

A Post-Acute Provider's Guide To Reducing Avoidable Readmissions With Data Analytics

A White Paper

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I. Executive Summary

In 2013, 14% of consumers discharged from United States (U.S.) hospitals were readmitted within the following 30 days.ⁱ In an era of value-based purchasing and health care cost containment, high readmission rates have become a distinguishing mark of health care inefficiency – and reducing these high rates is now a focus of Federal and state government efforts.

Many readmissions result from preventable complications, insufficient post-discharge planning, lack of proper consumer education, and uncoordinated care management. Moreover, the average cost of a readmission – regardless of the payer – tends to be greater than that of the original admission, resulting in an estimated \$25 billion in wasteful and avoidable health care spending annually.^{ii,iii}

Reducing avoidable readmissions is an integral strategy to delivering high-quality care. But it is not just a strategy for hospitals. Post-acute providers play a major role in minimizing avoidable readmissions.^{iv} In many regards, the quality of on-going, comprehensive care management received by individuals with complex physical and mental health conditions is evidenced by the frequency of their hospitalizations. Improvements in the care management process can substantially reduce avoidable readmissions. A re-design of the discharge process can also identify systematic inefficiencies and create opportunities for post-acute providers to play a larger role in the discharge process as a strategy to reduce chances of readmission.

“Reducing avoidable readmissions is an integral strategy to delivering high-quality care. But it is not just a strategy for hospitals. Post-acute providers play a major role in minimizing avoidable readmissions.”

Central to these strategies is an improvement in data analytics capabilities to deliver efficient, evidence-based care to individuals following a discharge. High-performing analytics platforms can produce actionable reports to be used as decision support throughout the care management process – from risk identification and stratification that defines the intensity of care management required, to continual reports showing adherence to treatment goals. State-of-the-art staff training then couples with analytics to assure that data is uniformly put to use with sound care management strategies, resulting in the most effective care for individuals, improved health outcomes, and reduced readmissions.

II. Readmission Rates & How The Market Is Responding

Reducing readmission rates is an increasing focus of many ambulatory and post-acute providers – not just hospitals. In the shift to value-based care, readmissions have become an indicator of inefficient care management. States and the Federal Government are advancing new financial incentives and care models to reduce avoidable or preventable readmissions in the 30-days following a hospital discharge.

Medicare

As a single entity, Medicare is the nation's largest health care payer. In 2014, Medicare spending grew 5.5% over the previous year, topping \$618 billion, encompassing 20% of all U.S. health care spending.^v Growing Medicare enrollment coupled with cost increases that consistently outpace inflation are pushing federal regulators to pursue opportunities for cost savings.

Medicare's high readmission rates have been a prime target of these efforts. In 2011, almost one in five Medicare enrollees admitted to a hospital experienced a subsequent readmission within 30 days of discharge, costing Medicare \$24 billion.^{vi,vii}

Medicare's readmission reduction program is now in its 4th year. This program introduces penalties assessed on hospitals with high 30-day readmission rates for targeted conditions.^{viii}

Hospitals with high rates are penalized up to 3% of their Medicare revenue. In 2016, 2,665 hospitals – 77% of all hospitals nationwide – were penalized for high 30-day readmission rates, while less than 800 hospitals maintained a low enough readmission rate to avoid a penalty.^{ix} This program has led to a 4.8% reduction in all-cause readmissions within Medicare and is continuing to pressure health systems to reduce avoidable inpatient repeat utilization.

Although Medicare is still heavily anchored in fee-for-service (FFS) reimbursement, that too is changing. One in three Medicare beneficiaries are voluntarily enrolled into Medicare Advantage plans, a form of managed care.^x Under this arrangement, private health insurers take on risk for Medicare enrollees in return for a capitated payment. The insurer then provides care management (including readmission reduction initiatives) as a means to improve care quality while reducing costs. Further, the Centers for Medicare and Medicaid Services (CMS) has established a goal of shifting at least 50% of all Medicare payments to alternative, value-based arrangements featuring substantial risk on the part of the provider by the end of 2018.^{xi} These reforms all include as a central component, a focus on reducing avoidable readmissions.

“A study performed by 19 state Medicaid medical directors found that avoidable readmissions are caused primarily by just a few diagnostic groups including mental and behavioral health disorders, complications related to pregnancy and childbirth, and chronic diseases.”

