Grand Valley State University
ScholarWorks@GVSU

Doctoral Projects | Kirkhof College of Nursing

4-2019

Development of a Process for Adoption and Attainment of PCMH Recognition Requirements for an Urban Primary Care Clinic

Jamie L. Hendricks
Grand Valley State University

Follow this and additional works at: https://scholarworks.gvsu.edu/kcon_doctoralprojects

Part of the Nursing Administration Commons, and the Public Health and Community Nursing Commons

ScholarWorks Citation

Hendricks, Jamie L., "Development of a Process for Adoption and Attainment of PCMH Recognition Requirements for an Urban Primary Care Clinic" (2019). *Doctoral Projects*. 104.
https://scholarworks.gvsu.edu/kcon_doctoralprojects/104

This Project is brought to you for free and open access by the Kirkhof College of Nursing at ScholarWorks@GVSU. It has been accepted for inclusion in Doctoral Projects by an authorized administrator of ScholarWorks@GVSU. For more information, please contact scholarworks@gvsu.edu.

Development of a Process for Adoption and Attainment of PCMH Recognition Requirements for an Urban Primary Care Clinic

Jamie L. Hendricks

Kirkhof College of Nursing

Grand Valley State University

Advisor: Katherine Moran, DNP, RN, CDE, FAADE

Co-Advisor: Dianne Conrad, DNP, RN, FNP-BC

Organizational Mentor: Dustin Maynes, MSW

Site Mentor: Jess Eglinton, Executive Assistant

July 15th, 2019

Abstract

The Centers for Disease Control and Prevention (2017) reported that in 2016, healthcare expenditures in the United States totaled 17.9% of the gross domestic product. Unfortunately, care quality is not reflective of the high costs of care. Models of care delivery like the patient centered medical home (PCMH) have shown promise in addressing these concerns.

This project focused on program development for PCMH adoption at an urban clinic in an effort to improve financial stability and remain competitive. The purpose was to propose a plan for adoption and attainment of PCMH recognition requirements for an urban primary care office.

The Donabedian model and Promoting Action on Research Implementation in Health Services framework guided the development of a process for PCMH recognition. The deliverables were: (1) A gap analysis – to communicate the clinic's readiness for a PCMH endeavor and to guide education/roadmap development, (2) Completion of the core criteria of NCQA's PCMH concept one- to help the clinic initiate the PCMH recognition journey, (3) A PCMH roadmap –utilizing NCQA's criteria and gap analysis findings, a roadmap outlining remaining recognition requirements was developed to ensure sustainability, (4) PCMH education was delivered to staff in one session to facilitate PCMH understanding; evaluation of participant satisfaction was conducted, and (5) A business proposal- outlined projected expenses and the return on investment anticipated with PCMH recognition.

It was expected that the project would result in acceptance of the proposed process and commitment to sustaining the initiative. The urban clinic improved readiness for recognition, which assisted with a care transformation to improve outcomes and financial stability.

Table of Contents

Problem Statement 8

Review of the Literature 9

Method 9

Conceptual Models 15

The Donabedian Model 15

PARiHS Framework 17

Need and Feasibility Assessment of the Urban Clinic 19

Framework for Assessment 19

SWOT Analysis 23

Ethics and Human Subjects Protection 25

Project Plan 26

Purpose 26

Design for Evidence-Based Initiative 26

Settings and Participants 28

Objectives, Implementation Strategies, and Timeline 28

Project Data Collection and Evaluation Plan 29

Resources and Budget 30

Outcomes 30

Discussion 38

Project Limitations 43

Implications for Practice 44

Sustainability Plan 44

Dissemination 45

Conclusions 45

Enactment of DNP Essentials 46

Appendix A 54

Appendix B 61

Appendix C 62

Appendix D 63

Appendix E 64

Appendix F 69

Appendix G 73

Appendix H 74

Appendix I 75

Appendix J 76

Appendix K 77

Appendix L 79

Appendix M 80

Appendix N 81

Appendix O 82

Appendix P 83

Appendix Q 86

Appendix R 87

Appendix S 88

Appendix T 89

Appendix U 90

Appendix V 101

Appendix W 103

Appendix X 110

Appendix BB 116

Development of a Process for Adoption and Attainment of PCMH Recognition Requirements for an Urban Primary Care Clinic

The cost and effectiveness of healthcare in the United States (U.S.) has been a topic of relevance in recent years. The fragmented nature of this poorly coordinated health system has resulted in national healthcare spending that is twice as much as comparable countries and is not representative of improved access to services, quality, or health outcomes (Papanicolas et al., 2018). For example, in 2016, national health expenditures totaled 17.9% of the gross domestic product (Centers for Disease Control and Prevention, 2017). Even though the U. S. spends more on healthcare, the use of healthcare services is similar to comparable high-income countries.

In 2010, the expansion of Medicaid through the Affordable Care Act (ACA) provided the opportunity for millions of previously uninsured Americans to become eligible for health insurance coverage. Unfortunately, primary care provider shortages have led to a lack of access to primary care and preventive services for millions of Americans (Medical Economics, 2014). Lack of access to preventive and primary care services has contributed to increased use of emergency rooms and contributes to avoidable hospital admissions. In efforts to curtail the costly burden of unnecessary acute care use and the lack of access to primary care, initiatives to improve the nation’s healthcare system have been proposed; the most promising is the patient centered medical home (PCMH).

The PCMH is a value-based care delivery model that is patient centered, team-based, and coordinated (Agency for Healthcare Research and Quality, n.d.). The model has strengthened the relationships between patients and care teams by putting the patient at the center of care (National Committee for Quality Assurance [NCQA], n.d.). The Institute of Healthcare Improvement’s Triple Aim is to improve the patient experience and population health, while

reducing healthcare costs (Bodenheimer & Sinsky, 2014). Healthcare providers and leaders have proposed the addition of a fourth dimension to the Triple Aim that addresses improvement of the work life of healthcare providers, resulting in a Quadruple Aim (Bodenheimer & Sinsky, 2014). The focus on the PCMH areas of care coordination and increased patient/provider satisfaction is in alignment with all four aspects of the Quadruple Aim.

Insurance payers use PCMH recognition as a way to identify practices that are focused on efficiency and quality. Organizations that achieve recognition are rewarded with expanded incentives and reimbursements (Nielsen, Langner, Zema, Hacker, & Grundy, 2012). While successful implementation of the model is challenging (Gale et al., 2015), the PCMH has the capacity to improve care quality at a lower cost (Paustian et al., 2014). PCMH recognition allows for the abatement of health costs through increased provision of preventive services and improved satisfaction of patients and clinicians (Department of Vermont Health Access, 2015). Furthermore, PCMH recognized organizations can expect an estimated 1.5:1 return on investment (ROI) (Reid et al., 2010); with full PCMH implementation, a reduction of over $26.00 (7.7%) per member per month (PMPM) has been documented (Paustian, 2014).

To attain PCMH recognition, practices must decide which program they will follow to pursue recognition status. According to the Modern Medicine Network (2015), there are multiple organizations in the U. S. that award PCMH distinction; among these, the NCQA is the most widely recognized program. Practices in Michigan primarily pursue NCQA and Blue Cross Blue Shield (BCBS) PCMH recognition. NCQA's PCMH recognition has been awarded to more than 13,000 practices nationwide (NCQA, n.d.). One advantage of the NCQA recognition program is that the NCQA provides comprehensive guidelines to facilitate PCMH adoption.

The NCQA's program features six foundational concepts that are crucial to the medical home (Appendix A). The six concepts are: team-based care (TC), knowing/managing your patients (KM), patient centered access (AC), care management/support (CM), care coordination/transitions (CC), and performance measurement/quality improvement (QI). Within these concepts are 100 criteria: 40 that are core and 60 that are elective. Organizations seeking recognition must pass all core criteria and a minimum of 25 of the elective criteria.

Despite the popularity of the PCMH, many organizations fail to achieve PCMH recognition. Due to the complexity of the program, transformation to the value-based model of care can be timely, costly, and is a process that requires a high level of commitment (Goldman, Brown, & Stebbins, 2018). Organizations seeking recognition face a challenging transformation that requires an individualized approach to change in areas such as care coordination, population health management, quality improvement, and access to care (Bresnick, 2015).

The organization for this Doctor of Nursing Practice (DNP) scholarly project expressed interest in pursuing PCMH recognition. The organization is a Federally Qualified Health Center (FQHC) look-a-like urban primary care clinic for underserved adults. An FQHC look-a-like is a provider of community-based healthcare that meets the requirements of the Health Resources and Services Administration Health Center Program, but does not receive funding. The clinic is a tax-exempt, non-profit clinic that previously relied on private funding, which is less reliable than other funding sources (DeSalvo & Kertesc, 2007); however, it now receives revenue for services provided from various insurance providers (Appendix B).

Problem Statement

While the clinic was financially stable, an organizational assessment identified that leadership of the clinic was concerned about the clinic's continued financial stability and

therefore considered transformation to a value-based model like the PCMH. In the immediate area, there were at least three competing organizations with multiple PCMH recognized sites providing similar services to the same target population. Without transitioning to a value-based model, the clinic may not have the opportunity to improve financial security, stay competitive, or improve outcomes. The clinic's Executive Director became interested in the NCQA's recognition program after attending a NCQA PCMH conference. Due to the complexity of the program, lack of understanding about the medical home, and uncertainty about the potential return on investment, a small Midwest urban clinic had not obtained PCMH recognition at the time of this project. This led to the program development project at the urban clinic. Therefore, the clinical question addressed in this project was: What is the process for adoption and attainment of PCMH recognition requirements for an urban primary care clinic?

Review of the Literature

Method

Utilizing the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA), a comprehensive literature review was conducted in July 2018 via electronic search using the Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Medline databases (Appendix C). Literature published in English from January 2013 to July 2018 and studies that were conducted in the U.S., Europe, and Australia were searched. A combination of the words patient centered medical home, PCMH, and medical home were used with the Boolean operator "or". Systematic reviews and meta-analysis involving primary care practices were included. Seven articles met the search criteria for the review, to address the questions below. Study characteristics can be reviewed in Appendix D and study descriptions can be reviewed in Appendix E. Review of the articles focused on evidence that answered the following questions:

(1) What are the benefits of the PCMH, (2) What are the strategies to achieve PCMH recognition, (3) What are the barriers to PCMH recognition, and (4) How can barriers to implementation be overcome?

Medical home benefits. Patient Centered Medical Homes (PCMH) have been used to improve care quality in the primary care setting and to decrease health costs (van den Berk-Clark et al., 2018). PCMHs are associated with increased use of preventive services (Hadland & Long, 2014; Jackson et al., 2013; Sinaiko et al., 2017; van den Berk-Clark et al., 2018), improved experiences (Jackson et al., 2013; Xu, 2016), and a reduction in emergency department visits and avoidable hospitalizations (Hadland & Long, 2013; Jackson et al., 2013; van den Berk-Clark et al.; Xu, 2016).

Cost reduction, reimbursements, and return on investment. While one review did not find evidence to support a reduction in costs in organizations with PCMH interventions (Jackson et al., 2013), other studies were able to find evidence of cost reductions (Sinaiko et al. 2017; Xu, 2016). After a two year study, Sinaiko et al. (2017) concluded that PCMH initiatives yielded a significant reduction (4.2%) in costs from baseline ($28,000 per 1,000 patient-months; p=0.05). Additionally, a Pennsylvania health system that implemented PCMH strategies for Medicare and Medicaid patients found that their initiatives produced a savings of nearly eight percent over 90 months, which equaled a per member per month (PMPM) savings of $53.00 (Bresnick, 2016).

PCMHs have also been associated with enhanced reimbursements (Janamian et al., 2014; Paustian et al., 2014); to date, over 100 insurance payers offer enhanced reimbursements for achieving PCMH recognition (NCQA, 2018). Edwards, Bitton, Hong, and Landon (2014) reported that PCMHs received reimbursements up to $5.00 PMPM. Lastly, there were enhanced

reimbursements when meeting NCQA's Healthcare Effectiveness Data Information Set criteria, a set of nationally recognized quality measures upon which value-based models are based.

Emerging evidence supported the consensus that PCMH payment programs yield a return on investment (Robert Wood Johnson Foundation, 2013). The ROI for PCMHs was as at least 1.5:1 after just two years (Reid et al., 2010). Some organizations such as the aforementioned Pennsylvania health system have shown a ROI of up to 1.7:1 four years after the implementation of PCMH interventions for Medicaid and Medicare patients (Ehrenberger, 2012).

Preventive services. Jackson et al. (2013) conducted a systematic review of 31 studies and concluded that PCMH interventions had positive effects on the delivery of preventive care. Similarly, Hadland and Long (2014) conducted a review of nine peer-reviewed empirical studies and found that individuals associated with a PCMH were more likely to have had a primary care visit in the previous year, have up-to-date immunizations, and to have received anticipatory guidance. PCMH interventions were also associated with increased use of screening tests (Sinaiko et al., 2017; van den Berk-Clark et al., 2018). For example, a meta-analysis of 17 peer-reviewed studies concluded that PCMH interventions result in increased breast (1.4%) and cervical (1.2%) cancer screening (Sinaiko et al., 2017).

Patient and staff experiences. A systematic review of 31 peer-reviewed empirical studies showed that in organizations that had PCMH interventions, there was an improvement in the satisfaction of patients and staff (Xu, 2016). Similarly, in the review by Jackson et al. (2013), there was an increase in staff satisfaction in organizations with PCMH interventions. The study also demonstrated improvement in patient experiences (Jackson et al., 2013).

Emergency department utilization and admissions. PCMH interventions resulted in decreased costly emergency room visits (Hadland & Long, 2013; Jackson et al., 2013; van den

Berk-Clark et al., 2018; Xu, 2016) and avoidable admissions (van den Berk-Clarke et al., 2018; Xu, 2016). Improved clinical outcomes have been associated with decreased emergency room use in states with Medicaid expansion (van den Berk-Clark et al., 2018).

Implementation strategies. The majority of studies measured a variety of inconsistent PCMH interventions. For example, during their endeavor to describe PCMH approaches, Jackson et al. (2013) conducted a systematic review to determine what individual PCMH components had been implemented. The authors found that interventions involved widespread changes in care delivery, with a total of 24 out of 31 studies having interventions that included all PCMH components (Jackson et al., 2013). The study identified 51 distinctive types of strategies to achieve those components. Nearly all studies (n=30) implemented coordination interventions such as care coordination, referral tracking, and mental health integration. Team-based interventions were applied by all studies and included provider designation, obtaining contact information for patients, role definition, PCMH dedicated activities, and team meetings. All 31 peer-reviewed studies implemented strategies such as comprehensive care plans, shared decision-making, and supporting self-management (Jackson et al., 2013). Enhanced access interventions (electronic communication and extended hours) were the least implemented. The majority of interventions aligned with the NCQA PCMH concepts outlined in Appendix A.

Barriers to implementation. In a systematic review of 29 qualitative studies that identified an overlap of PCMH strategies, 11 of the studies discussed barriers to transformation (Janamian et al., 2014). Those barriers included a lack of PCMH understanding, electronic health record (EHR) difficulties, cost barriers such as funding and payment model inadequacies, and insufficient resources (Janamian et al., 2014). Review of the literature also made evident that a lack of structured implementation strategies posed a barrier to PCMH implementation.

Lack of PCMH knowledge. A barrier to successful PCMH transformation was lack of understanding about the model. Resistance to change stemmed from a lack of understanding of the PCMH and contributed to the inability to achieve the long-term commitment needed from organizations (Janamian et al., 2014). PCMH specific education has the potential to increase stakeholder buy-in and reduce resistance to change.

Electronic health record difficulties. Janamian et al. (2014) reported that an Electronic Health Record (EHR) that has the capacity to collect population data, has a disease registry, and allows for interoperability could facilitate the PCMH recognition process. However, the cost of EHR purchase can produce a financial burden, especially for small organizations lacking abundant resources often available to larger systems. The cost of an EHR ranged from $15,000 to $70,000 per provider (The Office of the National Coordinator for Health Information Technology [ONC], 2014).

Cost barriers. The undertaking for PCMH can be costly, with initial costs associated with NCQA recognition for a single-site organization at $500.00 per clinician and an annual fee of $120.00 per clinician (NCQA, 2018). Janamian et al. (2014) reported that existing funding models and projected reimbursements were inadequate for PCMH transition. Reimbursements for PCMH recognition also may not support sustainability (Janamian et al., 2014).

Inadequate resources. Strong infrastructure is key to successful PCMH implementation. Janamian et al. (2014) reported that resources crucial to PCMH implementation were proper equipment, sufficient staff and structure, adequate transition time, and adequate financial support. Large organizations have more resources than smaller systems and while successful implementation is not dependent on size, there were more barriers to implementation for small organizations. Greater access to resources lead to earlier adoption of the PCMH.

Lack of implementation strategies. While three studies addressed PCMH implementation strategies (Hadland & Long, 2013; Jackson et al., 2013; van den Berk-Clark et al., 2018), only one (Janamian et al., 2014) solely addressed PCMH implementation. The studies in the systematic review by Janamian et al. (2014) found that the lack of a structured approach to PCMH recognition was a barrier to implementation. The absence of a structured guide for PCMH implementation may have been a deterrent to organizations considering a PCMH endeavor.

Strategies to Overcome Barriers. None of the reviewed studies identified specific strategies to overcome the identified barriers to PCMH implementation. However, to aid in successful implementation of the model in the future, all reviews produced recommendations. The recommendations varied widely and can be reviewed in Appendix E. There was a collective consensus that the PCMH needs to be more clearly defined, evaluation measures need to be standardized, and structured guidelines to PCMH implementation need to be developed.

Review Conclusion

Although further exploration of the PCMH is required, core concepts have been identified and research supports the endeavor. Positive associations with patient/staff experiences, preventive services, acute care use, and healthcare costs were recognized in PCMHs and in organizations that were not yet recognized but who had implemented PCMH interventions (Annis et al., 2016; Jackson et al., 2013; van den Berk-Clark et al., 2018). Organizations with variable characteristics were identified, but it is noted that both large and small organizations were included (Annis et al., 2016; Jackson et al., 2013; Janamian et al., 2014; van den Berk-Clark et al., 2018). Despite the identification of barriers to implementation, the review identified benefits associated with PCMHs. While the absence of clearly defined implementation strategies

may deter organizations contemplating PCMH recognition, studies in the literature support implementation of individualized PCMH interventions to meet the unique needs of each health system.

Conceptual Models

The conceptual model utilized to examine the phenomenon of adopting a process to attain PCMH recognition was the Donabedian model (Appendix F). The theoretical framework to assess and guide project implementation was the Promoting Action on Research Implementation in Health Services (PARiHS) Framework (Appendix G).

The Donabedian Model

The Donabedian model assists with the focus on multi-dimensional aspects of assessments and implementation of the PCMH. The three key concepts of the model are structure, processes, and outcomes, which are outlined below and can be viewed in Appendix F.

Structure. Structure is any component that supports care in an organization. For the urban clinic, structural components that were key to successful implementation of the PCMH model were human resources, an electronic health record, and the space and equipment necessary for the transformation. The clinic already employed multiple staff members serving in roles crucial to PCMH recognition such as care coordinator and mental health provider roles. The study by Jackson et al. (2013) identified that nearly all studies included in their systematic review had implemented care coordination and mental health integration. An organizational chart can be viewed in Appendix H and stakeholders crucial to PCMH readiness can be viewed in Appendix I. The EHR is also a crucial structural component of successful PCMH implementation; the absence of an effective EHR can be a barrier to achievement of PCMH recognition. The clinic had previously purchased and used the Athena EHR, which had a PCMH

accelerator program aligning with NCQA's requirements for recognition. Lastly, the clinic possessed the physical space and equipment vital to a PCMH endeavor.

Process. Process includes the methods of care delivery in an organization and is dependent on structural components. There were numerous processes within the urban clinic that aided in the delivery of quality care, including care coordination and the tracking of numerous quality measures (vaccinations, cervical/breast/colorectal cancer screening). The clinic possessed an EHR with comprehensive reporting capabilities, allowing the collection of data for completion of the gap analysis. However, processes needed to be further developed to support achievement of PCMH recognition and sustainment. A key processual component for completion of the project was regular staff meetings and communication to support the retrieval of data pertinent to the development and completion of the identified deliverables. Additional process components included the gathering of NCQA's PCMH criteria for recognition, PCMH recognition reimbursement data from the clinic's major insurance payers, and dissemination of the gap analysis, roadmap, and PCMH education to stakeholders. Individualized process improvements were essential to achieving desired outcomes.

Outcomes. Outcomes included any change including an improvement in knowledge, behavior, or satisfaction of care (Donabedian, 1998). The overall desired outcome of the project was an accepted process for adoption and attainment of PCMH recognition requirements. Additionally, the deliverables were expected to result in the following outcomes: (1) Improved understanding of PCMH recognition requirements, (2) Improved understanding of and readiness for PCMH recognition, and (3) Sustainability of a PCMH recognition process. Structure, process, and outcomes were considered in the phenomenon of adopting and attaining PCMH recognition

requirements and guided the multi-faceted approach to the project. Application of the Donabedian model for this project can be reviewed in Appendix F.

PARiHS Framework

The PARiHS Framework (Appendix G) is multi-dimensional and was used to guide implementation of the project (Kitson, Harvey, & McCormack, 1998). The framework is dependent on three complementary components and include evidence, context, and facilitation (Kitson et al., 1998). Successful implementation demanded ongoing appraisal of evidence, the context of the implementation of that evidence, and the processes of facilitation.

Evidence. A collection of knowledge and information sources were used for clinical decision-making. The PARiHS framework identified the sources for knowledge and information as research, clinical and patient experience, and data (Rycroft-Malone, 2004). Nielson, Buelt, Patel, and Nichols (2016) stated that there was evidence for the affirmative impact of the PCMH on quality and clinical outcomes. There are studies available showing a positive correlation between PCMHs and improvement in quality indicators (Rosenthal et al., 2016a), improved disease management (Calman et al., 2013), and reduced acute care use (Rosenthal et al., 2016b).

The evidence of the benefits of the PCMH led to a program development project for adoption and attainment of PCMH recognition requirements for the urban clinic. While consistently utilized implementation strategies for the PCMH have not been identified, evidence supports medical home recognition, and recommendations have been made for health systems to individualize implementation strategies to meet their needs. Leadership of the clinic focused on a transition to a value-based model of care such as the PCMH; an individualized plan for attaining PCMH recognition requirements supported the transition.

Context. Healthcare provision takes place in a variety of settings, communities, and cultures and is influenced by economic, social, political, fiscal, and psychosocial factors (Rycroft-Malone, 2004). Culture, leadership, and evaluation are the three themes addressed in the PARiHS framework under context and they are vital to change (Rycroft-Malone, 2004).

Assessment of the urban clinic's culture revealed a desire for transformation in care delivery after identification of the need to improve reimbursements to improve financial stability. However, with a lack of structured policies and a leadership structure lacking full clarity, there was apprehension about interventions supporting a system-wide change such as a PCMH initiative. The leadership was key to transforming culture and was motivated for organizational improvement with a PCMH initiative. The leadership possessed leadership qualities such as honesty, commitment, and empowerment that were necessary to create cohesion of staff and to guide transformation. The staff was equally fundamental to the transformation and was committed to positive change.

Facilitation. Facilitation is the technique that a person utilizes to empower the application of evidence into practice (Rycroft-Malone, 2004). Facilitators delineate the change process and clarify how the process of transformation can produce the desired outcomes. The three themes of facilitation are purpose, roles, and attributes.

The purpose of facilitation varies from focused to comprehensive approaches and is intended to provide support to promote task achievement (Rycroft-Malone, 2004). The facilitator role varies depending on the role purpose. In this context, the student served as the facilitator. At the clinic, the facilitator's ability to provide a hands-on approach aided in the PCMH recognition process. The role required the attribute of flexibility for the accommodation of change.

Application of the PARiHS framework assisted the facilitator with an understanding that allowed for identification of the structure and process changes needed to obtain the outcomes of PCMH recognition.

Need and Feasibility Assessment of the Urban Clinic

Framework for Assessment

The Burke-Litwin model of organizational performance and change (Appendix J) was the framework utilized for assessment of the urban clinic. The model helps to identify problems, guide change, and identify influential variables; it is comprised of 12 interrelated factors that are categorized into transformational or transactional dynamics (Burke & Litwin, 1992). The framework also allows for identification of dimensions that are causally linked to promote change (Burke & Litwin, 1992). Leadership of the clinic communicated an interest in a NCQA PCMH initiative, as a result, PCMH concept areas were considered throughout the assessment.

External environment. Key external factors applicable to the urban clinic were financial support and community partnerships. The urban clinic relied on the community generosity to provide ongoing health provision to the vulnerable population of the community. Obtaining financial support from the community was at times a rigorous process that inadequately met the financial needs of the clinic. Capitalizing on enhanced reimbursements experienced with PCMH recognition will reduce the clinic's burden of the timely and costly pursuit of private donations and funding in the future.

From July 2017 to July 2018, the clinic served over 1,700 underserved patients with a payer mix that was over 54% Medicaid (Appendix K). Eight percent of patients were covered by Medicare, and 19% were self-pay. Most self-pay patients were on a sliding-scale, which provided cost reductions to qualifying patients but created additional costs to the clinic. To

receive the sliding-scale self-pay, patients could not be over 400% of the level of income. These patients paid no more than $15-$40 for office visit services. The remaining 19% of a patient's insurance was a mixture of other payers (Appendix K). It is important to note that over 50% of the clinic's payers were Medicaid programs, permitting application of the findings to the urban clinic. More than 50% of the clinic's patients are covered by insurance payers that reimbursed for NCQA PCMH recognition (Meridian and Priority Health), which provided financial incentive for the clinic to seek PCMH status. Additionally, a study addressing the return on investment with PCMH organizations who serve Medicaid and Medicare patients showed that there is a long-term ROI of 1.7:1 (Ehrenberger, 2012). While PCMH transformation can be costly, for the urban clinic, it was important to consider the long-term financial benefits associated with the PCMH as outlined above.

Leadership, management practices, and mission/strategy. The Executive Director was a Registered Nurse with a Master's Degree in Business and an advocate for change through a PCMH initiative. The clinic's leadership structure is outlined in Appendix H and provides insight to the delineation of responsibility; however, role definitions are not clear. Completion of the core criteria of NCQA's Team-Based Concept aided the clinic in defining structure, roles, and responsibilities.

The urban clinic's mission was to improve the health of the community by the provision of quality care that was affordable, and given in a compassionate manner. Advocacy for a PCMH endeavor aligned with the mission, vision, and values of the clinic. The desire to improve the health of the community drove the clinic's leadership to embark on an individualized PCMH recognition process.

