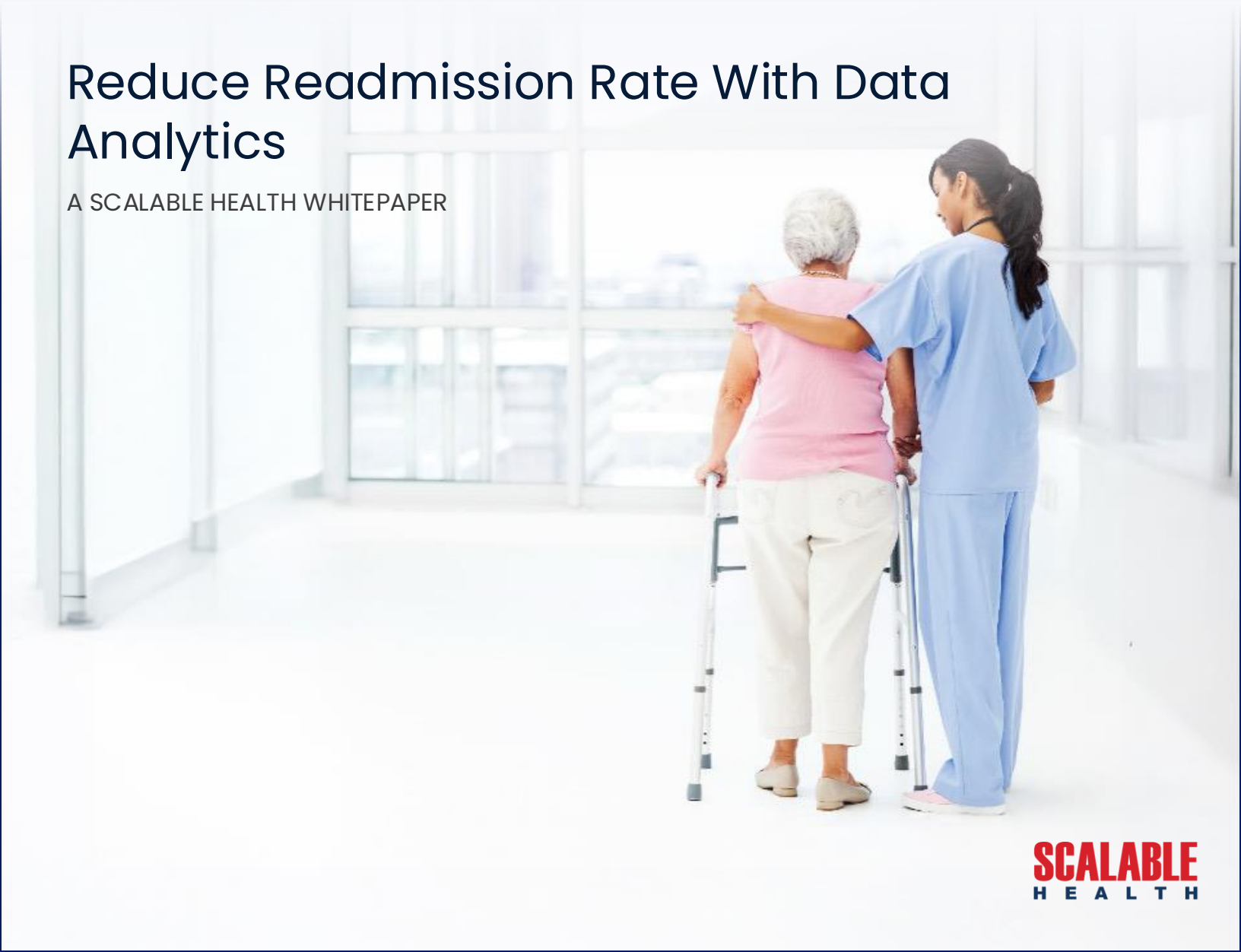
Reduce Readmission Rate With Data Analytics

A SCALABLE HEALTH WHITEPAPER



SCALABLE HEALTH

TABLE OF CONTENT

DATA DRIVEN HEALTHCARE TO IMPROVE READMISSION RATE

Facilitating successful patient transitions across the spectrum of care and reducing hospital readmission rates are primary objectives for healthcare providers, insurers and others as the healthcare industry strives to improve clinical outcomes while reducing costs. To thrive in the competitive landscape, healthcare organizations must become data driven. Predictive analytics extends beyond simple risk scoring allowing providers to integrate and interpret unstructured data, analyze information in real-time, recommend intervention options, personalize and systematize pre-admission outreach, and facilitate care coordination across hospital systems. These data-driven decisions improve the quality of care at a hospital, potentially minimizing hospital stays and driving down readmission rates.

UNDERSTAND THE IMPACT OF POTENTIALLY AVOIDABLE READMISSIONS

Most hospitals face 15-18% readmission rates. According to experts up to 12% of those readmits can be avoided.