Medicare's Readmission Reduction Efforts: An Opportunity For Post-Acute Providers

- Hospitals are currently exploring strategies to reduce readmissions
- Many avoidable readmissions are caused by poor follow-up
- Hospitals that partner with post-acute providers to assure a smooth discharge process and improve follow-up care experience lower readmissions

Medicaid

Medicaid readmission rates are somewhat difficult to measure and compare because Medicaid is administered at the state level and each state's program varies in terms of structure, payment methodology, eligible population, and services offered.

In Focus: Medicaid Superutilizers^{xx}

- The care for 5% of individuals within Medicaid and Medicare consumes 50% of all spending. A major cause of high costs is frequent readmissions by this population. Some superutilizers have a dozen or more readmissions each year.^{xiii}
- Superutilizers have multiple, comorbid chronic conditions coupled with under-treated or undiagnosed mental health and psychosocial barriers.
- By providing improved person-centered, preventative care management to superutilizers, health systems and payers can substantially decrease readmission rates.
- A five health system collaborative in Pennsylvania engaged in care management for this population and reduced total inpatient and E.R. costs by over \$1 million for just 138 high utilizing patients.

Medicaid has experienced rapid growth in recent years, driven primarily by state decisions to expand Medicaid eligibility. In 2014, Medicaid spending topped \$495 billion, or 16% of all U.S. health care spending – an 11% growth over the previous year.^{xii}

Medicaid is found to have an all-cause readmission rate of 13.7%; however, this varies from state to state.^{xiv} Care Management Technologies (CMT) is a data analytics firm with extensive experience working with Medicaid agencies. CMT has seen Medicaid all-cause readmission rates vary by state from a low of 9% to a high 47% with average readmissions rate of 24% for those with a diagnosed behavioral health disorder in the past year compared to an average of 12% for those without such diagnoses. On average, individuals with behavioral health diagnoses analyzed in this large multi state data set experience readmission rates double that of individuals with no behavioral health diagnosis. This finding is supported by a study performed by 19 state Medicaid medical directors which found that states spend an average of \$77 million annually on avoidable readmissions, and those readmissions are caused primarily by just a few diagnostic groups, including mental and behavioral health disorders,

complications related to pregnancy and childbirth, and chronic diseases.^{xv, xvi}

States are pursuing an array of readmission reduction initiatives as a means to reduce the increase in costs as Medicaid expenditures continue consuming larger portions of state budgets.^{xvii, xviii} Targeted efforts include experimentation with new payment models such as bundled or episodic payments for specific treatments, shared savings models, and targeted disease management for individuals with chronic conditions. Managed care continues to grow as the dominant payment strategy within Medicaid programs. Within the last year alone, nine states expanded managed care either geographically or to new populations.^{xix} States are also launching Medicaid health homes, Accountable Care Organizations (ACOs), and other risk-based care models aiming to improve outpatient-based care management and reduce readmissions.

Post-acute providers play a key role in these risk-based models. For example, states with Medicaid health homes must demonstrate how services are linked between the health home and community services. Person-centered care management that spans the boundaries of traditional systems of care has been shown to improve both outcomes and care quality.



In New York, where 15% of all hospital stays result in a readmission, penalties are assessed on hospitals with high readmission rates. In just the first year of this program, the state has saved \$47 million.^{xxi}



California estimates that by improving discharge planning within the state's Medicaid program and reducing hospital stays from avoidable readmissions by just one day, the state could save \$48 million.^{xxii}

III. What Is Causing High Readmissions?

High hospital readmission rates are influenced by many factors. It is important to acknowledge first that not every readmission is avoidable or preventable just because it takes place within 30 days of a discharge. Some readmissions are planned, and others are unrelated to the previous admission (as in the case of a car accident). These types of readmissions are generally warranted and not targeted for reductions. However, other readmissions are related to the original admission and may be a sign of inefficient care provided during or following the original hospital stay. For example, individuals admitted with a health crisis related to a chronic condition may be discharged and end up back in the hospital a few weeks later with similar symptoms. These readmissions may be deemed avoidable and preventable - and are the subject of federal, state reduction efforts.

Many factors can contribute to high avoidable readmission rates, ranging from the consumer population's average illness severity to the health care provider's approach to consumer education.^{xxiii} From a process improvement standpoint, four factors stand out as opportunities for providers and payers to enhance care management and reduce the likelihood of readmission.

