team from Yale University surveyed more than 500 U.S. hospitals regarding their use of 10 practices that have been associated with lower readmission rates for heart failure and acute myocardial infarction. The findings, published in the *Journal of the American College of Cardiology*, suggest plenty of room for improvement.

Hospitals on average were only implementing 4.8 of the 10 practices, and only 3 percent were implementing all 10. Almost all hospitals (94.6%) were monitoring 30-day readmissions rates, but only 49.6% of them were coordinating with community physicians.

More than three-fourths of the respondents did educate patients about their medications, but half the time no pharmacist or pharmacy tech was involved.

Orthopedics today®

Non-Surgical Causes of Readmissions

A researcher in the United Kingdom examined reasons for 30-day readmission rates following primary total hip and knee replacements from April 2010 to April 2011.

Roughly 60% of total hip replacement readmissions and 60% of total knee replacement readmissions were for non-surgical, postoperative reasons and therefore not a reflection of hospital performance attributable to the surgery. A disturbingly large number of procedures (60%) were also coded improperly.



Readmissions Double Medicare Post-Acute Costs

The Alliance for Home Health Quality and Innovation, a home health agency trade group, commissioned a study by healthcare consulting firm Dobson DaVanzo & Associates to see how much hospital readmissions affect cost in the Medicare program. The study was part of its Clinically Appropriate and Cost-Effective Placement research project.

The study found that the average cost of care in the post-acute setting for someone with at least one readmission was more than double the cost of someone without a readmission -- \$33,000 vs. \$15,000.

The likelihood of a readmission increased with the number of chronic conditions, but the key variable affecting the cost of care was severity.



Advocate Health Care ACO Reduces Readmissions

After only six months of operation as an Accountable Care Organization in partnership with Blue Cross Blue Shield of Illinois, Chicago-based Advocate Health Care is reporting encouraging results in driving down utilization.

The new ACO, called AdvocateCare, serves 250,000 PPO members and 125,000 HMO members who receive their coverage from the BCBS plan.

Readmission rates for patients with chronic conditions dropped 26%, and the readmission rate for patients sent to skilled nursing facilities was only 13.6%, well below the national average. Further, officials reported that for the first six months of 2011, hospital admissions per member were down 10.6% from 2010 and emergency department visits down 5.4%.



Highmark Adds Preventable Readmissions to P4P

Highmark's Quality Blue pay-for-performance hospital program now requires all participating hospitals to measure and reduce the number of hospital readmissions.

Beginning last month, the program, which had previously allowed hospitals to choose any of the program indicators, will now require all participating hospitals to include 30-day readmissions in addition to their regular selections.

A recent Pennsylvania Health Care Cost Containment Council (PHC4) report noted that about 12.4 percent of hospital readmissions fell into the potentially preventable classification. Highmark's Quality Blue hospital P4P program, which began in 2001, currently includes 90 hospitals in Pennsylvania and West Virginia.

Hospital Compare

CMS Updates Readmissions Data on Hospital Compare

CMS recently updated the 30-day hospital readmission rate data on its Hospital Compare web site. Data are reported on a rolling three-year performance period, the most recent update representing the period ending June 30, 2011.

This is the same data that will form the basis of the readmissions penalty provision included in the Affordable Care Act, under which hospitals will lose 1% of their DRG payments if they are performing significantly worse than the national average.

In this most recent update eight hospitals performed worse than average on all three reportable conditions -- community acquired pneumonia, acute myocardial infarction, and coronary artery disease. Two Florida hospitals were also better than average on all three -- Citrus Memorial Hospital, in Inverness and Sarasota Memorial Hospital, in Sarasota.

INDUSTRY NEWS



ED Strategic Focus on Reducing Admissions

Researchers at Harvard Medical School writing in the *Annals of Emergency Medicine* suggest that emergency departments would do better to focus not on those visits which are routine and minor (even if better served by a primary care system) but rather to look strategically at high cost cases which can lead to costly admissions.

