REPORT 8: Status Report on Efforts to Improve Quality in Primary Care Practices Through HMCT’s Project Better Care in Memphis and Shelby County, Tennessee

September 2013
This report is designed to reach a broad spectrum of individuals, including those with decision making capabilities. Its purpose is to act as a catalyst to bridge the conversation from research to practice.

Copies of this report and additional information are available at: www.healthymemphis.org
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Patients and their health care providers deserve better. Despite ever increasing technologies for diagnosing and treating illness, the United States ranks lower than other developed nations in providing affordable quality primary care. In Memphis, we particularly suffer from higher rates of diabetes and other chronic illnesses than other parts of the country.

Doctors and medical professionals are trapped in the 20th century model of seeing one patient at a time, expected to remember all the required guidelines for management of diabetes, hypertension, asthma, and other chronic conditions; not to mention reminding patients to get their preventive screenings, like mammograms and immunizations. Patients, on the other hand, don’t have enough time with their doctor or nurse practitioner to ask all the questions they need to ask to understand their illness.

Re-inventing primary care is the current topic of much discussion in our health care system. Here in Memphis, we can take pride in one of our community initiatives. Project Better Care (PBC) was developed by Healthy Memphis Common Table, in partnership with Memphis Medical Society and Bluff City Medical Society. PBC seeks to redesign and transform primary care practices to deliver 21st century care, using the principles of population health and patient activation.

PBC provides hands on assistance to both the practice and the patients. Practices are guided through redesign of their workflows, efficient use of their electronic records, and consistent application of chronic care guidelines. Population management streamlines the process from a case by case basis to a systematic approach. High risk patients are assigned to a patient coach, who meets individually with the patient. Social needs as well as health care needs are addressed and patients learn what they can do to keep themselves healthy and stay out of the emergency room or hospital by improving their engagement with their health care provider.

The successful implementation of this project has created a blueprint for other regional health improvement collaboratives to utilize. I would like to thank the PBC sponsors and the HMCT staff for their hard work, professionalism, and dedication to make Memphis/Shelby County a healthier community. I particularly commend the PBC practices for being willing to turn their practices upside down, which a project of this magnitude requires. Their honest assessments of needed improvements required courage, and their implementation of the needed changes has exhausted some but inspired many. Most importantly, the practice transformation has brought better care to their patients.

This is just the beginning. I look forward to expanding the PBC model to address more chronic diseases that plague our community by recruiting more primary care practices to this mission of transforming primary care.
ABOUT HEALTHY MEMPHIS COMMON TABLE

The Healthy Memphis Common Table (HMCT) is a non-profit, 501(c)(3) regional health improvement collaborative (RHIC) that addresses both the health of everyone in the community and the health care delivery system. HMCT’s vision is to support Memphis in becoming ‘one of America’s healthiest cities’ by mobilizing the community into action to achieve excellent health for all. Our commitment to the community is to:

**IMPROVE** the quality of primary care

**EMPOWER** patients and caregivers

**FIGHT** childhood and adult obesity

**REDUCE** diabetes, hypertension, and heart disease

**ELIMINATE** food deserts in low income neighborhoods.

The HMCT is Southeast Tennessee’s only RHIC. There are approximately 50 RHICs in the country that have been developed to address a multi-stakeholder organization committed to improving the health and the health care of the entire community.

The first RHIC was founded in 1995. The HMCT was organized in 2003 as a combined effort of various organizations to align and create a “common table.” The HMCT has been certified by the Department of Health and Human Services as Tennessee’s only Chartered Value Exchange, and is seen as a national model of innovation and collaboration. Currently HMCT operates seven projects which focus on the five areas noted above and has expanded its management capacity to lead specific community-wide efforts. These efforts involve over 50 partner organizations, 200 organizations that are collaborators, and 25-30 steering committees and workgroups. These 400 plus individuals, who serve on various committees and workgroups, represent a cross-section of the community that includes hospital executives, business leaders, consumers, nurse practitioners, physicians, insurance executives, educators, faith based leaders, and health department officials. The key is the collective impact these individuals are making in framing the work of HMCT and the actions associated with improving the health and health care provided in our community.

The role of HMCT is three-fold: serve as a multi-stakeholder neutral convener, produce community-level performance reports and execute on small scale projects which can expand community-wide. The work of HMCT is done through partnership and collaboration and the model of the RHIC has created a new era of change and innovation. The key to the work of HMCT is the alignment of resources and agendas. This is so important to the Memphis region, and HMCT is honored to serve in this significant role.
EXECUTIVE SUMMARY

Reneé S. Frazier, MHSA, FACHE
CEO
Healthy Memphis Common Table

The name of Project Better Care (PBC) provides a vast amount of insight to its purpose and it is with great pride that we focus our 8th Take Charge for Better Health® Report on its work. In just 20 months, we’ve seen firsthand how improving the efficiency of primary care practices, improving the patient/provider relationship, and providing patient coaching can greatly improve the health of the patient.