Comorbidity:

Individuals with multiple comorbid conditions spanning physical and behavioral health tend to experience higher avoidable readmission rates. In many cases, behavioral health problems may be undiagnosed or undertreated in primary care or acute care settings and contribute to on-going health problems related to chronic physical health conditions.^{xxiv}

Lack Of Proper Discharge Planning:

Individuals experiencing an inpatient stay who do not receive proper discharge planning before, during, and after discharge are at increased risk of readmission. Discharge planning assures continuity of care during a consumer's transition from the hospital to outpatient care, and can reduce the likelihood of readmission.^{xxviii}

Non-Adherence To Discharge Planning:

When individuals receive proper discharge planning, they sometimes do not follow discharge plans which increases the likelihood of a readmission. Non-adherence to discharge plans can result from any number of factors including poor planning and communication, a lack of a culturally-competent approach to consumer education, lack of family support, medication reconciliation concerns that impede follow through, or from the consumer's inability or unwillingness to follow the plan.^{xxix,xxx}

What Conditions Are Causing High Readmission Rates? ^{xxv,xxvi,xxvii}

What are the top conditions causing readmissions? That depends on the demographics of the population:

Condition	# Readmits	Total Cost
MEDICARE:		
Congestive Heart Failure	134,500	\$1.7 billion
Septicemia	92,900	\$1.4 billion
Pneumonia	88,800	\$1.1 billion
MEDICAID:		
Mood disorders & SMI	77,400	\$588 m
Diabetes	23,700	\$251 m
Complications related to pregnancy & childbirth	21,500	\$211 m
COMMERCIAL:		
Maintenance chemotherapy	25,500	\$400 m
Mood disorders	19,600	\$290 m
Misc. complications of care	18,000	\$250 m

Medication Reconciliation:

Avoidable readmissions often result from challenges related to the prescription of new medications in an inpatient setting. New medications prescribed during a hospital stay may have duplicate or adverse properties to prescriptions already being taken by the consumer. New medications may have dosage or administration requirements which the consumer finds difficult to understand once they are home. Hospital staff may not have provided clear instructions to the consumer on how to take the medication or the importance of taking the medication. The consumer's health plan may not include the new medication's brand name in their formulary, creating a financial barrier to staying compliant. To reduce the likelihood of medication non-adherence, medication reconciliation should be a standard part of the discharge and inpatient follow-up process.

Strategies to reduce avoidable readmissions require a focus on these influencing factors and are essential to the post-acute provider's successful role in supporting home and community stability. A common element weaved throughout these is inefficiency – whether that be in the form of inefficient care coordination for individuals with co-occurring illnesses, inefficiency in planning and implementing discharge plans, or inefficiency or lack of attention to change in the post-acute care provider's processes. It is no longer acceptable for post-acute providers to simply offer a follow-up appointment within seven days of discharge. That offer is only the first step in several of adequate care management to prevent readmission. In each case, data-driven solutions and improvements in staff training are proving to become best practices for improving the quality of care provided.

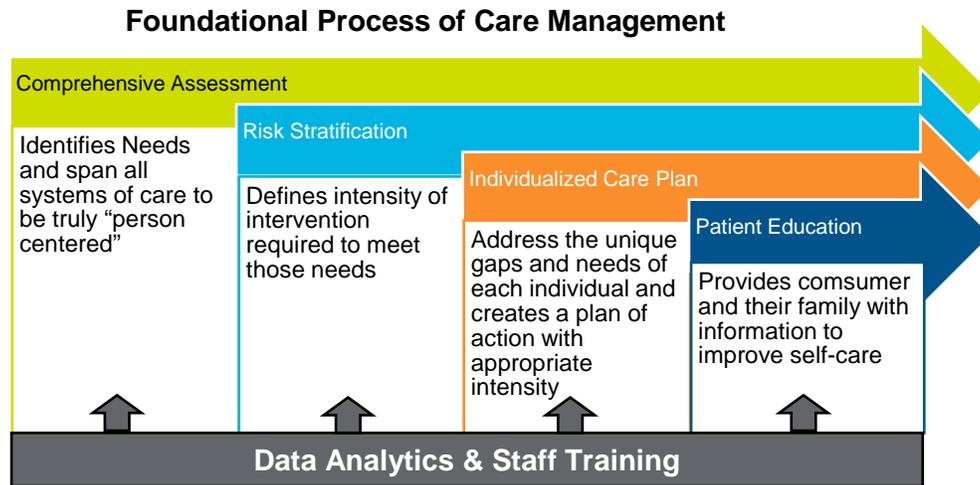
IV. Reducing Avoidable Admissions & Readmissions With Data Analytics & Improved Staff Training

