The idea of care management—managing a selected set of patients to focus on reduced costs and better quality of care—isn’t new to the healthcare industry; it’s been primarily established in the payer space for years. However, with the growth of value-based incentives and risk-based contracting, healthcare provider organizations have started to think of care management, also called “complex care” and “disease management,” in the context of population health strategies.

Ultimately, the goal is to ensure patients get the right care at the right time. To do this, a care management program must be able to answer the following questions:

- Is the program managing the right group of patients?
- Is it having an impact for those patients?
- Is there variation between care teams that may help identify and communicate best practice?
- Is there an opportunity to change how to identify patients or direct them to a different level of support that can positively impact health and program costs?
The Healthcare Delivery Organization’s Case for Care Management

Organizations in risk-based contracts and value-based payment models need a way to reduce the cost and increase the quality of care for patients identified in their care management programs. Medicare claims data shows that five percent of all patients account for almost 50 percent of utilization and costs, however organizations need a strategy to identify and work with the patients they will impact the most—going beyond this five percent.

Cumulative Distribution of Personal Healthcare Spending, 2009

The Five Core Competencies of Care Management

The goal and responsibility of every healthcare organization and provider using a care management approach is to deliver the right care at the right time to the right patients. Effective care management enables the care team to identify and group individual patients by current and anticipated level of need, and then support
patients at the appropriate level of care for the situation. Additionally, it is imperative to evaluate the effectiveness of the program and to assess and adjust the care accordingly. This standard of care management can only be achieved if five competencies are in place:

- Data Integration
- Patient Stratification and Intake
- Care Coordination
- Patient Engagement
- Performance Measurement
Data Integration

Most ACOs, Integrated Delivery Networks, and provider organizations have multiple EMR systems and data sources that span across the continuum of care, from post-acute settings to long-term care and more.

Pulling all this data together—EMR, clinical, claims, wearable devices, socioeconomic—has not been a priority for care management programs in the past, but it’s essential to build a robust program that drives outcomes improvement. Organizations also need the ability and flexibility to add custom data feeds to the mix.

KLAS Research’s 2016 report on Population Health Perception demonstrated that as organizations expand the disparate sources of patient data, all with their own methods to identify patients, into a patient-centric view, they need to dedicate time and resources to implement an Enterprise Master Patient Index (EMPI) strategy and negotiate member-level data sharing with payers and HIEs.


Patient Stratification and Patient Intake

Stratifying patients and identifying those patients who should be part of the care management program occurs in three levels of maturity:

Stage One Stratification: Stage one leverages historical data to inform the current state and answer questions such as: Who is at the highest risk today? And who is the costliest? This is a good starting point and provides a path for getting to the next two levels of maturity.
Stage Two Stratification: Stage two predicts the future state and allows organizations to ask: Who will be the sickest tomorrow? And who will be the biggest utilizers tomorrow? This stage gets into predictive analytics and finds those patients who might be considered risking risk.

Stage Three Stratification: Finally, stage three answers the important question: Who can an organization have the biggest impact upon? It’s not enough to know who is the sickest or costliest today or tomorrow; health systems should be able to identify which patients have the best chance of improving outcomes. This level of maturity allows organizations to find where they will receive the greatest Return on Engagement answering the question: How much will it cost to improve this patient’s health?

A care management program needs to start with stratification, risk, and patient load balancing algorithms that can be customized to fit an organization’s needs and allow it to progress through the three stages of maturity.

Workflow Optimization: Patient Intake

As a care management program progresses, the importance of a good patient intake process increases. Healthcare organizations must consider how to enroll those patients in care management programs in a way that doesn’t create an administrative burden on the care management team. The complexity of managing enrollment will grow as the care management program matures and to scale all this work, organizations need tools to optimize that workflow.

Care Coordination

When most people think of care management, they are actually thinking of care coordination. This is the day-to-day work of a provider or member of a care management team providing support to the patient. The entire care team needs to be able to communicate with one another, working off the same information, and creating care plans that can be modified. Training should also be formalized to ensure standard team design and strategy for the care management program.

Starter sets for a particular care management program, such as diabetes or heart disease, can set up an organization for early success. Using modifiable evidence-based care plans, assessments, patient-reported outcomes measures (PROMs), and identifying community resources (support groups, etc.) will help the care team do the work involved in this core competency.
**Patient Engagement**

The flip side of care coordination, patient engagement is how the patient and his family communicates back with the care team. Patients need to engage in their own care for a care plan to be successful, and organizations should be providing tools that make this engagement as easy as possible—not only for the patient, but for the patient’s family, friends, and other members of the community that the patient wants involved.

A care management program should include patient-created data, such as data from fitness and medical devices. Additionally, employing a patient-centered algorithm that helps patients find others who have similar diagnoses and circumstances can help increase engagement and foster success among a given patient community.

**Performance Measurement**

Understanding what is spent on a care management program, and how effective that program has been in delivering outcomes improvement will drive better decision making for the next round of patient intake. Program design should be strategic based on the data derived from this core competency.