Aligning Forces for Quality | Improving Health & Health Care in Communities Across America

AF4Q Collaboration Drops Readmissions Rates

Since October 2010 The Robert Wood Johnson Foundation has invested nearly \$300 million in Aligning Forces for Quality (AF4Q), its national quality improvement effort in 16 communities around the country. The 16 are linked in a virtual learning network and focused on three main areas -- reducing readmissions, improving language services for non-English speakers, and reducing overcrowding in the emergency department. The results have been solid. About 60 percent of participating hospitals improved their readmission rates for heart failure patients, avoiding an estimated 486 unnecessary re-hospitalizations.



Medline Launches Readmissions Tracking Tool

Medline has created a readmission tracking and analysis tool for nursing homes that measures a nursing home's readmission rate and enables it to identify and analyze trends that cause readmissions. The facility can then rectify the problem areas and improve resident care. The tool identifies the root causes for readmissions by analyzing patterns of readmissions, such as the hospital a resident was admitted from; the day, time, and shift when the readmission occurred; physician coverage during the time of the transfer; and the reason for the transfer.



Integrated Care Model Reduces Readmissions for Duals

Avalere recently analyzed the outcomes of the Mercy Care Plan's integrated model in Arizona for keeping people out of the hospital and lowering readmissions rates for dual-eligible beneficiaries. Mercy Care's results when compared to Medicare fee-for-service dual eligibles produced impressive results, including 43% fewer hospital days and a 21% lower readmission rate.



Care Transitions Intervention Program Applauded

A Care Transitions Intervention pilot program in upstate New York has demonstrated a 25% reduction in hospital readmissions according to the Finger Lakes Health Systems Agency.

The pilot was a collaborative effort among hospitals, home health agencies, and a Medicaid-managed care program. Between the Fall 2010 and Spring of 2012, the program succeeded in reducing both 30-day and 60-day readmissions.



UPMC Medical Home Cuts Readmissions, Costs

The University of Pittsburgh Medical Center (UPMC) has seen a decrease in readmission rates, utilization, and costs resulting from its implementation of the Patient-Centered Medical Home model. The overall readmission rate dropped 12.5% compared to non-medical home practices in the first year and 18.5% in the second year.

Catching Up With...continued from page 12

Relatively few have had relationships with the Area Agencies on Aging. And from their perspective, many of the Area Agencies on Aging have traditionally focused on broader issues of importance to the well-being of older Americans in the communities they serve, and have not focused on patients who were recently discharged from the hospital and are at risk of being readmitted. The Community-based Transitions Program established in law creates the opportunity for some communities to explore how organizations such as the AAAs can enhance the efforts to ensure that patients' stay well enough and thus do not need further hospitalization. We will be watching with interest to see what promising models emerge from these federally supported experiments.

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

Nancy Foster: When I was growing up in Omaha, my Mom and Dad were deeply involved in kids' sports programs because they fundamentally believed that it was essential for kids to have an opportunity to learn important life lessons -- fairness, teamwork, dedication, learning to deal with defeat and disappointment, sportsmanship, and appreciating people for what they can do, how they can contribute, and the strength of their character rather than superficial physical characteristics. I have tried to follow in their footsteps, supporting my son's baseball and swimming teams, and I convinced myself that it was because I wanted my son and his friends to learn these same life lessons. I think they have, but the truth is that I have learned at least as much as they have -- and maybe valued the lessons more than the kids have.



Catching Up With ...

Nancy Foster is Vice President for Quality and Patient Safety Policy at the American Hospital Association and the point person on hospital quality and safety issues. She is the AHA's representative to the National Quality Forum, the AHA's liaison to the Joint Commission's Board, and co-chair of the AHRQ's Patient Safety Coordination Center Advisory Committee. She talks about readmissions definitions, penalties, commercial plan activity, working with Area Agencies on Aging, and herself.

Nancy Foster

- Vice President for Quality and Patient Safety Policy, American Hospital Association, Washington, DC (2002-Present)
- Member, National Quality Forum (1999-Present)
- Coordinator for Quality Activities, Agency for Healthcare Research and Quality (AHRQ) (1997-2001)
- Excellence in Government Leadership Fellow
- BA degree in economics, Princeton University; graduate work at Chapman University and Johns Hopkins University.

