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The Building Blocks of High-Performing Primary Care:
Lessons from the Field

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Executive Summary

"In its most highly developed form, primary care is the point of entry into the health services system and the locus of responsibility for organizing care for patients and populations over time. There is a universally held belief that the substance of primary care is essentially simple. Nothing could be further from the truth."

— BARBARA STARFIELD, MD
FROM HER BOOK "PRIMARY CARE: CONCEPT, EVALUATION, AND POLICY"

PRIMARY CARE IN THE US IS UNDERGOING A transformation — from physician-centered practices to patient-focused teams. An outpouring of energy, thought, and work has gone into this transformation, and a clear picture of this new primary care practice is emerging.

To understand how practices are approaching the creation of a successful patient-centered medical home, this research involved site visits and extensive interviews with the leadership and all levels of staff at seven high-performing primary care practices.

For the purposes of this report, high-performing practices are defined as those with high levels of patient and staff satisfaction, clinical quality metrics that have improved over time, and a stable financial base.

This report focuses on six characteristics considered by these practices to be the building blocks of this new model of health care delivery:

1. **Data-driven improvement.** High-performing practices collect, clean, and summarize performance data, which are used by clinicians and staff in all corners of the organization to drive effective action.

2. **Empanelment and panel size management.** High-performing clinics assign patients to a clinician and team in the process of empanelment, and they actively manage panel size, balancing capacity and demand so that continuity of care and access can be sustained.

3. **Team-based care.** Teams — including clinicians, medical assistants, registered nurses, front desk personnel, and behaviorists — are created, and all members are responsible for the quality of patient care. Effective teams rely on an explicit vision and clear principles, the same team members working together almost every day in a shared space, defined workflows, established channels of communication, training and cross-training to build skills, ground rules, and clinician-approved standing orders.

4. **Population management.** Population management addresses the needs of various subgroups of the patient population. Practices provide panel management to support the preventive care needs of all patients. They provide self-management support, or health coaching, to patients with chronic diseases. Patients with complicated medical and psychosocial needs receive a different level of care — complex care management.

5. **Continuity of care.** Continuity improves quality of care, improves the patient's experience, and lowers costs. To ensure continuity of care, practices require clinicians to work a minimum number of hours and days each week, train front desk personnel to encourage continuity in scheduling, and actively control panel size to ensure that demand does not exceed supply.

6. **Prompt access to care.** A high priority for patients, timely access to care is difficult to achieve without managing panel size to balance capacity and demand, and building teams that add new capacity. Practices improve access by opening their schedule for only a few weeks at a time, spacing visits by taking care of more needs each time, and offering visits through multiple channels, such as phone, web-based patient portals, group visits, and visits with non-clinician team members, such as registered nurses or medical assistants.

The practices visited are remarkably similar in their implementation of these primary care building blocks. At their core, high-performing primary care practices require a functioning data system that is used to drive improvement, the empanelment of patients to a clinician or team with a reasonable panel size, and stable teams with the same people working together on a regular basis. These three central building blocks — which enable the other building blocks to be successfully put in place — have allowed these practices to transform into patient-centered medical homes and ultimately, to provide better care for their patients.

I. Introduction

Primary care in the US is facing difficult times: With a shortage of physicians and no shortage of patients, a change is called for in how care is delivered. Many primary care practices throughout the US are attempting to meet this challenge by transforming themselves from physician-centered practices to patient-focused teams. These efforts are bringing them closer to a model for 21st-century health care delivery — the patient-centered medical home.

To understand how high-performing practices are approaching the creation of a successful patient-centered medical home, this research involved site visits and extensive interviews with the leadership and all levels of staff at seven primary care practices.[1] (See Table 1 on page 5.)

For the purposes of this report, high-performing practices are defined as those with high levels of patient and staff satisfaction, clinical quality metrics that have improved over time, and a stable financial base.

Six characteristics of successful practices emerged from the site visits as the building blocks of transformed primary care. They include:

- Data-driven improvement
- Empanelment and panel size management
- Team-based care
- Population management
- Continuity of care
- Prompt access to care

The seven practices, with widely different organizational structures, patient populations, and geographic locations, exhibited a remarkable similarity in their independent implementation of these building blocks. This report discusses each building block and describes trends and variations among the seven practices.

Building Blocks vs. Starfield Characteristics of Primary Care

The building blocks discussed in this report are distinct from the core characteristics of primary care, which were formulated in the early 1990s by Barbara Starfield, world-renowned primary care scholar. Starfield described these attributes as first-contact care (access), continuity of care over time, comprehensiveness, and coordination of care.

In a 2009 interview with the American Academy of Family Physicians, Starfield said: "The system must focus on providing more primary care to more people.… Second, care has to be person-focused over time.… The third characteristic is comprehensiveness. Instead of referring so much unnecessarily to (sub) specialists, we have to reserve (sub)specialist care for things that (sub)specialists are really needed for — the less common and complicated things — and take much better and more care of most health needs within a primary care setting. The fourth characteristic is coordination. People have to go elsewhere for (sub) specialized services every now and then, and that is good care, not bad care. When they do go, the care they receive elsewhere has to be coordinated with their ongoing care."

The building blocks described in this report are somewhat different; they are the means by which the Starfield characteristics are implemented. In order to achieve her vision for primary care, the building blocks of data-driven improvement, empanelment, and team-based care are needed as the foundation.

Table 1. Primary Care Practices Visited

	LOCATION	TYPE OF ORGANIZATION	PATIENTS SERVED	APPROXIMATE NUMBER OF... PATIENTS SERVED ANNUALLY	CLINICIANS*	ELECTRONIC MEDICAL RECORD (EMR) SYSTEM
Clinica Family Health Services†	Denver, Colorado	Nonprofit community health center	Mostly Latino uninsured and Medicaid	40,000	46	NextGen
Multnomah County Health Department Primary Care Clinics†	Portland, Oregon	County-run health center	Low-income uninsured and Medicaid	45,000	40	EPIC
Clinic Olé†	Napa, California	Nonprofit community health center	About 50% Spanish speaking, 50% English speaking low-income	20,000	30	eClinicalWorks
Group Health, Olympia Medical Center	Olympia, Washington	Primary care site of integrated system	Mixture of patients, members of Group Health (commercially insured)	46,000	42	EPIC
Sebastopol Community Health Center (one site of West County Health Services)	Sebastopol, California	Primary care site of a larger nonprofit community health center	Low-income uninsured and Medicaid	3,400	8	eClinicalWorks
La Clínica de la Raza, Transit Village site, Family Medicine Department	Oakland, California	Nonprofit community health center	Mostly Latino uninsured and Medicaid	12,000	16	In the process of implementing NextGen
West Los Angeles Veterans Affairs Primary Care Clinic	Los Angeles, California	One site of a very large national integrated system	Veterans	15,000	12	Computerized Patient Record System (CPRS)

* This number represents the number of people, not the full-time equivalent (FTE).
† For these clinics, the number of patients served and the number of clinicians reflects the entire organization rather than only one site.

Ordering the Building Blocks

The building blocks of primary care are interrelated; however, the order in which they are put in place is important. This report describes the building blocks in their ideal order of implementation, according to the leaders of the high-performing practices interviewed for this report.

The practices visited confirmed that data-driven improvement, empanelment with panel size management, and team-based care are the three fundamental building blocks that support the other elements. The first and most basic step in the creation of a patient-centered medical home is to develop a data system that allows practices to understand their patient population and engage in quality improvement. Not all of the data systems described in this report are high tech, but all involve careful identification of the types of measures that help drive change. The second step is to empanel each patient to a specific clinician and adjust panel size to appropriate levels. The third is to develop stable teams in which every team member — clinician, medical assistant (MA), registered nurse (RN), and others — shares responsibilities for the health of their panel of patients.[2]

With empanelment and team-based care, practices are able to balance the demand for services with the capacity to provide them, a prerequisite for achieving continuity of care and prompt access to care. Empanelment also allows practices to measure and improve the care of their entire population through population management. While access to care and continuity of care are intertwined, access comes last in the arrangement of building blocks because it is difficult to achieve without other building blocks already in place. Prompt access is important to patients; however, too many practices fail to improve access because they have not empaneled their patients or created teams.