Understanding the impact of potentially avoidable readmissions needs careful consideration with risk-adjustment tools and techniques that can be converted into enhanced care coordination to support both patient and hospital staff. The good news is that today's analytics techniques can help providers minimize their readmission rates and length of stay (LOS). This advancement allows healthcare providers to better record, track and analyze patient data to make real-time predictions about patient risk factors and determine which patient is likely to encounter post-discharge difficulties. In addition, the use of data analytics will help hospitals identify common factors driving length of stay to continually improve their clinical protocols and achieve better outcomes.

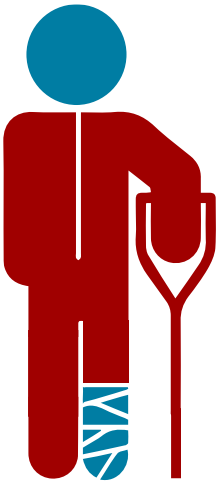
30 DAYS READMISSION RATES TO U.S HOSPITALS

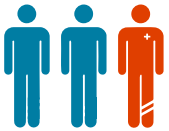
1 in 5

patients with these procedures were readmitted

23%
Amputation of the lower extremity

19%
Amputation of the lower extremity





1 in 3

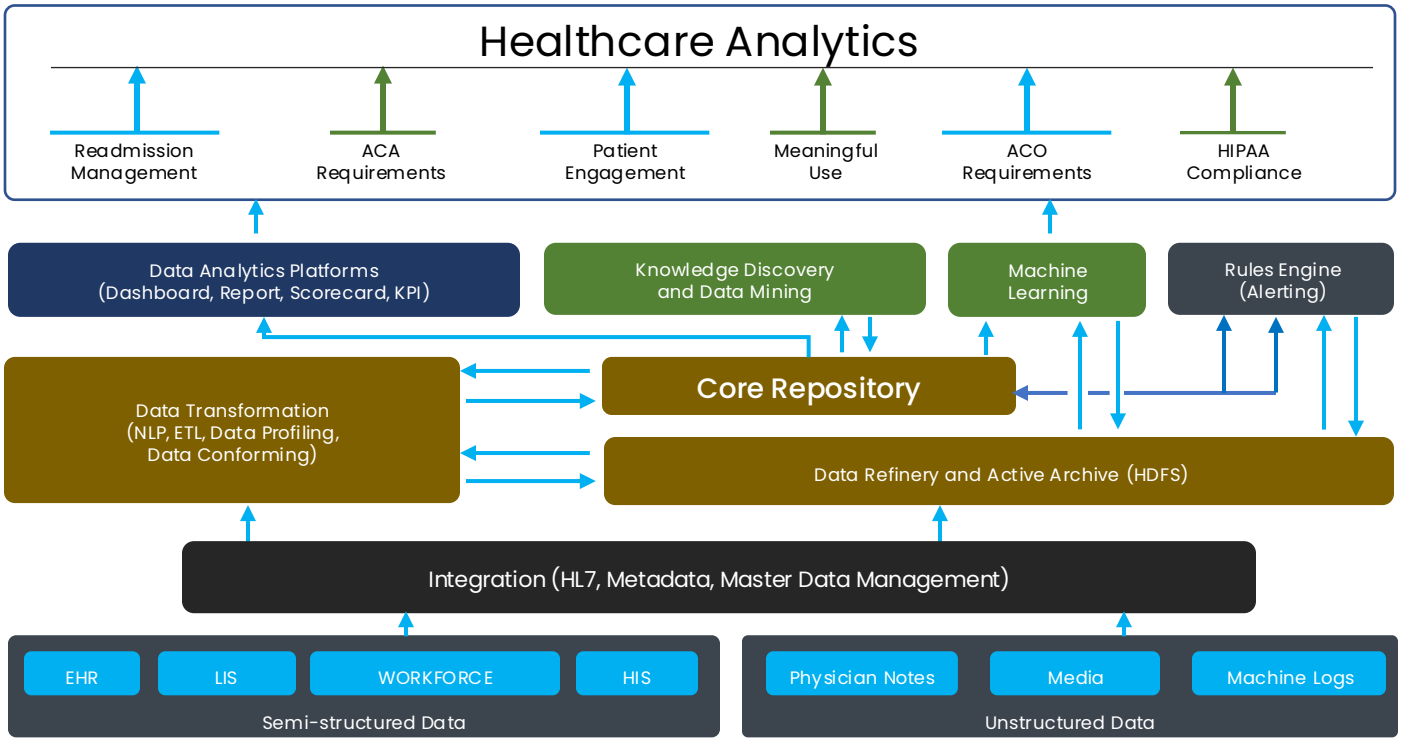
patients with these diagnosis were readmitted

32%
Sickle cell anemia

32%
Gangrene

JOURNEY TO DATA ANALYTICS FOR READMISSION MANAGEMENT

Patient readmissions are a major burden on the healthcare system, costing over $25 billion annually. Hospitals are prioritizing reducing admissions and length of stay to improve patient care, lower expenses, and enhance the overall patient experience. Knowing and acting on both these aspects is key to any health system's commitment to minimize unnecessary readmission and enhance care coordination. Data analytics solutions allow hospital to estimate the financial impact of improvements in quality and patient care based on readmission rates.