Improving efficiency and reducing avoidable utilization starts with enhanced use of existing data to inform person-centered, preventative care management. Existing consumer data tends to be fragmented by systems of care so that consumers seeing multiple providers end up having multiple, uncoordinated, and incomplete medical records. In addition, utilizing medical records and consumer data doesn't provide a complete, accurate, and comprehensive holistic view of the consumer's history of care, care providers, and medications prior to and during hospitalization. There are several ways to bring in more robust data sources to inform the care management process, including access to paid claims data for a full view of the consumer's treatment history and past diagnoses. New health care delivery paradigms have increased data sharing transparency between payers and providers; progressive payers who are seeking more accountability and shared risk with providers are more willing to disclose data for certain care management processes that lower costs, such as hospital readmission reduction. This type of data coupled with actionable data analytics reveals important information about consumer needs and vulnerabilities for potential readmission. The care management interventions defined by even the best data analytics platforms are only as good as the data that populates them.

Effective data analytics shows what interventions need to take place in order to improve care quality – but this improvement is possible only when analytics are coupled with improvements to the “human component” of care. In this age of data, the human component to quality improvement can be overlooked. New training is required in order to assure care management teams are well-equipped to make maximum use of data analytics. Care management activities go beyond the fee-for-service appointment scheduling that is typical of traditional post-acute provider settings. Understanding the workflow processes and additional clinical assessments and interventions needed for successful post-acute stability requires well-planned and continuous training in processes and protocols that are new to the typical outpatient setting, such as medication reconciliation, depression screenings, SBIRT training, pain management, differential diagnosis (e.g., diabetes shock vs. psychotic episode), impact of antibiotics in the elderly, risk of falls in the elderly, etc. New evidence-based care management practices inform the analytics process and execute the interventions called for by the analytics. State-of-the-art training of staff to advance best practices in care management can exponentially improve the power of data analytics by maximizing the human component.

The Foundation Of Care Management Practices

Medicaid health homes, ACOs, patient centered medical homes (PCMHs), and other person-centered models of care are the laboratories for new models of care management focused on readmission reductions. These organizations reduce this risk by engaging in a comprehensive, person-centered care management process which remains a key strategy to reducing avoidable hospital utilization. Although the concept of care management has been around for decades, new evidence-based practices have transformed care management into a more intensive process.



This care management process is staged so that each component is a building block or foundation for the one that follows. Through each step of this process, data analytics and staff training can assure maximum efficiency and improved outcomes.

Comprehensive Assessments

When new consumers are onboarded into a care management program, it is essential to identify each individual's unique health problems, risks, and care needs. For consumers with complex conditions, this requires more than a warm handoff and a read through the consumer's medical records. Existing consumer data including diagnoses, past utilization, medications, and health history should populate data analytics algorithms that inform the care management process. At the onset of care management, providers often have an incomplete view of a consumer's health history. To supplement existing consumer data and to improve the capabilities of data analytics, the consumer onboarding process should start with a comprehensive intake assessment or evaluation aimed at identifying each consumer's care gaps and health needs. This assessment is usually in the form of an in-person questionnaire that spans multiple dimensions:

Health History:

Capturing the consumer's existing diagnoses, recent utilization patterns, and treatment history in all systems is essential to understanding the severity of their illness and will also inform care managers as to the potential risk of admission or readmission in the future. Consumer-reported information can sometimes be unreliable. Having robust claims data information is the most reliable set of data for capturing a clear picture of past service and diagnostic history, past problems with adherence, and evidence of care fragmentation and redundancies prior to the hospital admission.

Medication Reconciliation:

It is important to record the consumer's current medications, dosages, and administration patterns, as well as ascertain whether or not prescribed medications are actually being taken. Again, a claims history of past medication and medication fill rates is the most reliable data available for this purpose and many payers are providing this information to post-acute providers with "skin in the game" regarding readmission reduction. Medication reconciliation assures that individuals are not prescribed duplicate medications or medications with adverse interactions. Moreover, having a history of past medication use can indicate additional health problems and barriers that could otherwise go unnoticed.