This report focuses on six building blocks common to all seven practices visited. However, some — but not all — of the practices exhibited other foundational elements that should also be considered as building blocks for the primary care of the future. These four additional elements include: a shared mission buttressed by concrete objectives and goals; a clinic template that extends beyond 15-minute, one-on-one, face-to-face visits and creates time for other encounter types; coordination of care with specialty, hospital, and other services in the "medical neighborhood"; and well-trained leaders who are fully engaged in their roles. While this report describes the six building blocks observed in all seven practices, practices exhibiting the highest level of performance use all 10.

It is important to note that this research focused mainly on face-to-face encounters. Even though it is a top goal of high-performing practices to increase the prevalence of alternate encounter types — phone visits, e-visits, group visits, and visits with non-clinician team members — efforts to do so have been seriously hampered by the clinician visit-based payment system. Of the seven sites visited for this project, only the globally budgeted Group Health and Veterans Affairs systems are significantly shifting care to alternative encounter types.

II. Findings: How the Building Blocks Are Used

THIS SECTION OUTLINES EACH OF the six building block in detail, discusses their implementation at individual practices, and summarizes key take-home points.

1. Data-Driven Improvement

Data provide the bedrock of high-performing health practices, enabling clinics to see variation in practice and identify those models that lead to better health outcomes, fiscal sustainability, and increased efficiency.[3–7]

The practices examined for this research identify meaningful measures and publicize those measurements frequently, precisely, and quickly enough to provide rapid feedback. Problems are then addressed in a timely manner, and promising practices shared across teams. Team members use the data in discussions about practice improvement. Every clinic visited for this study has systems for collecting and reporting data, breaking down that data by team or clinician to identify variation, sharing information with staff, and converting the numbers into actionable steps.

Practices use a variety of electronic information systems, such as practice management systems, electronic registries, and electronic medical records (EMRs), as tools for data-driven improvement. All of the practices visited either have an EMR system or have plans to implement one. Unfortunately, many EMR systems require additional infrastructure (e.g., registries) to mine the data, or extract it in a way that helps practitioners understand their patient population. Some practices use effective low-tech systems to collect and share data rapidly, such as Multnomah County's visual management system outlined below.

Support from the clinic's leadership is critical to achieving data-driven high performance. This level of support inspires innovation throughout the organization and can create the organizational structures to foster it. In two of the clinics, the leadership team interacts with the entire clinic staff to motivate and nurture data-driven improvement.

Keys to Success for Data-Driven Improvement

- **Prioritize data collection.** High-performing practices prioritize finding the time and expertise to collect, clean, and summarize performance data, which are used by clinicians and staff in all corners of the organization to drive effective action.
- **Develop reporting systems.** While EMRs have the capacity to capture a wealth of data, most are weak in data reporting and mining capabilities. High-performing practices have invested in data systems that expand the EMR's capabilities or that are separate from, but populated by, the EMR. Some, like Multnomah, use simple, non-technical systems to provide rapid feedback for quality improvement.
- **Be strategic.** As there are an almost infinite number of metrics to consider, organizations with limited resources must be strategic when deciding what to measure and communicate.
- **Validate the data.** Once data are acquired, the next step is validation. If clinicians and staff do not trust the accuracy of performance data, the data can deter, rather than catalyze, quality

improvement. To ensure quality, practices "scrub," or clean, their data regularly. Questions practices ask in this process include: Are all the people listed as having diabetes really people with diabetes? Are patients empaneled/assigned to their regular clinician?

- **Identify organizational goals.** To move from data to action, clinic staff members identify organization goals for the items being measured and work together to interpret the gathered data. Several practices have found ways to encourage engagement in data driven improvement at all

Data-Driven Improvement in Action

Clinica Family Health Services

- Run charts demonstrate performance over time for the entire organization, each site, each pod (team), and each clinician.
- Metrics are organizational (e.g., continuity of care and access) and clinical (e.g., percentage of smokers receiving counseling; and diabetes, hypertension, and prenatal care processes and outcomes).
- Data boards — updated every few weeks — on the walls of each pod display goals, performance, and areas needing improvement.
- Areas needing improvement are discussed at twice-daily team huddles.
- Pay-for-performance systems have rewarded all members of high-performing teams, not just physicians.

Multnomah County Health Department

- In addition to run charts measuring organizational and clinical data, Multnomah's "visual management" system displays real-time indicators of key improvement initiatives for each team on a wall-sized board in a public space. Teams indicate goal achievement (e.g., accomplishing twice-daily huddles) by placing a green (achieved) or red (not achieved) dot on the wall. Teams highly value being "green."
- The systemwide medical director and director of operations make monthly rounds of the eight clinic sites, meeting with clinic leaders and discussing action steps to rectify issues resulting in red dots on the visual management data wall.

Clinic Olé

- A leadership training seminar, the Quality Culture Series, teaches executive teams from the regional consortium clinics how to use data to guide improvement.

Sebastopol Community Health Center

- A data dashboard includes 74 measures, which can be examined by site or by team. The quality management director selects two measures to share at each staff meeting. One measure provides an opportunity to highlight excellent performance; the other, to discuss an improvement opportunity.
- Like report cards, performance data can be a sensitive topic, particularly for clinicians. The leadership team at Sebastopol sets a constructive, rather than punitive, tone. For example, the medical director is vocal about the areas in which he needs to improve, thus normalizing a culture of self-reflection and continual improvement.

La Clínica de la Raza

- Metrics needing improvement are analyzed to determine the cause of the problem. For example, La Clínica leadership wanted to understand the low rate of diabetic eye exams. After going through the process of scheduling themselves an eye exam, the medical director and a panel manager discovered two problems. The referral sheet for their primarily monolingual Spanish-speaking patient population was provided only in English, and the map describing where to get the eye exam was incorrect. In addition, further discussion with front-line staff and patients uncovered perceived socioeconomic barriers, such as the cost of the visit and the incorrect perception that the visit would not be covered by their Medi-Cal or other coverage plan.

levels of the organization, such as using data at staff meetings and posting data in common areas.

- **Analyze variation.** A drop in the rate of preventive health exams could be a clinic-wide problem or an issue with a particular team. Data analysis by team provides insights into solutions to this problem.

2. Empanelment and Panel Size Management

According to the Safety Net Medical Home Initiative's Empanelment Guide, empanelment — the process of ensuring that every patient has an assigned primary care clinician — is important to the success of a primary care practice for four main reasons:[8,9]

- It provides a systematic way to encourage patients to see their own primary care clinician.
- It provides the clinic system and clinicians with a denominator (the total of each clinic's and each clinician's patients) for measuring performance.
- It enables the clinic system to manage supply and demand.
- It allows groups of patients to be identified, including those who do not come in for care.

All of the clinics discussed in this report have empaneled their patients to a clinician. Some clinics empanel patients to nurse practitioners and physician assistants as well as to physicians; others do not. All have processes in place to ensure that incoming patients are empaneled and that lists are periodically scrubbed to ensure that they accurately reflect current clinician-patient relationships. Most practices "right-size" their panels, adjusting demand to available capacity.

Keys to Success for Empanelment and Panel Size Management

- **Empanel all patients.** Most health centers use the empanelment method described in The Empanelment Guide developed by the Safety Net Medical Home Initiative.[10] Panel maintenance includes the development of procedures to empanel new patients and methods to regularly correct errors in empanelment.
- **Manage panel size.** High-performing clinics actively manage panel size, balancing capacity and demand so that continuity of care and access can be sustained. Most clinics use Mark Murray's method of empanelment (see sidebar on page 11). Demand is usually determined by risk-adjusting actual panels based on age and gender. Some clinics also account for the types and number of diagnoses. Group Health risk-adjusts panels using the diagnostic cost group predictive model (DxCG). Capacity is defined as the number of appointment slots per day or per year. A major weakness of this formula is that it defines capacity as face-to-face clinician visits. As new models of primary care payment emerge, the definition of capacity should expand to include telephone and email encounters, group visits, and encounters with non-clinician team members.
- **Manage demand.** Clinics manage demand in different ways. New patients are assigned to clinicians with lighter panels, panels are closed as they fill up, and patients are reassigned to smaller panels if there is a change in capacity. The method of limiting demand for a clinician or a practice is driven by the practice's philosophy. For example, Sebastopol Community Health Center leaders believe in the principle that health care is built on relationships, so they do not reassign patients without their permission.

