Healthcare in the U.S. continues to move from volume-based care to value-based care. In the process, managing chronic disease has become both a universal imperative and a foundational element of a patient-focused population health program.

Leaders of many physician groups—including those partnered with multi-hospital systems—look for a solid, practical approach to chronic care management. Though difficult, practices are changing up their organizational structure to support alternative payment models that reward maintaining a healthy population.

In the journey to value-based care, the daunting task of containing costs while improving outcomes for the rising numbers of patients with chronic disease has never been more important. As one of the U.S. healthcare system’s most complex and costly burdens and the No. 1 cause of death and disability, chronic disease is the single most important threat to the well-being of American families and a major drain on the national economy.

**CHRONIC DISEASE HAS CHANGED CARE PRIORITIES**

According to the Centers for Disease Control and Prevention (CDC) and other notable associated healthcare organizations, chronic diseases are a leading driver of U.S. spending:

- As of 2012, an estimated 117 million adults have one or more chronic health conditions, and one in four adults have two or more chronic health conditions.¹
- 90% of the nation’s $2.7 trillion in annual healthcare expenditures are for people with chronic and mental health conditions.²,³
- About 610,000 people die of heart disease in the United States every year—that’s 1 in every 4 deaths.⁴
- More than 30 million Americans have diabetes and another 84 million adults have prediabetes.⁵

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Equally important is the number of people living with one or more chronic conditions projected to grow dramatically as the U.S. population ages overall. Undeniably, Americans will be at greater risk of higher healthcare costs that, in turn, could impact economic growth.

**RESEARCH REVEALS COLOSSAL NEED TO PRIORITIZE POPULATION HEALTH**

To examine the issues facing organizations with regard to managing population health, HIMSS Media Pulse Research, in collaboration with Virence Health, released its “Challenges in and Barriers to Population Health” research findings in February 2018. Encompassing a range of provider types, overall results underscored the industry-wide need for effective and efficient population health programs.

The survey’s main objective was to better understand the progress underway together with challenges encumbering the complete adoption of population health management strategies at two distinct types of provider organizations: small and large standalone ambulatory group practices and larger physician practices affiliated with integrated delivery networks (IDNs). The 96 polled respondents held professional positions in business, clinical and technology.

**A summary of research key takeaways draws helpful conclusions:**

1. **Challenges.** Both IDNs and ambulatory practices found managing outreach to priority patients to be a challenge. However, ambulatory practices cited care management and care coordination, including closing gaps in care (51%) and coordinating team-based care (39%), as challenging while IDNs found identifying patients in need of intervention (41%) and ensuring the medical record reflects all population health activities (46%) to be more challenging.

2. **Organizational preparedness.** While providers are most confident in clinician expertise
(8 out of 10 respondents feel well prepared in this area), organizations feel less prepared to manage population health around staffing levels and staff reward/recognition practices (just 4 out of 10 feel well prepared in each of those areas).

3. Focus. Both types of provider organizations are currently concentrating on reporting/quality tracking, care coordination and care management to enable population health. Risk stratification, cohort identification, and cost management are among the future actions planned.

4. Shift to value-based care. Large ambulatory practices are most likely to be a patient-centered medical home (PCMH), involved in the Comprehensive Primary Care Plus (CPC+) program, or have more than 10% of practice revenue tied to risk-based contracts, all of which tend to drive practices to adopt population health capabilities as they transition to value-based care.
WHY PRACTICES STRUGGLE TO IMPLEMENT POPULATION HEALTH

Population Health is a coordinated, team-based approach to proactively managing the care of a defined patient population with similar needs.

Effective population health helps practices more efficiently enhance care quality, strengthen financial performance, and reduce the overall cost of care.

To prepare for implementation of a value-based care delivery and payment model, many primary care practices are taking on the role of quarterback navigating a new type of comprehensive patient care program. These agents of change are orchestrating long-term care plans via a holistic approach that manages the entire health of chronic disease patient populations.