Physical Health, Behavioral Health, Psychosocial, & Human Service Needs:

Because of the historic fragmentation of data, comprehensive care management requires providers to reach past traditional care boundaries to identify all possible health and human service needs and

"Mood disorders such as depression are the third most common cause of hospitalization among non-elderly adults, yet 60% of individuals suffering from chronic depression have not received treatment for it within the last year."

recognize the interrelated nature of co-occurring conditions. To achieve this, assessments should be comprehensive and standardized to include screenings for symptoms of potentially unidentified needs and barriers. Repeat hospital utilization can be caused by an underlying condition that has been previously undiagnosed or under-treated.^{xxxix} Social, environmental, or economic determinants of health should be recorded, such as homelessness, joblessness, and history of domestic violence.

Comorbid behavioral health conditions that accompany chronic conditions are a particularly common contributor to repeat utilization.

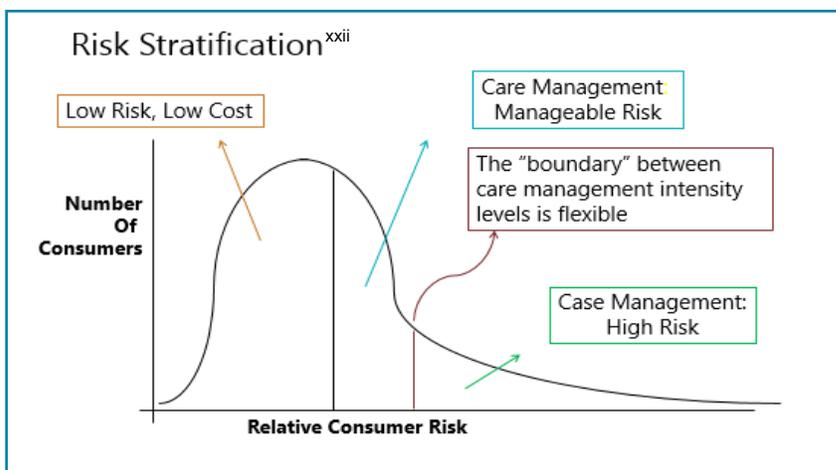
In fact, mood disorders such as depression are the third most common cause of hospitalization among non-elderly adults, yet 60% of individuals suffering from chronic depression have not received treatment for it within the last year.^{xxxii} A high-performing data analytics solution will use the information collected in the assessment to identify risks, care gaps, and inform a proper care management response.

Risk Stratification

Risk stratification aids in assuring efficient resource allocation of care management staff and serves as an important building block in the creation of care management plans. Analytics-informed risk stratification will identify which consumers are most at risk of admission, using health barriers, care gaps, and care management needs identified in the assessment process to assign consumers to targeted levels of care management intensity. A consumer with diabetes without complications, who has good blood sugar control, and has not experienced a hospitalization within the last year, is of lesser risk of admission and requires less intensive care management than the consumer with hypertension with consistently high blood pressure readings, who has not filled his beta blocker prescription in the last 90 days, and who also suffers from depression.

A high-performing data analytics platform will be capable of using risk factors identified in the assessment process to populate a risk model that:

- Assigns weights to various risk factors present within a consumer's data in terms of their influence on potential future utilization
- Stratifies each individual into an appropriate risk level that advises to the intensity of care management required to achieve improvements in health outcomes
- Flags consumers who are non-adherent to medications or non-compliant with previously-defined care management care plans
- Provides decision support to clinicians to assure that the most appropriate, preventative care is provided.



Individualized Care Plans

Risk stratification organizes consumers into risk tiers that advise on the intensity of care management required. But to be "consumer-centered," care management plans must be individualized and specific to the unique health and human service needs of each person across all systems of care. Recognizing the interrelatedness of a person's health and human service needs is key to improving health outcomes and reducing future avoidable utilization. Where consumers require care in areas outside of an organization's traditional services, care managers should work to refer consumers to the proper community provider or human service agency.

Creating Individualized Care Plans:

Essentially, each care gap or health and human service need should be identified during the assessment process and be assigned a care management intervention designed to meet that need. Measurable health improvement goals should be assigned to each of these gaps and needs. Goals provide both the consumer and the care management team with a common mission and serve to show progress over time. Goals should be made in partnership with the consumer to improve buy-in and should be set in a way that the consumer can show progress in short-term intervals, as these are easier to work toward than more aggressive, long-term goals.

Managing Care Plans:

Once care plans are established, health improvement goals should be fed into consumer electronic health records. These goals help to define the care management process while analytics tools track consumer progress toward goals and flag consumers who may be non-adherent. Proper staff training will assure that all members of the care team are uniformly using individualized care plans and health improvement goals to inform the care management process.