Organizational culture, work unit climate, and motivation. The assessment demonstrated a motivated climate where stakeholders were mission-driven. There was a culture of compassion and cohesion with personal accountability. Staff attendance and willingness to work beyond what is required supported the program development plan and provided readiness for change. In an effort to maintain financial viability amidst a transforming health system, the clinic leadership strove to be fiscally responsible while improving reimbursements. As a result of the efforts of the urban clinic's staff, stakeholders implemented interventions that partially or fully satisfy NCQA's PCMH criteria. Development of a PCMH education initiative, roadmap, and gap analysis will assist the clinic in implementing additional practices and policies that will meet the remaining NCQA PCMH criteria.

Structure and systems. The urban clinic had two recognized departments (Appendix H); including the clerical and clinical areas that functioned as departmental silos, but operated adequately. Each area had a supervisor responsible for departmental affairs such as communication and team meetings. While the urban clinic did have regular team meetings and communication, there was no formal policy outlining the processes, which was crucial to NCQA's first concept. Completion of NCQA's PCMH first concept aided in the development of more clearly defined staff roles, responsibilities, and expectations for regular team communication.

The clinic had a variety of implemented policies and procedures; however, the NCQA criteria requires a variety of distinctly defined and formally implemented policies and procedures. This was an area of recommended focus for the clinic. They had already implemented multiple policies (after-hours coverage, test tracking) and procedures (quality improvement, care coordination) that served as a foundation for meeting the criteria of NCQA's

fourth, fifth, and sixth concepts (Appendix A). The clinic also employed aspects of team-based care and had expanded hours, which are critical areas of NCQA's first and third concepts (Appendix A).

Lastly, the clinic purchased and used the Athena EHR that "pioneered support for PCMH recognition through an innovative pre-validation program with NCQA" (Rothenhaus, 2015, para. 2). In an effort to improve workflows at the small urban clinic, leadership invested in an EHR system to improve workflows that are necessary for PCMH transformation; as a result, they did not incur the costs related to EHR implementation for the purposes of a PCMH recognition process. The EHR has a PCMH Accelerator Program, which awards 35.25 auto credits. Athena auto credits are PCMH recognition requirement credits that are automatically awarded to practices that possess and utilize the EHR. The burden of the workload associated with a PCMH recognition process was, and will continue to be, reduced because of auto credits that are received from the use of the urban clinic's EHR.

Individual abilities, needs/values, and performance. The urban clinic desired to have staff functioning at the fullest breadth of their scope of practice; however, the project facilitator observed that there were staff performing tasks that are more appropriately delegated (such as clinical staff performing duties that were more appropriate to delegate to clerical staff). The urban clinic's leadership has recognized the importance of a transformation in care delivery in efforts to reduce the workload burden on key personnel; as a result, they chose to undertake a PCMH recognition initiative. NCQA's fourth concept, care management and support, addressed staffing needs (such as improved care coordination), which were required to meet PCMH requirements.

Aligning with the PCMH model, the urban clinic leadership and staff value service to underserved populations. The staff was motivated to provide quality care to individuals disproportionately affected by health disparities. There was motivation to implement change that allowed for the provision of accessible and quality care. PCMH recognition will aide in fulfillment of their mission by improving outcomes and financial stability.

Stakeholders and support. The clinic was overseen by a Board of Directors and employed 28 staff members. There were an annual average of 80 volunteers with a variety of credentials, and the clinic regularly accommodated health profession students. The clinic's leadership structure can be viewed in Appendix H. When considering a PCMH initiative, it is important to evaluate how all staff roles and responsibilities would best be utilized in a PCMH initiative. Staff that are crucial to a PCMH transformation can be viewed in Appendix I. Stakeholder support was a factor that improved the clinic's readiness for adoption and attainment of PCMH recognition requirements. Through the assessment process, a lack of readiness for PCMH recognition and a desire to improve PCMH readiness was identified.

SWOT Analysis

The strengths, weaknesses, opportunities, and threats (SWOT) analysis is a well-established organizational assessment tool that is a versatile planning approach to explore organizational diversity (Willis & Thurston, 2014). A SWOT analysis of the clinic, with consideration of PCMH readiness, was performed. A visual SWOT chart can be reviewed in Appendix L.

Strengths and opportunities of the urban clinic included stakeholder desire for the continued provision of affordable quality care. The clinic had a strong bond with the community and developed alliances that were an origin of crucial funding. As outlined in the organizational

assessment, the clinic implemented processes such as quality improvement and care coordination programs to aid in attainment of PCMH requirements. Also aligning with PCMH concept areas, the clinic provided many aspects of team-based care and improved care access by providing same day appointments and expanding clinical hours.

There were internal weaknesses within the clinic. The clinic's primary internal weakness was their reliance on private funding. The process of applying for financial aid and the stipulation of providing evidence that the clinic was meeting pre-determined requirements for each source of aid was arduous. Since more than 50% of the clinic's patients were covered by insurance payers (Appendix K) that reimburse for NCQA PCMH recognition, there was financial incentive for the clinic to seek recognition. Another weakness was the lack of comprehensive official policy and the need to more clearly define organizational structure and role definitions, which inhibited the clinic's capacity to function as efficiently as possible. A final weakness was the lack of knowledge of the PCMH recognition process among the urban clinic's leadership and staff. An individualized PCMH roadmap and a detailed PCMH educational session improved readiness for a PCMH recognition process.

The external threats should be considered when contemplating a transformation to a care delivery model such as the PCMH. The clinic's mission was praiseworthy; however, there were at least three locally situated direct competitors with multiple PCMH recognized clinics providing similar services to a similar population in the community. Additionally, there were at least five indirect competitors in the immediate geographical area. As the medical home becomes the preferred model of care delivery, unrecognized organizations such as this urban clinic would find themselves unable to compete with PCMHs.

Through the organizational assessment process, strengths and opportunities for the clinic were identified. As noted in the description of the weaknesses and threats, there was a need for a transformation in care delivery that enhances reimbursements and improves outcomes in order to maintain viability and competitiveness. An individualized PCMH endeavor assisted in this transformation. The organizational assessment and conceptual frameworks guided the evidence-based project plan.

Ethics and Human Subjects Protection

Preceding project implementation, the facilitator submitted an Institutional Review Board (IRB) application seeking approval to conduct the project as directed by the university. The application was approved and can be reviewed in Appendix M. The urban clinic did not have an internal IRB. The facilitator did not interact with any patients and did not require access to protected health information (PHI). Various types of data were necessary for project completion. Specific examples of required data are available in Appendix N. All data containing PHI was de-identified aggregated data reports generated from Athena and were provided by the urban clinic's quality improvement specialist. All data was stored on a portable device secured by the facilitator. The storage device was protected with the BitLocker Drive Encryption and required a password for access. Additionally, the project facilitator completed Epigeum training such as the Responsible Conduct of Research and Human Subjects Protections sessions. The program development project did not include interaction with patients and did not subject patients or staff to physical, social, economic, or legal threats.

Project Plan

Purpose

The purpose of the scholarly project was to develop an individualized approach to aid in the adoption and attainment of PCMH recognition requirements for an urban primary care clinic.

Design for Evidence-Based Initiative

The PARiHS framework guided the program development plan at the urban clinic. The three interrelated factors emphasized by the model (evidence, context, and facilitation) were thoughtfully considered and are explored below.

Evidence. The program development plan was based on existing evidence-based research. The PCMH emphasizes patient centeredness and is in alignment with a transformation of the current healthcare system from a fee-for-service model to value-based care. PCMH adoption has been shown to have positive associations with outcomes (van den Berk-Clark et al., 2018) and studies have shown improved ROIs in PCMHs (Bresnick, 2016; Ehrenberger, 2012).

Current literature was analyzed and used as a guide to develop the proposed plan that included a PCMH gap analysis, completion of the core criteria of NCQA's first concept, a PCMH roadmap for completing all of NCQA's core criteria, PCMH education (focused on the process, gap analysis, and roadmap), and a ROI analysis. NCQA's PCMH concepts (Appendix A) guided roadmap development, which was individualized to the urban clinic to include the preferences of the urban clinic's stakeholders and patients. Evidence guided the formation of PCMH education intended to aid in attainment of PCMH requirements. Utilizing systematically collected data from the local geographical region, the facilitator developed a business proposal to guide decision making. The business proposal was used to inform stakeholders of the potential ROI and outlined the anticipated costs of PCMH implementation.

Context. Organizational context guided the program development plan. Leadership of the clinic promoted cohesiveness in efforts to focus on improvement of care delivery and financial stability. The culture of the urban clinic allowed for a change initiative; and the human resources and physical structure necessary for a PCMH recognition initiative already existed. While there was room for further development of processes, there were processes already in place that supported a transition to a value-based care delivery model. The small nature of the clinic and the lack of access to the resources afforded to larger organizations necessitated the development of an individualized roadmap to PCMH recognition.

Facilitation. The DNP student served as the project facilitator who guided strategic program development implementation. For the purposes of this project, it was necessary that the facilitator have the ability to empower key stakeholders. A system-wide change as comprehensive as a transformation in a care delivery model can be arduous; the facilitator needed to possess both patience and understanding, while still being able to take initiative, promote cohesiveness among the team, and motivate the stakeholders. The facilitator provided a hands-on-approach throughout project implementation, and staff benefited from positive re-enforcement and encouragement for ongoing change. The ability of the facilitator to be approachable and receive feedback helped this organization reflect on what skills were necessary in order for them to continue the adoption of PCMH recognition requirements after the conclusion of the project. As a result of completion of the core criteria of concept one, a key stakeholder was identified as the facilitator to continue the process for adoption of PCMH recognition requirements, which is needed for sustainability of the PCMH initiative. The deliverables have laid the groundwork for adoption and attainment of recognition requirements.

Settings and Participants

The setting was an urban clinic for underserved adults. Participants in the program development project included the facilitator, staff, and leadership of the clinic. No patients or community members participated in the project. The project required minimal resources for completion. The most notable resource was the time donation of key stakeholders. Availability of staff and ability to donate time to the project were not perceived as a barrier for project implementation. The clinic possessed the flexibility to accommodate students in a manner that supported success. The urban clinic staff and leadership were supportive of a project addressing readiness for adoption and attainment of PCMH recognition requirements.

Objectives, Implementation Strategies, and Timeline

A timeline served as a guide for project implementation and completion (Appendix O). The project deliverables are outlined below. A table of deliverables, implementation strategies, and expected outcomes are available in Appendix P. The project objectives and correlating timeline were as follows:

- By May 31st, 2019, evaluate the urban clinic's state of readiness for PCMH recognition through the completion of a gap analysis.
- By June 30th, 2019, develop an individualized PCMH roadmap that identifies the core components the urban clinic will need to meet to attain PCMH recognition.
- By June 30th, 2019, complete all of the core criteria of NCQA's Team Based Care concept one (Appendix A). The deliverables for each core criteria was guided by NCQA's PCMH requirements for evidence of completion.
- By June 30th, 2019, in collaboration with the Program Coordinator, develop and conduct an educational session for staff, focusing on NCQA's recognition process, gap analysis,

and roadmap. Evaluate the satisfaction with the education using a post-education Likert-style survey (Appendix Q).

- By June 30th, 2019, collaborate with the Program Coordinator, Executive Director, Executive Assistant, and Development Director to develop a PCMH Return on Investment (ROI) analysis outlining projected expenses and the ROI for PCMH recognition. PCMH reimbursement data, PCMH cost estimates, ROI data, stakeholder salary estimates (Appendix R) guided the development of the ROI analysis to be presented at the education session.
    - Note: This objective was changed due to the application submission and receipt of an Americares grant, which provides financial support for NCQA's PCMH implementation. Americares is a non-profit organization that has the collective goal of meeting the health care needs of American's through disaster relief and long-term health care initiatives (Americares, n.d.). The DNP student played an instrumental role in assisting the urban clinic with the grant application process. The funding is expected to greatly reduce the financial and resource burden of a PCMH transformation journey for the clinic. As a result of this funding opportunity, the small urban clinic required a change in this deliverable to include an NCQA PCMH budget for completion of NCQA's PCMH recognition requirements rather than an ROI analysis.

Project Data Collection and Evaluation Plan

Evaluation of the program development project included evaluation of whether or not the project objectives were met and if the proposed deliverables were produced. A table of project deliverables and measurement data can be viewed in Appendix P and are outlined below. The

successful completion of all deliverables and acceptance of the program development plan for a process for adoption and attainment of PCMH recognition requirements has resulted in improved readiness for PCMH recognition.

Resources and Budget

Attention was given to the human and financial resources fundamental to the DNP project. The required human resources for this project included a variety of interdisciplinary professionals including the Project Coordinator, Executive Director, Executive Assistant, Development Director, Lead RN, Project Specialist and Quality Measure Specialist, RNs, NPs, MDs, and Social Worker. Approximate wages were obtained from the urban clinic's Executive Director to estimate costs associated with time donation (Appendix R). Additional resources required included the space essential to accommodate the facilitator's needs and physical resources necessary to conduct an educational luncheon, print PowerPoint handouts, and educational fliers. A visual expense report including in-kind time donation of personnel as well as materials needed was designed to aid in understanding of the project costs (Appendix S).

Outcomes

Leadership of the small urban clinic identified the need for a transformation from fee-for-service to value-based care delivery. The clinic leadership sought an individualized approach to PCMH recognition for the urban clinic. To answer the identified clinical question (What is the process for adoption and attainment of PCMH recognition requirements for an urban primary care clinic?), five deliverables were developed: (1) A gap analysis, (2) Completion of the core criteria of NCQA's PCMH concept one, (3) A PCMH roadmap, (4) PCMH education, and (5) A NCQA PCMH budget. The gap analysis communicated the clinic's readiness for a PCMH endeavor and guided the roadmap development, the core criteria of NCQA's PCMH concept one

helped initiate a PCMH recognition journey, a NCQA PCMH roadmap outlined the remaining recognition requirements and served as a guide for an individualized approach to NCQA PCMH recognition, and the PCMH education improved the staff's knowledge of the medical home and the process for achieving recognition. The deliverables impacted the dimensions emphasized by the Donabedian model: structure, processes, and outcomes (structure: PCMH roadmap, process: PCMH education, outcomes: NCQA's PCMH concept one core criteria). The deliverables are described in detail below.

Gap analysis. Using NCQA's 2017 recognition criteria (Appendix A), a gap analysis of all of NCQA's PCMH criteria was conducted to understand the current state of the clinic's readiness to meet the criteria. The project facilitator collaborated with the Program Coordinator, Executive Director, Quality Improvement Specialist, Information Technology Coordinator, Lead RN, Care Coordinator RN, Clerical Staff, and Project Specialist to complete the gap analysis. A word document audit tool was developed based on all criteria of NCQA's six PCMH concepts. The gap analysis was completed by June 1st, 2019 and was delivered at the educational session for clinic stakeholders on June 26th, 2019. The gap analysis materials were provided in print and on a Bitlocker secured portable storage device for future use by the urban clinic. Due to the large nature of the gap analysis document, it was not reproduced entirely within this scholarly paper. A visual representation of the gap analysis findings can be reviewed in Appendix T.

The gap analysis findings allowed identification of the areas of strengths and weaknesses as it pertained to the six NCQA PCMH concept areas. Strengths for the clinic are within the Team-Based Care and Practice Organization, Care Management and Support, and Care Coordination and Care Transition concept areas. Deficiencies are in the Knowing and Managing your Patients, Patient-Centered Access and Continuity, and Performance Measurement and

Quality Improvement concept areas. The urban clinic was able to review the gap analysis findings and became better prepared to start their PCMH recognition journey. The detailed findings of the gap analysis provide a thorough understanding of the clinic's state of readiness for a PCMH recognition process. Identification of strengths and weaknesses allowed clinic leadership to accurately determine how to allocate crucial resources for the purposes of adoption and attainment of PCMH recognition requirements.

NCQA's PCMH concept one core criteria. Interventions to meet the core criteria of concept one (Appendix A) were implemented after collaboration with a variety of stakeholders including Executive Leadership, clinical staff, and administrative personnel. The deliverables for each core criteria were guided by NCQA's PCMH requirements for evidence of completion. Due to the nature of the deliverable, a variety of formats were utilized to complete the criteria (brochure, charts, and written policies). Prior to presenting the deliverables to the clinic's leadership, the facilitator reviewed the information to determine if each component met the NCQA's definition of acceptable evidence for PCMH recognition. The core criteria of NCQA's Team-Based concept were completed and presented to Executive Leadership by June 20th, 2019. Details of each concept one core criteria were communicated to the stakeholders of the small urban clinic at the educational session conducted on June 26th, 2019. The clinic's leadership was provided with a Bitlocker secured portable storage device containing the electronic version of the final documents for this deliverable. Due to the size of the final document, only an example of each core concept deliverable is provided for review (Appendix U).

As a result of the completion of this deliverable, the urban clinic will now successfully complete the requirements of the core criteria of NCQA's PCMH concept one. Representative core criteria are described below.

- *TC-01*: *Designates a clinician lead to manage the PCMH transformation*. The facilitator collaborated with the Program Coordinator and Executive Directors to identify a PCMH leader and determine timing of activities to support objective completion. The deliverable included a formal document outlining the PCMH Champion and Transformation Manager's name, credentials, role definition and PCMH responsibilities.
- *TC-02: Defines organizational structure and staff responsibilities to support key PCMH functions*. The facilitator collaborated with the Program Coordinator, Project Manager, and Executive Assistant to refine organizational structure, to identify staff responsibilities crucial to PCMH functions, and to determine the timing of meetings to support the objective. The deliverable was a formal document outlining the clinic's structure and key staff roles for PCMH.
- *TC-06*: *Has regular patient care team meetings or a structured communication process focused on individual patient care*. The facilitator collaborated with the Program Coordinator, Lead RN, and Executive Assistant to arrange activities to support objective completion. The deliverable was a formal document outlining a structured team communication process.
- *TC-07*: *Involves staff in the practice's performance evaluation and quality improvement activities*. The facilitator collaborated with the Program Coordinator, Development Director, and Quality Improvement Specialist to create a formal, documented policy outlining the inclusion of staff in performance evaluation and quality improvement. During the educational session held on June 26th, 2019, the details of this deliverable were communicated to the staff of the small urban clinic.

- *TC-09: Has a process for informing patients about PCMH*. In collaboration with the Program Coordinator and Development Director, the facilitator developed a formal document to inform patients about the PCMH (Appendix V). The Development Director of the small urban clinic will collaborate with the other Executive staff members to determine a policy, procedure, or workflow that outlines the dissemination of the deliverable to the clinic's patients. This is anticipated to occur immediately after receiving NCQA's PCMH recognition status.

Roadmap. A PCMH roadmap for completion of all of NCQA's PCMH core criteria was developed and managed by the facilitator utilizing guidelines from the NCQA's PCMH recognition requirements for each concept, results from the gap analysis, and completion of the core concepts of NCQA's Team-Based concept. The roadmap was designed for the urban clinic to assist with adoption and attainment of NCQA's PCMH recognition requirements. The project facilitator collaborated with the Executive Leadership to develop the deliverable. The roadmap was presented in Word and PDF format to the urban clinic's Executive Leadership on June 20th , 2019 and was reviewed by the Project Manager, Executive Assistant, and Executive Director. The clinic's leadership was provided with a Bitlocker secured portable storage device with the electronic version contained on it. The document can be viewed in Appendix W.

The roadmap was presented at the staff education session on June 26th, 2019. It provided a detailed and individualized guide to PCMH recognition through NCQA. It also was inclusive of a step-by-step timeline for successful completion of all remaining requirements for NCQA PCMH recognition. The clinic leadership accepted the completed roadmap and reported that it was a crucial resource to guide their individualized approach to adoption and attainment of NCQA's PCMH recognition requirements. At the educational session, staff in attendance

verbalized acknowledgement of the importance of this individualized roadmap for the clinic. The stakeholders verbalized acknowledgment that the individualized roadmap had improved the clinic's readiness for PCMH recognition and contributed greatly to the likelihood of successful attainment of NCQA's PCMH recognition requirements.

Staff educational session. The facilitator developed the education focusing on NCQA's PCMH concepts, criteria, and recognition process, gap analysis findings, and the individualized PCMH roadmap. Additionally, the facilitator developed a 13 question five-point Likert-type survey to evaluate participation satisfaction with the educational sessions. The educational opportunity included a verbal presentation with electronic visual materials (PowerPoint) that was presented along with the satisfaction survey to the clinic leadership for review prior to June 20th, 2019. The information was disseminated by the facilitator during two twenty minute education sessions held on June 26th, 2019. The educational materials were provided to staff of the urban clinic in print at the educational sessions and to the Executive Director on a Bitlocker secured portable storage device for future use by the urban clinic. The educational materials can be reviewed in Appendix X. The Likert survey can be reviewed in Appendix Q and the findings of the survey can be reviewed in Appendix Y.

At the request of the Executive Leadership, the educational sessions were optional for all staff. While they were encouraged to attend, it was not mandatory. Additionally, to minimize the impact of the sessions on the workflows of the office, the leadership requested that the information be disseminated during two twenty-minute educational sessions during the staff lunch period. The staff was receptive to the education and showed interest in learning about the patient centered medical home and the NCQA PCMH recognition process. Staff was attentive to the disseminated information and engaged in related dialogue. Stakeholders also actively

participated in a question and answer opportunity that was provided at the conclusion of each session.

After the education sessions were conducted, staff in attendance were asked to complete the Likert-style education satisfaction survey. The data was evaluated in collaboration with a university statistician using The SAS System on June 27th, 2019. Due to the small nature of the urban clinic and the number of attendees at the education sessions, only nine surveys were received. Analysis of the data revealed that overall, staff felt that the method of education was effective. Out of the nine surveys completed, more than half of the surveys revealed that respondents strongly agreed with all of the 13 survey questions. Furthermore, review of the survey results revealed that if the “agree” and “strongly agree” results were collapsed, only one answer would fall outside of that category. That answer was “neither disagree or agree” and was in response to the statement: Your interest in the subject has increased as a result of this course. Given the small sample size, it is difficult to ascertain if the findings would be similar with a larger audience. Nonetheless, the responses were largely positive and provided the project facilitator and urban clinic leadership with valuable knowledge to consider in the future when developing staff education of this nature.

NCQA PCMH Budget. A NCQA PCMH budget was developed using estimations of the cost of the material resources and direct labor necessary to adopt and attain NCQA’s PCMH recognition requirements. NCQA’s PCMH concepts and individual criteria were used to guide the development of the budget. NCQA’s recognition fee’s, the estimated staff salaries and costs for benefits provided by the urban clinic leadership, and registration fees for a variety of recommended educational opportunities crucial to the success of PCMH adoption were also used to guide the budget development. The budget was presented in Word and Excel format to the

urban clinic's leadership on July 1st, 2019. Due to the nature of the information necessary to complete the budget and length of the document for this deliverable, a detailed budget summary will be provided to the urban clinic leadership but is not included in this document. An abbreviated budget summary can be reviewed in Appendix Z.

The delivery of a NCQA PCMH budget provided the urban clinic's leadership with an outline of the estimated minimum costs for implementation of the remaining NCQA PCMH recognition requirements. The primary resource noted to be required for the PCMH recognition process was time. Consideration of recommended staff education and certifications, NCQA PCMH recognition fees, and additional staff salary and benefits were included in the budget. There was inclusion of very few physical resources due to an existing infrastructure that is sufficient for achieving PCMH recognition requirements.

The budget was developed using estimated income data for all key personnel (yearly salaries - annual income/52wx40h). Estimated salary information can be reviewed in Appendix R. The budget provided an estimation of the anticipated costs to employ the human resources needed and to implement the processes necessary to meet unmet NCQA PCMH criteria. The estimated overall financial burden for implementation of interventions to meet the remaining criteria necessary for PCMH recognition was calculated to range between $19,171 and $45,049 (Appendix Z). When subtracting $95,120 for the processes that are already being implemented by the urban clinic, these numbers represent the range between the must-do and recommended interventions to satisfy the remaining unmet criteria for NCQA PCMH recognition. The budget estimation for achieving PCMH recognition allowed the Executive Leadership to have a detailed understanding of the minimum costs for implementation of interventions necessary to achieve NCQA PCMH recognition.

Discussion

Through a thorough organizational assessment, the project facilitator and urban clinic leadership were able to identify the need for a transition from a fee-for-service care delivery model to a value-based model for the urban clinic. Value-based models of health care delivery are becoming the standard in the United States. Despite the desire for a transition in care delivery, there was uncertainty among the urban clinic's leadership about the risks versus benefits of such a transformation, as well as the associated costs of implementation and benefits being PCMH recognized. This led to the student-led program development project.

Gap analysis. The NCQA PCMH gap analysis allowed for identification of the urban clinic's current state of readiness compared to the desired state of readiness for attainment of NCQA's PCMH recognition requirements. Identification of the currently met and unmet criteria, as well as the identified "low hanging fruit", allowed for the project facilitator to prioritize the recommended individualized approach to PCMH recognition. Two of the barriers to PCMH implementation identified in the literature included a lack of PCMH understanding and insufficient resources (Janamian et al., 2014). In addition to the intended outcomes of the analysis, there was an increase in stakeholder knowledge of the PCMH. The finite details of the gap analysis required familiarity of the recognition process, as a result, stakeholder knowledge increased exponentially, which is anticipated to result in a greater likelihood of successful PCMH recognition. The gap analysis also allowed for identification of the resources needed to successfully complete the remaining recognition criteria. This will minimize the impact of the barrier and enhance the likelihood of successful PCMH recognition for the small urban clinic. Additionally, improved knowledge of the PCMH and awareness of the resources needed for

achievement of PCMH recognition requirements were instrumental to the development of the individualized roadmap for NCQA PCMH recognition.

NCQA's PCMH concept one core criteria. As a result of the completion of the core criteria of NCQA's PCMH concept one, the urban clinic has met crucial aspects of the team-based, patient-centered, and value-based care delivery model (National Committee for Quality Assurance [NCQA], n.d.). The systematic review by Jackson et al. (2013) that aimed to identify strategies to PCMH implementation found that all 29 studies included had implemented team-based interventions including defining staff roles and having structured team meetings and communication processes. Completion of the team-based concept's core criteria has clearly delineated the organizational structure and stakeholder role definitions and responsibilities, which strengthened the urban clinic's opportunity for successful adoption and attainment of PCMH recognition requirements.