Accordingly, improved clinical outcomes and reimbursement success in caring for the chronically ill depends upon the practice’s ability to:

- **Manage outreach to engage high-priority patient populations.** Care coordinators can establish a process to administer proactive outreach activities such as appointment scheduling for medical screening, labs or exams per the patient’s preferred method of communication.
- **Close gaps in care.** Providers must focus on identifying groups of patients with specific care gaps requiring medically necessary care. Closing care gaps lightens a provider’s workload considerably when the patient’s health status vastly improves. This is also an opportunity to realize incremental revenues under value-based reimbursement models while doing what is right for patients.
- **Integrate a team-based collaborative care approach into the ambulatory care setting.** Some tactics include welcoming extended care coordinators and building health insurer relationships to create shared accountability arrangements. Both providers and payers benefit from stronger financial performance with shared savings contracts that enable cost control.

Yet, even with the promise of incentives, physicians and care teams face challenges that hamper their efforts to implement a population health program and make it sustainable. Cultural, organizational, operational and IT infrastructural barriers—together with the constant threat of provider burnout—hold back the necessary clinical and business practice transformation. Likewise, finding time in a busy work day and qualified labor resources to treat and manage the holistic needs of patients with chronic conditions competes with a practice’s additional burdens over and above routine care delivery. Typical burdens and barriers include:
• Increasing documentation requirements
• Changing regulatory requirements
• Disconnected systems and outdated data that prevent visibility into the patient’s record
• Lack of a central IT platform supporting data aggregation, stratification of risk-based populations or identification of cohorts, care coordination, patient engagement, analytics and reporting
• Evolving care delivery and payment models
• Unmanageable referral administration
• Low staffing levels

PRACTICES THAT ACHIEVE IMPRESSIVE RESULTS IN POPULATION HEALTH CREDIT ORGANIZATIONAL TRANSFORMATION AND ADVANCED TECHNOLOGY

Proactive, team-based care is imperative

Succeeding in population health requires a new way of operating, and change is hard. Keys to organizational transformation include:

• Identify and communicate the need for change; clarify the vision and goal or create a common convincing vision
• Understand your current data systems and create a strategic plan on how to achieve desired results
• Ask executive leadership to champion your initiative
• Start with a small pilot. Make sure your data is accurate. Show wins to gain momentum and win over the physicians.
• Manage all your patients, not just the ones that come in
• Transition to a team-based care delivery model, which may require hiring additional staff and requires engendering trust across the care team
• Daily huddles
• Value-based care team that meets weekly and reviews progress (to create a regular sense of urgency in successfully transforming how we do business)

“We thought if we could start with a smaller patient cohort, that we could show outcomes, that we would create more provider [buy-in].”

- Tracie Koepplin
Advanced technology enables practices to more efficiently deliver informed, coordinated care

Even the most diligent practices struggle to shift to value-based care models without the assistance of enabling technology. Virence Health offers a set of population health management solutions to support ambulatory medical practices and those affiliated with hospital/health systems to achieve radical organizational and technology transformation. The advanced technology tools make it easier for leaders to change how their practices operate and enable viable, sustainable and successful value-based care and payment programs that achieve impressive results.

Specifically, Virence Health’s integrated ambulatory population health solution helps providers manage chronic disease patients efficiently and cost-effectively through three core elements:

- **Quality analytics** to easily visualize care gaps, identify cohorts, and prioritize patients for intervention
- **Care coordination tools** to more efficiently manage proactive outreach to priority patients and improve collaboration across the care team
- **Patient health status dashboards** to more efficiently close gaps and deliver informed, coordinated care during the visit

An integrated, sophisticated ambulatory population health tool like the one from Virence Health streamlines and automates a multitude of otherwise burdensome manual processes that are critical to the success of a population health program. A few examples include:

- Collect and aggregate data from disparate IT systems or platforms
- Identify and segment at-risk and rising-risk patients into cohorts
- Document, manage and monitor the health of multiple populations
- Improve care coordination to efficiently deliver team-based care
- Manage proactive patient activity outreach
- Track and trend patient data including health and financial outcomes
- Identify and act to close gaps in care for every patient
- Align data with evidence-based guidelines at the point of care
- Create and monitor wellness and preventive care plans
With organizational transformation and advanced technology, practices implementing a successful population health program can expect to achieve the following benefits:

- **Enhance care quality** with better visibility to where care is needed to more effectively manage populations
- **Increase provider efficiency** by balancing workloads, operating at top of licensure, and aligning patient data with evidence-based guidelines at the point of care
- **Strengthen financial performance** in shared savings contracts with better cost control in chronic disease populations as well as under the fee-for-service model by more thoroughly and proactively ensuring patients receive needed services

**CASE STUDY: PHYSICIANS MEDICAL CENTER IMPROVES DIABETIC PATIENT OUTCOMES WITH POPULATION HEALTH**

At the forefront of the value revolution is Physicians Medical Center (PMC), a physician-owned multispecialty organization in McMinnville, located 40 miles west of Portland in the heart of Oregon wine country. PMC successfully implemented a population health program that transformed its providers’ approach to a deadly and costly disease affecting thousands—diabetes.

In operation for more than 60 years, PMC has 22 providers. These physicians, advanced practicing providers, behaviorists, pharmacists, nutritionists and diabetes educators deliver care services to approximately 25,000 patients annually, or about 68 percent of the 37,000 local residents.

PMC’s journey to healthcare transformation began in 2011 with its acceptance to the Comprehensive Primary Care initiative (CPCi), the CMS four-year, multi-payer...
pilot initiative intended to strengthen primary care while incentivizing provider participants.

At the pilot’s onset, PMC administrators quickly discerned that its allocated tools, staff resources and services were insufficient to support the transition. To secure provider buy-in to address these obstacles and meet CPCi requirements, leaders presented data that pinpointed the areas requiring intervention. The strategy worked. The data insights galvanized providers to approve additional funding for organizational transformation.

“We knew that if providers could see the data and comprehend the importance of organizational transformation to improve patient care and outcomes, they’d be more willing to accept change,” said Tracie Koepplin, clinical manager at PMC. “To achieve the CPCi model and work at our fullest potential, we needed to change our mindset and operate differently within our practice.”

ORGANIZATIONAL CHANGES MOVE FORWARD

Over the course of seven years, PMC administrators executed organizational changes to meet population health goals:

- Enhance outreach responsibility for patients who are past due for services
- Ensure that every patient is assigned to a primary care provider
- Hire an extended care management team
- Stratify patients based on risk levels
- Create care plans for high-risk and rising-risk patients
- Manage transitional care services for patients discharged from the ED or hospital
- Implement new workflows and a team-based care model
- Share decision-making with patients
- Institute a patient/family advisory council

“When we first shared the requirements for CPCi, our providers began to realize quickly that they weren’t going to be able to do this work alone anymore. They were going to need help from team members to provide the necessary services required for transformation. We realized that we did not have enough resources allocated for our providers to do this work, so we ended up having to hire a good support staff, and we had to work on that trusting relationship between the new staff and the providers before we could really move on in the transformation.”

-Tracie Koepplin
“Our nursing staff had been spending 30 minutes every evening preparing charts and identifying gaps in care for patients being seen the next day. The Virence Health tools helped our nurses and other staff members manage patient cohorts more efficiently.” -Tracie Koepplin

The changes didn’t stop there. PMC tapped Virence Health’s Centricity™ Practice Solution for a comprehensive set of population health technologies to leverage data from the practice’s electronic medical record for population health. Staff used the system to stratify patients by combining evidence-based treatment guidelines and medical records to create a comprehensive patient profile. “We learned early on that data accuracy is important,” noted Koepplin. “Our nursing staff had been spending 30 minutes every evening preparing charts and identifying gaps in care for patients being seen the next day. Our providers came to recognize that being successful in value-based care meant investing in robust automation. The Virence Health tools helped our nurses and other staff members manage patient cohorts more efficiently.”