Empanelment in Action

Multnomah County Health Department

- An empanelment process started in 2007 with a pilot clinic and was spread to all clinic sites over six months. By early 2008, more than 99% of patients were empaneled to a clinician.
- Patients are considered active if they have had at least one visit in the past 12 months. This period of time is used to calculate panel size and measure quality. Other practices use an 18-month or 24-month period.
- Multnomah used the four-step method of empanelment developed by health care management expert Mark Murray as well as Murray's formula to calculate ideal panel size. (See sidebar on the following page.)
- Panels are adjusted by age and gender to account for variation in demand — clinicians with many elderly and sick patients would have smaller panels than clinicians with many young and healthy patients. Other systems adjust panels by diagnosis as well.
- When a clinician reaches the ideal panel size, their panel is temporarily closed. Clinicians with small panel sizes are assigned more new patients. Clinicians see monthly updates of their panel size on their team dashboard. In addition to using panel size to balance demand and capacity, panel size is used to think strategically about the number of teams and clinicians needed at each clinic.

Group Health Olympia

- Most members are empaneled to a primary care physician. Nurse practitioners and physician assistants are not assigned panels; they see same-day patients, although some share a physician's panel and care for a subpanel of their own. Patients can choose their primary care physician as long as the physician has an open panel.
- Panels are risk-adjusted using the diagnostic cost group predictive model, also known as DxCG-adjusted panels.[11] Panel size per FTE clinician is approximately 1,800. Panels are not closed until the physician reaches 2,000 patients and are reopened when the panel size falls to 1,800. Panels can be opened and closed from week to week in response to physician stress and panel size.
- Panels are leveled by giving newer physicians with smaller panels some patients of overpaneled physicians.[12] This approach may lead to objections by both patients and physicians; if a patient objects, they are not moved to a new clinician.

Sebastopol Community Health Center

- Capacity (available slots for patients) is calculated using the Mark Murray method.[13] Panels are risk-adjusted based on age, gender, and chronic conditions. An incremental weight is applied for each of a number of chronic conditions (e.g., diabetes, COPD, chronic pain) or for pregnant patients.
- To redistribute patients from overpaneled clinicians, clinicians with small panels are encouraged to invite patients from larger panels to join their panel. This action has reduced excessive panels by about 50%.

Four-Step Method of Empanelment

Mark Murray, MD, family physician and health care management consultant, is well known in the primary care field for his development of empanelment guidelines. The Multnomah County Health Department used Murray's four-step method of empanelment:

1) Patients who have seen only one clinician are assigned to that clinician.
2) Patients who have seen more than one clinician are assigned to the clinician they have seen most often.
3) Patients who have seen multiple clinicians the same number of times are assigned to the clinician who performed their most recent comprehensive health exam.
4) Remaining patients are assigned to the clinician they saw last.[14] Clinicians review the panels for accuracy.[15]

After creating panels, Multnomah right-sized them using Murray's formula:

Clinician visits per day
× Number of clinician days per year
÷ Average number of visits per patient per year
Ideal panel size

For example, if clinicians see 18 patients per day and work 210 days per year, and the average patient has 3.6 visits per year, ideal panel size per clinician FTE is 18 × 210 ÷ 3.6 = 1,050 patients. A clinician working at 0.7 FTE should have a panel of 735 (0.7 × 1,050 patients).[16]

3. Team-Based Care

The practices visited demonstrate that health care is a team sport. Winning teams require strong leadership to meld diverse individuals with widely different levels of training into a whole that is better than the sum of its parts. Communicating information among team members about the team's patients requires considerable time and energy.

The high-performing teams visited have each gone through the challenging transformation from the old lone-doctor-with-helpers model to a new model in which all team members share the responsibility for the care of the team's panel of patients.[17] These practices show that team-building is not simply the delegation of tasks from the doctor to the team. Responsibilities, not simply tasks, are reallocated so that all team members contribute to the health of their patient panel. Team members are sharing the care.

While team-based care can be challenging, this research shows that it is key to the success of a well-functioning clinic. The shortage of primary care clinicians in the US creates large panels in most primary care practices; the average panel size for US primary care is approaching 2,500 patients. It would consume 18 hours each day for one primary care physician without a team to provide high-quality chronic and preventive care to this number of patients.[18–21] Team-based care also increases capacity for patient encounters (see section on access). On a well-functioning team, RNs, pharmacists, clerks, and MAs are trained as health coaches and panel managers, substantially increasing the capacity of the team to provide chronic and preventive care, thereby improving access.

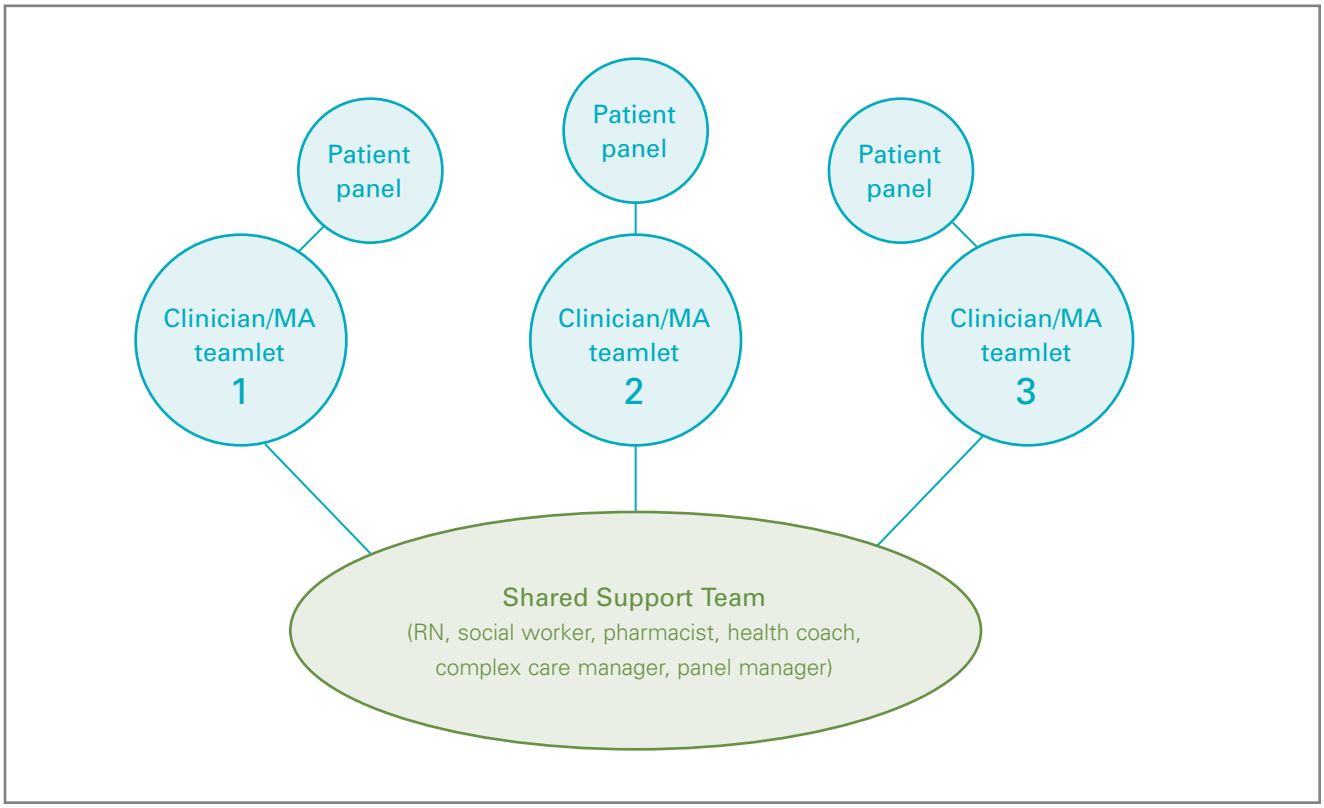
The clinics surveyed outlined several elements that are critical to the development of a well-functioning team. They include:

- Shared vision, principles, and concrete goals
- Established teamlets
- Colocation
- Defined workflows
- Training, skills checks, and cross training
- Communication
- Ground rules
- Standing orders (clinical protocols)

The practices visited have built their teams by identifying and articulating shared vision, principles, and concrete goals, and making them central to staff communication and decisionmaking. A team vision statement and set of principles are broad and establish the overall tone for the team, while concrete goals are more specific and time limited. For example, a goal might be to reduce the percentage of the team's diabetes patients with HbA1c levels greater than 9 from 20% to 10% by January 1, 2013.

