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Development of a Patient-Centered Medical Home Toolkit at an Integrated Primary Care Clinic

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Development of a Patient-Centered Medical Home Toolkit at an Integrated Primary Care Clinic

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August 15th, 2017

Dedication

I dedicate this work to my family and my friends who have continuously supported me through my academic journey. For my Dad, who was the greatest inspiration for my dreams and aspirations. Because of him, my love for learning and compassion to help others grew into something more than I could have ever imagined. For Kathy, who encouraged and supported me as well, thank you for your continuous love and encouragement to reach my goal. For my siblings, all four of you, thank you for your endless love and support. And thank you to all my friends, for being my sounding board for much of my academic journey and encouraging me when I needed it.

Abstract

Health care spending in the United States far exceeds that of other high-income countries (Squires & Anderson, 2015). In 2013, the U.S. spent 17.1 percent of its gross domestic product (GDP) on healthcare, which was almost 50 percent more than the next highest spender noted as France (Squires & Anderson, 2015). While the U.S. spends more on healthcare than other countries, multiple other health outcome measures are worse including life expectancy, heart disease, diabetes, and chronic respiratory illnesses (Squires & Anderson, 2015). Today's healthcare system is highly fragmented, lacking the necessary coordination within the primary care setting. Better care coordination may ultimately improve patient care, lower costs, and increase patient satisfaction in health care. In order to address the complex nature of health care there have been multiple models introduced. One model is the Patient-Centered Medical Home (PCMH) with the goal of reforming the healthcare system.

For this scholarly project, a quality improvement project was implemented at an integrated primary care clinic currently PCMH recognized where the PCMH documentation practices of the staff have diminished putting the clinic's re-recognition at risk. The purpose of this project was to develop a PCMH toolkit to improve the staff knowledge and documentation compliance regarding PCMH. To address the lack of documentation, a toolkit was developed. A survey consisting of 10 Likert-style items was given to all staff members prior to the development of the toolkit to evaluate the level of knowledge about PCMH and associated documentation. A chart audit was conducted to assess the current documentation compliance for PCMH prior to development of the toolkit to guide the focus of the toolkit and educational intervention. The PCMH toolkit was developed to include useful information for staff to utilize during documentation practices based on the results of the initial surveys and chart audit. The

PCMH toolkit also included information for the future PCMH standard requirements and the crosswalk between the current and future standards. Once the toolkit was assembled, the staff were then educated on its contents and how to utilize the toolkit. After a two-week period of time, the staff were given post-intervention questionnaires to assess for changes in knowledge and a post-intervention chart audit was performed to assess documentation compliance.

Donabedian model served as a conceptual model to frame the formal quality improvement project exploring staff knowledge and practice about PCMH and required documentation. The Plan-Do-Study-Act model served as an implementation guide for educating staff about PCMH and required documentation as well as developing a PCMH toolkit. Findings suggested that education and training on PCMH and associated required documentation may increase the knowledge of staff members. This may contribute to an increase in successful Patient Centered Medical Home implementation. Limitations of the project included the brief evaluation period and a continued incomplete staffing structure. Recommendations for sustainability and future iterations of the toolkit involve further investigation of the documentation process and identification of effective staffing roles and responsibilities once the staff is up to full capacity with a nursing supervisor in place. The formalization of the quality improvement project in the integrated primary care clinic during the PDSA cycle provided a strong foundation from which to build subsequent PDSA cycles focusing on improved documentation practices.

Keywords: PCMH, Toolkit, integrated, primary care

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Executive Summary

Health care spending in the United States far exceeds that of other high-income countries (Squires & Anderson, 2015). In 2013, the U.S. spent 17.1 percent of its gross domestic product (GDP) on healthcare, which was almost 50 percent more than the next highest spender noted as France (Squires & Anderson, 2015). While the U.S. spends more on healthcare than other countries, multiple other health outcome measures are worse including life expectancy, heart disease, diabetes, and chronic respiratory illnesses (Squires & Anderson, 2015). Today's healthcare system is highly fragmented, lacking the necessary coordination within the primary care setting. Better care coordination may ultimately improve patient care, lower costs, and increase patient satisfaction in health care. In order to address the complex nature of health care there have been multiple models introduced. One model is the Patient-Centered Medical Home (PCMH) with the goal of reforming the healthcare system.

