

The Four Steps of Population Health Management

White Paper



A growing number of organizations are joining the march to value-based care to provide higher-quality care at a lower cost. For example, since the passage of the Affordable Care Act, more than 360 Medicare accountable care organizations (ACOs) have been established, serving about 5.3 million Americans with Medicare.¹

Incentivized by this shared-savings model to ensure that patients receive appropriate, cost-efficient care, organizations are using population health management (PHM) strategies to optimize health system performance.

Through PHM, organizations are gradually transitioning from acute, episodic care to a more coordinated, long-term approach. By investing more resources in preventive care, they're helping patients stay healthier while controlling costs. But this transition must be well planned. Provider groups consistently cite the same four steps of critical focus for success in PHM:

1. Optimizing network management
2. Managing care transitions
3. Investing in in-home intervention
4. Expanding chronic disease management

This paper will examine these four areas of focus in PHM in an effort to help organizations successfully navigate the journey from providing care to managing health.

Population health management must be built on a foundation of data

Each of the four steps of population health management relies on data — timely, relevant and comprehensive data that can help organizations make better decisions. In today's health care environment, there are two sources of data: claims data and clinical data.

Claims data is the traditional source of data for health care. Because claims data is based on uniform and broadly available information, it is useful for finding overarching care patterns. Claims data helps answer questions about the types of people who receive care, the care settings in which they receive the care, the categories of care they receive, their demographics, and the general type of care that is being delivered.

This type of data provides great insight for population health discovery as well as for research studies. Also, since claims data is originally meant for reimbursement, the data is an excellent source for chronicling the cost of care. Claims data helps organizations find retrospective patterns in care, and claims are useful for seeing the spectrum of care received by a particular patient.

CLAIMS DATA

- chronicles cost of care
- answers questions about types of people receiving care
- allows for comprehensive care pattern research
- makes population health discovery possible

But there are some significant drawbacks to claims data: The data highlights the condition for which the provider is being paid, so not all conditions need to be listed on the claim (and, subsequently, they generally aren't listed). Claims often contain a very general diagnosis. And they're dated; claims are most often made available weeks after the date of care.

Delivery systems now have accessible electronic data that can round out the patient picture and help provider organizations improve care quality, control costs, and increase patient satisfaction. Such clinical data is found in electronic medical records (EMRs). EMRs make a rich store of data available for analysis and are found throughout the continuum of care, including the emergency department, hospital inpatient records, outpatient/ambulatory, physical therapy, and radiology areas. Unlike claims data, they are timely, they are longitudinal, and they reflect how medicine is actually practiced.

Both types of data are critical for facilitating population health management. Even with all the benefits of electronic medical records, providing one large practice with claims information opened a completely new world.

"For so many years, physicians have relied heavily on patients and their medical records to inform their decisions about care," said Simeon Schwartz, MD, president and CEO of WESTMED Group, Purchase, N.Y., a multi-specialty clinic that has been practicing population health management for nearly a decade. "The problem, of course, is this approach seldom offers a holistic view of a patient, as the details of his or her health history are often blurry or incomplete. Only now that we've begun to unlock the power of our patients' claims data do we understand the extent to which patient records don't reveal the entire picture."

Step one: Optimize network management

Most organizations don't have the luxury of groups like WESTMED, which is approaching value-based care with significant experience in PHM. For those without experience, an initial concern should be the network they use for referring patients to specialists. The latest estimates on health care spending in the United States totaled nearly \$2.8 trillion,² and 20 percent of that went to pay the cost of services provided by physicians.³

With physician referrals on the rise, network management has the potential to yield significant savings. The percentage of patients referred by one physician to another rose over the previous decade from 4.8 percent to 9.3 percent.⁴ One general survey showed that primary care physicians (PCPs) primarily base their referrals on patient experience, patient access, and physician communication, meaning they worked in the same clinic or shared an electronic medical record (EMR).⁵ It is interesting to note that the results don't include quality of care or cost efficiency as reasons for referring to specialists.

In value-based contracts, it is in a physician's best interest to refer to specialists who provide high-quality, cost-effective care. By analyzing their patients' claims and clinical data, physicians can identify specialists who provide the best care at the best value.

CLINICAL DATA

- found in EMRs
- longitudinal
- reflects how medicine is actually practiced
- timely

For WESTMED, sharing data on physician performance has become part of the culture. “We do not tell doctors what to do; we show them what they are doing,” said Schwartz. “Analytics are only good if you share them transparently. You have to set up a physician culture that allows you to share analytics transparently. I have to convince the physicians that the data is right.”