A key feature of team-based care is the establishment of stable teamlets — a clinician paired with a small number of support staff who work together daily.[22] The long-term, consistent collaboration within the teamlet makes it possible for MAs and other staff members to take ownership of their panel of patients, create systems of accountability, and effectively share the care (Figure 1).

Figure 1. Team Model



Colocation dramatically improves communication between team members and helps facilitate team care. Rather than locating MAs and nurses in a central island and clinicians in separate offices — the norm in most primary care settings — members of the teamlet have adjacent workstations, and the entire team shares a common open space. Some of the practices visited have made architectural changes enabling several teamlets and other members of the extended primary care team (e.g., RNs, panel managers, behavioral health professionals) to sit together in one open space.

A defined workflow outlines the roles and lines of communication within the team, providing the glue that holds team-based care together. Primary care practices are made up of hundreds of complex, intersecting workflows — how prescriptions are refilled, how patients are informed of their lab results, how patients are coached to understand their disease and medications. The workflows in high-performing practices are transparent and mapped clearly, so each team member understands who performs which functions, in what order, and how handoffs are made when workflows involve more than one person on the team. This iterative process is revisited over time to continually improve the patient experience and the team's efficiency. Mapping workflows in a collaborative process can help team members work better together. For example, to map the prescription refill workflow, one team started with a basic map of each step of the process. Next, everyone involved in the process — the front desk staff member, MA, and clinician — was involved in correcting the map and identifying variation in practice; discussing inefficiencies, gaps, or danger points (poor workflows can negatively impact quality); and suggesting a new and better workflow. Workflows also illuminate where standing orders can empower non-clinicians to share the care.

As workflows are defined and required competencies identified, training and skills checks ensure that every team member has the knowledge and skills to carry out their roles. Team-based care is generally neglected in the curriculum of allied health professionals, so organizations seeking to transform into robust team-based models must identify needed skills and ensure adequate training for their team members. Cross-training all team members ensures that any of them can fill in when another team member is absent or otherwise unavailable.

The practices visited have established systems of team communication on many levels. Monthly or biweekly team meetings are used to discuss principles, goals, ground rules, and problems. Daily or twice-daily huddles are held to go over the day's patients and anticipate patient needs. Minute-to-minute exchanges about specific patients are greatly facilitated by colocation.

Effective teams use ground rules that govern conduct and communication within the team. Ground rules, which are agreed upon by all team members, establish expectations for how quickly team members respond to requests from each other, what kinds of activities are acceptable (e.g., use of cell phones during work time), and how team members address conflict between one another. One set of ground rules governs conduct at meetings; another creates expectations for interactions during the clinic day. Discussions about ground rules were sometimes challenging, in part because they threaten established hierarchies. For example, meeting tardiness on the part of clinicians and MAs is treated in the same way when ground rules are explicit. Proactively discussing ground rules helped create a group vision of an ideal working environment and helped preempt conflict.

The practices involved in this research use clinician-approved standing orders, or protocols, to empower non-clinicians to take responsibility

for specific clinical tasks. Without standing orders, all work reverts to the clinician. Standing orders empower RNs to refill particular prescriptions or increase certain medication doses. They specify how MA panel managers order routine chronic and preventive care studies, such as mammograms, fecal occult blood tests, or cholesterol lab tests, for certain groups of patients.

The research demonstrates that sharing the care requires a culture change on the part of both clinicians and non-clinician team members, and resistance may arise. Non-clinician staff may not have the proper training to take on new responsibilities, may not feel accountable for providing high-quality care, or may not have time to assume new roles. At the same time, some physicians have an "only I can do it" mentality, which can be dispelled by addressing the first three issues: making sure non-clinician staff members are well-trained in new roles, building in accountability by closely linking non-clinicians with a clinician, and analyzing workflows to ensure that everyone has the time and resources needed to do their new jobs well.

The high-performing practices visited are making the shift to share the care. While none of the practices described in this report have completed this shift, all are actively moving in that direction.

MAs, RNs, front desk personnel, and behaviorists play key roles on high-functioning practice teams. This next section outlines each of these roles in more detail and highlights examples of how these roles are being maximized in the different clinics.

Medical Assistant Role

MAs are one of the fastest growing health care workforces in the nation. Between 2008 and 2018, the number of MA positions in the US is expected to grow by 34%. About two-thirds of MAs are based in physician offices.

Traditionally, MAs have played administrative roles (e.g., billing, scheduling) and provided clinical support (e.g., measuring vital signs, rooming patients, assisting with procedures).[23–27]

However, MAs, who are more culturally and linguistically representative of patient populations than other allied health professions, have the potential to play greater roles in health care. The clinics visited have expanded the role of MAs to help with population management and to take on panel management and self-management support responsibilities (see pages 20 and 21). Expanding the role of MAs makes it possible for RNs and clinicians to provide preventive and chronic care to all patients, thereby improving overall patient access to care.

However, this shift has been difficult for many practices. Limited job descriptions and a lack of time during busy clinic sessions prevent MAs from taking on new responsibilities. Training curricula do not include new MA roles such as panel management, and scope of practice varies broadly by state. Expanding the MA role requires skills-based training and mentoring. Practices involving MAs in outreach to patients to update colon cancer screening, for example, train MAs so they can describe how to perform a fecal occult blood test and educate patients about the test's importance. Revising the job description of MAs and matching performance evaluations to these job descriptions helps define the new role.

Exploring new roles for MAs requires the formation of stable teamlets so that MAs become familiar with their clinician and the patients on their panel, and so they ultimately feel responsible for the health of those patients. Practices that have been successful in expanding the MA role have created detailed, clinician-approved standing orders. For example, MAs in one clinic are authorized to determine which patients need immunizations

and administer those immunizations; they are also authorized to order routine cancer screening tests and chronic disease laboratory studies without checking first with clinicians. Staffing levels are adjusted to account for the MA's expanded role. For example, health coaching, which takes considerable time, cannot be done while rooming patients. Additional time should be budgeted for the MA to accomplish both tasks.

The Medical Assistant Role in Action

Clinica Family Health Services

- MAs are empowered through standing orders to support diabetes care and provide immunizations. For patients with diabetes, the MA determines if the patient is overdue for a Hemoglobin A1c, foot exam, or retinal exam. If so, the MA may perform point-of-care testing for Hemoglobin A1c. MAs also perform diabetic foot exams and set up appointments for a retinal exam (done with a retinal camera during a group visit). For children, the EMR includes decision support on which immunizations are needed. The MA draws up the immunizations while the clinician is seeing the patient and gives the shots in the post-visit. Clinicians are not involved in routine immunizations.

Clinic Olé

- MAs use the EMR template to guide screenings for and assessment of symptoms while rooming patients. For example, for patients with abdominal pain, the MA does a urinalysis. For asthma, the MA measures the patient's oxygen saturation and prepares a nebulizer treatment. MAs check smoking status and perform universal screenings for depression (using the PHQ-2), anxiety, and insomnia.

Group Health Olympia

- MAs conduct panel management outreach to the patients on their own panel; this outreach is often centralized in a single office in many large health care organizations. MAs receive a report listing patients overdue for services and contact the patients by phone, letter, or patient portal (EMR electronic communication system). The MA knows the patients and can easily discuss with the clinician any case that is inappropriate for outreach.

The Registered Nurse Role

RNs are an underutilized resource in primary care. Even with their wealth of clinical knowledge, RNs are too often relegated to roles that do not require their skill level or trapped in triage, a stop-gap measure to address poor access. Attempts to divide RN time between triage and chronic care management are often unsuccessful, because chronic care becomes overshadowed by urgent needs. The current situation is a vicious cycle: RNs are unable to add capacity because of their triage duties, and the inability to add capacity negatively impacts access such that triage is required.

High-performing practices are exploring ways to free RNs from triage so they can use their skills to provide acute care, manage patients' chronic care needs, and coordinate care for patients with complex medical needs. Fundamental to these efforts is the division of acute and chronic care responsibilities between members of the team; however, specific strategies vary. Some practices empower RNs to address, rather than simply triage, many acute care needs through standing orders. Other practices shift acute care duties to the licensed practical nurse (LPN), freeing RNs to provide chronic care management.