The Patient-Centered Medical Home is a care model for primary care delivery with major objectives including: improving patient outcomes, improving safety and system efficiency and improving patient and staff experiences (Jackson et al., 2012). The PCMH model strengthens the relationship between the provider and the patient which improves the coordination of care (Stroebel, Fuentes & Silver, 2012). By adopting the PCMH model, providers and healthcare organizations realize the quadruple aim: improved patient outcomes, improved patient experience, improved work life satisfaction of care providers and decreased cost of healthcare (American Academy of Family Physicians [AAFP], 2015).

A Midwest integrated primary care clinic was identified as an organization which would benefit from this Doctor of Nursing Practice project to help maintain and/or improve their current PCMH recognition status. In 2014, the integrated primary care clinic successfully

attained Level 2 PCMH recognition from the National Committee of Quality Assurance (NCQA). Since that time, especially in the end of the year 2016, the clinic underwent a large turnover of staff, resulting in many of the PCMH practices dissipating. Therefore, the two-fold clinical question was: (a) What is the current state of knowledge and documentation practices within the organization regarding PCMH? (b) To what extent will a toolkit improve the current documentation practices of staff members regarding PCMH requirements? To answer the clinical question a literature review was conducted and an organizational assessment was performed which revealed that current practice within the integrated primary care practice would benefit from a PCMH toolkit to be utilized by staff within the practice for 2017 and future PCMH submissions.

The Donabedian model and the Plan-Do-Study-Act models guided this quality improvement DNP scholarly project to develop, implement and evaluate the identified evidence-based initiative. A survey was given to staff prior to the implementation of the project which consisted of 10 likert-style questions to assess the knowledge of the staff regarding PCMH. A chart audit was also conducted prior to the project implementation to assess the current PCMH documentation compliance. A PCMH toolkit was then developed based on the needs identified from the pre-intervention questionnaire and audit. An educational session was completed to improve the staff's basic knowledge of PCMH and associated documentation requirements. After a two-week period of time the staff were given a post-intervention questionnaire, identical to the pre-intervention survey, to assess any change in knowledge. A post-intervention chart audit was also performed to assess changes in documentation compliance. Post intervention analysis of the survey responses was performed using a McNemar's Test. When comparing the separate questions, there were two questions with statistically significant changes. Question six

regarding knowledge on where to find resources on PCMH and Question eight regarding knowledge of job expectations specific to PCMH both had significant p values (<0.05). The documentation compliance was also evaluated and analyzed using the SAS statistical software. The results of the chart audits did not give a statistically significant result. If the integrated primary care clinic maintains the utilization of the PCMH toolkit, the knowledge of the staff as well as the PCMH level of recognition may be improved in future years.

Development of a Patient-Centered Medical Home Toolkit at an Integrated Primary Care Clinic

Introduction and Background

One of the largest challenges of health care reform in the United States is expanding access to all residents, while also redesigning the delivery system to provide consistently high-quality care at lower overall cost. Currently the healthcare system is fragmented, lacking the necessary coordination in primary care which would ultimately improve patient care, lower costs, and increase patient satisfaction. Health care spending in the United States far exceeds that of other high-income countries (Squires & Anderson, 2015). In 2013, the U.S. spent 17.1 percent of its gross domestic product (GDP) on healthcare which was almost 50 percent more than the next highest spender noted as France (Squires & Anderson, 2015). While the U.S. spends more on healthcare than other countries, multiple other health outcome measures are worse including life expectancy, heart disease, diabetes, and chronic respiratory illnesses (Squires & Anderson, 2015). In order to address the complex nature of health care there have been multiple models introduced such as the Patient-Centered Medical Home (PCMH) with the goal of reforming the healthcare system.

For this Doctor of Nursing Practice (DNP) scholarly project, the target organization is an integrated primary care practice that is PCMH recognized but has an unstable internal structure resulting in difficulty maintaining recognition. Maintaining and/or improving the current PCMH recognition status may help the organization gain financial stability, improve workflow processes, and increase staff satisfaction while improving overall patient care. With the shift in healthcare reimbursement from fee for service to value based reimbursement, new delivery models specific to the ambulatory care settings have emerged, including the Patient Centered Medical Home Model.