This report provides a summary of PBC, its implementation, its challenges, and the overall lessons learned. Here are some of the major points of the report results:

- Composite scores of successful integration of the chronic care model improved from a low 1.2 to a high of 9.2.
- A1c testing improved from a low of 42 percent to a high of 90 percent.
- Foot exams improved from a low of 21.6 percent to a high of 80 percent.
- Baseline patient activation scores were 2.0 with an achieved target of 3.0. Since the implementation of the care plan, the baseline score has increased to 4.0.
- Patient use of the emergency department was noted as nine avoided visits. Sixty percent of patients would have been admitted.

We are grateful to BlueCross BlueShield of Tennessee in association with the Robert Wood Johnson Foundation’s Aligning Forces for Quality (AF4Q) initiative, the Memphis Medical Society, and the Bluff City Medical Society for seeing the value of PBC and providing monetary and technical support. Much like PBC, the work we do here at HMCT is a team effort that not only involves the staff but our various community partners, organizations, and individuals. We count each individual who learns to better self-manage their illness as a victory we should all celebrate.
INTRODUCTION

What is Project Better Care? Project Better Care (PBC) is a quality improvement program offered by Healthy Memphis Common Table intended to support the redesign of primary care practices using the Chronic Care Model creating a readiness toward Patient Centered Medical Home (PCMH). PBC uses nationally recognized standards to support practices improve their delivery of care and provides direct support to their patients with diabetes. PBC has engaged physicians, health care providers, health plans and patients reorganize the way that chronic care is provided in our community. The underlying philosophy of PBC is that the quality of health care and a patient’s experience of care can be improved in Memphis and Shelby County while reducing, or at least controlling, the cost of care. The guiding principle of PBC is that the best place to deliver preventive care is in primary care practices. The expected result is to manage chronically ill patients better within their primary care practices so fewer of them need to be hospitalized or visit the emergency room.

Organizationally, PBC is a partnership between three Memphis-based health care organizations that serve as sponsors and their community partners which include physicians and patients with chronic medical conditions. The three sponsoring organizations are HMCT, Memphis Medical Society and Bluff City Medical Society. The community partners are health care providers in five small primary care practices interested in improving the quality and continuity of care they deliver and their patients with chronic medical problems who have been referred by their providers and have volunteered to participate. Each of the five participating primary care practices have one to three providers, and their patient base ranges from 6,000 to 8,500, with an average of 38 percent of patients being diagnosed with diabetes.

Why Project Better Care? At the time of initial participation in PBC, the focus of the practices was more on treatment than prevention. The primary care practices did not consistently follow published diabetes management guidelines or set self-management goals with individual patients with diabetes. In addition, the practices had not activated their patient registries within their electronic medical record (EMR) systems, which assist the practices in the management of quality improvement (QI) activities and the understanding of their patient population.

In the last 20 years, a consensus has emerged from the research community that many illnesses are preventable and onset can be delayed with positive lifestyle changes and regular visits to primary care providers. Most public health officials and health services researchers now believe that symptoms and consequences of chronic illnesses are manageable if they are properly diagnosed early on and if patients receive regular quality care from a primary care provider with whom they have a strong and stable relationship.
But many of today’s primary care providers are overwhelmed with the number of patients they must take care of and the responsibilities that they face, from acute care to chronic care management and to prevention needs of a population. They cannot possibly do all the work themselves and much of it doesn’t require their expertise. In addition, primary care practices have a new business model from which they must operate. They are under pressure to computerize their medical records or upgrade their existing information systems to manage their patients’ records electronically. They are also under pressure from the government, insurance companies and professional organizations to show evidence of the quality of care they deliver, a difficult task for many primary care practices that do not have a fully functioning EMR system.

Most Memphis area primary care practices are small with fewer than three providers working as a group to care for a large patient base. Their small size makes it difficult to justify the costs associated with an expensive EMR system and the necessary staff training to make the system fully functional. These practices rarely get paid enough to assemble an interdisciplinary team to keep track of their patients’ health care needs and care for them beyond the four walls of the doctor’s office. When patients cannot manage their own health at home and the needed services are not immediately available, they find themselves in the hospital. Health services researchers call these hospital stays “potentially avoidable hospitalizations” because they could have been avoided if timely and effective primary care had been delivered earlier to the patients.

The Memphis and Shelby County area has had its share of potentially avoidable hospitalization problems as reported by a September 2012 issue of the Take Charge for Better Health® Report prepared by HMCT.³ For example, in 2009, Shelby County, Tennessee had a rate of 1,262 cases of chronic potentially avoidable hospitalizations per 100,000 adults, while the rate for Tennessee was 1,173 and the United States was 1,086 per 100,000 adults. In the same year, insurance companies and other third-party payers paid a total of $87.9 million for 12,722 cases of potentially avoidable hospitalizations in Memphis and Shelby County according to the same report.

