“Quality Up, Cost Down” Model at Mercy Clinic

A Population Health Management Initiative

BY ALEJANDRO RETI, M.D., M.B.A., AND CAROLYN KOENIG, M.D.

Information technology played a key role when the organization built a population health management strategy to improve quality while reducing care delivery costs.
In 2013, clinical leaders at Mercy Clinic–East set
in motion a major initiative to improve management of
hypertension and diabetes at scale.

Mercy Clinic–East is an 850-provider division of
Mercy Health and has approximately 80 practice loca-
tions across the greater St. Louis metropolitan area.
Mercy is the nation’s seventh largest Catholic health
system, with 34 hospitals and 2,900 integrated provi-
ders and clinical operations in four states across the
Midwest.

Significant new risk-based contracting opportuni-
ties in its core service areas enabled Mercy to invest
significantly in community engagement and proactive
outreach. The organization built a population health
management strategy to improve quality while reduc-
ing care delivery costs—a model called “Quality Up,
Cost Down.” The hypertension portion of the pro-
gram incorporates the Measure Up/Pressure Down®
campaign developed by the American Medical Group
Foundation in 2013. The model is built on three pillars:

  ■ Provider Engagement
  ■ Patient Engagement
  ■ Care Coordination

Information technology plays a key role supporting
each pillar. In this article, we summarize the program,
its results, important lessons learned, and comment on
how technology makes these results possible.

**Pillar 1: Provider Engagement**

Systematic support for both provider and patient
behavior change are at the core of these programs. A
team of clinical, operational, and quality staff seeks
provider engagement by providing consistent, trans-
parent reporting on measures that matter clinically,
supported by reliable data to drive performance-based
incentives tied, in part, to targeted quality goals.
Diabetes measures include A1c control (<9%) and
compliance with annual eye exams.1 The hypertension
program focuses on blood pressure (BP) control to
less than 140/90. Patient satisfaction measures and per
capita use-rates balance these program metrics.

Informed by monthly progress reports, the team
does quarterly multidiscipline, triple-aim rounds
in primary care provider (PCP) offices. These rounds
address individual concerns, identify barriers to quality
care, and push forward creative, practical solutions to
observed problems. For example, the rounds revealed
variability in how PCP offices enter eye exam reports
into the electronic health record (EHR), yielding errone-
ously low results in some settings that straightforward
retraining could correct. The program is also coupled
with protocols for blood pressure measurement, PCP
referral for uncontrolled patients seen in a specialty
clinic, and escalated treatment.

The program relies on a technology infrastructure1
that automates much of the traditional, time-consuming
aspects of a provider reporting function, including
data aggregation, normalization and validation across
clinical sites, report generation and distribution, and
registry preparation to drive patient outreach and
education.

**Pillar 2: Patient Engagement**

The program emphasizes education, skill build-
ing, encouragement, and shared decision-making
to promote patient behavior change—all enabled by
an analytically driven process to proactively identify
patients with gaps in care. Combined EHR, administra-
tive, and socioeconomic data power a set of registries
identifying patients not meeting defined goals. These
registries also highlight patients with other clinical sce-
narios worthy of follow-up. For example, patients not
at BP goal who start a new medication are scheduled
for a follow-up visit within 30 days, and patients with
a last A1c greater than 8.9% are asked to come in after
91 days have elapsed without an updated A1c result
(Figure 1).

The team schedules appointments using a combina-
tion of staff calls and analytics-driven automated phone
outreach. The program also encourages patients to pre-
pare for their visit, ordering ancillary services like labs
in advance when needed. To accommodate the large
increase in direct patient interaction, a BP Navigator
role was created to handle proactive patient outreach
and scheduling functions in the hypertension program.
Beyond scheduling, the BP Navigator is trained to
triage the patient, provide basic education, and connect
patients with a PCP if they do not already have one.