The RN Role in Action

Clinica Family Health Services

- RNs provide enhanced access to acute care. They use physician-approved standing orders to diagnose and treat positive strep throat cultures, uncomplicated conjunctivitis and ear infections, head lice, positive chlamydia and gonorrhea cultures, uncomplicated urinary tract and respiratory infections, and to manage warfarin dosing. Abnormal lab results are channeled to the RN's EMR in-box. The RN calls patients, provides patient education, and orders appropriate medications based on standing orders. One RN supports an average of three clinician-MA teamlets and is colocated on the pod, instantly accessible to the entire team.

Group Health Olympia

- Clinicians refer patients requiring chronic care management to RNs who see patients with diabetes, coronary heart disease, hypertension, and chronic pulmonary disease, particularly patients with new diagnoses or changes in their care plans. RNs function as health coaches, providing patients with the knowledge, skills, and confidence to self-manage their chronic conditions in accordance with the care plans. RNs help patients set goals and make action plans. They organize huddles with the patient's clinician, MA, and team pharmacist to discuss any patient whose disease is difficult to control.
- In a randomized controlled trial at Group Health, patients with diabetes and depression with RN care management had more improvement in HbA1c, LDL-cholesterol, systolic blood pressure, and depression scores than usual care patients.[28]
- The ability of RNs to take on the chronic care role is made possible by licensed practical nurses (LPNs, also known as licensed vocational nurses or LVNs in some states), who perform triage, respond to patient calls and clinician requests, and receive and sort incoming lab results.

The Front Desk Role

Front desk and clerical staff are often overlooked as a resource for team-based care. In many practices, they act as a message-taking service and are unable to resolve many of the issues confronting them. Several of the practices visited have removed the duty of answering phones from their clerical staff, instead engaging them in panel management activities such as sending letters to patients overdue for mammography or improving the patient experience through "touch back" follow-up calls.

The Front Desk Role in Action

Sebastopol Community Health Center

- Front desk personnel, called care team representatives, are part of the core teamlet and are responsible for all nonclinical communication with their panel of patients.
- Care team representatives do follow-up calls or "touch backs" to check on a new mother who just started breastfeeding, to make sure that labs were done, or check on a patient after an outpatient procedure or a medication change. Touch backs allow care team representatives to contribute to patient care.

The Behaviorist Role

As part of the movement away from a referral model to an integrated services model, many of the primary care practices visited provide patients with ready access to behavioral and mental health services. These practices have behavioral health specialists on their teams who can meet with patients in "warm handoffs" immediately following a visit with a clinician, who refers the patient for services.[29]

The Behaviorist Role in Action

Clinica Family Health Services

- Clinicians can do a warm handoff to the pod's behavioral health professional at the end of a clinician visit. After an introduction by the clinician, the behaviorist conducts a 10- to 15-minute unscheduled visit in the exam room. Depression, anxiety, and psychosocial problems are commonly addressed this way.
- MAs taking a patient's history may uncover depression symptoms, do a PHQ-9 depression screen, and contact the behaviorist if there is a positive result. The behaviorist follows these patients over time by phone or follow-up visits.

Keys to Success for Team-Based Care

- **Build a stable team.** Building high-functioning teams that can share the care is the most basic component of both population management and patient-centered access to care. The practices described here engage MAs, nurses, and front desk staff as integral members of the care team and use their combined resources to respond to the needs of their patient population.
- **Develop principles.** An explicit vision and clear principles instill a team with a sense of mission and help guide decisions about the team's make-up and how it will function. A model common to the practices described here is a group of clinician-MA teamlets that work together consistently, supported by a larger team of clinicians and other clinic staff.
- **Define workflow.** Defined workflows help standardize roles and communication among team members. The process of creating these workflows can be an opportunity for team building. With workflows defined, team members receive the training and supervision to grow into their roles. Team workflows evolve as practices shift from face-to-face clinician visits to other encounter types (phone visits, e-visits, and visits with non-clinician team members).
- **Facilitate communication.** High-functioning teams have established channels for communication. They dedicate time for team meetings, and they facilitate the all-important minute-to-minute interactions among team members regarding specific patients. Teams communicate easily when all team members, including physicians, are colocated, best exemplified by Clinica Family Health Services. Ground rules contribute to successful teams by establishing expectations for all team members.
- **Establish clinician-approved standing orders.** Clinician-approved standing orders based on defined workflows empower non-clinician team members to share in the care of their patient panel.

Team-Based Care in Action

Clinic Olé

- Clinicians and MAs were paired into teamlets in late 2010. The clinic manager paired fast MAs with slow clinicians and vice versa. Not all staff members adapted well to the change; two MAs left the clinic. However, two years later, clinicians report that working consistently with the same MA has been a major improvement. With the MAs feeling an increased sense of responsibility to the patients on the teamlet's panel, clinicians reported a positive culture change.

Team-Based Care in Action, *cont'd*

Multnomah County Health Department

- Multnomah's East County Health Center remodeled its clinic in 2008 to enable colocation of its teams. Previously, clinicians shared office space with other clinicians; now, everyone on the team works together in the same space. Staff members acknowledge that a cultural change accompanied the architectural change. The new design facilitates rapid communication about patient care.

West Los Angeles VA

- Teamlets include four members: the clinician, an RN, an LVN, and a clerk.[30] Social workers, pharmacists, and behavioral health professionals assist several teamlets.

Clinica Family Health Services

- Clinical activity centers around the pod, a shared space in which all team members, including clinicians, work.[31] The pods are color-coded — green, blue, and purple — as are the clinic walls and appointment cards handed to patients. Assigned to one color pod, each patient builds relationships with the clinical members of that pod.
- Each teamlet consists of an MA and a clinician. Each pod has three teamlets, which are supported by a pod-based behavioral health professional, an RN, a case coordinator (health coach), and a medical records specialist (Figure 1, page 12).
- At the beginning of each shift, each pod huddles to review the day's patients. The behavioral health professional and case coordinator anticipate which patients are likely to need their time, and MAs identify patients who need a procedure. If a group visit to a patient is scheduled, everyone learns which team member will be off the pod for which period of time.
- Workflow mapping is used extensively. To examine how incoming phone calls were handled, team members discussed who receives the call, what script is used, and how emergent, urgent, and nonurgent requests are handled. After mapping the process and testing improvements, Clinica provided training on each step.