**A Brief History of Project Better Care:** PBC was launched in October 2011 with funding from BlueCross BlueShield of Tennessee in association with the Robert Wood Johnson Foundation’s AF4Q initiative. The longer-term aim of PBC is to reduce inappropriate ER visits and prevent readmissions of patients with chronic diseases. At the current time, the efforts are primarily focused on the improvement of diabetes care for the following reasons:

- More than 112,000 people (or 12 percent of Shelby County’s population) have diabetes and this prevalence rate is higher than the state average of 11 percent and much higher than the U.S. average rate of 8.3 percent.⁴

- In Tennessee, the prevalence of diabetes was highest among black females (13.2 percent), followed by white males (9.0 percent), white females (8.8 percent), and black males (8.4 percent).⁵ With

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**WHAT IS ALIGNING FORCES FOR QUALITY (AF4Q)?**

Healthy Memphis Common Table is part of Aligning Forces for Quality (AF4Q), the Robert Wood Johnson Foundation’s signature effort to help lift the overall quality of healthcare in the United States. Memphis joins 15 other communities across the country that are committed to performance measurement and public reporting as a cornerstone to achieving high-quality, patient-centered care that is equitable and affordable. By publicly reporting on important markers of quality care, HMCT’s AF4Q work informs consumers about how to get the best care possible for themselves and their families, and helps physicians identify areas for improvement of the care they deliver. The data is available to everyone at www.healthcarequalitymatters.org.
black people representing more than half of Shelby County’s population and with black females outnumbering black males, the burden of diabetes falls disproportionately on black Shelby County residents than on residents of other races and ethnicities.

- Diabetes and pre-diabetes contribute to the majority of premature deaths in Tennessee, according to a recent study from the University of Tennessee Health Science Center (UTHSC).6
- The same UTHSC study also reported that diabetes increased medical costs for employers and employees and created a substantial loss of productivity and a decrease in quality of life.
- Effective primary care delivered early can prevent emergency department (ED) visits later by patients with diabetes. In other words, many diabetes patients’ visits to hospital EDs are “sensitive” to the availability of, and access to, effective primary care. In Shelby County, primary care-sensitive ED visits cost insurance companies and other third-party payers close to $130 million in 2012 dollars.7

THE FOUNDATION OF PROJECT BETTER CARE

Many practicing physicians in primary care and family practices today feel overwhelmed by an influx of patients with complex healthcare problems and needs. They work long hours and have difficulty managing their workload with the staff they can afford to hire. The work never seems to end and the expectations for higher quality of care at lower costs are getting more difficult to achieve. Busy primary care physicians and practice staff need support, coaching, and patient management tools and resources.

The Chronic Care Model: Conceptually, PBC is built on the foundation of a proven patient care improvement strategy called the Chronic Care Model designed and developed originally by Dr. Edward H. Wagner, director of the MacColl Institute for Healthcare Innovation in Seattle, Washington.8 The model has been adopted across the United States by many primary care practices and community health initiatives and has proven to be effective in improving physicians’ adherence to the standards of care and clinical outcomes of patients with diabetes, congestive heart failure (CHF), asthma, and depression.9, 10

The key to the model’s success is its twin emphasis on effective interactions with patients and a prepared practice team that works with patients and their caregivers.11

WHAT IS A PATIENT CENTERED MEDICAL HOME (PCMH)?

PCMH is a new model of primary care that is patient-centered, comprehensive, team-based, coordinated, accessible, and focused on quality and safety.

SPECIFIC OBJECTIVES OF PBC:

1. Execute on practice redesign to improve patient outcomes;
2. Improve patient experience with the care they receive;
3. Connect patients to resources in the community;
4. Reduce unnecessary ER visits and hospital admissions; and
5. Prepare primary care practices to become Patient Centered Medical Homes (PCMH).
The Four Pillars of Project Better Care: As an extension of the Chronic Care Model, PBC follows proven strategies of a team approach and patient-practice interactions and adds two additional patient care strategies initiated locally by the PBC staff to enhance and improve the delivery of diabetes care. The strategies used are the four pillars of PBC:

1. Quality improvement coaching led by a registered nurse to support primary care practices in a redesign to improve workflow, efficiency, and standards of care for patients with diabetes;

2. Patient coaching coordinated and delivered by a registered health coach who uses motivational interviewing to help patients manage their own care, develop goals and connect them to requested resources;

3. Data analysis and feedback reports provided to primary care practices built on the basis of a fully functioning EMR system which offers real-time patient care data to drive QI; and

4. A learning collaborative established and maintained as a quarterly educational forum to encourage team learning among practice staff and provides CME credits for attendance.

Pillar 1 - Quality Improvement Coordinator as a Practice Coach:
According to the American Academy of Family Physicians, a QI coordinator works with the staff at a primary care practice to improve quality of care by changing the office workflow and patient care process. To strike a balance between working closely with the practice staff and providing an objective, third-party perspective, most of the QI coordinators are external to the practices and not working as employees.