The program supports patient understanding and
self-efficacy by issuing EHR-generated report cards
(“The ABC’s of Hypertension and Diabetes”) and
prescribing educational videos and content for patient
review at their convenience. Based on physician observa-
tions that literacy, socioeconomic issues, and lack of
phones and transportation all regularly prevent patients
from accessing resources to get their disease under
control, the program partnered with Primaris, a local
quality improvement organization (QIO), to cultivate
community-based support for transportation, medica-
tions, and glucose testing.
Pillar 3: Care Coordination

Care coordination serves a key role in patient engagement. Clinical leaders recognized diabetes education was inconsistently available in program clinics due to inconvenient clinic design, locations, and excessive out-of-pocket costs for patients with Medicare or commercial insurance programs. To remedy this, the program embedded a diabetes nurse practitioner (NP) to serve as a Diabetes Educator in two of its clinics. Automated registries bring patients with persistently elevated A1c, any new diabetes diagnoses, or first-time insulin prescriptions to the Educator, and physicians make ad hoc referrals for other reasons as well. Figure 2 details the interrelated program components.

Results

The combined program generates significant improvements in clinical outcomes as well as organizational economic benefits. In roughly two years, the proportion of hypertensive patients with BP below the 140/90 threshold rose from 65% to 76.7% across Mercy East Community.

The average starting A1c in the Diabetes Educator pilot population was 8.75%, but was reduced to 7.6% in patients in the program. In all, 44 of 54 patients experienced reductions in their A1c after participating in the Educator program.

Across all sites, the program generates a mean of 734 incremental appointments per month, yielding an estimated $625,000 in incremental fee-for-service visit revenue per year. The limited-duration Diabetes Educator pilot generated revenue (based on Medicare reimbursement levels for an NP visit) equating to $247,000 per year for a program that costs approximately $97,000 annually to operate.

While there was incremental revenue associated with the program, it is important to put goal attainment in the context of meaningful patient outcomes. During its two-year existence, the hypertension program has helped 10,937 patients bring their BP under control, which an internal analysis translated to 304 prevented heart attacks or strokes. Further, a one-percent reduction in A1c reduces cardiovascular event risk by 45% and risk of eye, kidney, and nerve damage by up to 40%.

These outcome improvement levels translate to meaningful reductions in total cost of care as experienced by payers, employers, and patient communities.

Lessons Learned

Front line physician support is critical for success. Attaining reliable data that matter—namely, BP and A1c values and visit and screening history—is a first step in achieving that support. Just as important is linking patients to an attributed provider with enough accuracy to maintain the integrity of the program. With confidence in the data, Mercy makes physician-level reports visible to all physicians within the organization, encouraging healthy competition among staff. Finally, the organization includes BP and A1c attainment in the nine quality goals that are a component of Mercy’s new population health compensation strategy for PCPs.

Physicians manifested their support by promoting staff adoption of standardized techniques for BP measurement and a treatment escalation algorithm that favors well-proven generic therapies. Inconsistent
measurement materially distorts BP values and interferes with appropriate patient management. Adopting standard treatment pathways has shown in other settings to improve control rates.4

Aspects of this program generated enough coordination work to require new staff roles. The BP Navigator is the prime example. These staff members are necessary to generate hundreds of incremental appointments a month to proactively manage inadequately controlled hypertension patients. A meaningful proportion of the patients these Navigators bring to the clinic are new to the system and create an opportunity to establish new PCP relationships. Based on experience to date, the Mercy team estimates annual new revenue of $296,000 from these patients, a conservative number considering the estimate does not include downstream visit revenue from patients who subsequently develop an ongoing PCP relationship with a Mercy provider.

Expanding the Program

Still, the current program configuration does not completely capture all patients without a Mercy PCP, and keeping up with outbound calling varies among clinics. Expanding the Navigator program will address these issues and expand the program to include patients undiagnosed with hypertension.
Last, the importance of supporting this initiative with community-based engagement cannot be overemphasized. This effort has built awareness of the barriers preventing patient improvement and spurred a new level of collaboration with community-based third parties. This, in turn, has led to kinder, more inclusive care to meet highly individualized patient needs.

Tracking and assessing clinical, financial, and operational outcomes enables the team to iterate on program design and gain the confidence to generalize its approach to patient engagement. With this rigorous foundation, the clinical and business leadership has garnered the support of physicians, patients, and administration to continue Mercy’s investment in population health management.

References
1. Optum One™, Optum Analytics (www.optum.com/providers/analytics/optum-one.html) and Emmi Health Solutions (www.emmisolutions.com).

Alejandro "Rm, M.D., M.B.A., is chief medical officer, Optum Analytics, and Carolyn Koenig, M.D., is associate medical director, and adult quality, safety, value committee co-chair, Mercy Clinic East Communities