Readmissions News: *The AHA has expressed its dissatisfaction with CMS's use of an "all cause" readmission definition. How would you structure the definition so that it properly accounts for any readmission that should be considered unwarranted?*

Nancy Foster: AHA has insisted that HHS should comply with the language of the Affordable Care Act that requires that the readmission measures be adjusted to remove planned and unrelated readmissions. We have suggested that planned readmissions could be eliminated by having a check box or code on the claim form indicating whether the readmission was planned. This would then be auditable. We note that at its recent meeting, The National Uniform Billing Committee approved a short list of billing codes that provide a mechanism for indicating a planned readmission, meaning that the AHA's suggested remedy for eliminating planned readmissions is now possible.

To address the issue of unrelated readmissions, we suggested pulling together a panel of expert practicing clinicians in the areas of heart attack, heart failure, and pneumonia to identify diagnostic codes that indicate conditions that are unlikely to indicate a condition that, when it is the principal reason for readmission, is related to the original heart attack, heart failure, or pneumonia. For example, diagnoses indicating acute trauma, cancer, or gall bladder problems are unlikely to be related to the heart attack, heart failure, or pneumonia. If you were to look at the specifications for more recently crafted readmissions measures from CMS, you would see that they have taken such an approach with these newer measures. The original readmission measures, however, do not have a significant list of excluded diagnoses.

Readmissions News: *There is similar disagreement about the Medicare penalties for high readmission rates. Has AHA's concern been about the metrics and whether they will affect safety net hospitals disproportionately, or do you find the whole concept of financial penalties bad public policy?*

Nancy Foster: AHA believes that there are several problems with the calculation of the penalties for the readmissions program, but the issue you ask about, that of the disproportionate effect of the penalties on the safety net hospitals is not so much about the calculation of the penalties themselves, but rather what we see as clear evidence that there should be an adjustment made to reflect socio-economic status in this measure for precisely the same reasons the measure is adjusted to reflect differences in the severity of patient illness. In some instances, a readmission is the result of something that was not done well while the patient was hospitalized, but a readmission can also be the result of the patient not being able to follow through on the discharge instructions they were given.

If the patient can't afford the medications that were prescribed, or if the patient can't get to the office of the physician or therapist for follow up treatment, or if the patient's neighborhood grocery store does not carry or the patient's family cannot afford the type of food needed for the patient to adhere to the recommended diet, the patient will likely come back to the hospital for readmission. All of these reasons for readmission represent frailties in the national infrastructure that need to be addressed, but AHA believes they do not all represent issues for which the hospital should be penalized. To create a fair and equitable approach to the penalties, we believe the measure must be adjusted for differences in community socio-economic factors, and we have suggested a mechanism that would work and that is readily available to CMS -- the use of the proportion of hospital patients that are dually eligible for Medicare and Medicaid.

Readmissions News: *As part of the shift to value-based purchasing, have the commercial payers begun to implement penalties, non-payment, or negative P4P scores with respect to preventable readmissions?*

Nancy Foster: Sorry, this is not something we track, so I can only tell you that anecdotally that I have heard of some insurers using readmission rates in their contracting with hospitals. Where I have heard it most often is in their determination of tiers for payment purposes. But it is appropriate that insurers be cautious in how they think about using readmission measures because the 30 day readmission measures we currently have were built from Medicare data for use on Medicare patients. We know very little about whether there is any similarity in the reasons for readmission, the patterns for readmission, and the opportunities to address readmissions in the under 65 population that would typically be insured by a private insurer.

Readmissions News: *The new CMS transition assistance program brings some new players into the game, notably Area Agencies on Aging. This must be new ground for many hospitals, no?*

Nancy Foster: **Hospitals** have traditionally worked with many in their community to meet the needs of their patients -- nursing homes, rehabilitation facilities, home care agencies, and visiting nurses associations to name a few.

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