TRANSFORMING CARE DELIVERY

THE POWER OF CLINICAL VARIATION MANAGEMENT
About The Chartis Group

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Health systems need to focus on three primary areas to achieve significant improvements in acute care delivery performance. The three drivers of performance are: 1) Optimizing Patient Access and Throughput; 2) Aligning Capacity and Demand; and 3) Managing Clinical Variation. To date, most organizations have focused on the first two drivers. Improved patient throughput and demand management have allowed organizations to expand capacity and simplify patients’ access to needed healthcare services enabling increased volumes and streamlined transitions between care settings. These initiatives have demonstrated the importance of an interdisciplinary team approach to process and care redesign and have helped create a solid foundation for organizations to address the third driver – clinical variation management (CVM).

CVM is challenging to execute but is required to achieve and sustain next-level performance. Reducing variability has been a key factor in improving quality and efficiency in manufacturing and other production processes. Research across many industries, including healthcare, has demonstrated the poor outcomes and inefficiencies that result from high levels of process variability, and the potential quality and economic value from increased standardization. Reducing variation has enabled significant improvements in patient outcomes and financial performance across a range of clinical areas. Proactive management of variation in clinical practice and supporting processes requires active physician engagement and leadership, strengthening of foundational competencies and a culture of continuous performance improvement. This paper describes a framework and approach to help health systems address the main causes of clinical variation and achieve significant improvements in performance.

The Power of Clinical Variation Management

Acute care providers are striving to simultaneously manage costs and improve patient outcomes and experience. Health systems risk losing valuable contracts and financial incentives in most communities if they are unable to demonstrate value. As organizations assume greater accountability for the costs and outcomes of care through a variety of payment models, reductions in length of stay (LOS), complication rates, mortality and potentially avoidable admissions and readmissions are required to
achieve needed savings. There are numerous examples across the country of hospitals and health systems realizing positive financial impact and improved outcomes through effective CVM implementation. The examples below illustrate the types of measurable improvement that can be achieved:

- A Midwestern hospital achieved a 36% LOS reduction among total joint replacement patients, resulting in a savings of $1 million, after implementing a multidisciplinary, evidence-based process improvement project.\(^1\)

- A Northeastern Academic Medical Center demonstrated a first-year LOS reduction of two days for community-acquired pneumonia (CAP) patients, resulting in improved patient experience, expanded capacity and increased revenue to the system, after implementing clinician-supported, evidence-based care guidelines.\(^2\)

- A large multi-hospital intensive care unit (ICU) initiative to reduce central line associated blood stream infections (CLABSI) increased the percent of months with zero CLABSI observations from 59% to 80% in a nine-month period.\(^3\)

- A multi-hospital system program to standardize the use of chlorhexidine for vascular catheter site care resulted in savings of $6K-$50K per averted infection.\(^4\)

The examples above illustrate the power of CVM. However, CVM is challenging to implement due to the required clinician engagement and alignment around adoption and use of evidence-based medicine (EBM). Clinicians must acknowledge the potentially negative impact of individual physician behavior and decisions, driven by individual belief and experience, which cause variation in test ordering, care management and patient treatments. The subtle influence of the “physician’s pen” can lead to higher costs and poor quality care over time – dual effects of clinical variation.

**Effective Clinical Variation Management: How to Get There**

Health systems have invested significant resources to improve quality and safety. However, few have successfully designed and implemented a comprehensive, system-wide approach to reduce clinical variation. There are many barriers to effective CVM including a patient care structure that is often poorly coordinated across the organization, resulting in a culture of reactive, rather than proactive, outcomes management. Care teams often lack the right tools and information which limits their ability to take control of patient care outcomes. Clinician distrust of externally developed care approaches makes it difficult to gain agreement on standard care plans and practices, particularly in areas of high care complexity. It is very difficult to implement a comprehensive and sustainable CVM program without a disciplined approach to standardization and consensus around leading clinical practices, both of which require active involvement of clinicians and other care team members.

Due to these barriers, health systems frequently begin with a series of small steps, gradually increasing levels of sophistication, compliance and adherence. For example, some organizations start by gaining agreement around internal ‘best practices’ already in use by their staff clinicians and by adopting standardized care pathways. Eventually, the health system may incorporate some external leading practices, before finally adopting the full set of customized EBM practices, along with robust
compliance monitoring. This type of gradual progression is also common in the development and implementation of standardized, condition-specific clinical care processes. The limitation of this approach is that changes made in certain departments may be inconsistent or incompatible with practices and processes in other parts of the organization. In addition, because this type of change is localized and limited to a small group of patients, the broader organization may not recognize or fully realize the potential return on investment, leading to organizational resistance to making needed change.