Four measure types that should be considered:

**Outcome Measures:** How are patients doing? These measures will include looking at utilization (ED visits, for example) and drilling into the details for each diagnosis, procedure, etc.

**Process Measures:** What is the organization doing for care management? Monitoring processes, such as enrollments, assessments, and patient workload, an organization looking at these measures can find ways to improve to actual day-to-day work of care management. For example, decreasing or increasing patient loads, mitigating transition/handoff miscommunications, and identifying patients who are stagnant or regressing.

**Balance Measures:** Is the care management program working, and is the organization seeing a positive Return on Engagement? For example, for every $5 an organization is spending, do they see a $15 savings in utilization costs, along with improved patient outcomes? An organization looking at balance metrics can see if a patient’s task prioritization needs to change to help improve outcomes, for example.

**Insights Measures:** What should a care management program we doing more of? What should be changing? How does an organization take the next step? Insights measures can use algorithms and machine learning to identify key items for care management program success finding the biggest drivers for patient engagement and the most cost effective activities.
Putting It All Together: A Comprehensive Care Management Program

A robust care management program needs all five of these competencies integrated.

Starting the Care Management Program: Data integration and Patient Stratification and Intake

Organizations start by identifying a population for the care management program, sometimes dictated by an at-risk contract, using information from socioeconomic, clinical, claims, EMR, HL7, and other data feeds. These feeds are integrated into an analytics platform that allows for the next step: patient stratification.

Configurable Patient Stratification

Using a configurable score, health systems identify the first round of patients for the care management program. This score can be based on utilization algorithms, be disease or chronic-condition specific, use medicine lists, or evaluate social determinants of health—or employ a combination of those things.

Rightsizing the Patient List

Not every patient pulled in via this data will be right for the program, so the organization needs a method for rightsizing the list based on things like care manager availability.
Patient Intake

Next, many health systems benefit from the ability to manually add and remove patients based on other factors like discussions with primary care providers. This final list can be attributed to a care management program, and patients can be assigned to their final care teams and primary care providers (if necessary).

Working with the Data to Improve Patient Outcomes: Care Coordination and Patient Engagement

Now that patients have been assigned care teams, the work of care coordination and patient engagement begins. The care manager meets with the patient and agrees to patient-centered goals and activities to drive those goals. Some of these goals can be preset based on a diagnosis or condition, but they should be customizable.

The activities in the patient’s care plan are prioritized and scheduled or dispersed with the members of the care management team. This may involve a nutritionist, a pharmacist, a physical therapist, etc. It’s important the care team, along with the patient and whomever the patient wants to participate in her care, be able to communicate quickly and effectively through a common, easy-to-use framework. This will allow ongoing care management activities like care plan updates, adding or removing members of the team, check-ins, and education to occur in an efficient and effective manner. Additionally, when an event such as the patient returning to the emergency room occurs, the care team can be altered and investigate how to best assist.

Finally, a patient who is actively and well-managed can be discharged from the program or placed in maintenance mode.
Improving the Care Management Program: Performance Measurement

Health systems need to be able to evaluate their care management programs and determine effectiveness and Return on Engagement. Dashboards can show the impact programs have on a group of enrolled patients versus a control group of patients who are outside of the care management program. While not a double-blinded study, the information can be directionally correct and help inform the next round of decision making. Also, benchmark data from across multiple health systems with a similar group of patients and programs can add to the measurement of the program.

Care Management: Improving Patient Lives and Reducing Costs

Imagine a patient struggling to manage multiple medical conditions and this happened:

The patient receives an invitation from her doctor explaining how a team of healthcare professionals is contacting her to craft and coordinate a personal plan of care that includes help addressing the struggles she’s facing with self-care at home. Then they give her access to this plan through an app on her phone so she can see key medical information and communicate with her team. They ask her to participate to make this a successful experience. She’s feeling excited and empowered to do so.

This is how healthcare should be delivered. This care management model is what healthcare providers must do to improve the healthcare industry as whole, and truly help people have better outcomes at a lower cost and with a better experience.
Russ Staheli, Senior Vice President Professional Services

Russell joined Health Catalyst® as a data architect in October 2011. He started his career as an Intern and later Outcomes Analyst at Intermountain Healthcare in the Institute for Health Care Delivery Research supporting the Advanced Training Program for Executives & QI Leaders (ATP) and the Primary Care Clinical Program. Before coming to Health Catalyst he worked a Management Engineer Programmer Analyst for the Duke University Health System in their Performance Services department supporting their Infection Control and Epidemiology efforts. While there, he also worked as an external consultant to advance the analytical work of the Duke Infection Control Outreach Network (DICON), a collaborative of over 30 community hospitals. Russ holds an Master of Public Health in Health Policy and Administration from University of North Carolina Chapel Hill and a Bachelor's degree in Health Services Research from the University of Utah.
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