The QI coordinator is an experienced health care professional with many years of clinical and administrative experience. She meets with the practice QI team members, which can consist of physicians, nurse practitioners, medical assistants, and clerical support, at least once a month. The practice benefits from these meetings in many ways including:

- Building QI capacity within each practice.
- Introducing and embedding the Chronic Care Model within practice operations.
- Training practice staff to understand and use data effectively to drive QI.
- Sharing information on the latest American Diabetes Association’s Standards of Care in Diabetes and assisting practice staff in adhering to the new standards.
- Helping the practices create a culture that is ready and receptive to change.

The three phase process the practice coach, or QI coordinator, engages practices in is located in the box below. The QI Coordinator can work with the practice from 12-18 months and offers flexibility to adapt to the needs of the practice.

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Assessment and Planning</th>
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<tbody>
<tr>
<td>Phase 2</td>
<td>Execution &amp; Redesign</td>
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<tr>
<td>Phase 3</td>
<td>Sustainability/Autonomy</td>
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**Pillar 2 - Patient Coach:** A patient or health coach is a trained health professional who helps primary care practices establish closer relationships with patients both in and out of the office setting, working closely with the PBC primary care providers and practice staff, the patient coach fills a gap in the service by interacting closely with patients and engaging them in better managing their own care.

The basic premise of patient coaching is that many patients do not get the full benefit of a short physician visit. Oftentimes, patients do not remember what the doctor said in the exam room or do not fully understand the medical terms used and the instructions given. The purpose of patient coaching is “to help patients understand the clinician’s advice, to discuss how the patient feels about that advice, and to work with patients to use that advice to improve their health.”15 According to the Center for Excellence in Primary Care at the University of California at San Francisco:

Health coaching helps both the patients and clinicians. For patients, it can lead to better health outcomes and more satisfaction with their health care experience. When health coaching is implemented in a practice/clinic, it gives clinicians the opportunity to deal with more complex health problems.16

PBC’s patient coach began working with patients with diabetes from the five participating primary care practices in September 2012. She has coached up to 40 patients to better manage their own care. The patient coach develops SMART goals (Specific, Measureable, Achievable, Relevant, Time Bound, Responsibilities) with the patient and a Personal Care Log (PCL). The PCL incorporates contact numbers for the primary care practice, the coach and any other number that is of importance to the patient’s health. It also includes resource guides, medical checklists, medical appointments and their self-management goals and interventions.

There is a three phase process of patient coaching, which is listed below. Patients are referred by the primary care provider and patients sign a patient agreement form to participate. The patient coach meets directly with the patient for the first visit and follow up visits occur as determined by the patient. She can work with patients for up to one year, but can monitor the patient as long as PBC is involved with the primary care practice.

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Identification and Recruitment</th>
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<tr>
<td>Phase 2</td>
<td>Assessment &amp; Planning</td>
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<td>Phase 3</td>
<td>Coaching &amp; Self-Management Oversight</td>
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In addition to the help provided by the QI coordinator and patient coach, PBC improves the capability of the participating primary care practices in two additional ways: data analysis and feedback reports and learning collaboratives.

**Pillar 3 - Data Analysis and Feedback Reports:** Throughout the PBC process, data is collected to help drive QI efforts. The QI coordinator, with support from the data analyst, strives to assist the participating practice in adopting a functioning EMR system if they do not currently have one and to improve upon the existing system if they have one. The goal is to establish a fully functional EMR system in every practice so they can use their own data via a diabetes patient registry to measure the progress in their own performance year by year and compare performance across the practices.

A patient registry is an organized health information system used by a primary care practice to collect uniform data (clinical and other) to evaluate specified outcomes for a population defined by a particular
disease or medical condition. A diabetes patient registry is a subset of clinical data collected via the health information system of a primary care practice for patients diagnosed with the specific condition of diabetes. A practice is said to be able to provide "real-time" data to support clinical decisions and QI when accurate patient care data is updated regularly and accurately and can be retrieved immediately from a practice's EMR system. With the passage of health reform legislation and meaningful use, primary care practices and other health care organizations are increasingly under pressure to upgrade their EMR systems. The ability to provide baseline quality data based on a professionally accepted, recognized, and empirically verified performance scoring system, called the HEDIS System, is critical in the post-reform health care environment.

Throughout the PBC process, data collection, review, analysis and feedback are produced by and for the primary care practices. A scorecard helps in the discussion of where they are when they begin PBC, how they are progressing and what their goals are. The QI coordinator works to help the practice staff and care providers understand the correlation between the data and QI. This is also provided in the learning collaborative forum.

**Pillar 4 - The Learning Collaborative:** The learning collaborative is a quarterly gathering of the administrative and clinical staff of the five PBC and the six participating Diabetes for Life (DFL) practices. DFL is another quality improvement program; it is funded by the Merck Foundation. The practices receive educational information related to the Chronic Care Model and PCMH, exchange ideas and share learning experiences. It is based on the “Collaborative Learning Approach” campaigned by the Institute for Health Improvement of Cambridge, Massachusetts. It is an innovative, breakthrough way to improve the quality of care by bringing together teams of physicians and practice staff from the various units within a health care organization to “seek improvement in a focused topic area.”