Consumer Education:

A nearly universal goal of individualized care plans is continual health improvement. For individuals whose risk stratification calls for more intensive levels of care management, health improvement goals should ultimately aim to improve their wellbeing to a great enough extent that they require less intensive interventions, thereby “graduating” to a lower risk level.^{xxxiv} For example, a consumer with an out of control chronic condition could have short-term health improvement goals focused on improving self-monitoring and lifestyle choices as a means to get their condition under control. Once the condition has been properly managed and the consumer has shown longitudinal, sustained management of their condition, the individual is re-assessed and shown to be of a lesser risk. The individual is then graduated to a less intensive form of care management with new health improvement goals focused on preventative therapies and health maintenance.

A central strategy to delivering on this is improved consumer education. Individuals can lack an understanding of proper management of their illnesses. This is especially true when a new condition or new medication is prescribed during an inpatient stay. A lack of understanding can contribute to an avoidable readmission. Consumers, and when possible, their families, should be provided education about their illnesses, the proper management of illnesses, recognizing symptoms and how to respond to symptoms, the importance of medication adherence, and other prescribed therapies. This education should be provided using non-clinical terminology, using language- and literacy-appropriate language. Consumers should be able to recite back to the provider, an understanding of what their condition is and how it should be treated.^{xxxv}

Examples of 6-month health improvement goals:

- Remain on antipsychotic and attend at least 12 cognitive behavioral therapy appointments
- Enroll in smoking cessation program and remaining active for 6 months
- Maintain weekly phone contact with your care manager to discuss medication adherence and overall health and wellbeing.
- Test blood sugar at least three times daily and reduce hemoglobin A1c to below 8.0 in 6 months and 7.0 in 12 months
- Maintain exercise journal and engage in aerobic exercise for 30 minutes, 3 times each week.

Providers can help to standardize consumer and family education through the use of decision support tools made possible through data analytics software. For example, when a new diagnosis or a change in medication is made, automated decision support can remind clinicians to provide the consumer with a flier about their condition or medication. New technology, such as educational YouTube videos, describing evidence-based treatment of various conditions and other electronic social media formats can supplement real-time consumer education efforts.^{xxxvi} By automating these processes, providers can assure consistent efforts are made with consumer education.

Standardizing consumer education as a consistent part of caregiving also requires training of clinical and care management staff on the importance of education and how to provide it in a way that maximizes its value. For individuals who require it, education efforts can be made part of consumers' health improvement goals.

Staff Training & Education

Interestingly, it has been shown that a precursor for a successful consumer health education and consumer activation program is a health and wellness education program for the care team itself. When the care team members receive focused education on health and wellness applied to their personal lives, their ability to assist consumers with consumer activation and engagement in their own health improves.

Adequate staff training and support are essential investments to assure successful post-discharge care management in a value-based population health paradigm. A well-trained care management workforce will execute strategies called for by data analytics. This goes beyond the simple act of scheduling a post-discharge appointment. Best practices are continually evolving and post-acute providers must be well trained in the system and change processes necessary to manage multiple data flows that make up the backbone of data-informed care management, including care coordination workflow management tools, population-based disease management registries, and decision support technologies.

Clinicians serving as care managers should be well-trained in appropriate "bedside" manner, identifying and assessing for risks associated with higher risk of readmission, cultural competencies and sensitivity, the impact of social determinants on risk stratification, and care management best practices related to motivational interviewing techniques and strategies maximizing the assessment and risk stratification processes.

Serving as a post-acute provider is more than having an appointment available. On-going and organized training support for post-acute providers moving from a FFS paradigm to a care management paradigm is essential.

These strategies are designed to assess and identify risks and assign individually-appropriate care management based on those risks. Together, individualized comprehensive care management addresses risk factors and acts to reduce the chance of readmission. These strategies improve care for individuals with comorbidities by executing a holistic approach that spans traditional systems of care and is focused on health promotion. At each step of this process, actionable data analytics coupled with staff training can enhance care management by using data to identify risks, match those risks with appropriate levels of care management, and track each individual's progress toward health goals.

V. Hospital Discharge Process: An Opportunity For Care Management Improvement

When individuals are discharged from an inpatient setting, a lack of proper discharge planning can itself contribute to subsequent readmissions. Consumers may not be educated on new medications or management of newly-diagnosed conditions, and may not have information on proper follow-up care.

“Successful discharge planning starts before the discharge takes place.”

Even if such education is provided, consumers may be overwhelmed with information and may fail to follow up. Hospitals which now face penalties for high readmission rates are more likely than ever to seek partnerships with post-acute providers to focus on this effort, providing an opportunity to post-acute providers to take on a larger role in the discharge process.