Sebastopol Community Health Center

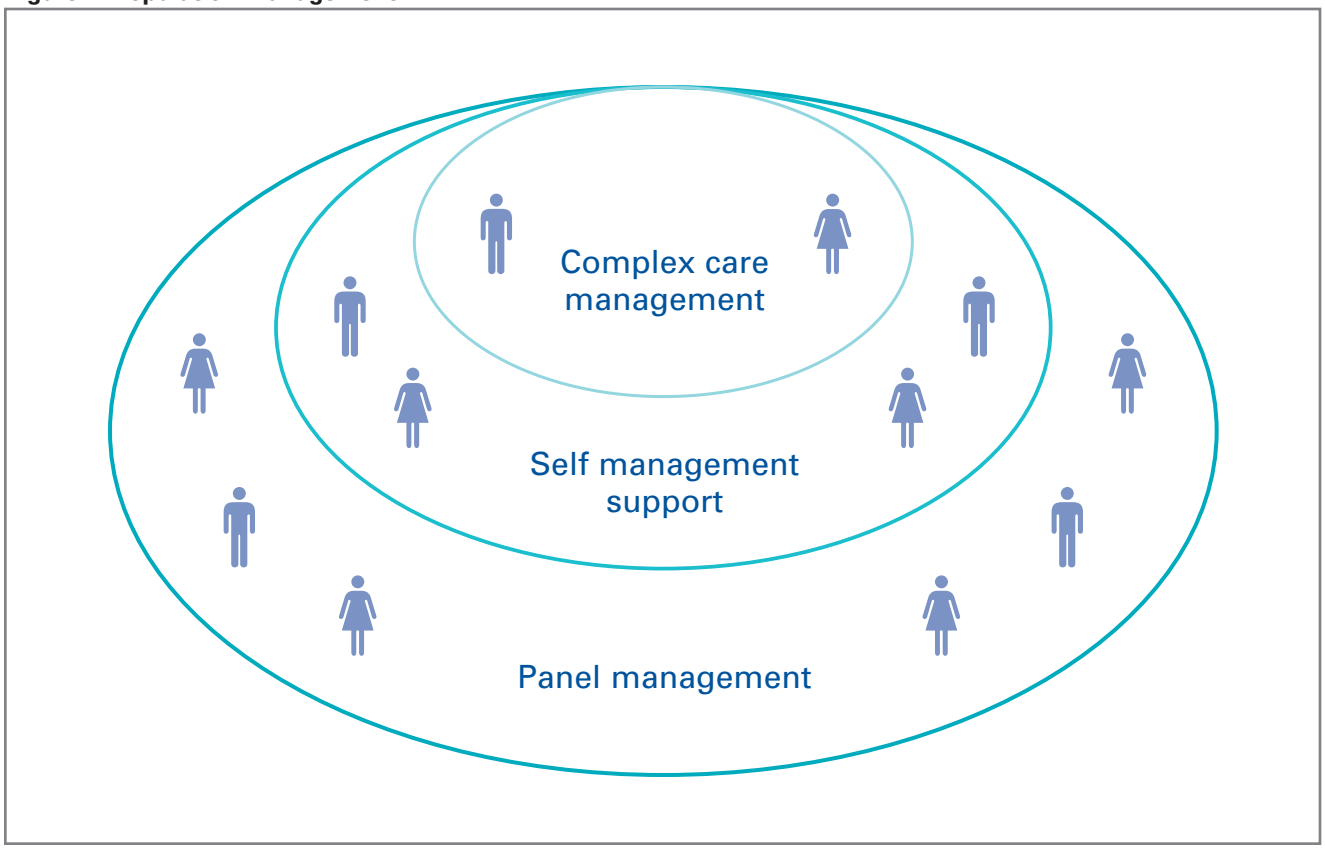
- Principles of Care reflect team-based values. They state, "At its core, all care is relational.… All barriers to timely access to this relationship should be removed." Staff members refer to this written, living document when making tough decisions, such as how to reassign patients from a panel that is too large.
- Formal meeting times are used effectively to share information among team members. For well-planned 5- to 15-minute huddles each morning and afternoon, MAs print out the schedule for the day. The team discusses the anticipated reasons for visits with the clinician, develops plans for cancellations, talks about patient personalities, and anticipates special needs, such as lab results or interpreters.
- Care teams meet monthly to review clinical outcomes together and discuss how to improve care.

4. Population Management

Population management involves the stratification of a patient population based on clinical needs so that appropriate resources may be deployed by the primary care team. The clinics visited practice population management by providing three basic levels of services: panel management, self-management support, and complex care management. (See Figure 2 on page 19.)

All patients require preventive care, such as cancer screenings and immunizations. Panel management systematically applies evidence-based guidelines to all patients in this broadest group, regardless of whether or not they seek care. In panel management, a member of the care team might send letters to patients overdue for a mammogram or remind patients checking in for a medical visit that they are due for a lipid panel to test their cholesterol.

Figure 2. Population Management



A subgroup of the general patient population includes individuals with a chronic condition, such as diabetes, high blood pressure, or asthma. These patients require support to understand their diagnoses, adhere to their medications, and make behavioral changes to improve the management of their conditions. Self-management support, or health coaching, helps patients gain the knowledge, skills, and confidence to improve their health.

The smallest patient subgroup contains individuals with complex medical needs or psychological and social factors which complicate the management of their conditions. This group requires complex care management.

Some patients within each of these circles effectively manage their own medical care. For example, some people in the outermost circle vigilantly show up for pap smears each year, and some medically complex patients successfully coordinate and manage all of their specialist visits and medications. Population management helps providers focus on those patients who require additional assistance to manage their health care needs. Their needs are distinct and require the deployment of different resources.

Many practices visited for this research engage MAs in panel management and self-management support but rely on the advanced clinical knowledge of RNs to address the needs of medically complex patients. Deployment of the team varies widely across practices. All patients, whether they require complex care management or not, are most effectively managed through a team-based approach to care.

Panel Management

Panel management is the systematic identification of a defined group of patients assigned to a clinician or practice to provide evidence-based preventive and chronic care. The clinics visited confirm that successful panel management requires a two-part culture shift from business as usual. First, the primary care practice must concern itself with the entire patient panel, not just those who seek care. Second, the primary care team, not just the clinician, must assume responsibility for the health of the team's patient panel. Panel management may take place separately from face-to-face office visits (outreach) or be done at the nursing intake portion of an office visit (in-reach). Panel management — which largely consists of routine functions not requiring clinical expertise — can be performed by unlicensed personnel, leaving highly trained practitioners to focus on more complex diagnostic and management issues.[32]

Panel management relies on the accuracy of the clinic's registry — a database with medical information about each patient. Practices use the registry to identify patients with care gaps, patients overdue for periodic preventive and chronic care services, and patients who are not in control for clinical measures such as LDL, hemoglobin A1c, or blood pressure. Ideally, information is automatically entered into a registry from a laboratory or the EMR.

Panel managers interviewed for this project use both in-reach and outreach to contact patients. With in-reach, a panel manager ensures that every patient coming into the clinic on a given day is up-to-date with all health care maintenance and chronic disease management. The in-reach model requires all personnel who room patients — usually MAs — to have panel management as part of their job expectations and to be properly trained. Also, the EMR or registry must have an easily accessible screen or report that staff can use to quickly identify and address care gaps during the rooming process.

Outreach involves a different workflow. The panel manager combs the registry or panel list to identify care gaps outside of the primary care visit; contacts patients by mail, phone, or via the patient portal (EMR communication tool); explains the care gaps to patients; and asks them to come to the practice or schedule diagnostic tests to close the care gaps. Practices that perform only outreach do not need all staff to be trained in panel management.

The practices visited are in one of two stages of implementing panel management as they shift responsibility from clinicians to non-clinicians. In the first stage, panel management still depends heavily on clinician involvement. While panel managers identify care gaps, the clinicians order needed lab and screening tests. Some practices have made the significant shift to the second stage, which does not involve the clinician at all. In this stage, clinician-approved standing orders are established which allow non-clinician members of the team to close care gaps. In these practices, an MA who identifies a diabetes patient overdue for a hemoglobin A1c test can order this test so that the results will be ready by the patient's next visit with the clinician.

Most practices begin panel management on a small scale and gradually expand to transform the team members' roles and the range of conditions affected. Outreach is an easy place for practices to initiate panel management because it can be conducted by a single dedicated staff person, thus requiring fewer changes in roles or workflow than in-reach. Most practices start panel management by focusing on a single condition or issue, such as diabetes care or cancer screening.

Panel Management in Action

La Clínica de la Raza

- All MAs take shifts to conduct outreach to patients at great risk of cardiovascular disease. The MA assigned to panel management for the day calls patients to address care gaps. They use the call to provide health coaching to reinforce self-management support behaviors such as home glucose monitoring and medication adherence.
- An MA panel manager tracks all patients on the anti-coagulant warfarin. Patients meet with the panel manager at least monthly for point-of-care testing of their INR to determine if the medication dose is correct. When point-of-care testing reveals a result that is out of range, the panel manager immediately alerts the clinician so that medication titration can occur while the patient is still in the clinic. The panel manager tracks INR results and medication dose changes using a registry flow sheet. In addition, the MA panel manager assesses patient adherence to medications and ensures that patients understand changes to their medication instructions. When a patient misses an appointment, the panel manager is responsible for outreach to bring the patient back into care. Results of panel management include decreased variation in results, increased patient adherence to medications, fewer adverse drug events, real-time response to out-of-range INRs, and decreased provider stress related to tracking down patients with out-of-range INRs late at night or the next day.

Clinic Olé

- MAs provide in-reach for immunizations. Using the EMR, MAs determine which immunizations are due and alert the patient. They draw up the immunizations during the clinician visit and administer them after the visit. Because immunizations are based on clinician-written standing orders, orders do not need to be placed during the visit, saving clinician time.