Typically, the participants in the learning collaborative are comprised of the members that have formulated their practice quality improvement team, which the QI coordinator establishes in the second phase of the work. Over the course of 12 - 18 months teams from various practices meet in learning sessions. They share ideas and experiences and learn from expert clinicians and their own peers to improve performance and share progress reports. Between learning sessions, members of the learning teams work in their respective offices to implement what they have learned from the learning sessions. Team members also help to disseminate the lessons learned throughout the medical practice by sharing their newly acquired knowledge and experiences with other members of the practice team.

The learning collaborative is coordinated by the PBC QI coordinator and follows the guidelines of the Employer Engagement Learning Collaborative of the American Institute for Research. It has been well attended by both clinicians and office staff and is an excellent example of how the PBC QI coordinator promotes learning and improves communication in an informal setting and a peer-to-peer format.

**FINDINGS**

In just 20 months since its inception, PBC has made significant and meaningful changes in how the five participating practices deliver diabetes care. The improvements include: HMCT operational changes, PBC practice redesign, patient impact, data strategies, community collaborations, and an intentional movement to PCMH.

**HMCT Operational Changes:** One of the key aspects that assisted PBC was the establishment of a part-time medical director who was one of the first PCMH NCQA recognized primary care practices in Memphis. Dr. Susan Nelson, HMCT’s first medical director, serves as a physician champion to lead the overall ambulatory quality improvement (AQI) activities of HMCT. Her responsibilities include regular visits with
participating primary care practices to discuss AQI activities and provide support to the QI coordinator and patient coach in coordinating their processes. She also supports the development of physician feedback reports and consults with participating physicians on all QI matters and performance issues against predetermined and agreed-upon quality targets. She serves as a presenter of the PBC learning collaborative, along with other notable individuals including Dr. Beverly Williams-Cleaves, founder of the Comprehensive Diabetes and Metabolic Center of Excellence; Dr. Robin Womeodu, vice president and chief medical officer at Methodist University Hospital; Dr. Cyril Chang, professor of Healthcare Economics at the University of Memphis; Dr. Marjie Harbrecht, chief executive officer at Health Team Works in Denver; Dr. Robert Graham, director of Aligning Forces for Quality; and Dr. Monica Peek, assistant professor of Medicine at the University of Chicago. The addition of the first medical director has been an invaluable addition to PBC.

**PBC Practice Redesign:** On the practice improvement side, PBC’s QI coordinator, with the full collaboration of the PBC practice QI team, has carried out a number of value-added QI activities to incorporate elements of the Chronic Care Model to build a strong foundation for chronic illness care. Redesign within practices to build this foundation and incorporate these standards into daily practice is the first step to improving patient clinical outcomes. Using the Assessment of Chronic Illness Care (ACIC), practices were assessed when the QI Coordinator first started working with practices and again 12 months later. Figure 1 presents the initial and 12-month follow-up scores for all practices on the integration of six components of the Chronic Care Model, such as providing patients with care guidelines, using information systems and registries, and conducting routine follow-up care for appointments, patient assessments and goal planning. The ACIC uses a scale from 0 to 11 to indicate the level of support for chronic illness care, the highest score of 11 indicates the optimal support for chronic illness and the lowest score of 0 corresponds to limited support for chronic illness care.

![Figure 1 - Composite Scores of Integration of Chronic Care Model Components](image)
The five practices as a group have shown statistically significant improvements in each of the six components of the Chronic Care Model as well as integration of the Chronic Care Model as a whole. The vast improvements in each of these areas reflect the transformation made within each practice structure to support and provide an effective system of care for all patients with chronic illness.

The impact of practice redesign is illustrated in the improvements in the clinical processes for diabetes care within each practice. There are a variety of tests that every patient with diabetes should have at least once a year. An A1c test, a measure of blood sugar over time, and a diabetic foot exam are examples of these tests. Within the practices, the frequency of how often tests like these were performed in a standardized way increased between the time PBC started in September 2011 and 14 months later in March 2013. Figures 2 and 3 demonstrate the improvement for the A1c test and diabetic foot exam within each practice.

**Figure 2 - Improvements in percentage of patients for whom a A1c test was performed at least once a year**

<table>
<thead>
<tr>
<th>Practice</th>
<th>Pre (9/2011)</th>
<th>Post (3/2013)</th>
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<tbody>
<tr>
<td>A</td>
<td>63</td>
<td>76</td>
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<tr>
<td>B</td>
<td>76</td>
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<td>D</td>
<td>73</td>
<td>73</td>
</tr>
<tr>
<td>E</td>
<td>65</td>
<td>47</td>
</tr>
</tbody>
</table>
All practices improved over the 14 month period in providing A1c testing. The percent of patients receiving an A1c test as recommended increased within all practices.