Roadmap. Development of the roadmap occurred after careful consideration of the findings of the gap analysis, which identified areas of strengths and weaknesses. These findings were crucial to the development of an individualized approach to PCMH recognition. The project facilitator also considered findings of the literature review and the identified barriers to PCMH implementation when developing the program development project. Janamian et al. (2014) reported that organizations lacking an individualized and structured guide to achieve PCMH status are less likely to achieve PCMH recognition. In an attempt to secure funding to complete the PCMH recognition process, the clinic leadership applied for and received a $100,000 Americares grant. A condition of the grant is completion of the PCMH recognition process within 12-24 months of initiation. Considering the findings from the gap analysis, budget, and individualized roadmap it is estimated that it will take nine months for the clinic to complete the

remaining PCMH recognition requirements. Delivery of the individualized PCMH roadmap enhances the likelihood of successful adoption and attainment of PCMH recognition requirements and ongoing sustainability of PCMH recognition.

Staff educational session. Prior to project implementation, the urban clinic's leadership lacked full clarity of the clinic's readiness for a PCMH endeavor, the best method for achieving PCMH recognition, and whether or not there were adequate processes in place to support a PCMH recognition journey. As identified in the literature review, a lack of understanding of the PCMH model is a barrier to successful PCMH transformation (Janamian et al., 2014). As a result, the project facilitator determined that staff education was a crucial aspect to garner staff buy-in for a PCMH recognition endeavor and developed individualized education on NCQA's PCMH recognition. After each session, the project facilitator received valuable feedback from multiple stakeholders that aligned with findings in the literature review: A lack of knowledge and understanding about the PCMH is a barrier to successful implementation of the value-based model. Ultimately, as a result of the education that outlined NCQA's recognition process, the gap analysis findings, and PCMH roadmap, there was staff buy-in to move forward with a PCMH recognition journey. This is an important achievement because long-term commitment to a transformation in the delivery of care at the clinic was needed to ensure continued progress and sustainability of a PCMH recognition endeavor.

NCQA PCMH budget. After the award of the Americares grant, the return on investment deliverable was no longer as vital to the clinic leadership as an estimated budget for the costs of PCMH intervention implementation. The Americares funding opportunity requires that the clinic develops a budget for PCMH recognition. Development of the budget based on the findings of the NCQA PCMH gap analysis provided the urban clinic leadership with an

estimation of the potential costs for initial recognition and partially fulfills requirements for the Americares grant. The budget revealed an estimated minimum cost for implementation of mandatory processes and procedures for PCMH adoption and attainment to be just over $45,000 for the small urban clinic. This leaves a remainder of approximately $65,000 available from the $100,000 Americares grant to cover unexpected expenses and additional costs that the clinic may choose to incur for implementation of added PCMH interventions. The urban clinic has previously attained Federally Qualified Health Center (FQHC) look-a-like status. Federally Qualified Health Centers and FQHC look-a-likes have an advantage over non-qualified organizations in pursuit of PCMH recognition because they have common goals including high-quality, cost effective care that is patient centered, and alignment with many PCMH required concept areas (NCQA, 2019). As a result of the clinic's achievement as a FQHC look-a-like, there was already a strong foundation of policies, practices, and procedures at the urban clinic. Without this strong foundation, the costs for PCMH implementation would be substantially higher. Additionally, when calculating the cost of PCMH recognition by other organizations in the future, it is crucial to note that the work conducted by the project facilitator equated to a minimum of $21,500 for at least 500 hours of work towards development of an individualized process to adoption and attainment of PCMH recognition requirements for the urban clinic.

Potential Revenue for PCMH recognition. It is important to consider potential incentives that may be awarded as a result of implementing PCMH interventions such as behavioral screening, preventative screening, immunizations, and chronic disease management. For example, nearly 50% of the clinic's patients are insured by Priority Health, who recognizes NCQA's PCMH recognition and provides a 0.75 cents per member per month (PMPM) incentive for PCMH recognition (Priority Health, 2018).

Priority Health also developed a Partners in Performance (PIP) program that provides incentives for a variety of services that crossover with NCQA's PCMH recognition, such as criteria QI1, QI8, and QI12, which can be viewed in Appendix A. Through the process of implementing PCMH interventions, the clinic will develop processes that align with quality measures incentivized by insurance payers such as Priority Health. The project facilitator reviewed the PIP program incentive data for the urban clinic and then assessed data for ten PIP measures that also fall under NCQA PCMH concept areas. Between January 1st and April 31st, 2019, the clinic could have received an additional $15,674 dollars in incentives for the reviewed measures (See Appendix AA).This represents potential monies for only *ten measures*, *for one payer*, *over the course of four months*. Therefore, it can be assumed that without a transformation in care-delivery, the potential lost revenue for those measures over one year is estimated at $47,022. This amount of money alone would nearly cover the salary for a full-time Registered Nurse at the clinic for one year (Appendix R).

Conclusion to the discussion. As a result of this project implementation, the urban clinic is better prepared to achieve successful NCQA PCMH recognition. The gap analysis identified that the clinic had already implemented processes that meet nearly half of the requirements for NCQA's PCMH recognition. While this provided hope for the urban clinic, the financial implication of implementing processes to meet the remaining requirements was unclear. As the gap analysis was near completion, the clinic was informed that they were chosen as a recipient of a $100,000 grant for a NCQA PCMH recognition process. As a result, a budget was developed which outlined the remaining anticipated costs for NCQA PCMH implementation. As a result, the urban clinic leadership was fully informed of their readiness for PCMH recognition and anticipated costs of recognition, they ultimately elected to pursue NCQA PCMH recognition.

Project Limitations

There were limitations for this DNP project. Staff turnover at the urban clinic resulted in four separate mentors during the course of the scholarly project. While the periods of transition were challenging, the availability of the mentors to the project facilitator minimized the potential negative impact this could have had on the project implementation. Additionally, the variable demands of the Executive Director resulted in minimal face-to-face availability with the project facilitator and necessitated communication through the project mentors when executive feedback was necessary. While this posed as a limitation, the cohesion among the urban clinic leadership and their ability to communicate effectively minimized the impact of this limitation.

Considering the potential financial burden associated with a PCMH recognition process and the importance of the impact of that burden on an organization, it is important to have the most accurate financial information possible in order to provide the most precise implementation budget possible. The activity-based costing method used to develop this budget had inherent limitations. Philip, Govier, and Pantely (2019) report that with activity-based costing, it is important to consider estimates of staffing time for finance staff to create pro formas, reconcile incentive payments, consider financial risks, and to engage in sound financial planning. They also emphasize that it is important to consider Chief Executive Officer or contract management time and other direct or indirect costs such as PCMH related training, new equipment, hiring trainers, upgrading software, and lost productivity from staff time dedicated to PCMH related activities (Philip, Govier, & Pantely, 2019). While most of the necessary information was obtained and included in the budget analysis, some information was not available. As a result, the clinic leadership will need to closely evaluate the budget to consider other potential costs of implementation that were not available for analysis.

Implications for Practice

The project facilitator's Doctor of Nursing Practice (DNP) education and experience as a Family Nurse Practitioner (FNP) provided the lens for a comprehensive approach to completion of the multi-faceted deliverables that were developed for this project, ultimately resulting in a meaningful project that positively affected the urban clinic and the field of nursing. Use of the Donabedian model (Appendix F) allowed a multi-dimensional approach to implementation of a PCMH endeavor. The nursing discipline will benefit from the PCMH initiative by dissemination of the project through formal presentation and publication of the program development project. There has been a gap in the literature for implementation of individualized PCMH interventions for small clinics, a project of this nature will assist in guiding PCMH implementation for other small clinics in the future.

Sustainability Plan

The urban clinic has committed to the sustainability of the developed evidence-based and individualized plan for PCMH recognition. Through the implementation of interventions to meet NCQA's PCMH concept one's core criteria, a designated clinical leader has been identified to serve as the facilitator of the ongoing PCMH recognition process. This designated clinical leader should develop areas of focus based on the potential for ROI, investigate what other have incentive and reimbursement programs align with PCMHs, assess the patient population and determine what Priority Health PIP measures would benefit the clinic. The clinician lead should regularly monitor for NCQA PCMH changes and for changing incentive and reimbursement programs offered by insurance payers.

Lastly, the urban clinic should consider hiring a consultant to help facilitate the PCMH recognition process. Philip, Govier, & Pantely (2019) report that some organizations elect to

employ the assistance of a consultant to facilitate change processes and to complete tasks required for PCMH recognition. Furthermore, they report that practices that choose to hire an external consultant have decreased direct labor and lost productivity costs.

Dissemination

Outcomes of the program development plan for adoption and attainment of PCMH recognition requirements were presented to key stakeholders of the urban clinic in June 2019. Additionally, at the closure of the project, the facilitator presented the final defense with an oral presentation utilizing visual and audio aids at the urban clinic in July 2019. The final defense was open to members of the community, university employees, and stakeholders of urban clinic. For future dissemination, the facilitator will consider presentation or publication of the evidence-based solutions to professional organizations or in professional publications. Lastly, the project findings will be published in ScholarWorks©.

Conclusions

The Patient Centered Medical Home is a value-based care delivery model that is patient centered and team-based; however, despite the evidence, the small urban clinic has not yet achieved PCMH recognition. While working closely with the urban clinic's leadership and considering the preferences of the clinic, the DNP student answered the following clinical question: What is the process for adoption and attainment of PCMH recognition requirements for an urban primary care clinic?

The program development project resulted in the development of a gap analysis of NCQA's PCMH recognition requirements, an individualized NCQA PCMH roadmap, completion of the core criteria of NCQA's PCMH concept one, a budget, and staff education

outlining NCQA's PCMH program and the previously identified deliverables. The individualized approach to PCMH recognition will aid the urban clinic in successful achievement of PCMH recognition. Beyond this project and the developed individualized approach to PCMH recognition for the small urban clinic, the ultimate future outcome will be achievement of NCQA's PCMH recognition. This will lead to improved patient outcomes and a reduction in the costs of healthcare for the patient population of the small urban clinic.

Enactment of DNP Essentials

"The eight Doctor of Nursing Practice Essentials are the foundational outcome competencies that are essential for all DNP graduates regardless of their specialty or focus (Association of Colleges of Nursing [AACN], 2006, p. 8). According to Moran, Burson, and Conrad (2017), the Doctor of Nursing Practice student must demonstrate that they have achieved doctoral level scholarship competency and advanced knowledge of an identified topic; the DNP project is the program deliverable that demonstrates the competency. The eight DNP Essentials were enacted in various ways throughout the course of the endeavor of the DNP scholarly project. A table of the DNP Essentials and how the DNP student enacted them during the course of the scholarly project can be reviewed in Appendix BB. Attainment of the DNP essentials enabled the facilitator to enact the role of the DNP prepared nurse for the purposes of the scholarly project and for future projects.

References

Agency for Healthcare Research and Quality. (n.d.). Defining the PCMH. Retrieved from https://pcmh.ahrq.gov/page/defining-pcmh

American Association of Colleges of Nursing. (2006). *The essentials of doctoral education for advanced nursing practice*. Retrieved from https://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf.

Americares (n.d.) About us. Retrieved from https://www.americares.org/en/about-us/

Annis, A. M., Harris, M., Robinson, C. H., & Krein, S. L. (2016). Do patient-centered medical home access and care coordination measures reflect the contribution of all team members? A systematic review. *Journal of Nursing Care Quality*, *31*, 357-366.

Bodenheimer T. & Sinsky, C. (2014). From triple to quadruple aim: Care of the patient requires care of the provider. *Annals of Family Medicine, 12*, 573-576. doi: 10.1370/afm/.1713

Bresnick, J. (2015). Patient-centered medical home complements healthcare reform. Retrieved from https://www.pcpcc.org/2015/04/02/patient-centered-medical-home-complements-healthcare-reform

Bresnick, J. (2016). How the patient-centered medical home "repackages" primary care. Retrieved from http://healthitanalytics.com/news/how-the-patient-centeredmedical-home-repackages-primary-care

Burke, W. W., & Litwin, G. H. (1992). A causal model of organizational performance and change. *Journal of Management*, 523-545.

Calman, N., Hauser, D., Waltermaurer, E., Molina-Ortiz, E., Chantarat, T., & Bozack, A. (2013). Becoming a patient-centered medical home: A 9-year transition for a network of federally

qualified health centers. *Annals of Family Medicine*, *11*, S68-S73. http://dx.doi.org/10.1370/afm.1547

Centers for Disease Control and Prevention (2017). Health expenditures. Retrieved from https://www.cdc.gov/nchs/fastats/health-expenditures.htm

Department of Vermont Health Access (2015). Vermont blueprint for health. Retrieved from http://blueprintforhealth.vermont.gov/sites/blueprint/files/BlueprintPDF/AnualReports/Vermont-blueprint-for-Health-2015-Annual-Report-FINAL-1-27-16.pdf

DeSalvo, K.B. & Kertesz, S. (2007). Creating a more resilient safety net for persons with chronic disease: Beyond the 'medical home'. *The Journal of General Internal Medicine*, 22, 1201-1203.

Donabedian, A. (1988). The quality of care: How can it be assessed? *The Journal of American Medicine*. http://dx.doi.org/10.1001/jama.1988.03410120089033

Donabedian, A. (2003). *An introduction to quality assurance in healthcare* (1st ed.). New York, NY: Oxford University Press.

Edwards, S. Bitton, A., Hong, J., & Landon, B. (2014). Patient-centered medical home initiatives expanded in 2009-13: Providers, patients, and payment incentives increased. *Health Affairs*, *33,* 1823-1831.

Ehrenberger, D. (2012). The business case for a patient centered medical home. Retrieved from http://www.familydocs.org/f/PMNSeptember2012.pdf

Gale, R., Asch, S., Taylor, T., Nelson, K. M., Luck, J., Meredith, L. S., & Helfrich, C. (2015). The most used and helpful facilitators for patient-centered medical home implementation. *Implementation Science*, 10(1), 1-11. http://dx.doi.org/http://dx.doi.org/10.1186/s13012-015-0246-9

Goldman, R., Brown, J., & Stebbins, P. (2018). What matters in patient-centered medical home transformation: Whole system evaluation outcomes of the Brown Primary Care transformation initiative. *SAGE Open Medicine, 6,* 1-15. https://doi.org/10.1177/2050312118781936

Hadland, S. E., & Long, W. E. (2014). A systematic review of the medical home for children without special health care needs. *Maternal and Child Health Journal*, *18*, 891-898. http://dx.doi.org/10.1007/s10995-013-1315-9"

Jackson, G. L., Powers, B. J., Chatterjee, R., Bettger, J. P., Kemper, A. R., Hasselbald, V., ... Williams, J. W. (2013). The patient-centered medical home. *Improving Patient Care*, *128*, 169-178. Retrieved from http://annals.org/aim/fullarticle/1402441/patient-centered-medical-home-systematic-review

Janamian, T., Jackson, C. L., Glasson, N., & Nicholson, C. (2014). A systematic review of the challenges to implementation of the patient-centered medical home: Lessons for Australia. *Medical Journal of Australia*, s69-s73. http://dx.doi.org/10.5694/mja14.00295

Kitson, A., Harvey, G., & McCormack, B. (1998). Enabling the implementation of evidence based practice: a conceptual framework. *Quality in Health Care*, *7*, 149-158. Retrieved from http://qualitysafety.bmj.com/content/qhc/7/3/149.full.pdf

Magill, M., Ehrenberger, D., Scammon, D., Day, J., Allen, T., Reall, A.,…Kim, J. (2015). The cost of sustaining a patient-centered medical home: Experience from 2 states. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4569450/
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4569450/

Medical Economics (2014). Access to primary care remains a challenge for 62 million

Americans. Retrieved from https://www.medicaleconomics.com/practice-management/access-primary-care-remains-challenge-62-million-americans

Modern Medicine Network (2015). PCMH accreditation: Is it worth it? Retrieved from http://www.medicaleconomics.com/health-law-policy/pcmh-accreditation-it-worth-it

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G. (2009). Preferred reporting items for systematic reviews and meta-analysis: The PRISMA Statement. *Public Library of Science Medicine*, *6*(7), 1-7.

Moran, K., Burson, R. & Conrad, D. (2017). *The doctor of nursing practice scholarly project: A framework for success (2nd Ed.).* Burlington MA: Jones & Bartlett.

National Committee for Quality Assurance (2019). PCMH congress. Retrieved from https//www.pcmhcongress.com/federally-qualified-health-centers

National Committee for Quality Assurance (2018). NCQA PCMH recognition: Concepts. Retrieved from https://www.ncqa.org/programs/health-care-providers-practices/patient-centered-medical-home-pcmh/pcmh-concepts/

National Committee for Quality Assurance (2018a). Resource directory of incentives for NCQA recognition. Retrieved from https://www.ncqa.org/wp-content/uploads/2018/08/20180826_PCMH_Resource_Directory_August2018.pdf

National Committee for Quality Assurance (n.d.). Overview of PCMH. Retrieved from http://www.ncqa.org/programs/recognition/practices/patient-centered-medical-home-pcmh/why-pcmh/overview-of-pcmh

National Committee for Quality Assurance (n.d.a). NCQA PCMH standards and guidelines (2017 edition). Retrieved from http://store.ncqa.org/index.php/catalog/product/view /id/2776/s/2017-pcmh-standards-and-guidelines-epub/

National Committee for Quality Assurance (n.d.b). About NCQA. Retrieved from https://www.ncqa.org/about-ncqa/

Nielsen, M., Buelt, L., Patel, K., & Nichols, L. (2016). The patient-centered medical home's impact on cost and quality. Retrieved from https://www.pcpcc.org/sites/default/files/resources/Executive%20Summary.pdf

Nielsen, M., Langner, B., Zema, C., Hacker, T., & Grundy, P. (2012). Benefits of implementing the primary care patient-centered medical home. Retrieved from https://www.pcpcc.org/sites/default/files/media/benefits_of_implementing_the_primary_care_pcmh.pdf

Office of the National Coordinator of Health Information Technology (2014). How much is this going to cost me? Retrieved from https://www.healthit.gov/faq/how-much-going-cost-me

Papanicolas, I., Woskie, L. R., & Jha, A. K. (2018). Health care spending in the United States and other high-income countries. *The Journal of the American Medical Association*, *319*, 1024-1039. http://dx.doi.org/10.1001/jama.2018.1150

Paustian, M. L., Alexander, J. A., El Reda, D. K., Wise, C. G., Green, L. A., & Fetters, M. D. (2014). Partial and incremental PCMH practice transformation: Implications for quality and costs. *Health Services Research*, *49*, 52-74. http://dx.doi.org/10.1111/1475-6773.12085

Philip, S., Govier, D., & Pantely, S. (2019). Patient-Centered Medical Home: Developing the business case analysis from a practice perspective. Retrieved from https://www.ncqa.org/wpcontent/uploads/2019/06/06142019_WhitePaper_Milliman_BusinessCasePCMH_Final.pdf?utm_source=sf&utm_medium=email&utm_campaign=milliman&utm_term=&utm_content=

Priority Health (2018). 2018 PCP Incentive Program An integrated program focused on patient-centered care. Retrieved from http://www.mclaren.org/Uploads/Public/Documents/MPHO/documents/HealthPlan/2018-pip-manual.pdf

Reid, R. J., Coleman, K., Johnson, E. A., Fishman, P. A., Hsu, C., Soman, M. P., ... Larson, E. B. (2010). The group health medical home at year two: Cost savings, higher patient satisfaction, and less burnout for providers. *Health Affairs*, *29*, 835-843. http://dx.doi.org/10.1377/hlthaff.2010.0158

Robert Wood Johnson Foundation (2013). Payment matters: The ROI for patient-centered medical home payment. Retrieved from http://pcpcc.org/resource/payment-matters-roi-patient-centered-medical-homepayment

Rosenthal, M. B., Aldina, S., Friedberg, M. W., Singer, S. J., Eastman, D., Li, Z., & Schneider, E. C. (2016a). A difference-in-difference analysis of changes in quality, utilization and cost following the Colorado Multi-payer patient-centered medical home pilot. *Journal of General Internal Medicine*, *31*, 289-296. http://dx.doi.org/10.1007/s11606-015-3521-1

Rosenthal, M. B., Aldina, S., Friedberg, M. W., Singer, S. J., Eastman, D., Li, Z., & Schneider, E. C. (2016b). Impact of the Cincinnati aligning forces for quality multi-payer patient centered medical home pilot on health care quality, utilization, and costs. *Medical Care Research and Review*, *73*, 532-545. http://dx.doi.org/10.117/1077558715618566

Rothenhaus, T. (2015). No more excuses for avoiding PCMH certification. Retrieved from https://www.athenahealth.com/blog/2015/08/10/no-more-excuses-for-avoiding-pcmh-certification

Rycroft-Malone, J. (2004). The PARIHS framework-A framework for guiding the implementation of evidence-based practice. *Journal of Nursing Care Quality, 19*, 297-304.

Sinaiko, A. D., Landrum, M. B., Meyers, D. J., Alidina, S., Maeng, D. D., Friedberg, M. W., Rosenthal, M. B. (2017). Synthesis of research on patient-centered medical homes brings systematic differences into relief. *Health Affairs*, *36*, 500-508. http://dx.doi.org/10.1377/hlthaff.2016.1235.

van den Berk-Clark, C., Doucette, E., Rottneck, F., Manard, W., Prada, M. A., Hughes, R., Schneider, F. D. (2018). Do patient-centered medical homes improve health behaviors, outcomes, and experiences of low-income patients? A systematic review and meta-analysis. *Health Research and Educational Trust*, *53*, 1777-1798. http://dx.doi.org/10.1111/1475-6773.12737

Willis, D. S. (2014). Working with the disabled patient: Exploring student nurses views for curriculum development using a swot analysis. Retrieved from http://www.sciencedirect.com.ezproxy.gvsu.edu/science/article/pii/S026069171400337

Xu, J. (2016). The patient-centered medical home and healthcare outcomes for older adults: A systematic review [Abstract]. *Gerontologist*, *56*, 405-406. http://dx.doi.org/10.1093/geront/gnw162.1623

Appendix A

NCQA's 2017 PCMH Concepts, Competencies, and Criteria

TEAM-BASED CARE AND PRACTICE ORGANIZATION (TC) -practice provides continuity of care, communicates roles and responsibilities of the medical home to patients/families/caregivers, and organizes and trains staff to work to the top of their license and provide effective team-based care
Competency A: The practice is committed to transforming the practice into a sustainable medical home. Members of the care team serve specific roles as defined by the practice's organizational structure and are equipped with the knowledge and training necessary to perform those functions.
• **TC1 (core) Designates a clinician lead of the medical home and a staff person to manage the PCMH transformation and medical home activities** • **TC2(core) Defines practice organizational structure and staff responsibilities/skills to support key PCMH functions** • **TC3*(1credit) The practice is involved in external PCMH-oriented collaborative activities** • **TC4*(2credits) Patients/families/caregivers are involved in the practice's governance structure or on stakeholder committees** • **TC5*(2credits) The practice uses an EHR system that has been certified and issued an ONC Certification ID, conducts a security risk analysis, and implements security updates as necessary correcting identified security deficiencies**
Competency B: Communication among staff is organized to ensure that patient care is coordinated, safe and effective.
• **TC6(core) Has regular patient care team meetings or a structured communication process focused on individual patient care** • **TC7(core) Involves care team staff in the practice's performance evaluation and quality improvement activities** • **TC8*(2 credits) Has at least one care manager qualified to identify and coordinate behavioral health needs**
Competency C: The practice communicates and engages patients on expectations and their role in the medical home model of care (no elective criteria)
• **TC9(core) Has a process for informing patients/families/caregivers about the role of the medical home and provides them with materials that contain the information such as after-hours access, practice scope of services, evidence-based care, education and self-management support.**

KNOWING AND MANAGING YOUR PATIENTS (KM) -the practice captures and analyzes information about the patients and community it serves and uses the information to deliver evidence-based care that supports population needs and provision of culturally and linguistically appropriate services
Competency A: Practice routinely collects comprehensive data on patients to understand background and health risk of patients. They use information on the population to implement needed interventions, tools, and supports for the practice as a whole and for specific individuals
• **KM1(core) Documents an UTD problem list for each patient with current and active diagnoses**

• KM2(core) Comprehensive health assessments includes (all items required): medical hx of patient/family, mental health/substance use hx of patient/family, family/social/cultural characteristics, communication needs, behaviors affecting health, social functioning, social determinants of health, developmental screening using a standardized tool, advanced care planning • KM3(core) Conducts depression screenings for adults and adolescents using a standardized tool • KM4(1 credit) Conducts behavioral health screenings and/or assessments using a standardized tool (implement two or more): anxiety, alcohol use disorder, substance use disorder, pediatric behavioral health screening, PTSD, ADHD, post-partum depression • KM5 (1 credit) Assesses oral health needs and provides necessary services during the care visit based on evidence-based guidelines or coordinates with oral health partners • KM6(1 credit) Identifies the predominant conditions and health concerns of the patient population • KM7(2credits) Understands social determinants of health for patients, monitors at the population level and implements care interventions based on these data • KM8(1 credit) Evaluates patient population demographics/communications preferences/health literacy to tailor development and distribution of patient materials
Competency B: The practice seeks to meet the needs of a diverse patient population by understanding the population's unique characteristics and language needs. The practice uses the information to ensure linguistic and other patient needs are met.
• KM9(core) Assesses the diversity of its population • KM10(core) Assess the language needs of its population • KM11(1 credit) Identifies and addresses population-level needs based on the diversity of the practice and the community (at least two): target population health management on disparities in care, address health literacy of practice, educate practice staff in cultural competence
Competency C: The practice proactively addresses the care needs of the patient population
• KM12(core) Proactively and routinely identifies populations of patients and reminds them, or their families about needed services (at least three): preventive care services, immunizations, chronic/acute care services, patients not recently seen by the practice • KM13(2 credits) Demonstrates excellence in a benchmarked/performance-based recognition program assessed using evidence-based care guidelines
Competency D: The practice addresses medication safety and adherence by providing information to the patient and establishing processes for the medication documentation, reconciliation and assessment of barriers.
• KM14(core) Reviews and reconciles medications for more than 80% of patients received from care transitions • KM15(core) Maintains an UTD list of medications for more than 80% of the patients • KM16(1 credit) Assesses understanding and provides education on new prescriptions for more than 50% of patients/families, as needed • KM17(1 credit) Assess and addresses patient response to medications and barriers to adherence for more than 50% of patients, and dates the assessments • KM18(1 credit) Reviews controlled substance database when prescribing relevant medications • KM19(2 credits) Systematically obtains prescription claims data in order to assess and address medication adherence