Facilitating network management optimization through data transparency can have a significant impact on individual patients — and whole populations. An Optum study found that when patients are redirected to providers who exhibit lower cost and higher quality care, the results demonstrate 10 percent fewer spine, hip and knee surgeries, saving as much as \$15,000 in health care costs per redirection. At the population level, complication rates among the providers’ patients for implantable cardiac device surgeries have dropped by 60 percent when performed by quality-designated cardiothoracic surgeons.⁶

One Connecticut-based insurer successfully transitioned 33 percent of its engaged members to lower-cost treatment settings for knee and hip replacements and lower-back pain. Restructuring its referral network netted the company a 550 percent return on investment.⁷ An airline, after instituting a Centers of Excellence program in orthopedic care, saw the overall volume of joint and spine surgeries among its employees dip 9 percent.⁸

Step two: Manage care transitions

Another area that needs analytic attention is providers’ efforts in managing care transitions. In value-based care environments, providers are incentivized to ensure that patients who go home or move to a skilled nursing facility get the support they need, both inside and outside of the facility.

Discharge planning processes often make assumptions that certain variables will work in the patient’s favor, such as:

- Prescriptions will be affordable and the plan will be adhered to
- Follow-up visits with physicians will be easily available
- Durable medical equipment will be affordable and delivered on time
- Patients will happily follow discharge orders

Unfortunately, these assumptions are often faulty. Further complicating discharge planning is the fact that certain patients are predisposed to readmissions. Patients who have multiple chronic conditions or who have depression as a comorbidity are more likely to return to the hospital. The same is true of patients with certain demographic factors that include age, gender, race, and geographic region.⁹

Even when considering the above variables, an organization’s readmission rate is a barometer of how well it manages its patients’ health when the patients aren’t under its direct care. Public and private payers are viewing readmission reduction as a significant opportunity to boost quality and reduce costs.

Under Medicare’s Hospital Readmissions Reduction Program, an organization’s reimbursement is also at stake. This program requires the Centers for Medicare & Medicaid Services to reduce payments to hospitals with excess readmissions, leading Medicare to penalize about two-thirds of eligible hospitals in the first and second years of the program.¹⁰

DATA TRANSPARENCY

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Proactive, post-discharge outreach can help make patients' transition from one care setting to another become more seamless, thus helping prevent readmissions. Complex care management programs with dedicated staff such as care managers, social workers, pharmacists and behavioral health specialists, or those partnered with organizations that provide such programs, have proven most successful.

One Texas health system saw value in adding a community-based model to supplement its employee telephonic care management programs. Recognizing that a majority of its health care utilization and costs are driven by a small subset of its population, the health system deployed a complex and chronic care management program to address the needs of its highest-acuity individuals. Targeting these patients for outreach resulted in a 65 percent reduction in health care costs.

Yet another Texas health system had five hospitals with readmission rates that exceeded benchmarks. After launching an integrated transitions care management program, the health system's telephonic engagement with patients discharged from an acute hospital stay rose to 74 percent from 45 percent. As a result, its system-wide readmission rate declined to 5.2 percent from 8.3 percent.

Analytics can strengthen care management programs by helping predict which patients need additional support. Applied to claims, clinical and abstracted data, this technology can spot care patterns that may be contributing to readmissions and identify clinical gaps, as well as provide outcomes data that shows the results of a transitions program.

Step three: Invest in in-home intervention

High-acuity patients who suffer from chronic illnesses such as diabetes, heart disease, lung disease and kidney disease are at high risk for admissions and readmissions. Additionally, many are elderly or have comorbidities, such as obesity or psychological issues, and require intensive treatment and management. Key cost drivers among the chronically ill include emergency room utilization, hospitalizations, end-of-life care and uncoordinated care. Yet in a fee-for-service environment, providers often discharge these patients and hope for the best.

It's clear that such high-acuity patients need more than just discharge instructions. In a value-based environment, they should be closely monitored post-discharge and targeted for intervention to keep them on the road to recovery.

Physician- and hospital-based organizations have typically stayed away from providing care within the home. But the advent of value-based reimbursement has made "house calls" a financially viable practice.

In-home care encompasses a number of different models and targets different populations — including high-acuity patients — which is critical from a quality, cost and population health perspective. Finding the right patients to target with in-home interventions begins with applying analytics to data. Organizations need to find the individuals that are driving a disproportionate share of the cost of care. This often necessitates applying highly accurate predictive models to the appropriate data.

Next comes the outreach — by phone, Internet, or in person — to the identified patients. Such outreach can be handled by home health agencies, social workers, nurses (including care managers), nurse practitioners, and even physicians. Home visits give practitioners, especially social workers and care managers, first-hand knowledge of patient needs.