The Virence Health tools helped practice members to work at the top of their medical licensure, and the automation capabilities empowered providers to deliver a higher value of care services to chronically ill patients.
DIABETES PATIENTS ARE FIRST POPULATION HEALTH COHORT

Cohort identification

With sufficient resources in place, PMC leaders kicked off their population health program by intentionally focusing on a smaller cohort—846 diabetes patients empaneled to PMC’s family medicine providers. “Virence Health’s Ambulatory Population Health tool contains filters that you can apply to the entire patient population to help identify priority patients. And that can be based on age, sex, or in this particular case, identifying by chronic disease,” explained Meredith Esonis, Solution Consultant at Virence Health.

The practice then used the tool to segment the diabetes patients in this cohort. The analysis revealed that utilization of diabetes educators was only 27%, the number of patients whose A1C was over 9% was 23%, and the number of patients overdue for a visit with the diabetes educators and not at treatment goal was 45%.

Encouraging these diabetes patients to see a diabetes educator became the top priority. The goal was to prevent gaps in care, defined as the discrepancy between recommended best practices and the care actually delivered to the patient.

Managing outreach to priority patients and operating at top of licensure

“Once you have identified the population, orchestrating team-based care is a simple matter of enrolling the population in the appropriate care pathway within the care coordination tool,” Esonis noted. “You can design your own care pathway programs, so you can pick the actions that are important to that program and determine which role is most appropriate for each task,” added Angie Barnes, RN, CDE Care Manager/Diabetes Educator, who led the diabetes population health pilot at PMC.

Armed with the most relevant data, PMC diabetes educators enrolled the identified patients in their diabetes education care pathway within the care coordination tool. The care pathway automatically assigned a pre-defined set of tasks to every patient in the cohort, and each task was also automatically assigned to the role minimally qualified to perform the action.

The care coordination tool was made accessible to all care coordinators, including new hires. The expanded care team included a data analyst, administrator, outreach facilitator, certified diabetes educator and dietician who relied on the Virence Health tools to monitor the health of diabetes patients. “The sophisticated tasking engine within the solution enables members of the care team to work at the top of their licensure and coordinate their activities in real time to manage patients’ care more efficiently and effectively,” explained Esonis.
The outreach facilitator next contacted diabetes patients by letter and phone to schedule appointments with providers. Rather than open each patient’s individual chart to accomplish this task, the facilitator relied on the care coordination task manager to more efficiently manage the diabetes population. The tool also populated each patient’s chart with relevant documentation in near real-time, which improved care team communication and engendered trust.

The diabetes population outreach was successful in achieving a surge in patient visits with diabetes educators and preserving availability of same-day openings on the primary care team’s schedule. Virence Health’s Ambulatory Population Health tools enabled care team members to work at the top of their licensure and to focus on higher value tasks that delivered a higher level of services to patients.

**Thoroughly closing gaps in care**

Not only did PMC proactively recall patients for diabetes education, the care team used every sick visit as an opportunity to address recommended best practices such as needed screenings and vaccines or medication concerns.

Patient health status dashboards helped care PMC team members ensure every seen patient received thorough care individualized to their needs. The dashboards, embedded with evidence-based guidelines and color-coding, display visually the patient’s gaps in care. Providers and care team members study the patient health status dashboards during team “huddles” and throughout the day to prepare for each patient’s visit.

“Our diabetes educators used the Virence Health population health tool to easily visualize and close care gaps at the point of care,” said Barnes.

“For instance, if a patient arrived with an unexpected sore throat, that person might have their A1C tested, receive a flu shot or be screened for depression. The visit is made more efficient,” she explained. “Our clinic has set the expectation that for every seen patient, we will close as many detected gaps in care as possible the same day. Having a dashboard that is automatically updated in real time just makes our care management process more efficient.”
DIABETES PATIENTS GAIN IMPROVED OUTCOMES

In a six-month population health pilot of 846 diabetes patients, PMC achieved remarkable outcomes:

- Doubled utilization of diabetes educators from 27 percent to 54 percent
- Reduced the number of patients with A1C greater than 9 percent by 30 percent, from 23 to 16 percent
- Decreased the number of patients past due for office visits or labs by 33 percent, from 45 to 30 percent
- Rolled out the population health program to the remaining diabetes patients
- Added retinal eye exam at the point of care

“Our utilization is up to 69 percent of the diabetes patients being seen by a diabetes educator in the past year,” said Barnes. “Our A1C poor control number is now down to 9 percent as a reflection of the entire clinic’s progress, which is a pretty amazing number. And, we only have 39 percent of our patients practice-wide who are past due for office visits.”