Competency E: The practice incorporates evidence-based clinical decision support across a variety of conditions to ensure effective and efficient care is provided to patients (no elective criteria)

- **KM20(core) Implements clinical decision support following evidence-based guidelines for care of (at least four): mental health condition, substance use disorder, a chronic condition, an acute condition, a condition related to unhealthy behaviors, well child or adult care, overuse/appropriateness issues**

Competency F: The practice identifies/considers and establishes connections to community resources to collaborate and direct patients to needed support

- **KM21(core) Uses information on the population served by the practice to prioritize needed community resources**
- **KM22 (1 credit) Provides access to educational resources, such as materials, peer-support sessions, group classes, online self-management tools or programs**
- **KM23(1 credit) Provides oral health education resources to patients**
- **KM24(1 credit) Adopts shared decision-making aids for preference-sensitive conditions**
- **KM25(1 credit) Engages with schools or intervention agencies in the community**
- **KM 26(1 credit) Routinely maintains a current community resource list based on the needs identified in Core KM 21**
- **KM27(1 credit) Assesses usefulness of identified community support resources**
- **KM28(2 credits) has regular "case conferences" involving parties outside the practice team**

PATIENT CENTERED ACCESS AND CONTINUITY (AC)

-PCMH model expects continuity of care. Patients/families/caregivers have 24/7 access to clinical advice and appropriate care facilitated by their designated clinician/care team and supported by access to their medical record. The practice considers the needs and preferences of the patient population when establishing and updating standards for access

Competency A: The practice seeks to enhance access by providing appointments and clinical advice based on patients' needs

- **AC1(core) Assesses the access needs and preferences of the population**
- **AC2(core) Provides same0day appointments for routine and urgent care to meet identified patients' needs**
- **AC3(core) Provides routine and urgent appointments outside regular business hours to meet identified patients' needs**
- **AC4(core) provides timely clinical advice by telephone**
- **AC5(core) Documents clinical advice in patient records and confirms clinical advice and care provided after-hours does not conflict with patient medical record**
- **AC6(1 credit) Provides scheduled routine or urgent appointments by telephone or other technology supported mechanisms**
- **AC7(1 credit) Has a secure electronic system for patients to request appointments, prescription refills, referrals and test results**
- **AC8(1 credit) Has a secure electronic system for two-way communication to provide timely clinical advice**
- **AC9(1 credit) Uses information on the population served by the practice to assess equity of access that considers health disparities**

Competency B: Practices support continuity through empanelment and systematic access to the patient's medical record
• **AC10(core) Helps patients/families/caregivers select or change a personal clinician** • **AC11(core) Sets goals and monitors the percentage of patient visits with selected clinician or team** • **AC12(2 credits) Provides continuity of medical record information for care and advice when the office is closed** • **AC13*(1 credit) Reviews and actively manages panel sizes** • **AC14*(1 credit) Reviews and reconciles panel based on health plan or other outside patient assignments**

CARE MANAGEMENT AND SUPPORT (CM) -the practice identifies patient needs at the individual and population levels to effectively plan, manage and coordinate patient care in partnership with patients/families/caregivers. Emphasis is placed on supporting patients at higher risk
Competency A: The practice systematically identifies patients that would benefit most from care management
• **CM1(core) Considers the following in establishing a systematic process and criteria for identifying patients who many benefit from care management (practice must include at least three): behavioral health conditions, high cost/utilization, poorly controlled or complex conditions, social determinants of health, referrals by outside organizations** • **CM2(core) Monitors the percentage of total patient population identified through its process and criteria** • **CM3*(2 credits) Applies a comprehensive risk-stratification process to entire patient panel in order to identify and direct resources appropriately**
Competency B: For patients identified for care management, the practice consistently uses patient information and collaborates with patients/families/caregivers to develop care plans that address barriers and incorporates patient preferences and lifestyle goals documented in the patients chart. Demonstration of such may be through reports, file review, or live demonstration of case examples.
• **CM4(core) Establishes a person-centered care plan for patients identified for care management** • **CM5(core) Provides written care plan to the patient/family/caregiver for patient's identified for care management** • **CM6(1 credit) Documents patient preference and functional/lifestyle goals in individual care plans** • **CM7(1 credit) Identifies and discusses potential barriers to meeting goals in individual care plans** • **CM8(1 credit) Includes a self-management plan in individual care plans** • **CM9*(1 credit) Care plan Is integrated and accessible across settings of care**

CARE COORDINATION AND CARE TRANSITIONS (CC) -the practice systematically tracks tests, referrals and care transitions to achieve high quality care coordination, lower costs, improve patient safety and ensure effective communication with specialists and other providers in the medical neighborhood
Competency A: the practice effectively tracks and manages laboratory and imaging tests important for patient care and informs patient of the results
• **CC1(core) The practice systematically manages lab and imaging tests by: tracking lab tests until results are available and flagging overdue results, tracking imaging tests until results are available and flagging/following up on overdue results, flagging abnormal results bringing them to the attention of the clinician, flagging abnormal imaging results bringing them to the result of the clinician, and notifying patients/families/caregivers of normal & abnormal lab & imaging results** • **CC2(1 credit) Follows up with the inpatient facility about newborn hearing and newborn blood-spot screening (NA for practices that do not care for newborns)** • **CC3(2 credits) Uses clinical protocols to determine when imaging and lab tests are necessary**
Competency B: The practice provides important information in referrals to specialists and tracks referrals until the report is received
• **CC4(core) the practice systematically manages referrals by: giving the consultant the clinical question, the required timing and type of referral, giving consultant pertinent demographic and clinical data, including test results and the current care plan; and tracking referrals until the consultant or specialists reports is available, flagging and following up on overdue reports** • **CC5*(2 credits) Uses clinical protocols to determine when a referral to a specialist is necessary** • **CC6*(1 credit) Identifies the specialist/specialty types most commonly used by the practice** • **CC7*(2 credits) Considers available performance information on consultants/specialists when making referral recommendations** • **CC8*(1 credit) Works with non-behavioral healthcare specialists to whom the practice frequently refers to set expectations for information sharing and patient care** • **CC9*(2 credits) Works with behavioral healthcare providers to whom the practice frequently refers to set expectations for information sharing and patient care** • **CC10*(2 credits) Integrates behavioral healthcare providers into the care delivery system of the practice site** • **CC11*(1 credit) Monitors the timeliness and quality of the referral response** • **CC12*(1 credit) Documents co-management arrangements in the patient's medical record** • **CC13*(2 credits) Engages with patients regarding cost implications of treatment options**
Competency C: The practice connects with other health care facilities to support patient safety throughout care transitions. The practice receives and shares necessary patient treatment information to coordinate comprehensive patient care.
• **CC14(core) Systematically identifies patients with unplanned hospital admissions and emergency department visits** • **CC15(core) Shares clinical information with admitting hospitals and emergency departments** • **CC16(core) Contacts patients/families/caregivers for follow-up care, if needed, within an appropriate period following a hospital admission or emergency department visit**

- **CC17*(1 credit) Systematic ability to coordinate with acute care settings after hours through access to current patient information**
- **CC18*(1 credit) Exchanges patient information with the hospital during a patient's hospitalization**
- **CC19*(1 credit) Implements process to consistently obtain patient discharge summaries from the hospital and other facilities**
- **CC20*(1 credit) Collaborates with the patient/family/caregiver to develop/implement a written care plan for complex patients transferring in to/out of the practice**
- **CC21*(Max 3 credits) Demonstrates electronic exchange of information with external entities, agencies and registries (may select one or more): regional health information organization (RHIO) or other HIE source that enhances ability to manage complex patients, immunization registries, summary of care record to other providers or facilities for care transitions**

PERFORMANCE MEASUREMENT AND QUALITY IMPROVEMENT (QI)

-The practice establishes a culture of data-driven performance improvement on clinical quality efficiency and patient experience and engages the staff and patients/families/caregivers in the quality improvement activities

Competency A: The practice measures to understand current performance and to identify opportunities for improvement

- **QI1(core) Monitors at least five clinical quality measures across the four categories (must monitor at least one measure of each type): immunizations, other preventive care measures, chronic/acute care clinical measures, behavioral health measures**
- **QI2(core) Monitors at least two measures of resource stewardship (must monitor at least 1 measure of each type): measures related to care coordination, measures affecting health care costs**
- **QI3(core) Assesses performance on availability of major appointment types to meet patient needs and preferences for access**
- **QI4(core) Monitors patient experience through: Quantitative data;, the practice conducts a survey with any instrument to evaluate patient/family/caregiver experiences across three dimensions (such as access, communication, coordination, whole person care) and Qualitative data; the practice obtains feedback from patients/families/caregivers through qualitative means**
- **QI5*(1 credit) Assesses health disparities using performance data stratified for vulnerable populations (must choose from each section of clinical quality and patient experience)**
- **QI6*(1 credit) The practice uses a standardized, validated patient experience survey tool with benchmarking data available.**
- **QI7*(2 credit) The practice obtains feedback on experiences of vulnerable populations**

Competency B: The practice evaluates its performance against goals or benchmarks and uses the results to prioritize and implement improvement strategies

- **QI8(core) Sets goals and acts to improve upon at least three measures across at least three of the four categories: immunizations, other preventive care measures, chronic/acute care clinical measures, and behavioral health measures**
- **QI9(core) Sets goals and acts to improve upon at least one measure of resource stewardship: measures related to care coordination, measures affecting health care costs**

• **QI10(core) Sets goals and acts to improve on availability of major appointment types to meet patient needs and preferences** • **QI11(core) Sets goals and acts to improve on at least one patient experience measure** • **QI12*(2 credits) Achieves improved performance on at least 2 performance measures** • **QI13*(1credit) Sets goals and acts to improve disparities in care or service on at least one measure** • **QI14*(2 credits) Achieves improved performance on at least one measure of disparities in care or service**
Competency C: The practice is accountable for performance. The practice shares performance data with the practice, patients and/or publicly for the measures and patient populations identified in the previous section.
• **QI15(core) Reports practice-level or individual clinician performance results within the practice for measures reported by the practice** • **QI16(1 credit) Reports practice-level or individual clinician performance results publicly or with patients for measures reported by the practice** • **QI17*(2 credit) Involves patient/family/caregiver in quality improvement activities** • **QI18*(2 credit) Reports clinical quality measures to Medicare or Medicaid agency** • **QI19*(Mex 2 credits) The practice is engaged in Value-Based Contract Agreement (Maximum 2 credits): Practice engages in up-side risk contract (1 credit) and practice engages in two-sided risk contract (2 credits)**

Note. From the National Committee for Quality Assurance, 2018. Copyrighted 2018 by the National Committee of Quality Assurance

Appendix B

Funding Sources for the Urban Clinic

Appendix C

PRISMA Flow Diagram

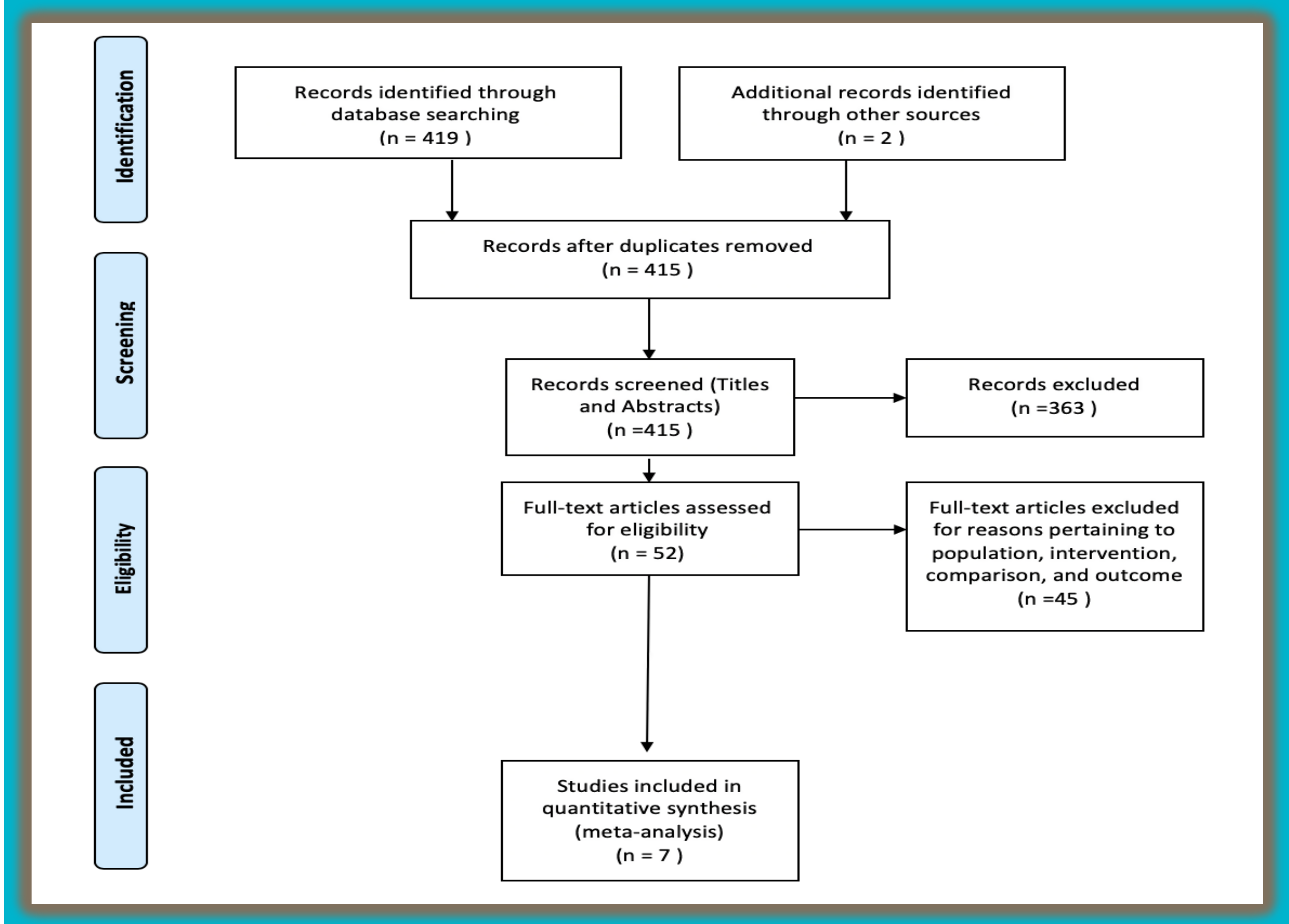


Figure 1. Flow diagram of search selection process. Adapted from “Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement” by D. Moher, A. Liberati, J. Tetzlaff, D. Altman, and PRISMA Group. Copyright 2009 by PLoS

Appendix D

Literature Review Study Characteristics

- **Study Types**
    - Observational (cross sectional, longitudinal, descriptive), random control trials, exploratory studies, experimental, and quasi-experimental
        - Jackson et al., 2013; Hadland & Long, 2014; Janamian, Jackson, Glasson & Nicholson, 2014; Annis, Harris, Robinson & Krein, 2016; Xu, 2016; Sinaiko et al., 2017; van den Berk-Clark et al., 2018.
- **Study Characteristics**
    - Geography:
        - United States (Jackson et al., 2013; Hadland & Long, 2014; Janamian, Jackson, Glasson, & Nicholson, 2014; Annis, Harris, Robinson & Krein, 2016; Xu, 2016; Sinaiko et al., 2017; van den Berk-Clark et al., 2018).
            - The Janamian et al. article addressed the applicability of the PCMH in Australia based entirely on studies conducted in the United States.
    - Setting:
        - All studies involved primary care.
    - Population:
        - Adult (Annis, Harris, Robinson & Krein, 2016; Xu, 2016; van den Berk-Clark et al., 2018).
        - Pediatric (Hadland & Long, 2014).
        - Adult AND Pediatric (Jackson et al., 2013; Janamian et al., 2014; Sinaiko et al., 2017).
    - Topics:
        - PCMH outcomes (Hadland & Long, 2014; Annis, Harris, Robinson & Krein, 2016; Xu, 2016; Sinaiko et al., 2017; van den Berk-Clark et al., 2018).
        - PCMH implementation (Janamian et al., 2014).
        - PCMH outcomes and implementation processes (Jackson et al., 2013).

Appendix E

Literature Review Article Desriptions

Author (year) Purpose	Type	#(type of studies)	Intervention Components	Measure(s)	Results	Conclusions
Annis et al., 2016 sought to answer two questions: to what extent do PCMH measures encompass associate care provider (ACP) delivered care and to determine links between ACP care and PCMH outcomes.	Systematic Review	-42 Studies with quantitative and qualitative measures were included. -More than half (n=23) were cross-sectional designs.	-Assessment of access and/or care coordination from patient (n=19), practice (n=17) and provider (n=13) perspective	-Access measures -Care Coordination (collaboration, teamwork, continuity of care, disease/case/care management)	-Less than half (n=18) report outcomes in assessment of access and care coordination -A small number (n=8) described aspects of ACP care in relation to outcomes (guiding question 2). -Many evaluation methods of ACP-delivered care and outcomes were specific to only physicians or PCPs & they provided little information on ACP contribution.	-Team and provider roles need to be better defined in relation to access/coordinatio n measures -PCMH measures need to reframe measures within a team context. -There is insufficient evidence linking ACP care to PCMH outcomes.
Jackson et al., 2013 sought to describe PCMH implementatio n approaches and to summarize evidence including clinical and economic outcomes.	Systematic Review	-31 RCT or observation al studies identified in 55 total articles (n=19 studies of effectivenes s, n=31 studies to describe PCMH)	-Interventions must be PCMH defined and include >2 of: enhanced access to care, care coordination, comprehensiveness, and a systems-based approach -Interventions must be delivered to populations representing multiple diseases -Be conducted	-Quality of patient and staff experiences with care -Quality of care based on care provision and health outcomes -The economic effect of PCMH interventions	-Studies largely involved comprehensive changes in care delivery. -23 of the studies had interventions that involved all 7 major PCMH components. -There were 51 overall strategies/approaches. -Estimated effect of PCMH interventions on patient & staff experiences,	-The medical home has a positive effect on patient experiences and preventive services. -There is Insufficient evidence to determine outcomes -More studies need to be done outside of the older adult/multiple chronic condition

			among adult or child primary care patients -Have at least a 6-month follow-up		preventive services processes, chronic illness care processes, and clinical & economic outcomes varied and there were numerous reported findings	population
Janamian et al., 2014 sought to review literature to pinpoint challenges and barriers to PCMH implementatio n	Systematic Review	-28 total studies: Exploratory Studies (n=9) Descriptive Studies (n=13) Exper/Quasi Experiment al Studies (6)	-Must have a clear theoretical framework -Must have clearly defined objectives -Interventions must relate to the PCPCC Joint Principles of the PCMH and include: patient-centeredness, comprehensive, coordinated, accessible, and quality commitment	-Data extraction forms used to extract data to determine individual findings of challenges/barriers to PCMH implementation among studies -This process resulted in development of various layers of themes from which key themes were generated. The themes were created to best represent the data	Of the 28 articles there were exploratory studies (n=9), descriptive studies (n=13), and experimental/quasi-experimental (n=13) studies. All studies met 5 or more of the 10 quality criteria and 9 studies met all 10 criteria. The review resulted in identification of 6 overlapping barriers to PCMH implementation.	-Challenges overlapped among the studies and included: transformation & change management, EHR difficulties, funding and payment model challenges, insufficient practice resource and infrastructure, and inadequate measures of performance and inconsistent accreditation and standards. -The nature of qualitative studies such as those included in this systematic review, are complicated by reporting styles and problematic data

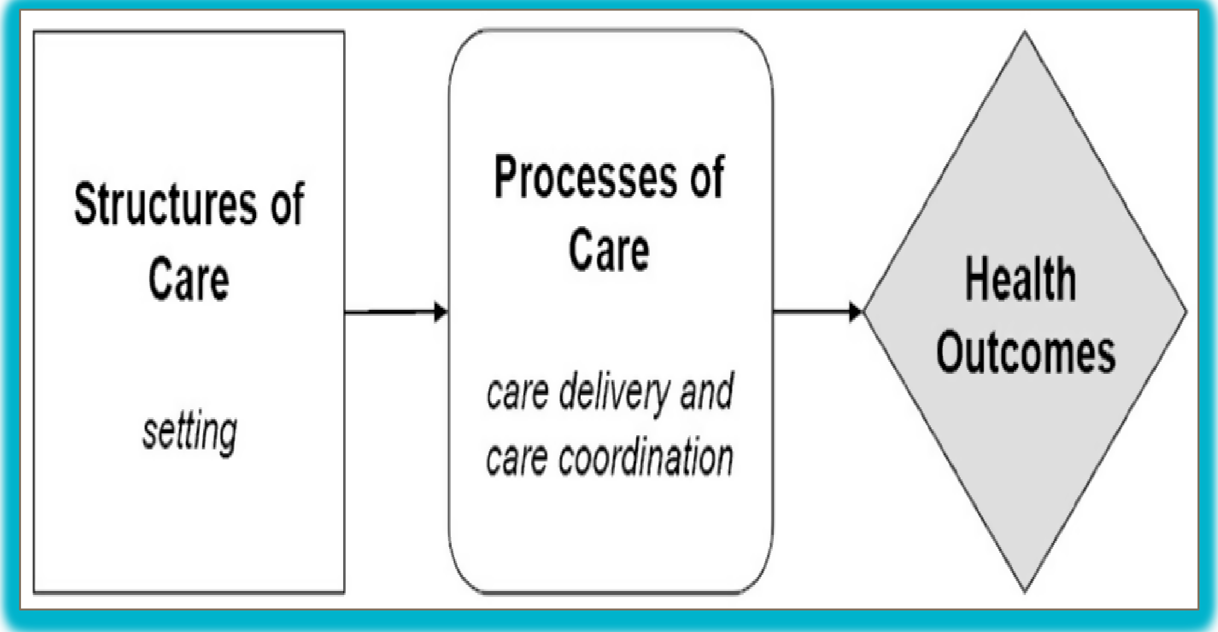
the PCMH impact on use, cost and quality			have met PCMH criteria from NCQA or similar criteria and if they included new payments, investment of resources into the PCMH initiative for time and other resources needed for PCMH adoption -Methodologically standardized findings from 11 major PCMH initiatives		-4.2% reduction in spending excluding pharmaceutical expenditures -1.4% increase in breast cancer screening -PCMH initiatives yielded a 4.2% reduction in health care cost from baseline (428,000 per 1,000 patients-months; p=0.05) -PCMH programs had a 1.2 increase in recommended cervical cancer screening (p<0.001) -PCMH organizations had 1.5% reduction in specialty visits (p<0.001) -A variety of statistical data is available for review with changes in most of the studied outcomes	-More evidence is needed to show how to integrate practices into larger health systems -PCMH evaluations vary significantly which leads to inconsistency with assessing data

						synthesis
Xu, 2016. Sought to determine to what extent the PCMH can improve health outcomes for older adults	Systematic Review	-Peer-reviewed empirical studies (n=31)	-PCMH interventions	-Degree and number of healthcare outcomes affected by PCMH implementation	-Older adults receiving care from a PCMH had fewer ED visits, less inpatient admissions and fewer avoidable admissions to the hospital -The reduction of acute/expensive utilization of healthcare led to cost savings on multiple levels	-The PCMH has the potential to improve health outcomes for older adults -The strength of the length between PCMH and adult health outcomes needs to be studied further
Hadland & Long, 2014 conducted a systematic review of existing evidence associated medical homes with beneficial health outcomes in children	Systematic Review	-Peer reviewed prospective (n=2) and cross-sectional (n=7) studies involving healthy children conducted in the US -Studies must have examined the medical home as a variable to at least one	-PCMH interventions	-Studies had a wide variety of evaluated measures: immunization status up to date (IUTD), use of the ED, avoidable hospitalizations, receipt of appropriate preventative care, unmet medical needs, receiving appropriate anticipatory guidance, developmental healthcare concerns solicited from parents, and	-There was a wide variety of evaluated measures with numerous statistical data reported -Positive association among healthy children between medical home and beneficial outcomes -The operationalization of the medical home employed by the studies was too heterogeneous to conduct meta-analysis	-Evidence to show a positive correlation between child well-being and the medical home -Data is limited and more work is necessary to determine the cost-effectiveness of the PCMH -Authors recommend future studies to employ experimental designs in the future

		measureable outcome		pediatric health-related quality of life		
van den Berk-Clark et al., 2018 aimed to determine what elements of the PCMH are provided to low-income individuals and whether or not PCMHs improve behaviors, experiences and outcomes for the low-income	Systematic Review and Meta-Analysis	-33 peer reviewed articles were included (10 RCT, 9 case/control, 9 longitudinal, 5 cross-sectional)	-For objective one, Four PCMH components: team-based care, care coordination, enhanced access to care and QI evaluations plus EMRs and self-management interventions -For objective two, PCMH interventions related to alcohol use reduction, A1C, Total cholesterol, LDL cholesterol, BP, HTN, DM, quality of life, mental health. Additionally, ER use, follow up adherence, prevention/screening tools, treatment and overall cost.	-The included studies had a variety of measures that included assessment of A1C, LDL cholesterol, health care utilization, inpatient hospitalizations, increased use of primary care, follow up and adherence, increased use of preventative services (such as mammograms, pap smears, flu shots, sigmoidoscopy), diabetes education and visiting a dietician. -Improved patient and provider satisfaction -Improved care quality	-Patients with PCMH intervention had: Positive effect from interventions (d=0.247) Better clinical outcomes (d=0.395) Higher adherence (d=0.392) Lower utilization of -emergency rooms (d=0.248)	-The PCMH model can increase health outcomes in low-income populations -More studies need to be done to test PCMH interventions on low-income populations -Intervention fidelity was not able to be tested in this because of the variety of different interventions available and implemented -More studies need to be done to assess for PCMH intervention effectiveness on low-income individuals with mental illness
Sinaiko et al., 2017 sought to obtain more accurate estimates of	Meta-Analysis	-17 peer-reviewed studies	-NCQA PCMH interventions -Interventions must	-To determine the impact of 7 major PCMH initiative interventions	-1.5% reduction in specialty visits -1.2% increase in cervical cancer screening	-PCMH components that result in the most success, need to be identified

Appendix F

The Donabedian Model, Permission for Use, and Application



Donabedian, A. (1988). The quality of care how can it be assessed? *Journal of the American Medical Association*, doi:10.1001/jama.1988.03410120089033

Request for Use of the Donabedian Model

1/11/2019 RightsLink Printable License

AMERICAN MEDICAL ASSOCIATION LICENSE
TERMS AND CONDITIONS

Jan 11, 2019

This Agreement between Grand Valley State University -- Jamie Lamers ("You") and American Medical Association ("American Medical Association") consists of your license details and the terms and conditions provided by American Medical Association and Copyright Clearance Center.