Similarly, all practices improved over the 14 month period in providing diabetic foot exams for a greater percent of their patients with diabetes. The percent of patients receiving a diabetic foot exam as recommended increased within all practices. These two examples demonstrate improvements within all practices to provide a higher number of diabetic patients with the recommended care for their disease.

**TESTIMONIALS BY PRACTICE STAFF**

“PBC has improved our practice. Our patients’ A1c and other measures are better since our partnership with Healthy Memphis Common Table.”

“We have implemented huddle sessions suggested by the practice coach and included all of the staff—a true TEAM effort.”

“When staff began to understand why quality improvement was important, they made an extra effort to encourage patients to get their preventive screenings.”

“When PBC began, we had charts piled sky high on the floor. Now we have them organized in file cabinets and have certain areas dedicated for our medical records professional who assists us with tracking and referrals.”
**Patient Impact:** Although the patient coach was hired many months after the practice QI coordinator, the work and accomplishments are equally impressive. Among the patients identified by the primary care practices for patient coaching, almost all of them agreed to participate and to meet with the patient coach. Establishing a trusting relationship with the patients was a crucial step in assisting with the development of self-management goals to improve their diabetes outcomes.

The patient coach worked with each patient to help him/her better understand the many and often confusing aspects of managing diabetes. The patient coach assessed each patient on 14 indicators that affect diabetes such as proper nutrition, testing blood sugar and managing stress. The scale was from 0 to 4 points; 0 points: patient does not understand what the indicator means, 1 point: patient understands what the indicator means, 2 points: the patient knows his/her own score for that indicator, 3 points: the patient has set and is following a plan for reaching his/her target for the indicator and 4 points: the patient has reached his/her target. The number of points for each of the 14 indicators was averaged to give the patient an overall score. The goal was for patients to reach at least a 3.0, meaning they are implementing a plan to reach their health indicator targets. Figure 4 illustrates the improvement in average score from the time patients began working with the patient coach through 10 months of engagement.

![Figure 4 - Average Patient Activation Score per Month of Engagement with Patient Coach](image)

Additionally, at the time patients began working with the patient coach all but one of them had been in the hospital or had an emergency room visit within the prior four months. After working with the coach for an average of 9 months, none of the 18 patients had been admitted to the hospital or had an emergency room visits for four months or more.
The patients working with the patient coach exhibited significant improvements in clinical outcomes as well: hemoglobin A1c levels dropped from a mean of 11.9 to 9.4 and cholesterol levels decreased (from 115.6 mg/dL to 109.9 mg/dL) within a subset of patients with baseline and 10-month follow-up data. In addition, from September 2012 through July 2013, patients reported nine occasions when an ED visit was avoided as a result of better understanding how to effectively manage their disease as a result of working with the patient coach. This is a potential savings of $7,038 ($782 per average visit).

Below is a list of patient and patient coach lessons learned from the personal face-to-face coaching sessions:

- There is a lack of understanding of simple medical terms that are critical to their health—A1c (blood sugar) level, blood pressure readings—and how they affect their health, for example.

- There is a lack of understanding of how serious uncontrolled hypertension and diabetes can be to a patient’s health; many don’t know the harm of an inappropriate diet and sedentary lifestyle.

- Many patients have mental health issues that have made their physical health worse and need to be addressed; stress reduction is critical to this group of patients.

- It is important to approach the patient’s health from a holistic approach—the patient cannot get better unless they believe that they have the power and knowledge to manage their own health.

- Patients become more motivated to take charge of their own health when they realize that lifestyle changes, not simply taking medications, will restore them to health.

- Most patients can find the intrinsic motivation to make positive behavioral changes if proper help is offered at the right time and place. This can be considered quality care from a patient’s perspective.

- Many patients have financial issues that can be serious barriers to proper care. For example, they cannot afford to pay copays for medications.

- Many patients have problems connecting themselves with available social services such as food stamps, senior services, etc.
**DARA’S STORY**

Dara (not her real name) is a former certified nurse’s aide who lives in a rural area of North Mississippi. When agreeing to accept patient coaching services, she had been living with many chronic conditions for years including Type II Diabetes. She was also a smoker despite the fact that she needed oxygen to help her breathe. Her personal journey has been marked by escalating violence, disintegrating health and increasing poverty despite near constant contact with healthcare and social service systems.

The chronic conditions developed parallel to the increasingly debilitating mental health issues. In her twenties, Dara had her first child and was working in Memphis. Her mental health issues grew worse. She gained weight and was plagued by various health issues. The unsafe condition in which she was living and a host of other personal and financial problems finally forced her to move. She moved into a rented house and has very little. Dara had no furniture and could only count on eating pizza left over from her son’s job or 10 pounds of sausage and a bag of white potatoes that the food pantry would distribute monthly.

The patient coach from Project Better Care helped Dara secure a sofa and other items from the Salvation Army and other donors. They also shopped for the healthiest (high in fiber and nutrition low on fat, sugar and salt) and the most appealing foods for the least amount of money. Gradually, okra and tomatoes, frozen beans, quinoa, onions, mushrooms and greens replaced pizzas, sausages and ramen noodles as staples of Dara’s diet.