Other methods for intervention outside of an acute care environment include telephonic case management, wellness education, and in-home monitoring. Together, these resources can improve post-acute care by allowing providers to:

- Conduct thorough in-home assessments
- Share results with treating physicians
- Trigger alerts for potentially urgent health issues
- Identify key topics for patients to discuss with primary care physicians
- Recommend and ensure appropriate follow-up appointments

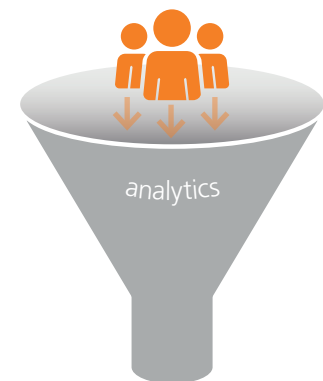
This kind of transitional care can help care providers identify challenges before patient cases become more complex and costly. Patients in North Carolina who received care as they transitioned out of an acute care facility, for example, were 20 percent less likely to be readmitted to the hospital than patients who did not. One out of three of these high-risk patients were less likely to be readmitted.¹¹ Additionally, data from Optum showed that telephonic transitional case management had reduced the likelihood of readmissions by 64 percent among its clients compared to a similar, risk-adjusted group.¹²

Step four: Expand chronic disease management to the full attributed population

Chronic conditions are the leading cause of death and disability among Americans and account for a staggering amount of the nation’s burgeoning health care costs. In the United States, the health care system spends between 78 and 85 cents on the dollar for treatment of chronic diseases such as heart disease, stroke, cancer and diabetes.¹³ In real dollars, that costs the U.S. economy as much as \$2.3 trillion.¹⁴ Perhaps not surprisingly, only 56 percent of people with these conditions receive recommended preventive health care services.¹⁵

In the fee-for-service setting, many physicians manage these chronically ill patients one office visit at a time. This model for care works well when providers aren’t liable for adverse events such as hospitalizations. But when providers are incentivized to keep patients healthy rather than treat them when they become ill, waiting for chronic patients to present at the clinic or the emergency department is a recipe for failure. Chronic disease management can be directed toward these patients to identify them, engage them, and intervene on their behalf. Such programs have resulted in significant improvement in the cost and quality of care of high-risk, chronically ill populations.

Analytics are particularly important when implementing chronic disease management programs within value-based care settings, helping providers account for and monitor their entire patient population. Running every patient through analytics allows managers to identify their highest-cost patients and processes, find unnecessary care pattern variations, and identify gaps in care.



- identify highest-cost patients and processes
- find unnecessary care pattern variations
- identify gaps in care

WESTMED uses analytics to provide a more holistic view of the group's 11,500 attributed patients. And the effort has borne fruit. For instance, a closer look at WESTMED's claims revealed that one patient on enzyme replacement therapy — at an annual expense of \$300,000 — hadn't been seen by a physician for more than two years, presenting a clear opportunity for intervention. Another patient was operated on by an out-of-network neurosurgeon who charged more than \$280,000 — far above average for such a procedure. WESTMED took steps to ensure other patients received more efficient care.

By aggregating claims and clinical data — and then applying analytical tools — patients can be stratified by risk: high, medium or low. This, in turn, can help providers appropriately direct their interventions and resources. Patients with complex, chronic conditions who fall into the high-risk cohort, for example, may benefit from specially trained case management nurses to fill gaps in their care. This might include:

- Communicating with multiple physicians
- Accessing community resources
- Receiving long-term condition support
- Coordinating care plans
- Assisting with psychosocial and knowledge needs

The medium-risk cohort, meanwhile, may benefit from help with navigating the complex health care system, including interventions aimed at driving down emergency department and out-of-network utilization. This could entail providing help with:

- Reaching appropriate care resources
- Receiving guidance about treatment options, condition management, medications and a healthy lifestyle
- Receiving instruction on medication adherence, drug interactions and medication alternatives
- Maintaining consistent visits with primary care providers

Population-based care manager outreach is producing improvement in evidence-based medicine compliance among the chronically ill. Boston-based Steward Health System — which comprises 11 hospitals serving more than 1 million patients — analyzed its population health data to identify the highest-impact intervention points and implement tailored care management programs.

For example, data analyses allowed Steward to identify new opportunities in the Complex and Chronic Patient Management program. When the health system looked at its data from a condition-specific perspective, it found a high prevalence of chronic heart failure patients. Resources were then specifically dedicated to managing that population, since there is strong evidence that the right care pathways can lead to better results.

Within the skilled nursing population, Steward also identified an opportunity to focus on advanced care planning for long-term-care patients. While the population isn't large, the complexity of patients' cases and their high utilization of the health system means that more proactive management can have a significant impact on cost and their quality of life. Steward is deploying its social workers to do more intervention within the skilled nursing facility population, as well as engage with their providers.