Self-Management Support (Health Coaching)

Effective chronic care management is largely dependent on a patient's own motivation to adhere to medications, eat healthy foods, engage in physical activity, and manage stress. Clinicians are ill-equipped to address these behavior change issues in a 15-minute visit. For patients who struggle to effectively manage their chronic conditions, self-management support, or health coaching, can help patients understand their disease, make lifestyle changes, and adhere to their medications.[33] The practices visited enlist various team members to provide self-management support. More important than which member of the team — RN, pharmacist, MA, or other staff — provides the health coaching is having well-trained coaches who are dedicated to that function.

Self-Management Support in Action

Clinica Family Health Services

- Each pod includes a case coordinator who works as a health coach and patient navigator. The case coordinator provides patient education and smoking cessation counseling and sets goals and action plans with patients. Goal-setting for diabetic patients has been shown to significantly improve glucose control compared with standard patient education.[34] Ideally, these 5- to 30-minute visits take place immediately after the clinician visit in a warm handoff. Having the case coordinator assume this responsibility frees RNs and other clinical staff to perform acute care functions.

Group Health Olympia

- RNs and pharmacists provide chronic care management. One full-time clinical pharmacist is assigned to a group of 10,000 patients to provide patient education, behavior change counseling, and medication intensification for patients with diabetes or coronary heart disease.[35]

Self-Management Support in Action, *cont'd*

Sebastopol Community Health Center

- The navigator serves as an advocate, coach, and a bridge to resources for patients requiring self-management support. The navigator receives warm handoffs from clinicians through an in-person introduction and meets with patients for several hour-long sessions. In these sessions, navigators provide emotional support, connect the patient to community resources, and help the patient create achievable wellness goals such as eating healthy foods or improving social support. Using a strengths-based approach, the navigator helps patients identify and build on their own resources. The navigator provides support between sessions by phone or in person, and the clinician joins the last session by videoconference to review the patient's self-management plan.

Complex Care Management

To assist patients with multiple chronic conditions, complex health care needs, and high use of in-patient and emergency department services, RNs and social workers in the practices visited play the role of complex care managers. They provide tailored patient support which includes coordination of care between primary care and specialists, medication review and reconciliation, and assistance accessing services such as in-home support.[36]

Complex care management is gaining visibility due to the rising cost of health care for patients with multiple chronic conditions.[37] Patients with five or more chronic conditions accounted for 76% of Medicare spending in 2002, and average spending for these patients is 17 times higher than for patients without chronic conditions. This high cost is coupled with poor quality of care. Studies have found that only about 30% of vulnerable older people receive adequate counseling and history taking, and potentially harmful drug interactions occur in as many as half of patients who are taking five or more medications per day. For the most medically vulnerable patients, the 15-minute clinician visit is inadequate to coordinate the care of multiple specialists, conduct medication reconciliation, address psychosocial issues, and ensure that patients understand and can manage their conditions to avoid unnecessary hospitalization and emergency department visits. The practices visited each provide complex care management in different ways.

Complex Care Management in Action

Sebastopol Community Health Center

- RNs provide complex care management, including managing transitions from the hospital or skilled nursing facility to the community.[38] Nurse care managers ensure that a patient understands follow-up instructions, schedule follow-up appointments, review medication adherence, assess the need for home care or durable medical equipment, and perform home visits to patients too sick to travel, those with repeat ER visits, or those with an unsafe home environment.
- Implementation of open access scheduling and active management of panel size freed RNs from triage and allowed them to take on this new role.

Group Health Olympia

- Each team has an RN complex case manager, who helps care for patients with complex health care needs. Their case load is approximately 60 patients. The primary goal of the complex case manager is to reduce unnecessary hospital and emergency department use by improving patient and family self-management skills. Patients are referred from Group Health's predictive model list, from physicians, or as a result of hospital discharge. The complex case manager assesses the patient's needs, makes a self-management plan which includes medication adherence counseling, and trains patients and family members to recognize and seek help for worsening symptoms before requiring hospitalization.

Keys to Success for Population Management

- **Design roles to meet the needs of patients.** Population management considers the needs of various subgroups of the population and designs team roles to meet the needs of these groups. For the general patient population, protocol-driven panel management conducted by MAs and front desk staff have been shown to increase screening rates. Patients struggling to control their chronic conditions receive help from MAs and nurses trained as health coaches, while medically complex patients successfully coordinate their care and avoid unnecessary hospitalizations through complex care management.

- **Plan for cost recovery challenges.** The population-based management strategies employed at the practices visited have been shown to improve the quality of patient care. However, in a fee-for-service environment, it has been difficult to recover costs for these services that are designed to be delivered by non-clinician staff whose time is often not billable. For globally-budgeted systems such as Group Health and the VA, population-based management has been an efficient solution. In contrast, community health centers are not at financial risk for emergency department and in-hospital use and thus have no financial incentive to offer these services. Despite the lack of financial incentives, many of the practices visited have found innovative ways to fund panel management, self-management support, and complex care management.

5. Continuity of Care

Continuity of care — the ongoing relationship between a patient and a team-based clinician — is fundamental to high-quality primary care and is a priority of each of the practices visited for this research. The consistency of patients seeing their own primary care clinician is associated with improved preventive and chronic care outcomes, a better physician-patient relationship, fewer unnecessary hospitalizations, lower overall costs of care, greater patient and physician satisfaction, and reductions in adjusted mortality for older adults.[39–41] Continuity of care and access are closely intertwined; their relationship is addressed in the section on access.

Keys to Success for Continuity of Care

- **Set goals.** Setting and measuring physician and team goals are vital to achieving and sustaining continuity of care. Many of the practices visited measure continuity as the number of visits made to the primary care clinician divided by the total number of visits to the health center. The VA puts an innovative twist on this formula by including ED visits in the denominator, thus placing a responsibility on the primary care team to prevent unnecessary visits to the ED.

- **Train staff and ensure full coverage.** To facilitate continuity, some practices require clinicians to work 80% FTE or spread their time over four or more days of the week. For practices that struggle to recruit full-time clinicians, partnering two clinicians and requiring one of the partners to cover all shifts ensures that the clinician has some knowledge of every patient seen. High-performing practices train front desk personnel to prioritize continuity of care; the Empanelment Implementation Guide offers script examples.[42]

Continuity of Care in Action

Clinica Family Health Services

- Continuity of care is measured regularly by determining the percentage of patient visits that are made to the patient's own clinician or to the patient's pod. Clinica's goals are 70% clinician continuity and 90% pod continuity. When the metric falls below 70%, Clinica's continuity of care improvement team develops an improvement plan.
- Staff training to achieve continuity of care is emphasized. Call center attendants are trained to balance continuity and access. When a patient calls, the attendant offers an appointment with the patient's clinician. If the patient wants to be seen that day or the next day and the clinician is unavailable, the patient will be given an appointment with another clinician on the same pod.
- Clinicians are strongly encouraged to squeeze in their own patients, but not the patients of other clinicians, if the patient desires a same-day or next-day visit.

Multnomah County Health Department

- To assure continuity, all new clinicians must work at least 50% FTE and see patients at least four days per week. This regularity increases the likelihood that patients will be able to see their own clinician. Part-time clinicians have a practice partner; the two partners cover all clinic sessions five days per week. When one practice partner is unavailable, the other practice partner must be present in the clinic.

West Los Angeles Veterans Administration

- Nationally, the VA system tracks continuity of care for each physician using a different measure: total visits by a patient to the physician to which the patient is empaneled divided by the total number of visits to any primary care clinician or to the emergency department (ED). Including ED visits in the denominator sends the message that ED visits are considered continuity-of-care failures.

- **Actively control panel size.** It is important to note that the practices highlighted here actively control panel size to ensure that demand does not exceed available capacity. The right-sizing of panels discussed previously makes both continuity and access possible.

6. Prompt Access to Care

Offering prompt access to care, while important for patients, is often difficult for primary care practices. Each of the practices visited has attempted to implement patient-centered access — the practice of allowing patients to choose when they would like to be seen by their clinician — on the same day, the next day, or at a future date. Successful practices have redesigned the care team to increase capacity for many different types of access to care, including one-on-one visits, phone visits, e-visits, group visits, or visits with non-clinician team members.

Some primary care practices have focused on working through the backlog (clearing the schedule of future appointments) without first balancing the demand for care with the capacity to provide it. Without this balance, the backlog builds up again, creating anger and frustration among clinicians, staff, and patients alike. High-performing practices that have sustained patient-centered access have balanced demand and capacity.