One month after seeing the patient coach, Dara returned to her primary care physician’s office and was surprised to find that she had lost one full BMI percentage, had a non-fasting blood sugar reading of 110, and had avoided an ER visit for a respiratory infection. During the second and third months of coaching, Dara was referred to a dental service provider who made her dentures at a reduced and affordable cost. She also found an organization to help her restart a career and a charitable organization that donated furniture so that she could return her rented furniture. This freed up her funds so that she could purchase food.

After six months of coaching, Dara had avoided hospitalizations six times and received all of the elements of the recommended evidence-based care standards. She plans to continue eating well, exercising more and staying aware of the present with a focus on the future. For the first time in decades, she has been asked to participate in a family event - her brother’s wedding. All of her siblings agree that she has been restored to her healthy self for the first time in many years.

**Data Improvements:** Data is a central component of PBC to guide improvement of quality care as reinforced by the advancement of the Affordable Care Act. You can’t change what you don’t measure. Establishing quality measurements and routine assessments of practice structure and clinical outcomes provide transparency to practices for understanding how to move from the status quo and into the quality-driven 21st century of healthcare. The benefits of PBC for the patient and practice have already been noted. However these improvements were not without challenges. When PBC began, only one of the PBC practices had a functional Electronic Medical Record (EMR). As part of the Affordable Care Act’s Meaningful Use Requirements, primary care practices are required to have an EMR by 2015, or penalties will be applied. Currently, four of the five PBC practices have an EMR and the fifth practice is slated to obtain theirs at the start of 2014.
Having an EMR is not the only issue, knowing how to use it, and use it effectively, is also crucial. The PBC QI coordinator and data analyst provided hands on support, answered questions and communicated with the EMR vendor when necessary to support practices to fully utilize their EMR system. A key component of one of the Plan-Do-Study-Act cycles was to make sure the information entered was correct and located in the appropriate section of the EMR. In addition, the practices received support with setting up and utilizing the registry functionality within their own EMR, which most of the practices didn’t know they had. PBC encouraged this connectivity to provide each practice access to meaningful and current data on their total patient population.

**Community Collaborations:** PBC has spurred systemic improvements in communication and collaboration to assist practice functioning and patient care. A few examples are listed below.

- **Southern College of Optometry** – Some patients receive their eye exam for diabetic screenings for free or at a reduced cost. They also invited PBC’s data analyst to speak about public health and the role an optometrist has as a member of the medical team that provides complete chronic illness care.

- **University of TN Dental School** - Patients have been referred to the mobile unit for routine and emergency dental care checkups and to help reduce pain which will improve their overall health.

- **CVS, Kroger and Walgreens pharmacies** - The QI coordinator has requested that flu and pneumonia vaccines results get sent to the PBC (and other) practices to assist in the coordination of care.

- **Learning collaborative event** – Several PBC practices had concerns about the lack of timeliness to have prescriptions filled with Walgreens. As a result, five pharmacists from Walgreens attended one of the learning collaboratives and explained their process and challenges they face. The practices communicated their perspective and both sides discussed ways in which they can improve the process. Overall, the experience and structure of the learning collaborative, which can be utilized with other entities in the community, can improve communication, establish a more efficient system and build trusted relationships.

**From Practice Redesign to Practice Transformation:** With the financial support of Robert Wood Johnson Foundation, BlueCross and BlueShield, and in collaboration with the two major local medical societies, the efforts of PBC have, in the last 20 months, resulted in the building of an effective intervention team to embark a select group of primary care practices and their diabetes patients on a journey of QI. Using the foundation of the Chronic Care Model, the practices have all improved their standards of diabetes care. Since most of the practices are well-versed with EMRs, the time has come for PBC to take on a greater challenge—to transition the participating primary care practices into fully recognized patient-centered medical homes. By the end of 2013, there will be a total of 10 practices involved with PBC, with the goal of becoming a NCQA recognized PCMH. According to NCQA, the PCMH is:

> A model of care that strengthens the clinician-patient relationship by replacing episodic care with coordinated care and a long-term healing relationship. Each patient has a relationship with a primary care clinician who leads a team that takes collective responsibility for patient care, providing for the patient’s health care needs and arranging for appropriate care with other qualified clinicians. The medical home is intended to result in more personalized, coordinated, effective and efficient care. A medical home achieves these goals through a high level of accessibility, providing excellent communication among patients, clinicians and staff and taking full advantage of the latest information technology to prescribe, communicate, track test results, obtain clinical support information and monitor performance.18
The federal health QI agency, known as the Agency for Healthcare Research and Quality, emphasizes that a PCMH is not simply a place where one can get care; it is rather a model of the organization of primary care that delivers the core functions of primary healthcare. Many healthcare professional organizations, including the American Academy of Pediatrics, American Academy of Family Physicians, American College of Physicians, and American Osteopathic Association, have endorsed this model. The federal government and major insurance companies now promote it because it holds promise as a way to improve healthcare in America by transforming how primary care is organized and delivered.