DATA DRIVEN HEALTHCARE FOR BETTER DISEASE MANAGEMENT: COPD, HEART FAILURE, AMI, PNEUMONIA AND THA/TKA

CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

Acute pain and frequent re-hospitalization have a hostile impact on the long-term clinical sequence of patients with Chronic Obstructive Pulmonary Disease (COPD), beside being very expensive. According to reports, one out of five index admissions for COPD (20.5 percent) were followed by a readmission within 30 days in US. Measuring readmission of COPD patients will create incentives to capitalize on interventions to improve hospital care, better evaluate the inclination of patients for discharge and facilitate transitions to outpatient status.

This will enable hospitals to build health information exchange for identifying COPD patients on admission, plan individualized care management program and display each patient's progress and compliance with treatment. Data analytics offers clinicians the ability to drill down into each episode of care and assess the timeliness of interventions and ensure the interventions were taking place at right time for COPD patients.

HEART FAILURE (HF)

Despite drastic improvement in patient outcomes with medical therapy, admission rates succeeding heart failure hospitalization remains high, with patients readmitted to hospital within 6 months of discharge. Approximately 55% of HF patients are re-hospitalized within 6 months of discharge and 75% of the re-hospitalizations are related to worsening of previously diagnosed HF. It is crucial to find realistic tactics for each health system to further ease heart failure readmissions and increase patient outcomes and healthcare performance.

Hospitals can significantly reduce heart failure readmissions by implementing a structured approach: first, identify and risk-stratify patients through disease management programs. Then, using data analytics, multidisciplinary teams can pinpoint readmission drivers and apply evidence-based interventions to improve patient outcomes.

HEART ATTACK (AMI)

Higher hospital readmission rate and unsolved inconsistency in those rates indicate complications in quality of care and outpatient management following discharge of heart attack (AMI) patients. Hospitals need to look beyond their walls and improve care coordination across providers.

Using chronic disease management can classify at-risk patients to deliver integrated care, avoid preventable emergency department appointments and re-hospitalizations of patients with AMI. Data analytics enable physicians to work with AMI patients and monitor from their home through the use of electronic devices that communicate patient data directly into their office.

PNEUMONIA

Readmission of pneumonia patients following an inpatient hospitalization is fairly common. Yet in the interest of encouraging higher-quality, patient-centered care and accountability, the unanswered question remain is use of data analytics to reduce readmission of patients.

Data analytics in health systems enhances pneumonia patient engagement while offering organizations to achieve better personalized care management during higher-risk readmission period. It allows health systems to stratify, analyze and manage pneumonia patients to enable early identification of evolving readmission risk factors and enhance pre-discharge care coordination.

THA/TKA (HIP OR KNEE ARTHROPLASTY)

Hospitals differ in their readmission rate. Analysis of patients demonstrate that 25% are re-admitted for elective Total Hip Arthroplasty (THA) and Total Knee Arthroplasty (TKA), suggesting room for improvement in clinical care.

Monitoring and reporting THA/TKA readmission rates is crucial for understanding progress in patient care quality and outcomes. Additionally, predictive modelling provides patients with valuable information to make informed decisions about where to receive care, leading to a potential reduction in avoidable readmissions.

REDUCING HOSPITAL READMISSION RATES AND IMPROVING THE CONTINUUM OF CARE

Predictive analytics models are used to categorize at-risk patients for poor outcomes, such as those most likely to be readmitted to medical facilities. It helps hospitals avert complications and ensure the healthcare providers get the most precise data estimates in real-time to minimize complications in high-risk patients.

The Imperative to Reduce Costs

Every aspect of healthcare delivery system is evaluated in an effort to continually improve healthcare outcomes while minimizing the costs. Predictive analytics can identify unique factors impacting the hospital's readmission rates. Understanding these aspects allow providers to intervene and refine treatment options before a risk scenario arises, thus helping to reduce the costs.

Begin Care Coordination Prior To Discharge

Care coordination is a cognizant effort to ensure that all key information needed to make clinical decisions is available to patients and providers. Patients in greatest need of care coordination include those with multiple chronic medical conditions, concurrent care from several health professionals, many medications, and extensive diagnostic workups, or transitions from one care setting to another.

Continuing care coordination after discharge

Experienced care coordinators should guide patients through their first month out of the hospital - this is when most avoidable relapses and readmissions occur. A detailed schedule should be established that includes: regular phone calls; confirmation that all the proper medicine and durable medical equipment is in order; reminders for doctor appointments; facilitation of transportation to and from doctor appointments.

CONCLUSION

Data analytics tools are streamlining and improving the safety of care transitions within primary care. Driven by healthcare reform, we anticipate increased support for readmission prevention and efficient care delivery in the coming years, with a strong emphasis on reducing readmissions rates and enhancing clinical outcomes.

Despite variations in data quality, the healthcare industry recognizes the importance of analyzing patient records. By applying clinical knowledge, research, and predictive analytics, clinicians can identify high-risk readmission patients. This enables them to coordinate safe and effective transitions from hospital to home.

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