MORE EFFICIENTLY DELIVER COORDINATED, INFORMED CARE

With the right tools and organizational transformation best practices, medical practices can enhance communication across care teams and build mutual trust and success. Virence Health solutions enable providers and care teams to work at their fullest potential carrying out population health program directives.

**The result:** Elevated quality health outcomes for targeted patient populations, reduced care expenditures, a balanced workload for providers who can redirect attention to patients requiring the most medical support, and a financially strong practice.

The accomplishments of the PMC team are a great example of what a successful population health program can achieve. Their cultural, organizational, and technological shift to proactive, team-based care and their ability to leverage their data helped them improve the lives of their patients,” said Sue Feury, Sr. Product Marketing Mgr. at Virence Health.
AUTHORS
These authors from Virence Health and Physicians Medical Center, PC presented on this topic at MGMA18 | The Annual Conference.

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Tracie Koepplin has a B.S. in nursing, a masters certificate in health informatics, and 30 years of experience in healthcare. Tracie started her career in oncology and then joined Physicians Medical Center (PMC) as the EHR Clinical Coordinator. Tracie is now the Clinical Manager and instrumental in leading PMC’s adoption of innovative care delivery and payment models. As President of the Centricity Healthcare User Group, she has designed curriculum to help executives become stronger leaders and help practices successfully transform to value-based care.

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Angie Barnes is a registered nurse, a certified diabetes educator, and a care manager at Physicians Medical Center (PMC). Angie has 18 years of experience in acute care, pediatrics, triage, and care management. Angie played a leading role in the implementation of PMC’s pilot program in population health focused on diabetes education – a program that has now successfully expanded throughout the clinic and into other care pathways.

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Sue Feury has 20 years of experience in healthcare. She began her career as a process engineer in biotech. After earning her MBA at the Tuck School of Business at Dartmouth, she held roles in product management and marketing at analytical instrumentation and cardiac device companies. In her current role as a senior product marketing manager at Virence Health, Sue has studied how industry-leading practices leverage technology to improve provider efficiency, care quality, and financial performance and thrive under value-based care models.
Virence Health is a leading software provider that leverages technology and analytics to help healthcare providers across the continuum of care effectively manage their financial, clinical, and human capital workflows. Virence offers a comprehensive suite of innovative technology-enabled solutions that aim to improve quality, increase efficiency, and reduce waste in the healthcare industry. Virence was acquired by Veritas Capital, a leading private equity investment firm with significant experience in the healthcare technology space, from GE Healthcare in July 2018. virencehealth.com

Physicians Medical Center, PC, (PMC), a leader in the transition to value-based care, is a multi-specialty health clinic based in McMinnville, Oregon specializing in pediatrics, family medicine, and internal medicine. PMC is a five-star Patient-Centered Primary Care Home, the highest rating, and participates in Comprehensive Primary Care Plus, an innovative alternative payment model. The Centers for Medicare and Medicaid Services (CMS) invited this advanced practice to present on numerous nation-wide webinars covering topics such as risk stratification and transitional care management.

Medical Group Management Association (MGMA) is the premier association for professionals who lead medical practice. Since 1926, through data, people, insights, and advocacy, MGMA empowers medical group practices to innovate and create meaningful change in healthcare. With a membership of more than 40,000 medical practice administrators, executives, and leaders, MGMA represents more than 12,500 organizations of all sizes, types, structures and specialties that deliver almost half of the healthcare in the United States.

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