All payments must be made in full to CCC. For payment instructions, please see information listed at the bottom of this form.

License Number	4505850222412
License date	Jan 11, 2019
Licensed Content Publisher	American Medical Association
Licensed Content Publication	JAMA
Licensed Content Title	The Quality of Care: How Can It Be Assessed?
Licensed Content Author	Donabedian, Avedis
Licensed Content Date	Sep 23, 1988
Licensed Content Volume	260
Licensed Content Issue	12
Volume number	260
Issue number	12
Type of Use	Dissertation/Thesis
Requestor type	student
Reusing this material for promotional purposes	no
Format	print
Portion	figures/tables/images
Number of figures/tables/images	1
List of figures/tables/images	Donabedian's SPO Model
Will you be translating?	no
Circulation/distribution	1
Distributing to	North America
Order reference number	
Title of your thesis / dissertation	Development of a Process for Adoption and Attainment of PCMH Requirements for Recognition for an Urban Primary Care Clinic
Expected completion date	May 2019
Requestor Location	Grand Valley State University 3446 Nobb Hill Drive HUDSONVILLE, MI 49426 United States Attn: Grand Valley State University

https://s100.copyright.com/CustomerAdmin/PLF.jsp?ref=c0b1415e-7d7a-44e1-994a-0bb129e0c3d1 1/4

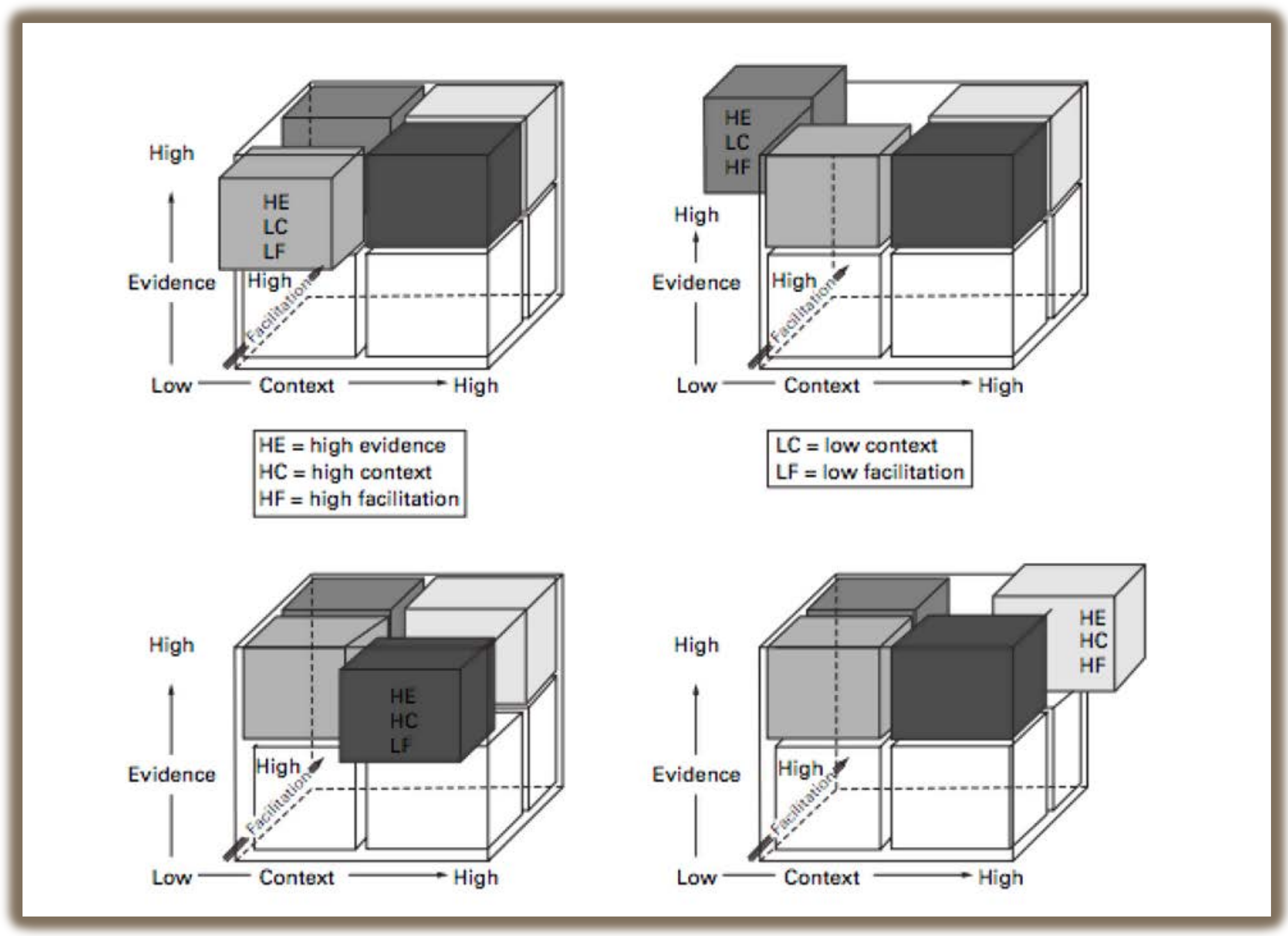
Application of Donabedian Concepts

Deliverable	Structure -Attributes of the setting in which the care occurs	Process -What will be done during the project process	Outcomes -What are the outcomes
PCMH Gap Analysis	-The urban clinic has the human resources necessary to assist with completion -Work climate supportive of completion -Existing Quality Improvement Program that will support completion -Existing physical resources needed for completion -Existing Electronic Health Record supporting PCMH needs to aid in completion	-NCQA's PCMH criteria will be used to guide gap analysis -Multiple meetings with stakeholders will be conducted to support development and completion -An NCQA PCMH gap analysis will be conducted to identify state of readiness -Gap analysis will be presented to key stakeholders at an education session	-The PCMH gap analysis will allow improved understanding of readiness for a PCMH recognition process
NCQA's PCMH Concept One Core Criteria (Appendix A)	-The urban clinic has the human resources necessary to assist with completion -Work climate to support completion -Existing physical resources needed to conduct completion	-NCQA's PCMH criteria will be used to guide completion -Multiple meetings with key stakeholders will be conducted to support development and completion of each core criteria -The deliverables meeting NCQA's evidence for completion will be presented to key stakeholders at an educational session	-Completion of the core criteria of concept one will enhance readiness for PCMH recognition
PCMH Roadmap	-The urban clinic has the human resources necessary to assist with completion -Work climate supportive of completion -Existing physical resources needed for completion	-NCQA's PCMH recognition criteria will guide roadmap development -Gap analysis findings will guide a PCMH roadmap development -Multiple meetings with key stakeholders will be conducted to support	-An individualized PCMH roadmap for the urban clinic will guide PCMH recognition -A PCMH roadmap will enhance readiness -A PCMH roadmap will support sustainability

		development and completion -The roadmap will be presented to key stakeholders at education session	
PCMH Education	-The urban clinic has the human resources necessary to assist with completion -Work climate supportive of completion -Structure and physical resources to support Facilitator needs for conducting project and conducting education session	-NCQA's PCMH recognition criteria will be used to guide education -Findings of the gap analysis and developed roadmap will guide education -Multiple meetings with key stakeholders will be conducted to support development and completion -Educational session will be presented to key stakeholders outlining the recognition process, gap analysis, and roadmap	-Understanding of PCMH framework and recognition process -Understanding of state of readiness for a recognition process
Budget	-The urban clinic has the human resources necessary to assist with completion -Work climate supportive of completion -Structure and physical resources to support completion	-Search for existing proposed budgets for PCMH intervention implementation -Meetings with stakeholders will be conducted to obtain salary data and relevant financial data -Development of a budget with estimated costs of human and physical resources necessary for successful adoption of PCMH requirements -The final budget will be presented to Executive Leadership on July 1st, 2019	-Development of a budget for review and determination of the prioritization of the allocation of financial resources for adoption of PCMH recognition requirements

Appendix G

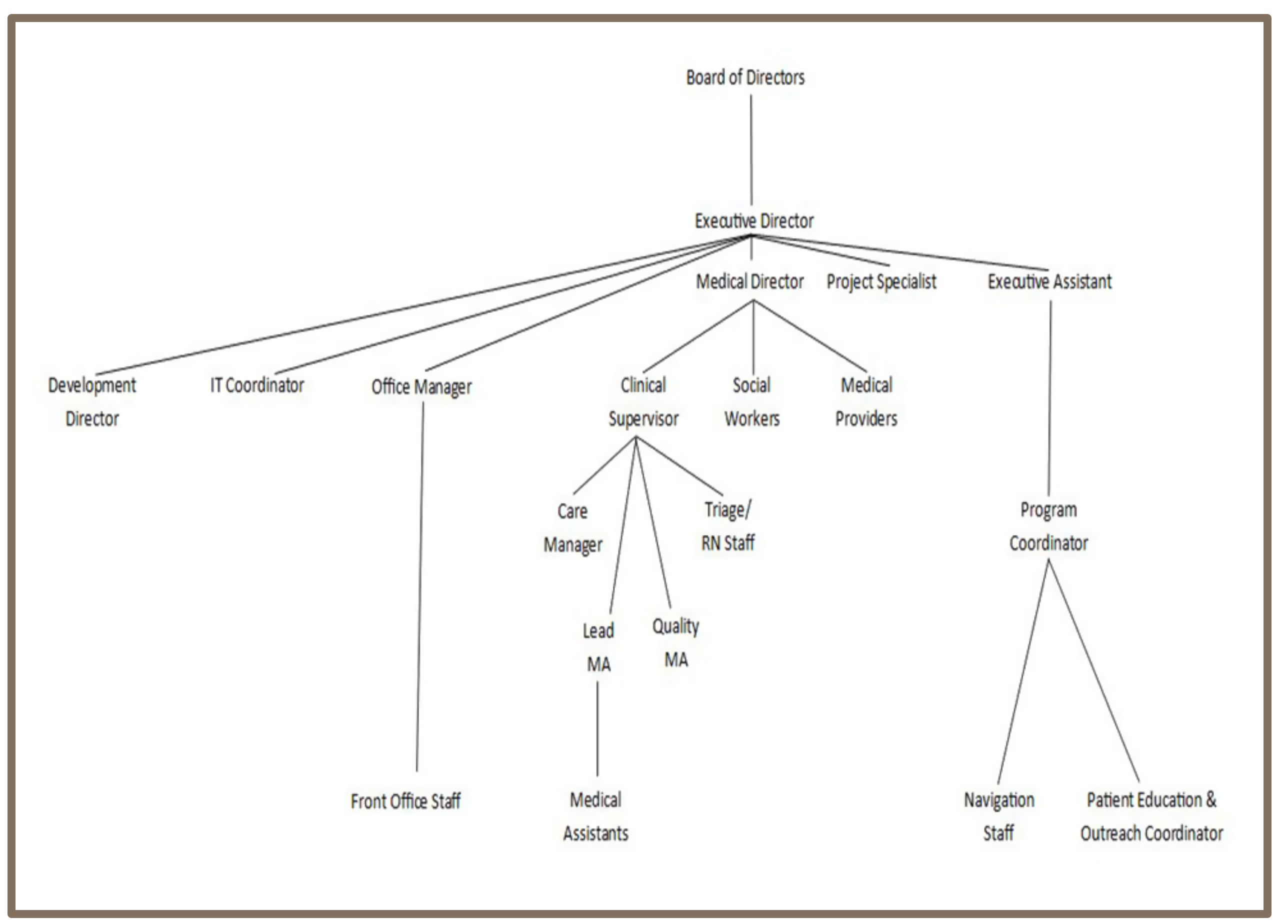
The PARiHS Framework



The PARiHS Framework. Reprinted from “Enabling the implementation of evidence based practice: a conceptual framework,” by A. Kitson, G. Harvey, & B. McCormack, 1998, *Quality in Health Care: QHC*, 7, p. 149-158. Copyright 1998 by Quality in Health Care.

Appendix H

The Urban Clinic's Organizational Structure



Appendix I

Stakeholders Vital to PCMH Transformation

- Executive Director
    - Development Director
    - Information Technology Coordinator
    - Office Manager
        - Office/Clerical staff
    - Medical Director (Medical Doctor)
        - Clinical Providers
            - Medical Doctor x1
            - Nurse Practitioners x2
            - Social Worker x1
        - Clinical Supervisor/Lead Registered Nurse
            - Care Manager RN
            - Staff RN
            - Lead Medical Assistant
                - Medical Assistants
            - Quality Medical Assistant
    - Project Specialist
    - Executive Assistant
        - Program Coordinator
        - Patient Education and Outreach Coordinator

Appendix J

Burke-Litwin Model of Organizational Performance and Change

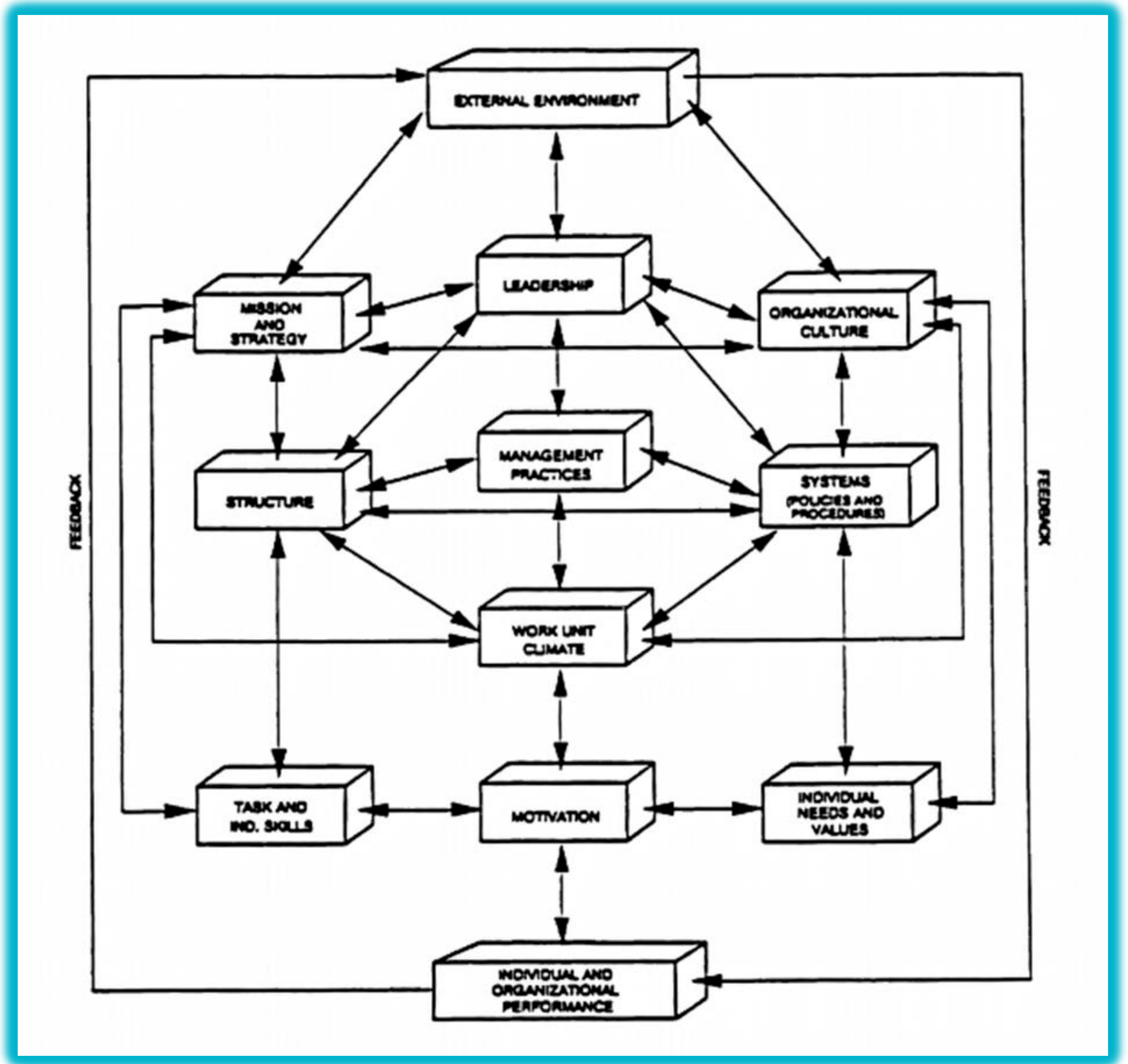
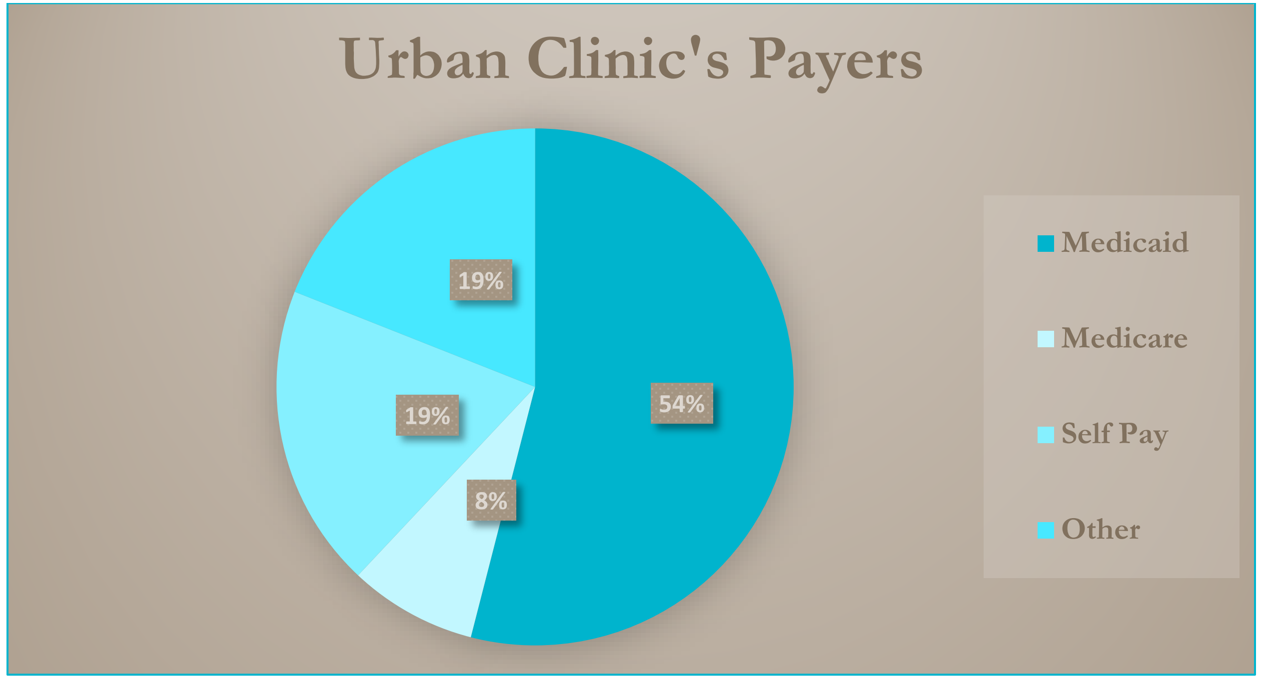
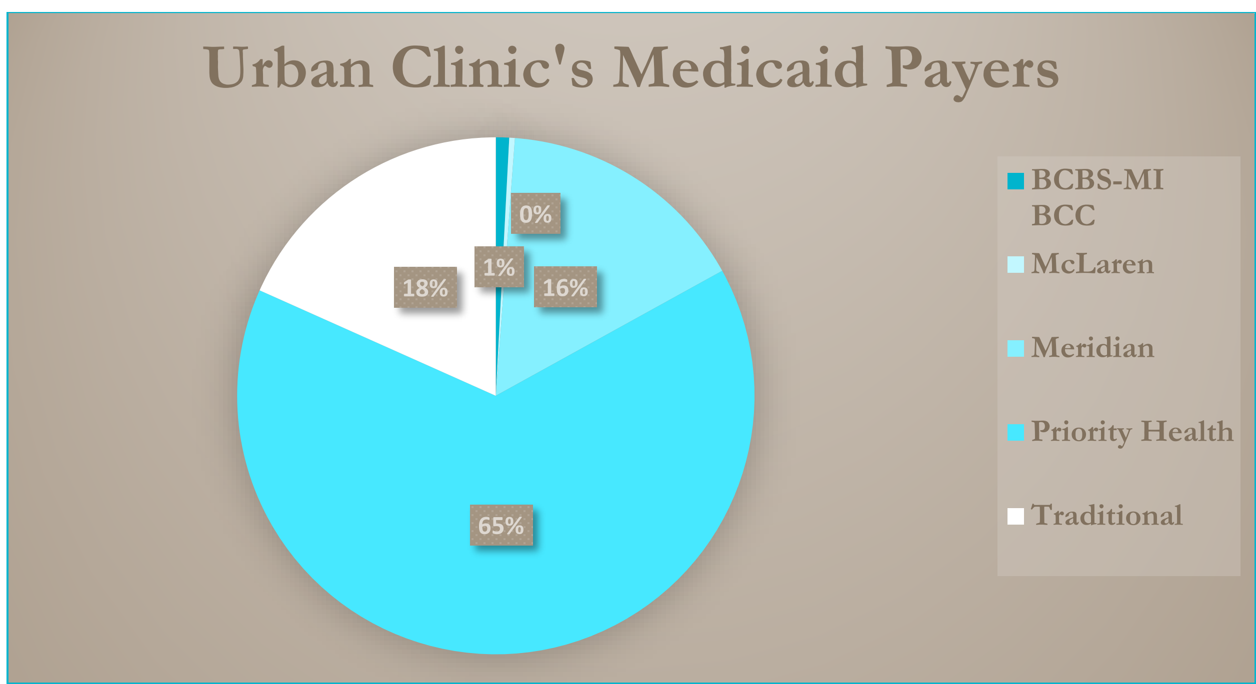


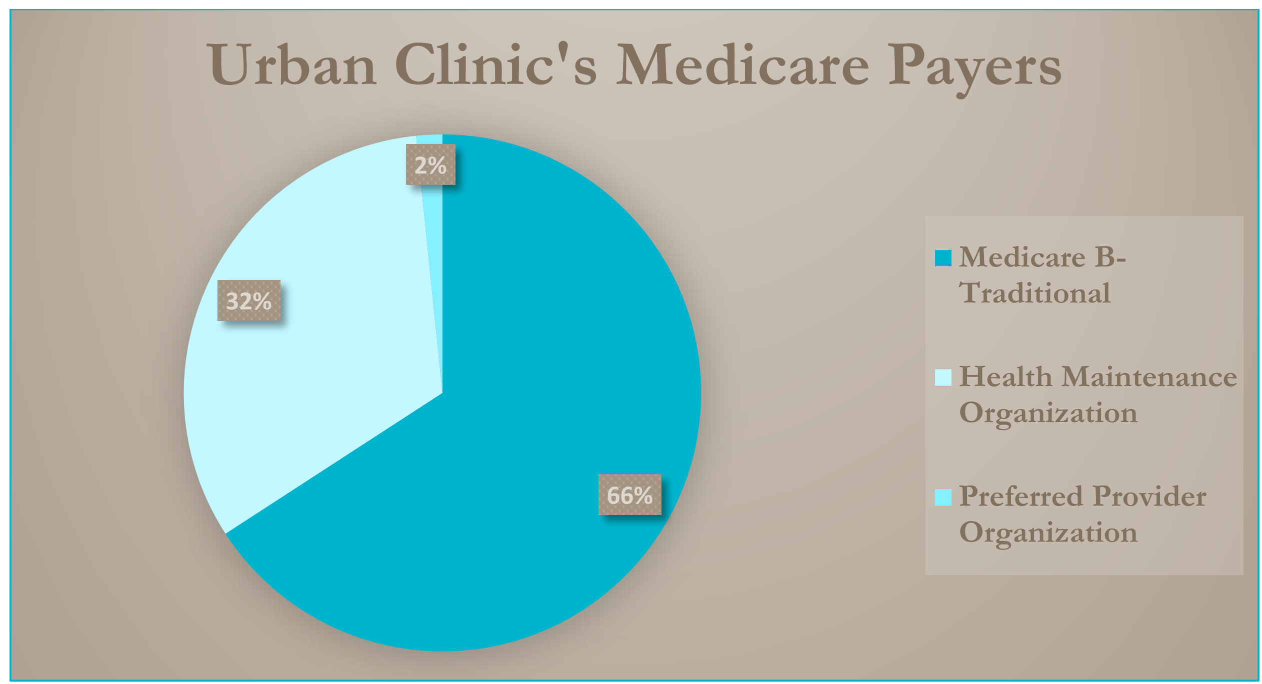
Figure 1. Burke-Litwin Model of Organizational Performance and Change. Reprinted from “A Causal Model of Organizational Performance and Change” by W.W. Burke and G.H. Litwin, 1992, *Journal of Management, 18*, 528. Copyright 1992 by Southern Management Association