A coordinated, proactive approach to CVM that builds the organization’s foundational competencies, while addressing variation in both clinical practice and supporting processes, can be a transformative driver of change for the entire system, enabling dramatic and enduring gains in care quality and financial performance. In the framework below, CVM is defined as “the application of evidence-based medicine, derived from research, clinical experience and patient preferences, to align clinical practice and process in support of delivering effective and reliable care.” The framework details the five foundational competencies and two essential elements needed to effectively manage variation in clinical decision-making and supporting processes:

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Quality  Efficacy  Patient Experience  Efficiency  Reliability
Building Foundational Competencies

There are five foundational competencies needed for organizations embarking on this journey including:

1. **Aligned & Accountable Leadership:** Leadership committed to clearly defined goals and a shared vision is required to move the organization forward.

2. **Clinical Performance Improvement Infrastructure:** The existence of clinical performance improvement expertise, training and tools; experienced staff able to engage clinicians; and highly functional quality governance and management is needed to support the needed change.

3. **Clinical Informatics and Analysis:** Alignment among clinicians and other stakeholders is aided by robust clinical informatics and analytic capabilities that allow “drill-down” into actionable improvement areas and provide quantifiable, reliable evidence of opportunities.

4. **Communications and Information Sharing:** Effective, system-wide communications, consistent messaging and information-sharing are key to promoting understanding, support and accountability for specific initiatives and ongoing performance improvement, as well as for the interdisciplinary care coordination and hand-offs integral to effective CVM.

5. **Patient and Family Engagement:** An organizational commitment and approach to engaging patients and families in performance improvement efforts, as well as in their individual clinical care, is essential to optimizing care delivery.

While not all of the foundational competencies need to be in place to begin a CVM initiative, a sufficient “threshold” level is required in order to implement and sustain the changes needed to effectively manage variation and realize the potential benefits.

Managing Variation in Clinical Decision-Making

An integrated approach that addresses both practice and process variation, while continuing to bolster foundational competencies, is the most effective way to achieve lasting improvements. Inconsistent care delivery based on individual preferences rather than clinical evidence, results in clinical practice variation causing poor outcomes and high costs. Complex chronic diseases such as congestive heart failure, acute conditions with high morbidity and mortality such as pneumonia or stroke, and preventable hospital-acquired conditions (HACs) such as venous thromboembolism, are examples of clinical conditions with significant practice variation. Improving outcomes in these and other high impact conditions requires strong clinician champions who can drive consensus around specific EBM guidelines, pathways and orders, and who have the authority to own and guide the process, and manage dissent. These clinical champions lead multi-disciplinary clinical care teams in the development and implementation of condition-specific practices that are evidence-based and patient-centered. Clinician compliance is supported through the use of consistent, credible and transparent metrics and monitoring.
Managing Variation in Supporting Processes

Evidence-based clinical practices are most effective and sustainable when they fit seamlessly into daily work routines which are enabled by consistent supporting processes. In this context, supporting processes are defined as the essential enablers to superior clinical practice and care delivery. When workflows, teams, structures, functions and tools lack consistency, the resulting variation of supporting processes leads to suboptimal implementation of clinical practices, which diminishes patient experience and outcomes and increases provider frustration. For example, it is impossible to successfully manage care against a standard, evidence-based clinical guideline without a structured model for the care team to communicate changes in a patient’s status or progress against clinical milestones. The resulting process and communication breakdowns can result in inefficient, suboptimal care delivery and patient harm. In contrast, clear role definitions and accountabilities; standard workflows and points of contact that are embedded into each care team member’s daily routine; and the use of tools and technologies; help ensure that the care team is aligned around patient goals and the plan of care, thereby enabling improved quality, reduced length of stay, and lower cost of care. Moving the organization toward more standardized care processes requires strong clinician and administrative leadership, as well as deep process improvement expertise. Effective implementation and a reliable process measurement system are essential to building organizational momentum and achieving system-wide benefit.