To be recognized by the NCQA as a PCMH, aspiring medical practices must meet the following strict quality standards in six major categories:

1. **Enhance Access and Continuity:** Accommodate patients’ needs with access and advice during and after hours, give patients and their families information about their medical home and provide patients with team-based care.

2. **Identify and Manage Patient Populations:** Collect and use data for population management.

3. **Plan and Manage Care:** Use evidence-based guidelines for preventive, acute and chronic care management, including medication management.

4. **Provide Self-Care Support and Community Resources:** Assist patients and their families in self-care management with information, tools and resources.

5. **Track and Coordinate Care:** Track and coordinate tests, referrals and transitions of care.

6. **Measure and Improve Performance:** Use performance and patient experience data for continuous QI.
As we have amply demonstrated in this report, the objectives and steps taken by the various QI activities initiated by PBC align fully with the assessment standards required to become a fully recognized Patient Center Medical Home. With additional efforts by the PBC intervention team and continued support from the clinical and administrative staff of the participating practices, we are confident that all of the PBC primary care practices will become fully recognized PCMHs, an honor few Memphis area’s primary care practices can claim.

WHAT DOES PBC MEAN TO OUR COMMUNITY?

In the past 20 months, HMCT’s PBC has made measurable and meaningful changes in the five primary care practices currently participating in the program and touched the lives of many patients with diabetes. The hard work of many dedicated health care professional, and their cooperative patients, and the resulting transformations in care delivery and patient care management have meant at least the following to our community:

1. The work of PBC has brought attention to a health system problem hidden in plain sight in Memphis and Shelby County, Tennessee - that many patients with chronic conditions do not get the recommended services they need to get better and they frequently go to the hospital for ED or inpatient services for serious problems that could have been avoided by effective primary care delivered earlier.

2. The work of PBC has also confirmed the research results and experiences from innovative intervention programs that a team-based approach to delivering proactive, patient-centered primary care can significantly improve diabetes patients’ physical and mental health.

3. Importantly, PBC has shown that the administrative and clinical staff members of primary care practices are ready and willing to change, but they need support to make measurable and meaningful changes to meet the new and higher standards of care in the primary care setting.

4. The practice staff welcomes and needs external help to improve the patient flow process and the use of health data to drive their QI efforts.

5. Most patients are motivated to do a better job managing their own health, but they need support that is accessible, user-friendly, and appropriate to them.

6. In brief, with the use of high quality, external QI coordinators and patient coaches, PBC has the potential to serve as a model of how primary care practices can improve the delivery of effective diabetes care and meet new and higher standards of care for patients with chronic conditions.
OUR WORK AHEAD

Besides continuing the work of PCMH with its current practices, PBC has the potential to expand. HMCT will be meeting with and talking with many more primary care practices, hospitals, health plans and patients to pursue additional support of its current efforts. Small primary care practices do not have many resources and improving the quality of care is a necessary next step to supporting the health of the individuals in our community. PBC is a viable option to support our primary care practices and increase the number of PCMHs with the aim of providing better health, better health care and reducing the cost of care. As a means to this end, HMCT will pursue the following:

1. Invite additional small primary care practices to join PBC, as well as coordinate with potentially larger systems across the state.

2. Increase the number of practice QI coordinators and patient coaches so PBC can assist in care coordination and support more patients.

3. Engage patients in a meaningful way to activate their participation with their health care provider and support preventive care as a way of life.

4. Complement more medical conditions such as hypertension, heart disease, and asthma for quality improvement.

5. Refine and expand its current data capacity and central repository for enhanced utilization by practices and incorporate a population health management tool.

6. Continue the quarterly learning collaborative activities to include new members from the primary care practices and to expand the pool of available faculty to lead these learning sessions.

7. Pursue payment reform innovations with the state of Tennessee as well as with third-party payers including TennCare, managed care organizations, and health plans to ensure that payments reflect the investment of the PBC team members and practice staff undertaking QI and PCMH-related work.

8. Explore funding opportunities to ensure the long-term sustainability of PBC and the work of HMCT.

With this work and the support of the Memphis and Shelby County community as a whole, we can achieve excellent health for all.

The health care delivery system is challenging to navigate even for the those that are employed within the system. Because of this, those without health care knowledge are especially challenged. The goal of HMCT is to work with primary care practices and patients to create a more efficient and more cost effective way to practice. A Patient Centered Medical Home is just that - patient centered - and with same day appointments, services catered to what the patient needs, and data to measure what is being done, HMCT via Project Better Care is working to accomplish that. This may be just a start, but with the support of the Memphis and Shelby County community as a whole, we can achieve excellent health for all.
REFERENCES


13. Taylor et al.


16. Stellefson M, Dipnarine K and Stopka C.


20. See footnote 19.
ACKNOWLEDGMENTS

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