Before The Discharge Takes Place

Successful discharge planning starts before the discharge occurs. For consumer populations with a high risk of readmission, hospitals and post-acute providers should work to assure that a warm handoff to the consumer’s primary provider takes place at discharge to increase adherence to post-discharge care plans. Warm handoffs have been shown to reduce readmissions and improve consumer satisfaction during vulnerable transitions of care.^{xxxvii} Key components to a warm handoff include:

- Communication and data exchange between the hospital and the post-acute provider. Consumer information should be exchanged before the discharge.
- Clear instructions to the consumer’s post-acute provider covering what took place during the inpatient stay, prescribed follow-up care, medication changes, and other instructions to assure a seamless transition.
- A teach-back process whereby consumers recite their post-discharge care plans and any new medication doses or self-care management practices to the discharge staff to assure that they properly understand the plan.

Finally, the discharge plan should be populated into the post-acute provider’s records and analytics platform to make necessary adjustments to the consumer’s assessment, risk stratification, care management plan, and health improvement goals.

One way to assure that a warm handoff takes place is to work with partnering hospitals on a re-designed discharge process that institutes strategies, such as admission notifications, to make post-acute providers aware of an admission. Even when a post-acute provider does not know about a hospitalization until after the discharge, it is still critical that communication is made with the hospital to ascertain the appropriate information to assure proper follow-up care. Data analytics should include a notification system any time an admission or discharge is recorded in a consumer’s claims or utilization data. Such notifications should trigger automatic responses by the care management team that are tailored to each consumer’s risk stratification and care management plan.

After The Discharge Takes Place

The time period immediately following a discharge is ripe with risk for readmission. In part, a warm handoff assures a smooth transition to outpatient-based care management. It assures that everyone who is part of the consumer's care team (including the consumer) is versed in the post-discharge care plan. Then the plan must be seamlessly executed. The following components of successful follow-up care should be accounted for in the post-acute provider's care management process:

- ***Risk Stratification:*** The follow-up plan, like the broader care management approach, should be informed by risk stratified data analytics so that those individuals who are most at risk for readmission receive a higher intensity form of follow-up care. Regular care management check-in phone calls, to or from the consumer, are a common strategy used for higher-risk individuals.
- ***Timeliness:*** Consumers should be engaged in outpatient-based follow-up appointments in a timely manner. Healthcare Effectiveness Data and Information Set (HEDIS) measures define the timeliness for various targeted conditions to between 7 and 14 days following the discharge – but beyond these, each consumer's individual risk factors and illness severity should inform the appropriate timeliness of their follow-up care. For consumers at risk of cancelling or failing to show up to appointments, reminder systems or other strategies should be put in place to maximize adherence to the post-discharge care plan.
- ***Consumer Education:*** Whereas in the discharge process a check is made to ensure that the discharge plan is clearly communicated to the consumer, following the discharge, this check should happen a second time – this time to guarantee that the plan remains understood by the consumer. Consumer education should include information on proper self-management and awareness of how lifestyle changes could impact overall health and wellbeing. This should be done in addition to the education process that took place during the discharge. Frequently, consumers are overwhelmed with information during the discharge process. On-going consumer education is key to assuring compliance with the post-discharge plan.
- ***Medication Reconciliation:*** Any new medications prescribed while in inpatient care should be recorded into care management plans and assessment documents, checked for adverse interactions with current medications, and adherence should be monitored. Medication non-adherence is a common cause for readmissions.^{xxxviii} Non-adherence can come in the form of failing to take new medication or administering a new medication with the wrong dose, at the wrong time, or in the wrong manner. Consumer education improves adherence, but other factors such as inability to pay for prescriptions can also factor in.

Finally, care managers need to make accompanying adjustments to the consumer's care management plan. Any new risks or health problems uncovered during or after the inpatient stay should be recorded into the consumer's care plan and any adjustments needed should be made to their health improvement goals and to the intensity of care management.