The health system's efforts have paid off, with significant progress toward key goals, including:

- Reducing readmissions
- Realizing cost-per-member, per-month savings
- Leveraging analytics to refine programs and target new opportunities

Steward has succeeded in lowering costs and improving care for its high-risk ACO population — and its approach promises to benefit patients across the health system's entire network.

Population health management is evolving care delivery

Making population health management part of the provider culture is essential, but it takes more effort than following a few simple steps.

"As WESTMED has delved deeper into population health management as an ACO, I've been humbled by the complexity of care delivery," Dr. Schwartz said. "Until you try to institute real changes, you don't appreciate the complicated nature of how physicians make decisions. Our understanding of what the practice of medicine is about — and what constitutes the right path of care — is evolving. But I believe that with the right tools and data, we can get there."

WESTMED's ACO and many other organizations are increasingly leveraging data and analytics to evolve into data-driven, value-based organizations. By using technology to evaluate the cost and quality of care provided by physicians to optimize their networks; manage care transitions to prevent readmissions; invest in in-home interventions and expand chronic disease management, they are driving the paradigm shift to more holistic, and resourceful, health care.

FOUR STEPS

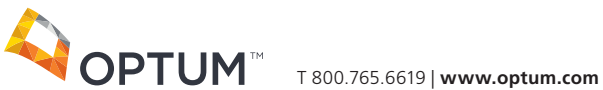
- 1 OPTIMIZE NETWORK MANAGEMENT**
- 2 MANAGE CARE TRANSITIONS**
- 3 INVEST IN IN-HOME INTERVENTION**
- 4 EXPAND CHRONIC DISEASE MANAGEMENT TO THE FULL ATTRIBUTED POPULATION**

Endnotes

- ¹ Centers for Medicare & Medicaid Services. More partnerships between doctors and hospitals strengthen coordinated care for Medicare beneficiaries. News release, Dec. 23, 2013. <http://www.cms.gov/Newsroom/MediaReleaseDatabase/Press-Releases/2013-Press-Releases-Items/2013-12-23.html>.
- ² Centers for Medicare and Medicaid Services. National Health Expenditures 2012 Highlights. Last updated January 7, 2014. <http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/highlights.pdf>. Accessed April 18, 2014.
- ³ Aetna. The facts about rising health care costs. n.d. <http://www.aetna.com/health-reform-connection/aetnas-vision/facts-about-costs.html>. Accessed January 30, 2014.
- ⁴ Michael Barnett, MD, et al. Trends in Physician Referrals in the United States, 1999–2009. *JAMA Internal Medicine*, 172 (January 2012):163–170, cited in Jenni Laidman, Physician referral rates nearly double in 10 years, *Medscape Medical News*, January 23, 2012, <http://www.medscape.com/viewarticle/757351>.
- ⁵ Michael Barnett, MD, et al. Reasons for choice of referral physician among primary care and specialist physicians. *Journal of General Internal Medicine*, 27 (May 2012):506-512. E-published September 16, 2011. Survey respondents volunteered the reasons they referred to specific specialists; they were not prompted with pre-determined choices.
- ⁶ Optum study of health plan membership using its OptumHealth Treatment Decision Support program; 4,245 members from 151 health plans were surveyed.
- ⁷ Optum client annual meeting, 2012. Confidential.
- ⁸ Optum client Centers of Excellence update, February 2013. Confidential.
- ⁹ American Hospital Association. Examining drivers of readmissions and reducing unnecessary readmissions for better patient care. *TrendWatch*, September 2011.
- ¹⁰ Kaiser Health News. Armed with bigger fines, Medicare to punish 2,225 hospitals for excess readmissions. August 2, 2013, <http://www.kaiserhealthnews.org/stories/2013/august/02/readmission-penalties-medicare-hospitals-year-two>. Accessed February 11, 2014.
- ¹¹ Carlos T. Jackson, et al. Transitional care cut readmissions for North Carolina Medicaid patients with complex chronic conditions. *Health Affairs*, 32 (August 2013):1407-1415.
- ¹² Osman I Ahmed, MD, DrPH, and David J. Rak, MPH. Hospital readmission among participants in a transitional case management program. *American Journal of Managed Care*, 16 (October 2010):778–783.
- ¹³ Gerard Anderson. Chronic care: Making the case for ongoing care. Robert Wood Johnson Foundation, February 10, 2010; and Ross DeVol and Armen Bedroussian, *An unhealthy America: The economic burden of chronic disease* (Santa Monica, Calif.: Milken Institute, October 2007).
- ¹⁴ National health expenditures totaled \$2.7 trillion in 2011; Centers for Medicare & Medicaid Services, National Health Expenditure Tables, page last modified January 9, 2013. Accessed November 15, 2013.
- ¹⁵ McGlynn EA, Asch SM, Adams J, et al. The quality of health care delivered to adults in the United States. *New England Journal of Medicine*, (2003) 348:2635-264

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