Where to Start

Organizations ready to begin the CVM journey must first decide where to start. Determining the right order, timing, and sequencing of clinical areas and foundational elements requires an assessment of opportunity, readiness and potential for success. In the first round of CVM, most organizations should focus on two or three conditions with the most significant opportunity, as indicated by:

- Practice variation among providers for similar types of patients, as indicated by significant differences in LOS, critical care utilization or resource consumption and cost per case
- Variation or shortfalls in quality as indicated by core measures, risk adjusted mortality rates, or high incidence of hospital acquired conditions and preventable readmissions
- High admission rates for chronic, ambulatory sensitive conditions such as congestive heart failure (CHF), diabetes, chronic obstructive pulmonary disease (COPD), and asthma
- Persistent clinical denials for delays in discharge or procedures, medical necessity, or LOS exceeding authorization

In addition to identifying improvement opportunities, there are several “rules of thumb” that are critical to ensure that a sufficient foundation is in place to support the effort, from assessment through design and implementation of new clinical and operational processes:
1. **Identify a Clinical Champion for each targeted area of improvement.** Achieving material and enduring results requires active engagement of physicians, nurses and other clinicians. Strong leadership from a respected clinician who can collaborate with and motivate physicians and other clinicians is essential to building consensus around the application of evidence-based medicine to clinical practice, and to gaining agreement on standardized approaches to care delivery and supporting processes.

2. **Develop and communicate a consistent, long-term vision.** The vision for undertaking CVM should clarify how the future state differs from the current state – for example, the expectation that there will be evidence-based clinical practice standards deployed consistently across the health system or that measures of clinical performance will be defined and reported on a consistent basis might represent a significant change for the organization. The vision should also articulate how physicians, hospital leadership and staff will collaborate to achieve the goals of the CVM program.

3. **Capture clinicians’ attention with meaningful data.** Clinicians often feel inundated with data that they do not feel accurately represents their performance, or which does not provide meaningful insights into how they might practice more effectively. Successful CVM efforts begin with good data and a process that actively engages clinicians in reviewing and responding to that data, and in selecting mutually agreeable launching points.

4. **Provide process improvement support.** CVM requires a structured approach to identifying improvements, designing implementation plans, and determining how impact will be measured. Identifying priorities, providing direct support to pilots and demonstration projects, staging and sequencing implementation activities, and monitoring progress requires dedicated support from individuals with clinical and process improvement expertise.

5. **Monitor, measure and report performance.** At the end of the day, clinical and operational leaders will want to see that they have made progress. Providing direct feedback, including individual performance data for physicians, serves the dual purpose of rewarding individuals and teams for the progress they have made, and motivating ongoing effort in areas where progress is lagging.

A disciplined approach to assessing and addressing CVM opportunities, like the one outlined above, can help organizations as they establish strategic priorities and develop a roadmap for moving forward. For organizations ready to take on the challenge, the potential benefits are substantial – superior performance in patient quality, outcomes and experience and reduced total cost of care.
Case Study – The Power of CVM

The leadership of a large Midwestern health system decided to address clinical variation in response to an organizational readiness assessment that identified significant opportunity for improved acute care standardization across multiple diseases and conditions. Quantitative analysis identified CHF, acute myocardial infarction, and pneumonia as top opportunities. Leadership targeted CHF for initial work.

A multidisciplinary team was convened by Quality leadership; the team consisted of a physician champion and subject matter expert in CHF management, an Emergency Department physician, quality and process improvement staff, CHF nursing and critical care unit staff, pharmacy staff, imaging staff, case management staff and patient/nurse education staff. The team was asked to design and test standardized diagnosis protocols, order sets, nursing protocols, risk stratification criteria, treatment goals, and discharge criteria, leading to a demonstration project for one cardiology group’s inpatients.

After a brief design process, the team launched the demonstration project by educating the physicians, nurses and other staff on the initial care units participating in the pilot; implementing newly approved EBM-based order sets and care pathways; implementing a new discharge planning process; and instituting a new patient and family education process.

A dashboard was developed and implemented to measure process and outcome metrics; subsequent improvements were reviewed by the teams in an iterative process which enabled them to overcome roadblocks over a three-month period. The team then implemented a staged roll-out plan for the entire organization’s CHF patients, based on the success of the demonstration project.

The benefits of the project in year one included:

> LOS reduction of 28% at the initial hospital
> Improvement from 20% to 67% of patients with documented follow-up appointments within seven days
> The ability to measure and monitor care variation across sites
> Increased utilization of the standardized EBM-based order set and clinical care pathway
> Improved communication and collaboration between Emergency Department, hospital staff, caregivers and patient/families
> Enhanced sense of nurse empowerment in day-to-day patient care

Potential Benefits of Clinical Variation Management:

- Improved quality and outcomes levels
- Enhanced patient care experience
- Higher patient safety and reliability
- Reduced total cost of care
- Increased clinician and care team alignment and accountability for patient care
- Care team empowerment and involvement
- Enhanced culture of continuous performance improvement
References