In the era of multiple encounter types (phone visits, e-visits, group visits, visits with non-clinician team members), the formula used to balance demand

Many practices use a basic formula to balance demand and capacity:[43]

Demand: panel size × visits per patient per year =

Capacity: clinician visits per day × days per year

and capacity needs to be altered to reflect the capacity offerings of each practice. Clinician visits should be supplemented by the variety of encounters offered — both on the demand side and the capacity side.

Because demand often exceeds capacity, many practices find that they need to reduce unnecessary demand and increase capacity. Practices have reduced demand by controlling panel size and extending the visit interval so that patients are seen only as often as is clinically indicated. One research study has shown that extending the visit interval does not affect quality of care.[44] Increasing capacity requires practices to expand the types of encounters provided to patients and empower non-clinician team members to provide care when clinically appropriate.

Keys to Success for Prompt Access to Care

- **Balance demand and capacity.** Before attempting to improve access, high-performing practices balance demand and capacity, which requires right-sizing panels and implementing team-based care that adds capacity.
- **Develop a scheduling system to accommodate patient access.** Most of the clinics visited have implemented some form of open-access scheduling. Some practices have found ways to create patient-centered access without working through the backlog, such as setting a date after which no appointments are made. Educating patients about new access policies is a key step.
- **Offer access through multiple channels.** Ideally, access is offered through multiple venues: phone, web-based patient portals, group visits, and visits with non-clinician team members who are empowered to provide care based on their scope of practice and standing orders.

Prompt Access to Care in Action

Group Health Olympia

- Patients can obtain a face-to-face clinician visit within two or three days, many within one day. Six out of 14 slots per clinician per day are saved for same-day appointments, which is usually sufficient to meet demand. Group Health reduced their panel size from 2,200 to 1,800, creating smaller panels that generate less demand.
- Group Health schedules appointments three months out. No-show rates are below 10%.
- A substantial amount of demand is now met through phone and email encounters rather than face-to-face visits.
- With the reduction of daily scheduled face-to-face appointments from 22 to 14, clinicians have more time to respond to patient emails, arrange scheduled phone visits, and take incoming phone calls from patients. A typical hour on the template may involve two 20-minute visits and one 20-minute slot for desktop medicine and phone calls.[45]
- The management of patient phone calls. The goal is to meet the patient's needs on the first call at least 65% of the time. First-call resolution reduces the workload of taking messages, notifying clinicians to call the patient back, and repeating the process if the patient calls again before receiving a callback.
- Physicians are encouraged to open their phones for the first half hour each morning so that patient questions can be resolved right away.
- Emergency room visits have dropped by 50% in the past few years.

Sebastopol Community Health Center

- Sebastopol is exploring new technologies, such as patient portals and telemedicine, to expand access. Through the patient portal, patients can view selected lab and diagnostic reports, update their contact information, request appointments, and send messages to their clinicians.
- A longer-term project — installing telemedicine kiosks in rural fire departments — will allow patients to receive care without having to travel long distances.

Prompt Access to Care in Action, *cont'd*

Clinica Family Health Services

- Patient-centered access has been sustained for more than 10 years, with patients receiving care within five days of their request, and usually within one or two days.
- Reliable phone access is provided through a call center. A sufficient number of call center attendants was hired to handle 1,200 to 1,500 calls per day, with a peak of 1,100 calls before 11 AM Monday mornings. Now, 98% to 100% of calls are handled rather than dropped, and 80% are picked up within 90 seconds. These metrics are reviewed regularly.
- Call center attendants — regularly monitored by the call center director — are well-trained on Clinica's EMR, the functioning of each pod, clinical protocols, outside referral resources, and customer service. For calls with clinical content, attendants call the cell phone of the RN on the patient's pod for urgent issues or send an electronic message to the RN for nonurgent matters.
- Call center attendants schedule appointments using a script that prioritizes continuity of care and attempt to achieve both continuity and access when possible.
- Appointments can be made only up to two weeks in advance; the third next available appointment (TNAA) cannot exceed 14 days.* Clinica attempts to fill clinicians' schedules only from 8 to 10 AM and leaves the remainder of the schedule open for same or next day appointments.
- With schedules open for only two weeks, Clinica's no-show rate is approximately 8%. When Clinica opened schedules for three weeks, the no-show rate jumped to 30%. Access is measured for each of Clinica's four sites, each pod, and each clinician.
- If no appointments are available and the patient requests a same-day visit, the call goes to the pod. Clinicians have appointment slots every 20 minutes and have an open 20-minute slot for each five slots for catch-up and care coordination. Clinicians are expected to squeeze in same-day requests if at all possible.
- TNAA is kept under a few days by matching demand and capacity, which is done in four ways: (1) limiting panel size to control demand, (2) adding capacity through RN and case coordinator visits, (3) adding capacity by extending the interval between visits if medically appropriate, and (4) adding capacity through group visits, which increases clinician productivity by 30%.
- To ensure that patients needing follow-up appointments do not fall through the cracks, the front desk uses an electronic tickler system to contact patients when they need another appointment. Patients are informed about this policy on their first visit.

*The "third next available appointment" is the third available appointment for a new patient physical, routine exam, or return visit exam from the day a patient makes an appointment request. The "third next available" appointment is used as a measure of clinician availability rather than the "next available" appointment since it is a more sensitive reflection of the clinician's true appointment availability. For example, an appointment may be open at the time of a request because of a cancellation or other unexpected event. Using the "third next available" appointment eliminates these chance occurrences from the measure of availability. Source: Institute for Healthcare Improvement (www.ihi.org).

III. Conclusion

THE SEVEN HIGH-PERFORMING CLINICS outlined in this report are remarkably similar in how they have transformed their primary care practices. All have identified measures to help chart progress toward goals related to continuity, access, patient experience, clinical quality, and financial viability. All actively use these metrics to drive improvement. All have empaneled their patients to a clinician or team. They have created small teams, many with a clinician-MA teamlet at the core. This model — simple in concept but sometimes challenging in its implementation — provides a small-practice feel within a large institution.

High-performing primary care practices require three main building blocks: a functioning data system that is used to drive improvement, the empanelment of patients to a clinician or team with a reasonable panel size, and stable teams with the same people working together on a regular basis. These core building blocks — which enable the other building blocks to be successfully put in place — allow practices to transform into patient-centered medical homes and ultimately, to better care for their patients.

Endnotes

1. The practices were selected using a "snowball" approach — sites were asked to recommend other sites for this study.
2. The term "clinician" refers to physicians, nurse practitioners, and physician assistants.
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Appendix: Performance Data, Primary Care Practices, 2011

	PERCENTAGE OF...						
	WOMEN WHO RECEIVED MAMMOGRAM IN PAST 2 YEARS ACCORDING TO GUIDELINES*	PATIENTS AGES 50 TO 75 WITH UP-TO-DATE COLORECTAL CANCER SCREENING	HIGH BLOOD PRESSURE (BP) PATIENTS WITH BP 140/90 OR BELOW	DIABETES PATIENTS WITH LDL 100 OR BELOW	DIABETES PATIENTS WITH A1C GREATER THAN 9	PATIENTS WITH CONTINUITY OF CARE WITH PCP	ACCESS
Clinica Family Health Services	40%	24%	68%	56%	23%	65% with PCP 85% with team	TNAA: 4 days
Multnomah County Health Department Primary Care Clinics	Data not available	Data not available	67%	51%	16%	83%	TNAA: 2 days
Clinic Olé	43%	18%	70%	58%	19%	72% with PCP 81% with team	TNAA: 4 days (down from 62 days in 2010)
Group Health, Olympia Medical Center	75%	59%	70%	58%	19%	60% with PCP 78% with team	35% of appointments were made within 36 hours of the patient request (goal is 37%)
Sebastopol Community Health Center (one site of West County Health Services)	36%	Data not available	62%	42%	11%	70%	1.8 days
La Clinica de la Raza, Transit Village site, Family Medicine Department	75%	Data not available	89%†	62%	21%	61%	5 weeks
West Los Angeles Veterans Affairs Primary Care Clinic	84%	71%	28%	65%	23%	63%	96% seen within 7 days

*Guidelines established by the US Preventive Services Task Force state that women ages 50 to 74 should receive a mammogram every two years.
†Number based on chart audit of a small sample of patients.

Notes: All data were reported from the primary care practices. PCP = primary care physician, TNAA = third next available appointment.

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