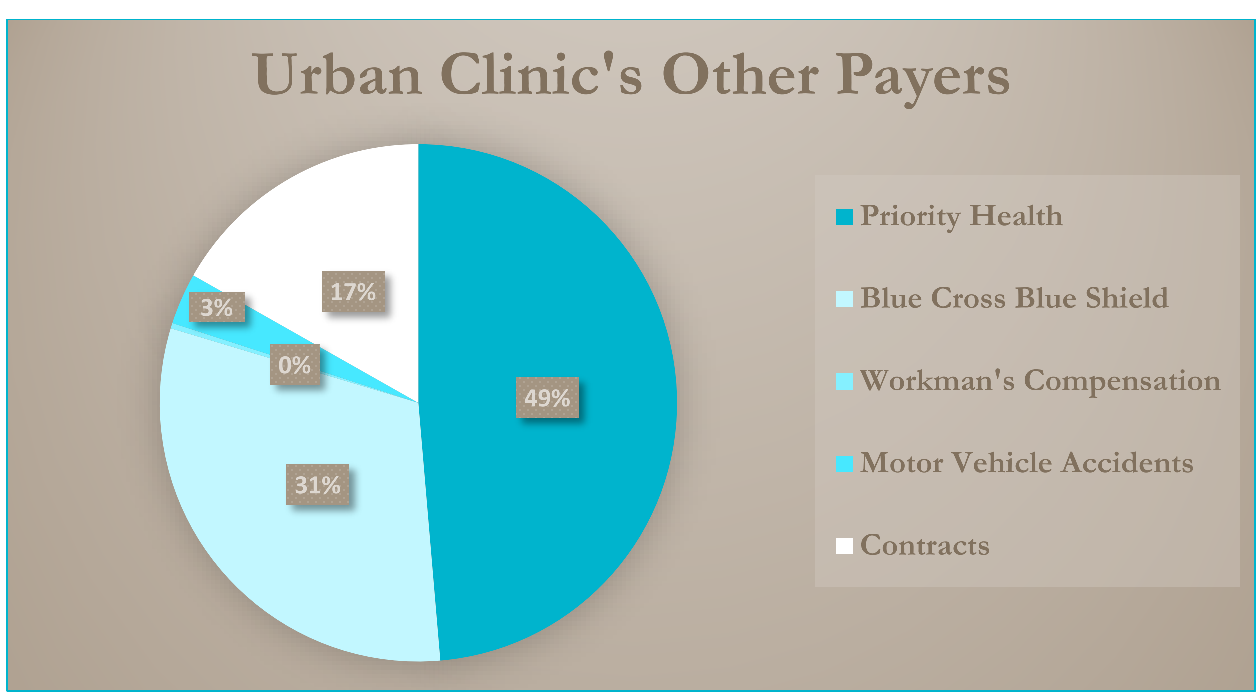
Appendix K

The Urban Clinic’s Payer Percentages






Urban Clinic's Medicare Payers
2%
32%
66%
Medicare B-Traditional
Health Maintenance Organization
Preferred Provider Organization


Urban Clinic's Other Payers
3%
17%
0%
49%
31%
Priority Health
Blue Cross Blue Shield
Workman's Compensation
Motor Vehicle Accidents
Contracts

Appendix L

Strengths, Weaknesses, Opportunities, and Threats Analysis of the Urban Clinic

<table>
<tr><th>STRENGTHS</th><th>WEAKNESSES</th></tr>
<tr><td>i. Focus on community health, strong community bonds, and partnerships
ii. Strive to provide quality and affordable care
iii. Motivated to secure funds to fulfill mission
iv. Strive to improve patient outcomes
v. Desire to become PCMH recognized
vi. Quality improvement program
vii. Care coordination/management program
viii. Identification and prioritization of community resources
ix. Same day appointments for urgent care, five day schedule</td><td>1. Privately funded, non-profit. Tireless process of securing funding
2. Fee-for-service based
3. Lack of comprehensive official policies and procedures to suffice PCMH recognition requirements
4. Lack of formal human resources department
5. Role definitions lack definitive clarity and “chain of command” is not clear to all stakeholders
6. Lack of knowledge on the PCMH recognition process</td></tr>
<tr><th>OPPORTUNITIES</th><th>THREATS</th></tr>
<tr><td>1. Local organizations aimed to improve population health
2. Community organizations willing and able to provide funding
3. Formal grand opportunities
4. Local colleges with multiple health profession students that can contribute to mission fulfillment while meeting school requirements
5. PCMH recognition (enhanced reimbursements and incentives provided by insurance payers, maintaining competitiveness with PCMHs in the community)</td><td>1. Five direct competitors in the immediate geographical area
2. Several indirect competitors in the immediate geographical area
3. At least two organizations with multiple PCMH recognized clinical sites in a twenty mile radius</td></tr>
</table>

Appendix M

IRB Approval

DATE:	May 06, 2019
TO:	Katherine Moran, DNP
FROM:	Office of Research Compliance & Integrity
PROJECT TITLE:	Development of a Process for Adoption and Attainment of PCMH Recognition Requirements for an Urban Primary Care Clinic
REFERENCE #:	19-324-H
SUBMISSION TYPE:	IRB Research Determination Submission
ACTION:	Not Research
EFFECTIVE DATE:	May 06, 2019
REVIEW TYPE:	Administrative Review

Thank you for your submission of materials for your planned scholarly activity. It has been determined that this project does not meet the definition of research* according to current federal regulations. The project, therefore, does not require further review and approval by the IRB. Scholarly activities that are not covered under the Code of Federal Regulations should not be described or referred to as *"research"* in materials to participants, sponsors or in dissemination of findings. While performing this project, you are expected to adhere to the institution's code of conduct and any discipline-specific code of ethics.

A summary of the reviewed project and determination is as follows:

The purpose of this scholarly project is to develop an individualized approach to aid in the adoption and attainment of Patient-Centered Medical Home recognition requirements for an urban primary care clinic. The focus on the PCMH areas of care coordination and increased patient/provider satisfaction is in alignment with the Quadruple Aim. This project will utilize known benchmarks and best practices to achieve this industry recognition. This project is not creating new generalizable knowledge but is using existing knowledge to improve patient care. Therefore, this project does not meet the federal definition of research and IRB oversight is not needed.

This determination letter is limited to IRB review. It is your responsibility to ensure all necessary institutional permissions are obtained prior to beginning this project. This includes, but is not limited to, ensuring all contracts have been executed, any necessary Data Sharing Agreements and Material Transfer Agreements have been signed, and any other outstanding items are completed.

An archived record of this determination form can be found in IRBManager from the Dashboard by clicking the "_ xForms" link under the "My Documents & Forms" menu.

If you have any questions, please contact the Office of Research Compliance and Integrity at (616) 331-3197 or rci@gvsu.edu. Please include your study title and study number in all correspondence with our office.

Office of Research Compliance and Integrity | 1 Campus Drive | 049 James H Zumberge Hall | Allendale, MI 49401
Ph 616.331.3197 | rci@gvsu.edu | www.gvsu.edu/rci

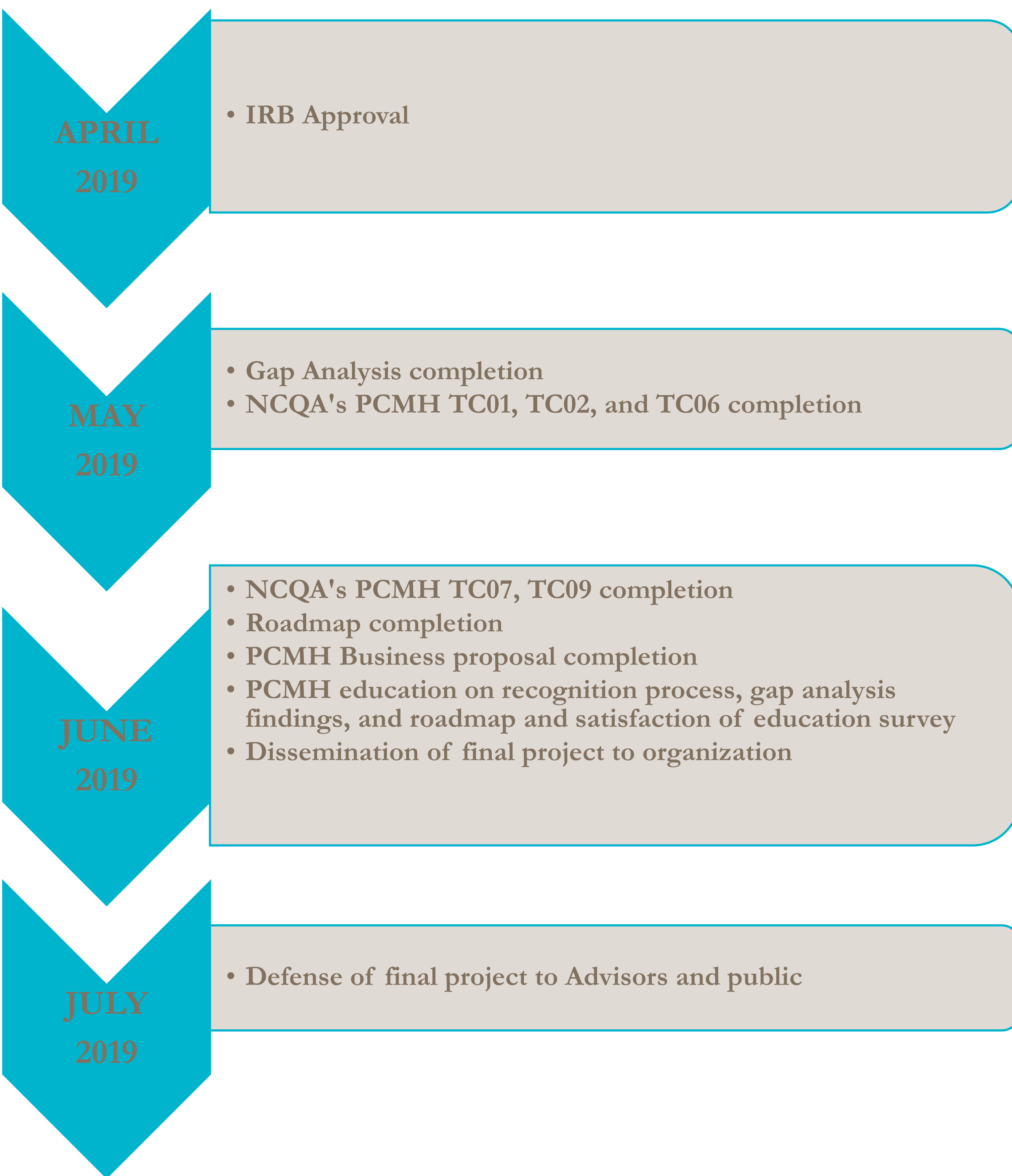
Appendix N

Urban Clinic Data Required for Project Completion

DELIVERABLE	DATA REQUIRED
• **PCMH Gap Analysis**	• All policies and Procedures • Staff Resumes outlining roles and responsibilities • Care management/coordination program outline • Quality improvement program outline • De-identified aggregated data reports from the electronic health record including data such as the following: common quality measure data (immunizations, cancer screenings, vital signs, etc…), demographic information (race, gender, sexual orientation and gender information, etc…), problem/medication lists, and referral/specialty data
• **NCQA's PCMH Concept One Core Criteria (Appendix A)**	• Staff Resumes, roles, and responsibilities • Clinic "branding" criteria • Policies regarding team meetings and communication • Policies regarding the practices performance evaluation and quality improvement activities • Clinic organizational leadership and staff structure
• **PCMH Roadmap**	• All data necessary to complete the gap analysis as outlined above
• **PCMH Education**	• All data necessary to complete gap analysis, PCMH concept one, and roadmap as outlined above
• **PCMH Budget (for the 12 months preceding recognition application)**	• Staff salary data • Percentages of each insurance payer for the patient population • Clinic funding sources (grants, donations, ROI analysis, etc...) • Costs of PCMH implementation

Appendix O

Projected Project Timeline



Appendix P

Project Deliverables, Measurement, and Timeline

Deliverable	Implementation Strategies	Data Sources	Collection Method	When Collected	Data Collector
PCMH Gap Analysis of NCQA's PCMH Core Criteria (Appendix A)	(1)Ongoing collection of data from gap analysis guided by NCQA PCMH recognition criteria (Appendix M) (2)Delivery of gap analysis to the Project Coordinator and Executive Director by May 31st, 2019. (3)Gap analysis findings will be disseminated at staff education intervention before July 31st, 2019	(1)NCQA website (2)Staff and leadership interviews (3)Document review (policies, job descriptions, reports, de-identified QI reports) (4)Meeting notes and agendas (5)Walk through luncheon	(1) Manual collection (2)Field notes (3)Observation (4)Interviews	(1) Prior to May 31st, 2019	(1)Doctoral Student (2)Key stakeholders (Program Coordinator, Executive Director, QI Specialist, Information Technology Coordinator, Lead RN, Care Coordinator RN, Clerical Staff, Project Specialist)
Core Criteria of NCQA's PCMH Concept One: Team Based Care (Appendix A)	(1)Utilizing NCQA's PCMH recognition criteria, TC core criteria will be completed (2)Evidentiary requirements outlined by the NCQA will be used to guide the formal documents for each core criteria (3)Overview of the core concepts completion will be discussed at the educational session (4)Documents meeting NCQA's criteria for evidence to be delivered to the Program Coordinator and Executive Director by June 30th, 2019	(1)NCQA website (2)Staff and leadership interviews (3)Document review (policies, procedures) (4)Gap analysis	(1)Manual collection (2)Field Notes (3)Observation (4)Interviews	(1)Prior to June 30th, 2019	(1)Doctoral Student (2)Key stakeholders (Program Coordinator, Executive Director, Development Director, Quality Improvement Specialist, Program Coordinator, Lead RN, Medical Director)

	(5)To be outlined at education intervention to be conducted prior to July 31st, 2019.				
PCMH Roadmap	(1)NCQA PCMH criteria and gap analysis will guide roadmap development (2)Delivery of roadmap to Project Coordinator and Executive Director by June 30th, 2019 (3)Roadmap will be disseminated educational session conducted by the end of July 2019.	(1)NCQA website (2)Gap Analysis (3)Staff and leadership interviews (4)Document review (policies, job descriptions, reports) (5)Meeting notes and agendas	(1)Manual collection (2)Field notes (3)Observation	(1)Prior to June 30th, 2019	(1)Doctoral Student (2)Program Coordinator
Staff Education	(1)Gathering of data to develop educational intervention using NCQA's PCMH criteria, gap analysis, and roadmap. (2) Delivery of roadmap to Project Coordinator and Executive Director by June 30th, 2019 (3)Delivery of education to key stakeholders by July 31st, 2019. (4)At completion of education intervention, a survey to assess satisfaction of the education will be administered	(1)NCQA website (2)Clinic branding criteria (3)Gap analysis (4)Roadmap (5)Resources to aid in development of a Likert-type survey to assess satisfaction with education	(1)Manual collection (2)Field notes (3)Observation (4)Post education staff satisfaction Likert-type survey	(1)Education and post satisfaction survey to be completed by July 31st, 2019.	(1)Doctoral student (2)Program Coordinator (3)With the assistance of a university statistician, the student will review the results from the 5-point Likert Survey
Return on Investment Analysis	(1)Data will be gathered on an ongoing basis. Utilization of gathered data will guide the business proposal (2) Delivery of business proposal to	(1)NCQA website (2)Estimated salary data from the urban clinic (3)PCMH gap analysis will guide	(1)Manual collection (2)Field notes (3)Observation (4)Evidence-based literature on ROI with PCMHs and	(1)Developed and completed by July 31st, 2019.	(1)Doctoral Student (2)Key stakeholders (Project Coordinator, QI Specialist, Executive Director,

	Project Coordinator and Executive Director by July 31st, 2019. (3)Business proposal will be presented at educational intervention at the end of July 2019.	business proposal (4)ROI information from the literature (5)Insurance payer reimburse-ment data	other associated costs		Executive Assistant, Development Director)

Appendix Q

PCMH Education Initiative Satisfaction Evaluation

Patient Centered Medical Home Education Initiative Satisfaction Evaluation

For each statement, check the response that best represents how you feel about the statement

	STRONGLY DISAGREE 1	DISAGREE 2	NEITHER AGREE OR DISAGREE 3	AGREE 4	STRONGLY AGREE 5
COURSE ORGANIZATION AND PLANNING					
The course instructor identified objectives of the educational session					
The course content was consistent with stated objectives					
The course content was arranged in a clear, logical, and orderly manner					
COMMUNICATION					
The instructor communicated the educational material in a way that you could understand					
The instructor showed enthusiasm about the subject matter					
You were encouraged to ask questions					
INSTRUCTIONAL METHODS					
The instructor used methods that enhanced your learning					
The instructor used time efficiently					
The instructor had a thorough knowledge of the subject content					
COURSE OUTCOMES					
You learned key concepts related to the course content and objectives					
Your knowledge about the course content expanded as a result of the education					
Your interest in the subject has increased as a result of this course					
OVERALL SATISFACTION					
Overall, I was satisfied with training quality					

Additional Comments:

Appendix R

Urban Clinic Employee Hourly Salary Approximations

Team Member Role:	Average Hourly Wage Approximations
Front Office/Clerical Staff	$13.00/Hour
Project Specialist	$17.00/Hour
Information Technology Coordinator	$14.00/Hour
Medical Assistant	$13.00/Hour
Registered Nurse	$26.00/Hour
Nurse Practitioner	$50.00/Hour
Medical Doctor	$70.00/Hour
Social Worker	$28.00/Hour
Program Coordinator-MPH	$11.00/Hour
Executive Assistant	$16.00/Hour

Note. The information provided in this table was obtained through personal communication with the urban clinic's Executive Director.

Appendix S

DNP Project Financial Operating Plan

EXPENSES	AMOUNT
Project Facilitator (500 hours x $43/hour)	$21,500
Urban Clinic Stakeholder Time:	
Program Coordinator/Mentor (66 hours x $11/hour)	$726.00
Executive Assistant (2 hours x $16/hour)	$32.00
Social Worker (2 hours x $28/hour)	$56.00
Medical Doctor (2 hours x $70/hour)	$140.00
Nurse Practitioners (2) (2 hours x $50/hour)	$200.00
Registered Nurses (2) (2 hours x $26/hour)	$104.00
Medical Assistants (3) (2 hours x $13/hour)	$78.00
Information Technology Coordinator (2 hours x $14/hour)	$28.00
Project Specialist (2 hours x $17/hour)	$34.00
Front Office/Clerical Staff (2) (2 hours x $13/hour)	$52.00
Total Urban Clinic Stakeholder Time	$1,450.00
Consultations	
University Statistician	$100.00
Cost of print/copy/fax	$15.00
Cost of Patient Education Brochure with branding	$250.00
Cost of Patient Education Insert with branding	$100.00
Educational Luncheon	$50.00
TOTAL EXPENSES	$18,893.00

REVENUE	AMOUNT
Project Facilitator Time In-Kind Time Donation	$21,500
Cost of Patient Education Brochure with branding (donated)	$250.00
Cost of Patient Education Insert with branding (donated)	$100.00
Urban Clinic Stakeholder In-Kind Time Donation	$1,554.00
TOTAL REVENUE	$23,404.00

NET OPERATING PLAN	$4,511.00

Appendix T

NCQA PCMH Gap Analysis Findings of the Urban Clinic

Table Key

Green	Satisfied
Yellow	Partially or Likely Satisfied
Red	Not Satisfied

NCQA PCMH Concept	Core Criteria	Core Criteria Met as of 6-1-19	Elective Credits Available	Elective Credits as of 6-1-19
Team-Based Care and Practice Organization (TC)	**5 Core**		**7 Credits**	
Competency A	2 Core	2/2	5 Credits	5/5
Competency B	2 Core	2/2	2 Credits	2/2
Competency C	1 Core	1/1	No Elective Credits Available	No Elective Credits Available
Knowing and Managing Your Patients (KM)	**10 Core**		**22 Credits**	
Competency A	3 Core	2/3	6 Credits	1/6
Competency B	2 Core	2/2	1 Credit	0/1
Competency C	1 Core	1/2	2 Credits	N/A
Competency D	2 Core	0/2	5 Credits	3/5
Competency E	1 Core	0/1	No Elective Credits Available	No Elective Credits Available
Competency F	1 Core	0/1	8 Credits	5/8
Patient-Centered Access and Continuity (AC)	**7 Core**		**8 Credits**	
Competency A	5 Core	3/5	4 Credits	2/4
Competency B	2 Core	0/2	4 Credits	0/4
Care Management and Support (CM)	**4 Core**		**6 Credits**	
Competency A	2 Core	1/2	2 Credits	2/2
Competency B	2 Core	2/2	4 Credits	4/4
Care Coordination and Care Transitions (CC)	**5 Core**		**24 Credits**	
Competency A	1 Core	1/1	3 Credits	0/3
Competency B	1 Core	1/1	14 Credits	11/14
Competency C	3 Core	3/3	7 Credits	4/7
Performance Measurement and Quality Improvement (QI)	**9 Core**		**16 Credits**	
Competency A	4 Core	1/4	4 Credits	0/4
Competency B	4 Core	0/4	5 Credits	0/5
Competency C	1 Core	0/1	7 Credits	2/7
TOTALS		19/40 Core Criteria		41/83 Elective Criteria

Appendix U

NCQA PCMH Concept One Core Criteria Evidentiary Samples

TC01: *Designates a Clinician Lead of the medical home and a staff person to manage the PCMH transformation and medical home activities*

TC01 (Core): Designates a clinician lead of the medical home and a staff person to manage

PCMH Clinician Lead Job Description

Title: Patient-Centered Medical Home Clinician Lead
Staff:
Supervisor(s):
Department: Clinical, Administrative

Job Summary

The Medical Director will serve as the PCMH Clinician Lead/Clinical Champion. The Clinical Champion will drive the PCMH initiative and will serve as a motivator to keep momentum moving forward in the clinic during the transformation process. They have a multi-faceted role and are an integral part of the health care team. There is significant overlap between the Medical Director position and the requirements of the Clinician Lead. The role will require duties beyond that of the regularly assigned duties as a Medical Director. While the Clinician Lead will also have other organizational duties, they will not function in a "vacuum", they will have a plethora of support from other stakeholders to help fulfill "other than PCMH" roles and responsibilities.

The PCMH Clinical Lead is an essential member of the health care team. They will work in collaboration with the Executive Director and Executive Assistant to lead the design and implementation of the processes that are fundamental to adopting and achieving NCQA PCMH recognition requirements. The Clinical Lead will be available to assist key stakeholders in adopting and attaining PCMH recognition requirements through clinical and administrative coaching and guiding. They will become a NCQA PCMH expert which will assist in the guidance of key stakeholders during the transformation. Their knowledge will allow them to work in collaboration with the clinic leadership to develop an individualized approach to PCMH recognition. They will work closely with clinic leadership and the PCMH Transformation Manager to ensure a successful transformation to the value-based PCMH model of care delivery. A minimum of five hours per week will be dedicated to the PCMH transformation.

(All activities will be done in collaboration with the PCMH Clinical Lead and the Executive Team)

Key Concepts of the Clinical Champion Role
• They will assist in defining organizational values and in the creation of a mission in support of the process of transformation • They will facilitate and support a culture of change among the organization, as well as leading continuous quality improvement that involves all staff in the process • They will facilitate an approach to understanding and addressing the health and needs of the patient population, while considering a population health approach • They should strive to create a strategic vision and drive the investment that is needed to create the infrastructure crucial to the PCMH transformation • They should provide ongoing support for transformation in all areas of the organization • They must be independent, take initiative, have clear judgement, and a professional demeanor at all times

Qualities and Skills of the Clinical Champion
• Firm knowledge of the PCMH and value-based care delivery • Commitment , support, and passion for the PCMH model of care delivery • Utilization of research to support PCMH transformation • Serve as an educational resource for PCMH expertise • The ability to provide leadership capable of creating a culture of change across all areas of the organization • Familiarity with organizational operations and the patient population which the clinic serves • Approachable, credible, and capable of motivating others • Ability to drive change and manage resistance to change • Experience and comfort with population health, continuous quality improvement methodology, and the concept of team-based care • Must have strong communication and interpersonal skills • Proficiency with the electronic health record

Responsibilities	
Administrative Leadership	• Will serve as the liaison between Executive Leadership & board, and serve as the go-to for the PCMH transformation process • Will set clear expectations of the staff as it pertains to PCMH implementation • Will be empowered to make both clinical and process decisions and hold stakeholders accountable for new workflows and processes • Will provide education and leadership to the clinical staff and keep them informed of goals and standards during the PCMH process • Will keep all stakeholders updated of the transformation process when appropriate • Will conduct and participate in regular educational sessions that will include key members to the transformation process. This will include training, PCMH education, and reporting on the process • Will lend insight, offer feedback & suggestions, and learn from other "best practices"

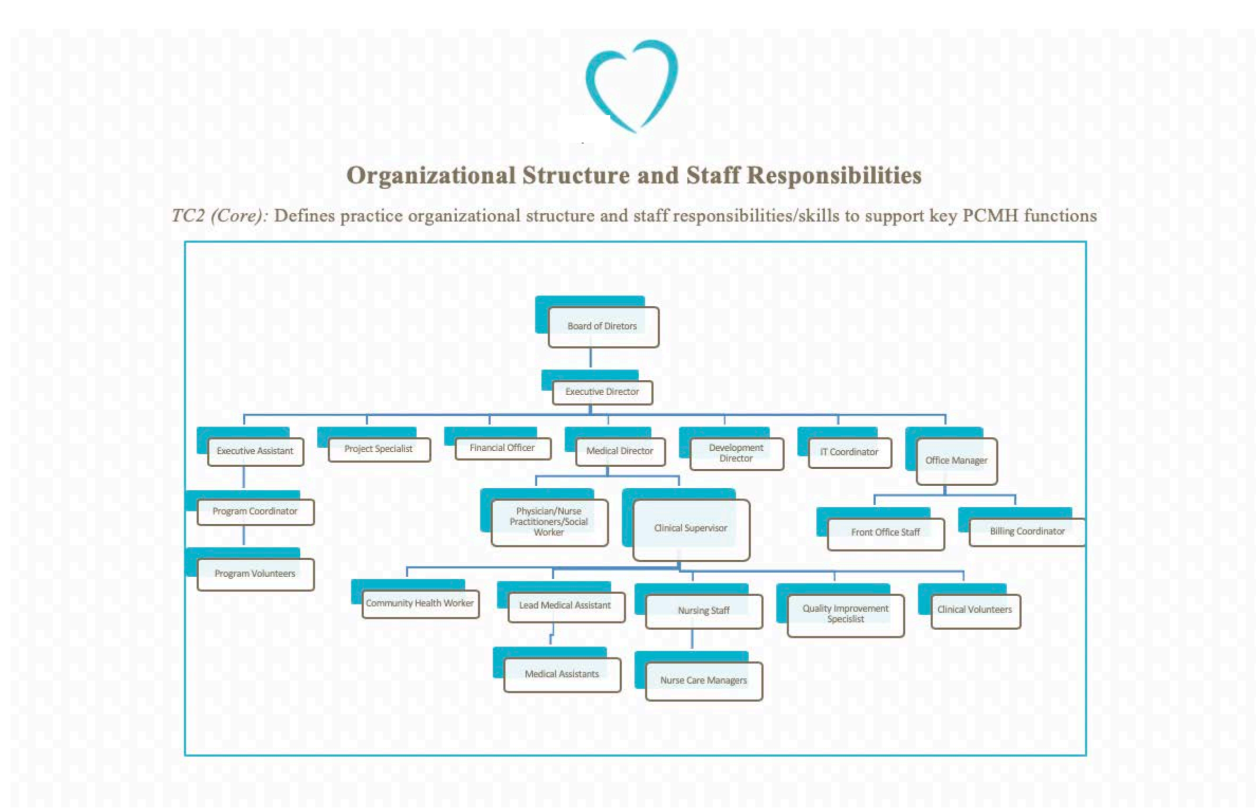
	• Will take the lead, approaching difficult situations with tact, while using sound decision making when approaching tough decisions
Change & Culture Leadership	• Will set the tone for transformation among the organization • Will be a positive leader of the transformation process and work with other key members in the transformation process to manage barriers to change • Will be available to key stakeholders throughout the transformation process: by email, phone, meetings • Will approach new workflows with a focus of solution • Will proactively collaborate with Executive Leadership and other key stakeholders to develop processes crucial to successful transformation • Must be capable of adjusting approaches to interaction based on the needs of those that are different from oneself • Will be a team player and a motivated leader that promotes cohesion among the organization's staff • Will show respect for all members of the organization • Will be accepting of the perspectives and ideas of other stakeholders
Clinical & Quality Leadership	• Will understand the roles and scope of practice of each individual that is key to the transformation, and have them work to the top of their scope, while appropriately delegating as needed • Keep up to date on changing standards of evidence-based practice • Have a thorough understanding of the patient population • Make clinical judgements that are appropriate and in the best interest of improving patient outcomes when selecting quality measures and initiatives through the PCMH standards • Embrace the reporting of quality at clinical and individual provider levels

I hereby acknowledge that I have read and understand the above mentioned job duties, qualifications, policies, and procedures for this position. I also certify that I received a copy of this job description.