Systemic & On-Going Activities To Support End-To-End Discharge Transitions

Building a formalized partnership with an inpatient provider to reduce readmissions requires post-acute providers to invest in the necessary inputs required for discharge care management success. Feeding every step of this care management process – from assessments to risk stratification to the formulation of person-centered care plans – are data-driven inputs which are required in order to produce efficient, individualized care management, including:

- Electronic Records With The Ability To Accept Real-Time Health Information Exchange (HIE) And/Or Admission, Discharge, And Transfer System (ADT) Data: access to electronic data is a prerequisite to use of analytics. Electronic records with longitudinal consumer data provide invaluable insights into consumer risks, gaps in care, and health needs. When supplemented with real-time HIE or ADT data, a comprehensive view of each consumer's health problems and needs can be assessed.
- Data Analytics And Decision Support Tools: Software that supplements electronic health data serves to inform the care management process and improve organizational efficiency by aligning care with evidence-based protocols and best practices.
- On-Going Training And Educational Support: In order to maximize the use of analytics software and assure the provision of continually-evolving best practices in care management, staff training should be provided to all care management and clinical staff.

These investments are strategically important to any post-acute provider seeking a greater role in care for consumers following a hospital discharge. The on-going growth of value-based purchasing is a catalyst necessitating these investments as organizations take on greater risk for the care of consumer populations.

VI. Summary

Reducing readmissions is a worthy goal of all providers – not just hospitals. If an avoidable readmission is an indicator of system inefficiency, then to a degree, achieving decreased readmissions is a logical result of improved outpatient-based care management.

Readmission reductions are possible through the use of evidence-based data analytics reporting and decision support tools that improve outcomes and quality and reduce system inefficiencies which are the net cause of avoidable readmissions.

An effective analytics platform can be used to simultaneously identify consumers who are at heightened risk of readmissions and provide decision support to clinicians that improves the use of evidence-based treatment. This platform should go a step further to produce performance reports showing performance at both the organizational and individual staff or team levels to reduce readmissions over time.

This reporting improves an organization's ability to invest training resources into those departments or individual staff persons who require them most. Training also assures that staff have command of the latest evidence-based care management techniques and strategies, which further empower organizations to reduce avoidable readmissions. Improvements in care management can then be accompanied by workflow changes through the use of state-of-the-art training that links performance to evidence-based industry best practices.

VII. The Post-Acute Provider's Readmission Reduction Checklist

Care Management Process

- Aggregate all available sources of data into a single data analytics platform

I. Comprehensive Assessment Should Include:

Health History

- Diagnoses
- Utilization patterns
- Treatment history

Medication Reconciliation

- Current medications
- Dosage
- Administration patterns
- Check for duplicate medications or adverse drug interactions

Summary Of Health And Human Service Needs

- Physical health
- Behavioral health
- Psychosocial barriers
- Determinants of health (social, economic, environmental)

II. Risk Stratification Process Driven By Data Analytics Capable Of:

- Assigning weights to risk factors
- Stratifying individuals into appropriate risk levels
- Checking for on-going medication adherence
- Evidence-based decision support to assure appropriate level of care management for each individual

III. Individualized Care Plans That:

- Assign care management interventions to each care gap and health risk identified in the assessment process
- Assign measurable short-term health improvement goals
- Populate care plans into the electronic records and analytics platform to inform the care management process
- Track progress toward goals and flag consumers who may be non-adherent

IV. Consumer Education Should Include:

- Education to both the consumer and when possible, their family
- Educational Topics:
 - Understanding your illness
 - Proper management of illness
 - Recognizing and responding to symptoms
 - Importance of medication adherence
 - Importance of other therapy adherence
- Education provided using language- and literacy-appropriate methods.
- Teach-back from the consumer to assure understanding.
- Data analytics including decision support to automate and standardize education

V. On-Going Staff Support & Education:

- Health and wellness for the care team
- Assessment of risks associated with readmission
- The social determinants of health: why and how
- Motivational interviewing
- Depression 101
- Managing pain in post-acute settings

Hospital Discharge Planning

I. Before the Discharge: A Warm Handoff Process

- Communication between hospital and post-acute provider
- Proper data exchange between hospital and post-acute provider

Clear instructions given to provider covering:

- What care took place
- Prescribed follow-up care
- Medication changes
- Consumer teach back process

Data populated into post-acute provider's records and corresponding adjustments made to the consumer's:

- Risk stratification
- Care management plan
- Health improvement goals

II. After The Discharge

- Follow-up care intensity informed by risk stratification analytics
- Follow-up appointments made in timely manner with appropriate reminder systems in place to maximize adherence to plan

Consumer Education

- Assure discharge plan is clearly understood
- Assure consumer is well-versed in self-management

Medication reconciliation

- New medications are populated into records with checks for duplications or adverse reactions
- Adherence to medications is monitored with claims data

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