Employee: ______________________________ Date: _________________________

Supervisor: ______________________________ Date: _________________________

TC02: *Defines practice organizational structure and staff responsibilities/skills to support key PCMH functions*



Team Member Job Title	Before Encounter Role	Encounter Role	Post Encounter Role
Primary Care Provider	-Review pre-visit preparation -Participate in team huddle	-Assess the reason for visit -Assess patient understanding of medications -Intervene based on evidence-based guidelines -Establish Care Plan -Prescribe -Place orders for labs, referrals, diagnostics, and other tests as needed -Engage care team in visit according to the patient's needs	-Review labs/diagnostics results -Communicate actions to take after results review to the care team (follow up, repeat testing, referral, etc…)
Registered Nurse	-Lead and direct team huddle -Provide clinical advice by phone/secure messaging -Obtain hospital discharge summaries -Contact patients following emergency room visits and hospitalizations	-Educate the patient on preventative care and/or management of chronic conditions -Assist the patient with self-management goals related to chronic medical conditions	-Respond to medication refill requests -Respond to clinical inquiries from patients -Field communication of order results from third parties and review them with the PCP as needed -Transition patients from acute care (emergency room/hospital admission) or long-term (rehab) care to the primary care provider -Communicate test results to the patients -Reconcile medications at care transition encounters
Medical Assistant	-Conduct and document pre-encounter preparation indicating	-Obtain and document vital signs -Review and update family and social history	-Communicates normal lab and diagnostic results to patients after provider final review and signoff

	what preventative and chronic care measures need to be addressed -Review and determine open lab, diagnostic, and referral orders -Document over the counter meds, herbal remedies used, and any vitamins & supplements that are being used	-Conduct behavioral health screenings as needed (GAD7, PHQ9, Vanderbilt, etc…) -Review and update any specialty provider information -Provide the patient with portal access information	
Patient Registration Specialist	-Recall patients due for care -Schedule routine care in response to patient phone and secure messaging inquiries -Review PCP panel sizes to ensure equal distribution of panel numbers and schedule patients accordingly -Arrange for interpreters to meet patients who have linguistic/interpretation needs	-Review and update patients current demographic and insurance information -Review privacy practices (HIPAA) with patient -Provide patient's portal access information	
Social Worker/Behavioral Health Specialist	-Identify patients due for behavioral health screenings	-Conduct behavioral health interventions in response to screening results -Intervene with patients in behavioral health crisis -Assist patients with behavioral self-management goal development -Be available for patients who are identified as needing behavioral health services during their PCP encounter	-Ensure patients who are at-risk for behavioral health concerns and/or substance use disorders receive routine/regular contact by a member of the care team

TC06: *Communication among staff is organized to ensure that patient care is coordinated, safe, and effective*

TC07 *(Core)*: Has regular care team meetings or a structured communication process focused on individual patient care

Meeting Type	Participants	Topics
Tuesday and Friday Staff Huddles	Clinical staff and Front Office staff	-Scheduled patients and their chief complaints -Outstanding quality measures for each patient -Outstanding orders (labs, radiology, referrals, etc…) for patients that day
Monthly Quality Improvement (QI) Meetings and All-Staff Huddles	Executive Director, Executive Assistant, Project Specialist, Quality Improvement Specialist, Clinical Leader or other clinical representative, at least one provider, and at least one front office representative.	-A QI update -Athena QM report -PH70 -Uniform Data Set -Meaningful Use -Out of range measures -Jobs/Current Projects and Impact on staff roles and how they can help -Other day-to-day staff needs and workflow processes, etc…
Monthly Provider Meetings	Executive Director, Executive Assistant, QI Specialist, Program Coordinator, Medical Director, Clinical Supervisor, Medical Doctors, Social Worker, Nurse Practitioners, Nurse Care Manager, Lead Medical Assistant, Nurse Care Manager, and at least one front office representative	-QI updates based on monthly QI meetings -Provider QI measures and their performance -Process changes -Areas of concern -Complex patients
Compliance and Performance Improvement (CPI)	Executive Director, CPI Officer, Medical Director, and at least one representative from	-Legal, licensing, certification, funding and

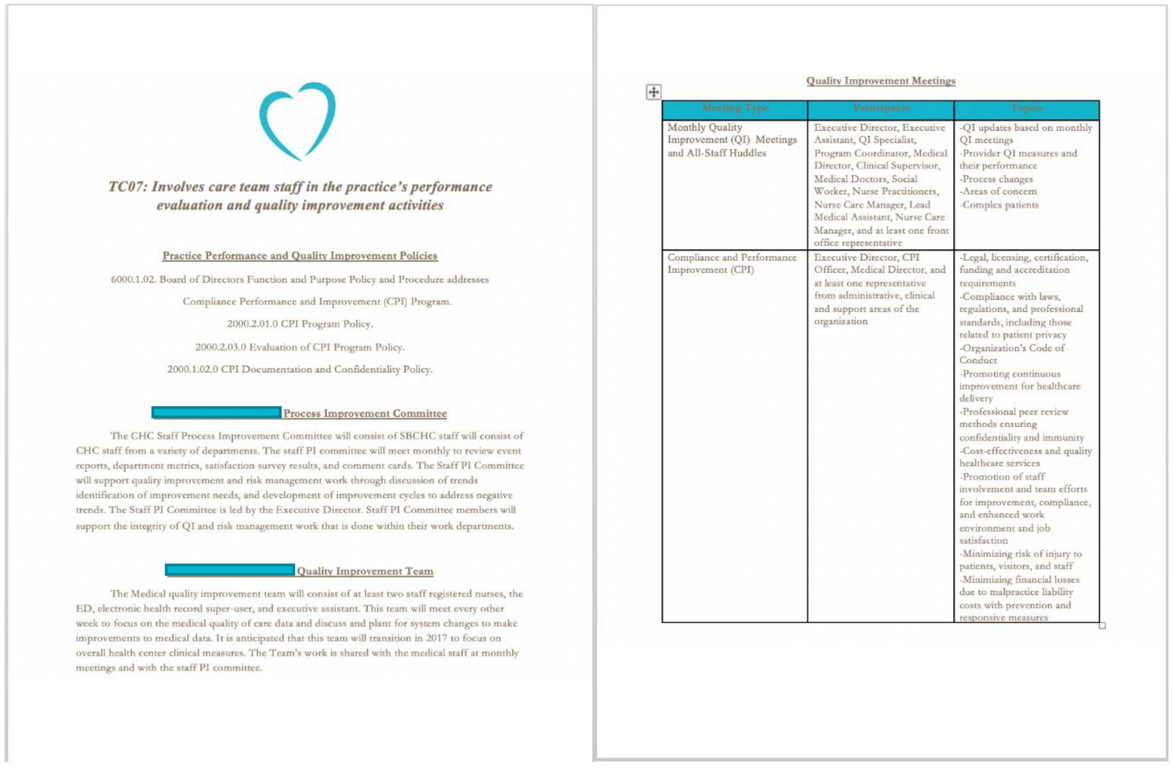
	administrative, clinical and support areas of the organization	accreditation requirements -Compliance with laws, regulations, and professional standards, including those related to patient privacy -Organization's Code of Conduct -Promoting continuous improvement for healthcare delivery -Professional peer review methods ensuring confidentiality and immunity -Cost-effectiveness and quality healthcare services -Promotion of staff involvement and team efforts for improvement, compliance, and enhanced work environment and job satisfaction -Minimizing risk of injury to patients, visitors, and staff -Minimizing financial losses due to malpractice liability costs with prevention and responsive measures

Example of Daily Huddle Documentation:

Clinical Measures Guide

Total Patients Scheduled: _________ **Previous Follow Up N/S:___________**			**-CRC Screening** **-Diabetic Measures** **-PHQ** **-BMI** **-Screening labs**	**-Mammogram** **-Cervical Cancer Screening** **-Contraception** **-STI screening**	**-Labs** **-Referrals** **-Imaging** **-Acute Care Records**
Time	**Chief Complaint**	**Age and Male/Female**	**General Medicine**	**Women's Health**	**Records and Results**

TC07: *Involves care team staff in the practice's performance evaluation and quality improvement activities*



TC07: Involves care team staff in the practice's performance evaluation and quality improvement activities

Practice Performance and Quality Improvement Policies

6000.1.02. Board of Directors Function and Purpose Policy and Procedure addresses Compliance Performance and Improvement (CPI) Program.

2000.2.01.0 CPI Program Policy.

2000.2.03.0 Evaluation of CPI Program Policy.

2000.1.02.0 CPI Documentation and Confidentiality Policy.

Process Improvement Committee

The CHC Staff Process Improvement Committee will consist of SBCHC staff will consist of CHC staff from a variety of departments. The staff PI committee will meet monthly to review event reports, department metrics, satisfaction survey results, and comment cards. The Staff PI Committee will support quality improvement and risk management work through discussion of trends identification of improvement needs, and development of improvement cycles to address negative trends. The Staff PI Committee is led by the Executive Director. Staff PI Committee members will support the integrity of QI and risk management work that is done within their work departments.

Quality Improvement Team

The Medical quality improvement team will consist of at least two staff registered nurses, the ED, electronic health record super-user, and executive assistant. This team will meet every other week to focus on the medical quality of care data and discuss and plant for system changes to make improvements to medical data. It is anticipated that this team will transition in 2017 to focus on overall health center clinical measures. The Team's work is shared with the medical staff at monthly meetings and with the staff PI committee.

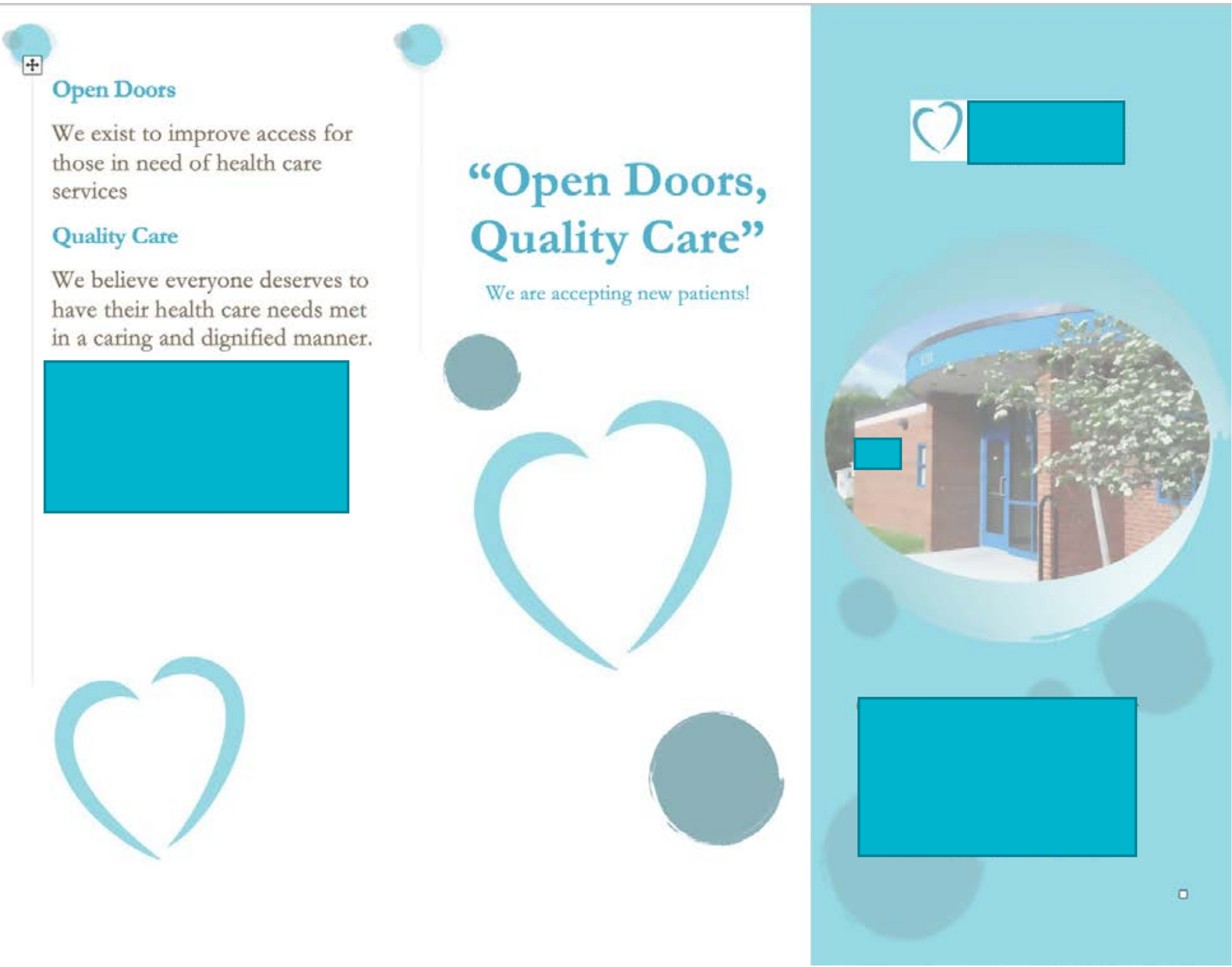
Quality Improvement Meetings

Meeting Type	Participants	Topics
Monthly Quality Improvement (QI) Meetings and All-Staff Huddles	Executive Director, Executive Assistant, QI Specialist, Program Coordinator, Medical Director, Clinical Supervisor, Medical Doctors, Social Worker, Nurse Practitioners, Nurse Care Manager, Lead Medical Assistant, Nurse Care Manager, and at least one front office representative	-QI updates based on monthly QI meetings -Provider QI measures and their performance -Process changes -Areas of concern -Complex patients
Compliance and Performance Improvement (CPI)	Executive Director, CPI Officer, Medical Director, and at least one representative from administrative, clinical and support areas of the organization	-Legal, licensing, certification, funding and accreditation requirements -Compliance with laws, regulations, and professional standards, including those related to patient privacy -Organization's Code of Conduct -Promoting continuous improvement for healthcare delivery -Professional peer review methods ensuring confidentiality and immunity -Cost-effectiveness and quality healthcare services -Promotion of staff involvement and team efforts for improvement, compliance, and enhanced work environment and job satisfaction -Minimizing risk of injury to patients, visitors, and staff -Minimizing financial losses due to malpractice liability costs with prevention and responsive measures

TC09: *Has a process for informing patients/families/caregivers about the role of the medical home and provides them with materials that contain information such as after-hours access, practice scope of services, evidence-based care, education and self-management support*

Appendix V

Patient and Caregiver PCMH Educational Brochure



Services and Programs

Services Offered:

- Continuing patient care
- Preventative screenings
- Women's health exams
- Behavioral health services
- Eye exams and eye care
- Physical therapy

Programs Offered:

- Women's health
- Medication assistance
- Walking program
- Health insurance navigation

What We Do

[redacted] improves the health of our community by providing high quality, affordable and compassionate health care to the underserved in our neighborhood.

PCMH

[redacted] is a patient-centered medical home (PCMH). A PCMH is a model of care that puts patients at the forefront of care. PCHMs build better relationships between patients and their clinical care teams. We've made a commitment to continuous quality improvement and a patient-centered approach.

Hours of Operation

Appointment Hours:

Monday: 8:30am – noon and 1pm – 6:30pm

Tuesday through Friday: 8:30am – noon and 1pm – 4pm

Lobby and Phone Hours:

Monday: 8:30am – 6:30pm

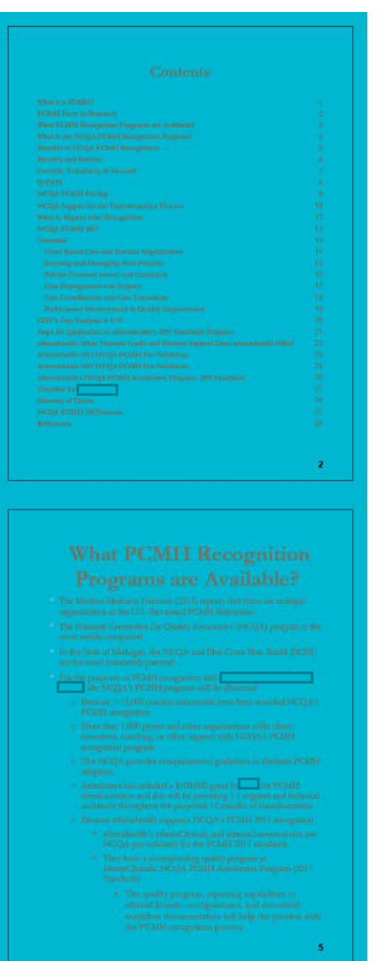
Tuesday through Friday: 8:30am – 4:30pm

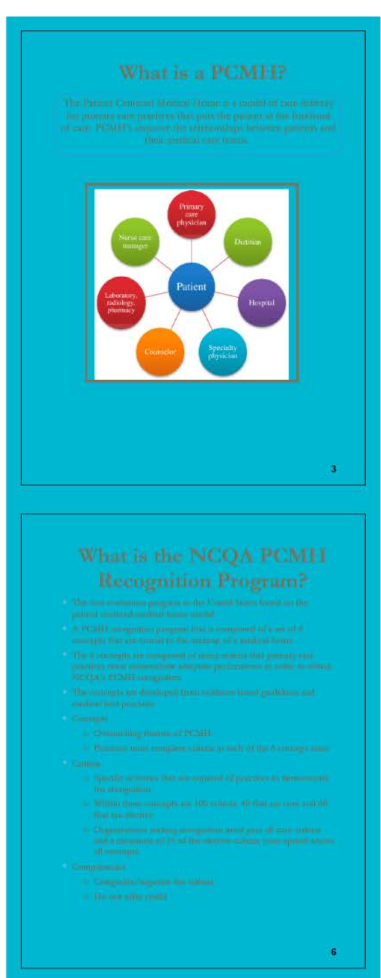
Community Resources:

- Free health and wellness classes
- Nutritional education
- Gym membership assistance
- Low cost exercise classes
- Smoking assistance programs
- Transportation assistance

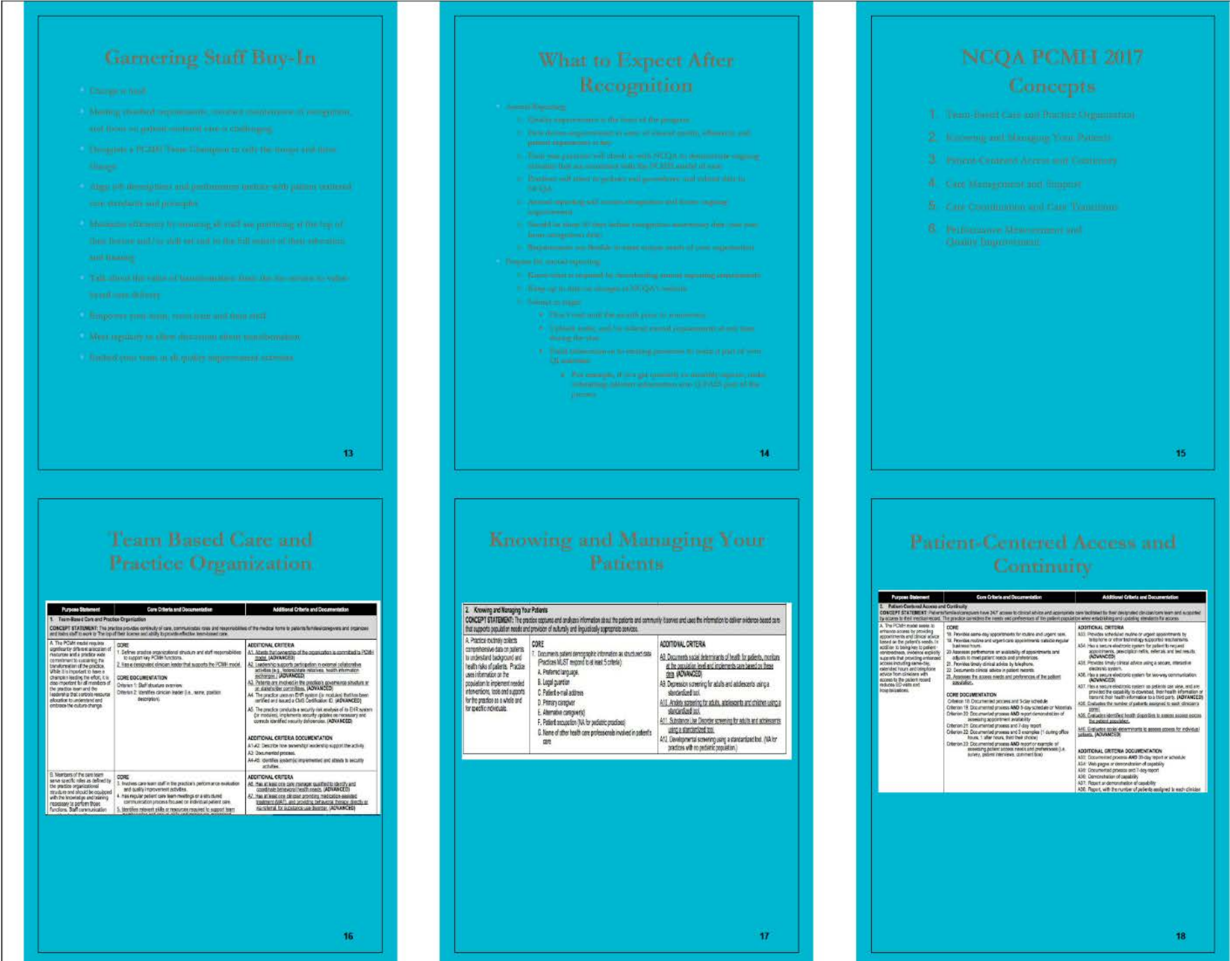
Appendix W

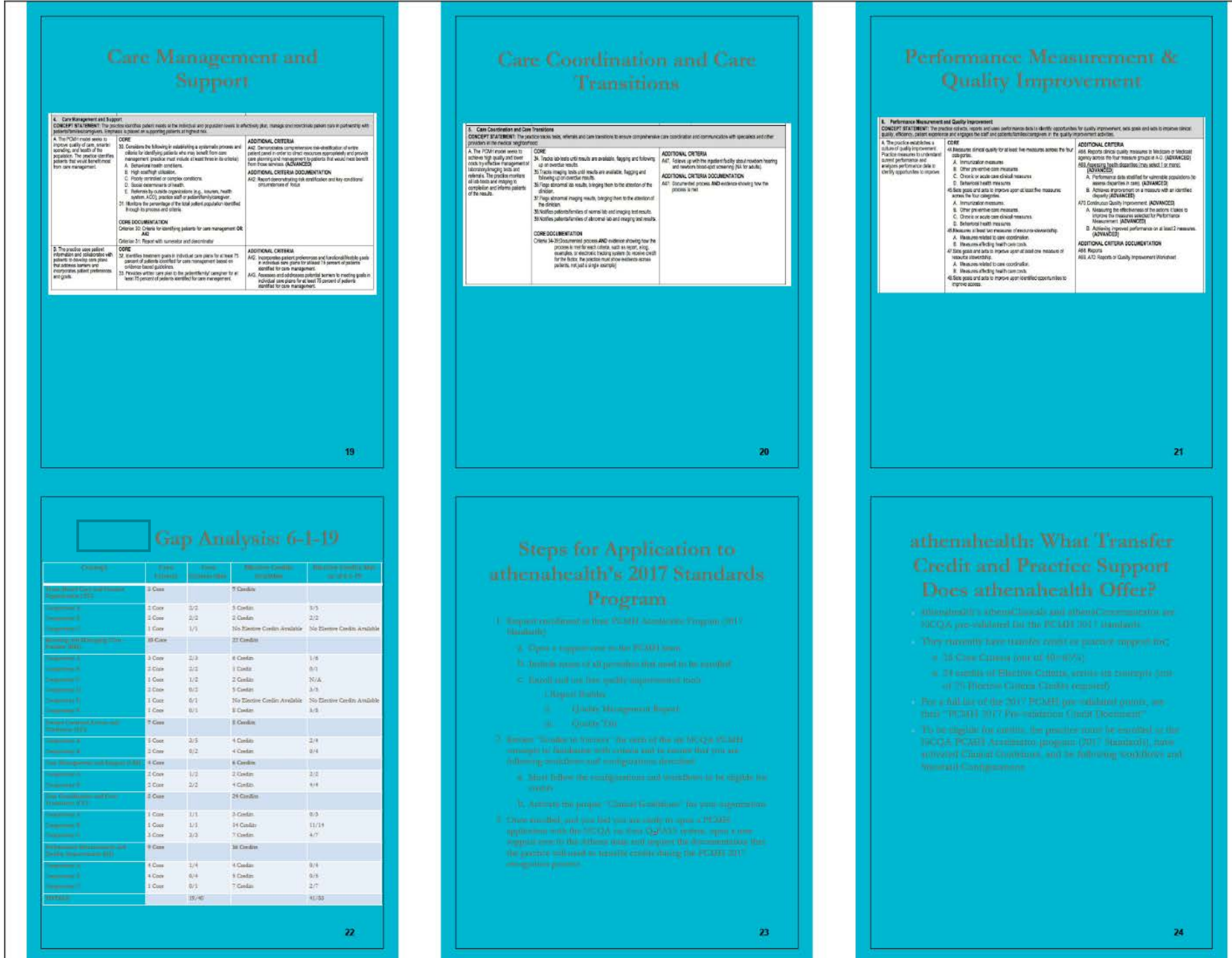
NCQA PCMH Roadmap

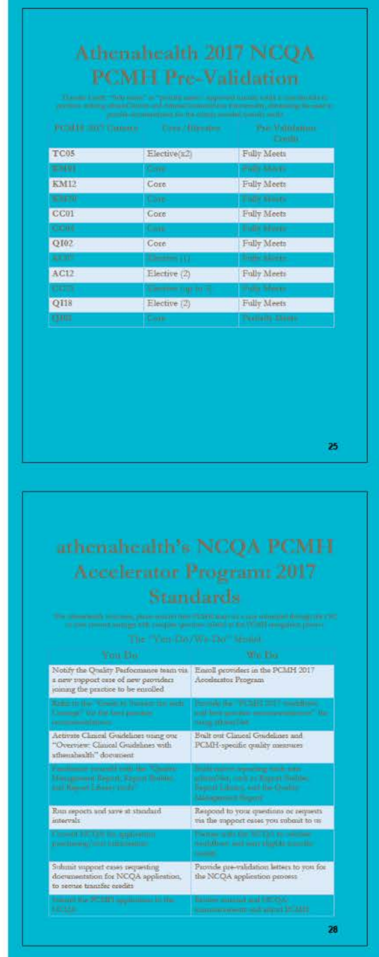




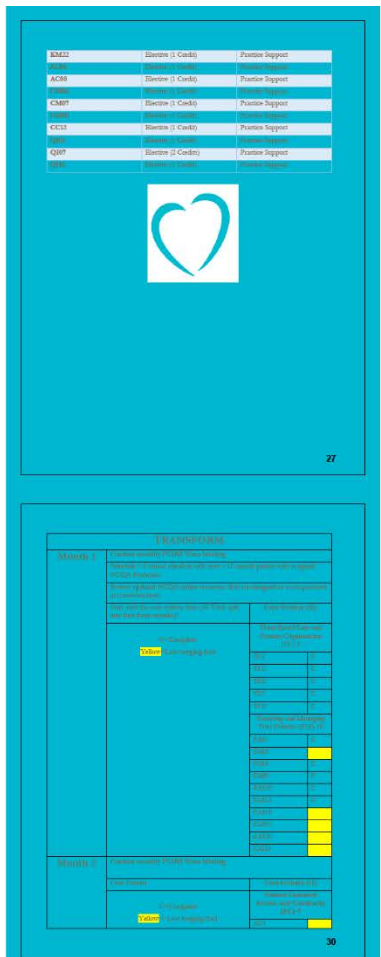
Benefits of NCQA PCMH Recognition
For Practices
Align with the direction of healthcare to value-based models of care delivery
Integrate services across the organization
Support revenue growth with incentives
Improve your practice with improved patient care and increased efficiency
Keep staff happy by streamlining processes and standardizing procedures
Market practice in NCQA's recognition directory
For Clinicians
Earn higher reimbursement
The Centers for Medicare and Medicaid Services (CMS) acknowledge NCQA's PCMH program as ways to receive Medicare Access and CHIP Reauthorization Act of 2015 (MACRA credit
Earn Maintenance of Certification (MOC) credits which are awarded by medical boards to clinicians in NCQA practices
Focus on patient care
For Patients
Stay health by receiving preventive services and screenings at a higher rate than patients who are not associated with a PCMH
Better communication due to the core concept of improved communication between care teams and patients/families
Patients associated with PCMH's have better management of chronic health conditions
PCMHs provide the care that patients want to receive
7
Benefits and Barriers
BENEFITS
Improves care quality in the primary care setting
Decreases health costs
PCMHs are associated with increased use of preventive services
Improved experiences
Reduced use of emergency department visits and avoidable hospitalizations
Patient Centered Medical Home
BARRIERS
Lack of PCMH understanding,
Electronic health record (EHR) difficulties
Cost barriers such as funding and payment model inadequacies
Insufficient resources
8
Commit, Transform, & Succeed
Download standards
Create a Q-PASS Account
Complete an online guided assessment to ensure eligibility
Complete Q-PASS enrollment information
Sign documents within Q-PASS and pay fee
Have a planning call with the assigned NCQA representative
Schedule 1-3 virtual check-in calls over a 12 month period with NCQA Evaluator
Follow your plan: Prior to each call, submit agreed upon documents, get feedback on what you submitted and share additional information "live" at each check in call, earn recognition, and reconcile clinician numbers and adjust fees
Annual data submission and attestation
Done through Q-PASS and will not require a virtual check0in unless selected for an audit
Annual fees due at this time
Multisite practices submit annual data at the same time
9
Q-PASS
The Quality Performance Assessment Support System
10
NCQA PCMH Pricing
Pricing: Single Sites
11
NCQA Support for the Transformation Process
12

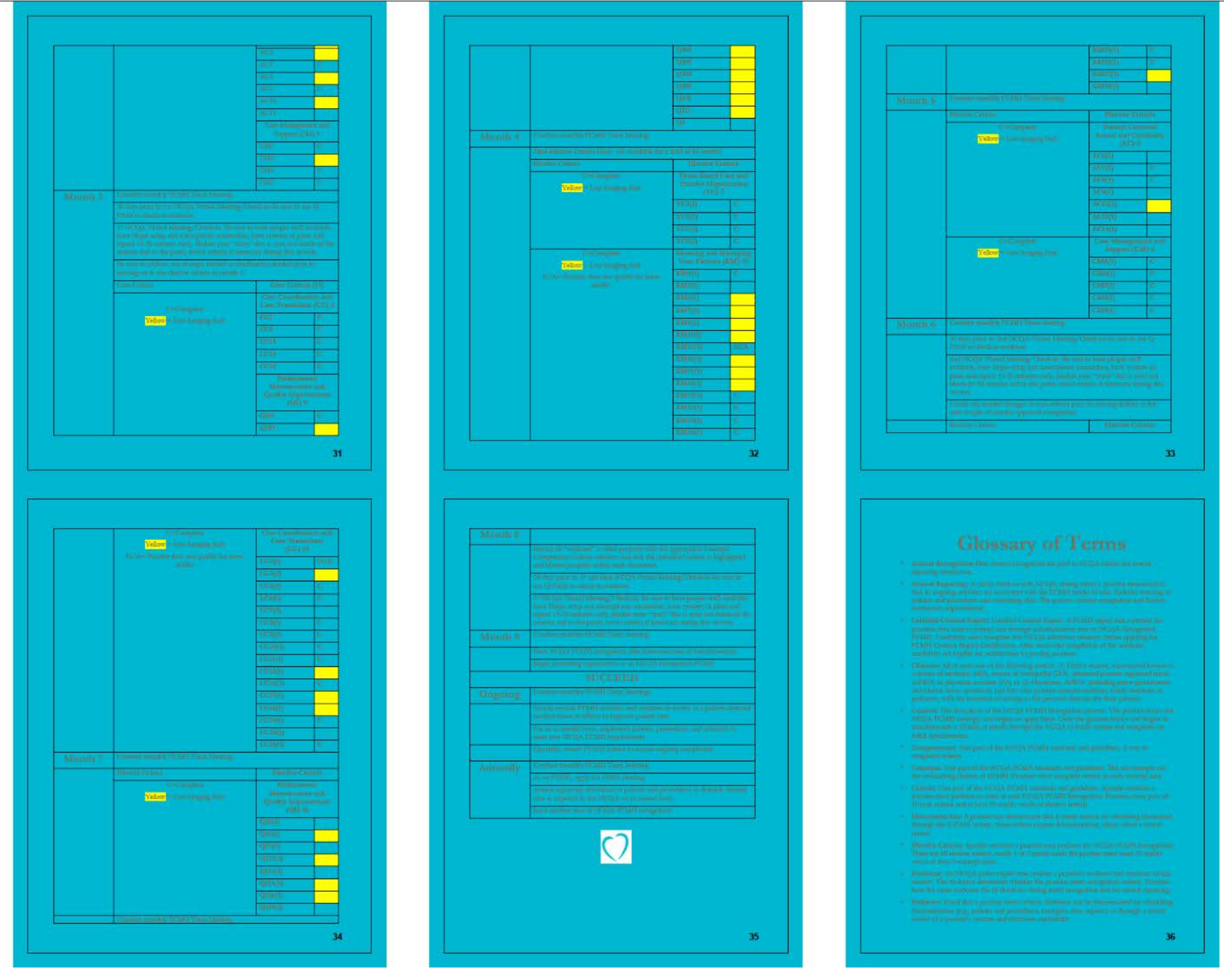

Garnering Staff Buy-In
13
What to Expect After Recognition
14
NCQA PCMH 2017 Concepts
1. Team-Based Care and Practice Organization
2. Knowing and Managing Your Patients
3. Patient-Centered Access and Continuity
4. Care Management and Support
5. Care Coordination and Care Transitions
6. Performance Measurement and Quality Improvement
15
Team Based Care and Practice Organization
16
Knowing and Managing Your Patients
17
Patient-Centered Access and Continuity
18

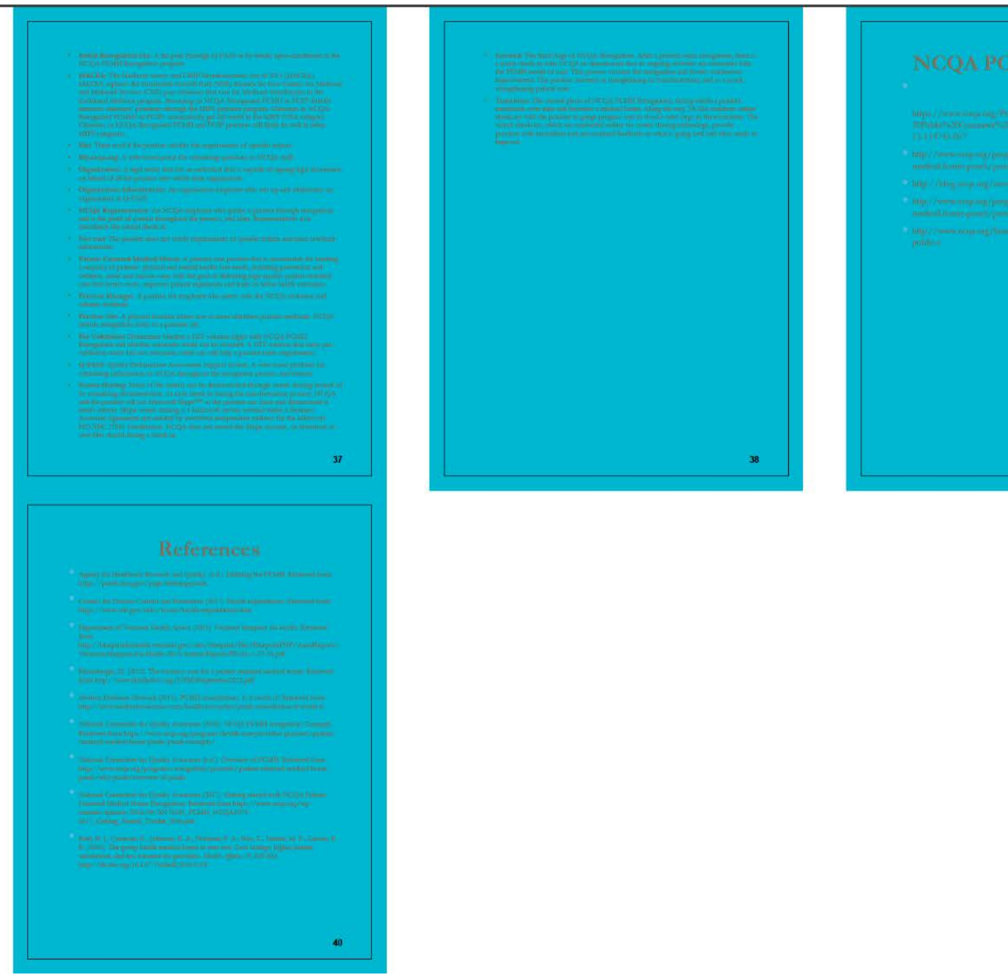

Care Management and Support
19
Care Coordination and Care Transitions
20
Performance Measurement & Quality Improvement
21
Gap Analysis: 6-1-19
22
Steps for Application to athenahealth's 2017 Standards Program
23
athenahealth: What Transfer Credit and Practice Support Does athenahealth Offer?
24


Athenahealth 2017 NCQA PCMH Pre-Validation
TC05 Elective(x2) Fully Meets
KM12 Core Fully Meets
CC01 Core Fully Meets
QI02 Core Fully Meets
AC12 Elective (2) Fully Meets
QI18 Elective (2) Fully Meets
25
athenahealth's NCQA PCMH Accelerator Program: 2017 Standards
Notify the Quality Performance team via a new support case of new providers joining the practice to be enrolled
Enroll providers in the PCMH 2017 Accelerator Program
Activate Clinical Guidelines using our "Overview: Clinical Guidelines with athenahealth" document
Built out Clinical Guidelines and PCMH-specific quality measures
Run reports and save at standard intervals
Respond to your questions or requests via the support cases you submit to us
Submit support cases requesting documentation for NCQA application, to secure transfer credits
Provide pre-validation letters to you for the NCQA application process
28

Athenahealth 2017 NCQA PCMH Pre-Validation
TC06 Core Practice Support
KM03 Core Practice Support
KM10 Core Practice Support
KM15 Core Practice Support
AC03 Core Practice Support
CM01 Core Practice Support
CM04 Core Practice Support
CC14 Core Practice Support
QI03 Core Practice Support
QI15 Core Practice Support
KM17 Elective (1 Credit) Practice Support
26
Timeline for
COMMIT
29

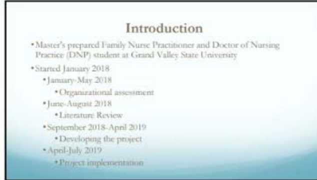

KM22 Elective (1 Credit) Practice Support
AC08 Elective (1 Credit) Practice Support
CM07 Elective (1 Credit) Practice Support
CC12 Elective (1 Credit) Practice Support
QI07 Elective (2 Credits) Practice Support
27
TRANSFORM
30

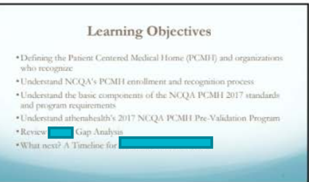


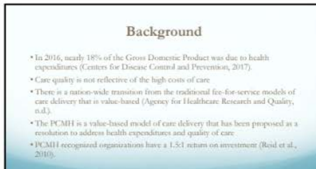

37
38
NCQA PCMH 2017 Sources
39
References
40

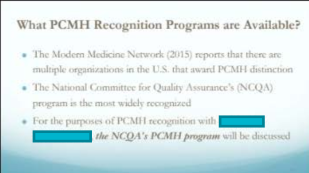
Appendix X

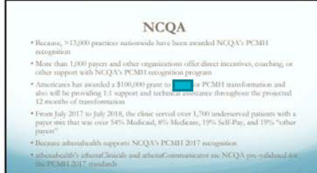
Staff Education

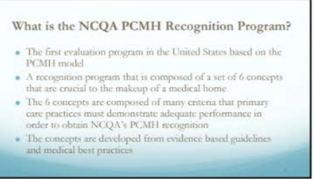


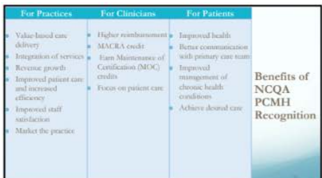


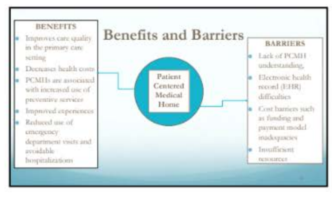


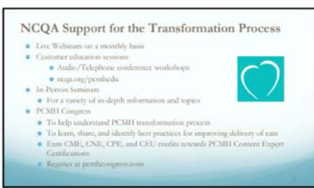


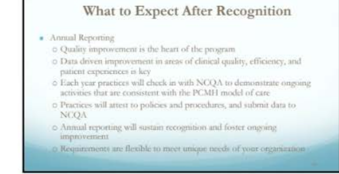


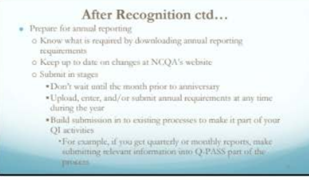


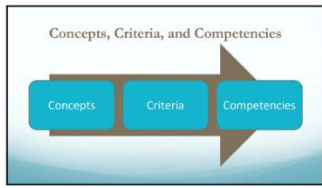


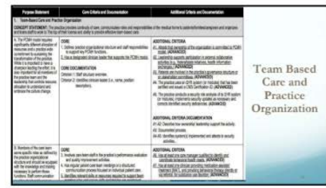


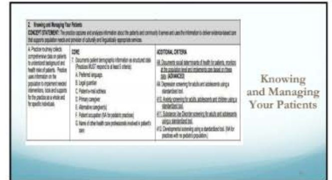


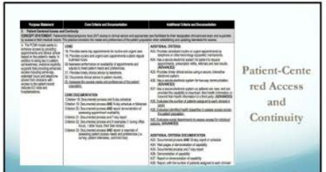


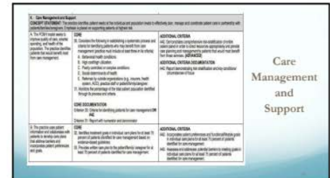


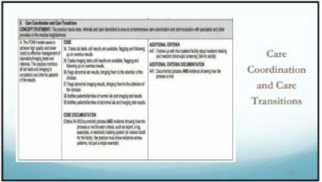


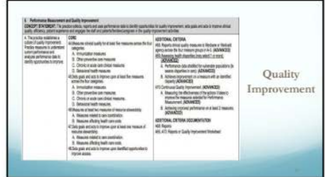


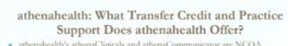












athenahealth's athenaClinicals and athenaCommunicator are NCQA pre-validated for the PCMH 2017 standards

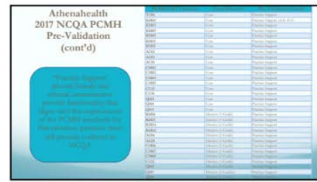
They currently have transfer credit or practice support for:

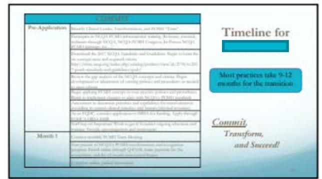
- 26 Core Criteria (out of 40=65%)
- 24 credits of Elective Criteria, across six concepts (out of 25 Elective Criteria Credits required)

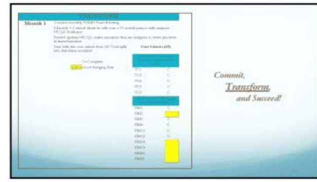
For a full list of the 2017 PCMH pre-validated points, see their "PCMH 2017 Pre-validation Credit Document"

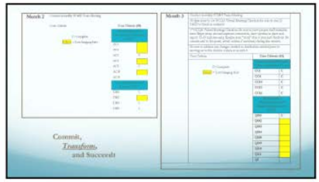
To be eligible for credits, the practice must be enrolled in the NCQA PCMH Accelerator program (2017 Standards), have activated Clinical Guidelines, and be following workflows and Standard Configurations

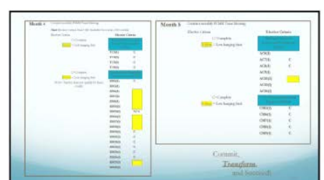
Athenahealth
2017 NCQA PCMH
Pre-Validation

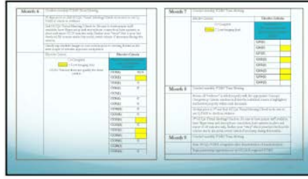


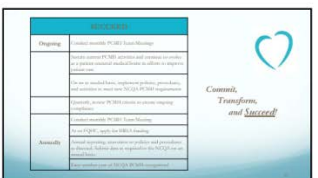


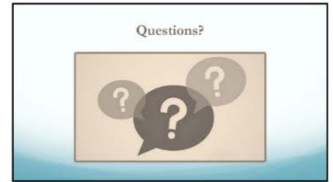


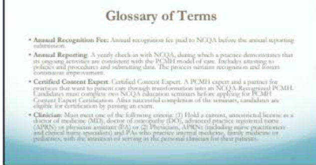












References

Appendix Y

Staff Satisfaction Survey

Question #	Neither Agree/Disagree	Responses to Question: Agree	Strongly Agree
1	0	1 (11.11%)	8 (88.89%)
2	0	1 (11.11%)	8 (88.89%)
3	0	2 (22.22%)	7 (77.78%)
4	0	3 (33.33%)	6 (66.67%)
5	0	1 (11.11%)	8 (88.89%)
6	0	1 (11.11%)	8 (88.89%)
7	0	3 (33.33%)	6 (66.67%)
8	0	2 (22.22%)	7 (77.78%)
9	0	1 (11.11%)	8 (88.89%)
10	0	2 (22.22%)	7 (77.78%)
11	0	2 (22.22%)	7 (77.78%)
12	1 (11.11%)	2 (22.22%)	6 (66.67%)
13	0	2 (22.22%)	7 (77.78%)

Note. None of the responses contained the answers Disagree or Strongly Disagree.

Appendix Z

Abbreviated Budget Summary

Difference Between Proposed and Current		
Proposed	**Current**	**Difference**
$114,290	$95,120	$19,171
Difference Between Mandatory and Current		
Mandatory	**Current**	**Difference**
$140,169	$95,120	$45,049

Note. $45,000 is the estimated difference between mandatory costs and current practice costs. This leaves a remainder of approximately $65,000 available from the $100,000 Americares grant to cover unexpected expenses and additional costs that the clinic may incur. It is also important to note that the work conducted by the project facilitator equated to a minimum of $21,500 for at least 500 hours of work towards development of an individualized PCMH recognition plan.

Appendix AA

Priority Health "Partners in Performance" Report of Ten Quality Measures for Medicaid Patients from January 1st, 2019 to April 30th 2019

Intervention	Reward Amount	Potential Reward (In Dollars)	Lost Opportunity Amount (In Dollars)	Payout Amount (In Dollars)
Preventative Screening				
Cervical Cancer Screening	4580	4580	0	20 PMPM
Chlamydia Screening	0	245	245	35 PMPM
Recorded BMI	0	92	92	.05 PMPM
Breast Cancer Screening	0	1420	1420	20 PMPM
Colorectal Cancer Screening	0	600	600	20 PMPM
Chronic Disease				
Hypertension: Controlled BP	0	5400	5400	45 PMPM
Statin Therapy for Patients with Diabetes	0	300	300	30 PMPM
Diabetes Control: HbA1C <8%	0	2650	2650	50 PMPM
Transformation of Care				
Emergency Department Utilization	0	128	128	.75 PMPM
Acute Care Utilization	0	342	342	2 PMPM
Total	*$4500*		*$15,674*	

Appendix BB

Reflection of the DNP Essentials

I.	Scientific Underpinnings for Practice	• Conducted a literature review guided by PRISMA on the PCMH which helped guide the program development project • Developed an individualized approach to adoption and attainment of PCMH recognition requirements at an urban primary care clinic with development of a gap analysis, completion of the core criteria of NCQA's PCMH concept one, an individualized roadmap, educational in-service, and a business case analysis • Applied implementation theory with PARiHS and nursing theory with the Donabedian model
II.	Organizational and Systems Leadership for Quality Improvement and Systems Thinking	• Conducted a thorough organizational assessment and used findings to identify the need of a care-delivery transformation • Developed the program development project with planning and communication to key stakeholders of the organization to improve their likelihood of buy-in and sustainability • Developed an individualized approach to PCMH adoption and attainment of PCMH recognition requirements to meet the needs of the urban clinic to transform their method of care delivery • Developed a business case analysis
III.	Clinical Scholarship and Analytical Methods for Evidence-Based Practice	• Conducted a literature review to analyze currently available literature on the PCMH to determine what was the best evidence available to guide the program development project • After reviewing the literature, developed an educational in-service to improve key stakeholder knowledge of the PCMH and conducted an educational session • Designed a Likert-style post-education satisfaction survey for urban clinic staff and analyzed the descriptive data • Served as a facilitator at the urban clinic to collaborate with the organization's key stakeholders and develop an individualized approach to PCMH adoption and attainment after conducting a thorough gap analysis

IV.	Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Healthcare	• The DNP student collaborated with Athena, as well as multiple insurers to obtain information crucial to the program development project and for information crucial to the business case analysis • The DNP spent 16 hours with the Director of Clinical Informatics Operations at HCA in the greater Nashville area to improve understanding of the importance of information technology to the DNP role • In addition to face-to-face communication, email was relied upon heavily to communicate with the organization. • Word documents were utilized to organize the project deliverables • Intimate familiarity with Word and how to apply branding criteria to documents was necessary for the 9th core concept of NCQA's PCMH concept one
V.	Health Care Policy for Advocacy in Health Care	• Reviewed national health initiatives related to the PCMH • The project impacted formal policies at the organization including but not limited to after-hours coverage, patient access, and after-hours communication • The project facilitator attended a state-wide leadership and advocacy day for Nurse Practitioner's
VI.	Interprofessional Collaboration for Improving Patient and Population Health Outcomes	• Communicated regularly and effectively with key stakeholders at the urban primary care clinic including leadership, medical providers, registered nurses, social workers, quality improvement specialists, and care managers • The project facilitator formulated and led formal communication to encourage adoption and sustainability of the program development plan • Attended a project site event held by leadership with multiple other health professionals and patients to outline the organizations history, patient population and their needs, and secure crucial community support to improve health outcomes • Participated as a board member on a local university board that seeks to transform healthcare to meet the needs of the local population

		• Participated in multiple events that sought to bring health professionals together in collaboration to improve the profession of nursing and positively impact patient outcomes
VII.	Clinical Prevention and Population Health for Improving the Nation's Health	• The project was developed after the organizational assessment identified a need for change in care delivery to improve the patient population's health • The project facilitator watched and participated in multiple AACN and NCQA webinars aimed at improving population health • The project facilitator participated in a community consortium group with the mission to improve the health of the identified vulnerable population it seeks to serve • Participated in multiple formally held events seeking to lessen the impact of substance use disorders and addiction on the community
VIII.	Advanced Nursing Practice	• The scholarly project required a thorough organizational assessment to identify a systems level need and led to the development and implementation of an individualized approach to PCMH recognition • Spent nearly 500 hours with the project organization to develop advanced nursing practice skills