Problem Statement

Improving primary care is an important task central to reforming health care delivery in the United States (Meyers & Clancy, 2009). Although patient-centered primary care once was the mainstay of our health care system, over time the system has become more specialized and technologically advanced (Bodenheimer & Pham, 2010). The current health care system, with its incentives to furnish more care, has resulted in highly fragmented care that emphasizes specialty and acute care over coordinated, patient-centeredness, and population health management (Bodenheimer & Pham, 2010; Dentzer, 2010). The patient-centered medical home (PCMH) is a promising model with intentions to improve primary care efficacy so that it is “accessible, continuous, comprehensive, and coordinated and delivered in the context of family and community” (Peikes et al., 2012, p. 1).

The integrated primary care clinic serves approximately 800 patients with chronic medical and/or mental health conditions. The majority of those patients have Medicare or Medicaid insurance. Within the Clinic are three Medical Providers, one psychiatric Nurse Practitioner, and five licensed master social workers (LMSW) prepared Health Coaches. Currently the Integrated Primary Care Clinic is recognized as a Level 2 PCMH and is due for re-recognition in the fall of 2017. It is important that the integrated primary care clinic remains active in PCMH recognition and continue to practice by the required standards to improve overall patient care. In order to address the need for PCMH maintenance, the clinical questions were: (a) What is the current state of knowledge and documentation practices within the organization regarding PCMH? (b) To what extent will a toolkit improve the current documentation practices of staff members regarding PCMH requirements? A literature review of the PCMH will be discussed in the following section.

Literature Review of the Evidence-Based Initiative

Stange et al. (2010) define PCMH as “a team of people embedded in the community who seek to improve the health and healing of the people in that community” (p. 602). Through the PCMH model, practices strive to achieve a comprehensive model to transform the delivery of health care in the primary setting. This is done by strengthening the relationship between the patient and the primary care provider by improving coordinated care (American Academy of Family Physicians [AAFP], 2015). Through PCMH the patient has access to a physician-led interprofessional team which provides continuous, comprehensive care (Ferrante, Balasubramanian, Hudson, & Crabtree, 2010). The interprofessional team allows the patient to have coordinated care including acute, chronic, preventive, and end-of-life care (Ferrante et al., 2010). PCMH incorporates evidence-based care to improve the quality and safety of care given to patients while enhancing access to care and reducing the cost and spending of healthcare (Ferrante et al, 2010).

The concept of PCMH has roots as early as 1967 when the American Academy of Pediatrics (AAP) first introduced the term “medical home” describing the role of primary care as a repository of medical records for their chronically ill children (Arend, Tsang-Quinn, Levine, & Thomas, 2012). The AAP later expanded the definition of PCMH to include primary care that is accessible, continuous, comprehensive, coordinated, family-centered, and culturally effective (Arend et al., 2012). Obtaining PCMH recognition allows primary care providers and their organizations to achieve concepts outlined in the triple aim: improved patient outcomes, improved patient experiences, and improved value of care (American Academy of Family Physicians [AAFP], 2015). A recent report by the Patient-Centered Primary Collaborative focused on twenty peer-reviewed studies that were published between August 2012 and

December 2013 which summarized the benefits of the PCMH model utilization (Nielson, Langner, Zema, Hacker & Grumbach, 2012). Findings mentioned in the report demonstrated that practices attaining PCMH status exhibited the following improvements: 61% reduction in cost of care (per member per month costs, return on investment, and total cost of care), 61% reduction in Emergency Department or urgent care visits, 31% reduction of inpatient admissions, , 31% improvement in population health, 31% improvement in access to healthcare, 31% improvement in preventative services, 23% improvement in patient satisfaction, and 13% reduction in hospital readmissions (Nielson et al., 2012). A systematic review by Jackson et al. (2013) found that PCMH is a conceptually sound approach to organizing patient care and appears to hold promise, especially for improving the experiences of patients and staff involved in the health care system. As PCMH continues to be defined and explored, core principles of PCMH have been identified in the model.

The Core Principles of PCMH

Comprehensive care. The primary care providers in the medical home are accountable for meeting the individual's physical and mental health care needs, including prevention and wellness, acute care, and chronic care (Agency for Healthcare Research and Quality [AHRQ], 2015). In order to accomplish comprehensive care, an interdisciplinary team of healthcare providers is needed. This team may include physicians, advanced practice nurses, physician's assistants, nurses, pharmacists, social workers, educators, nutritionists, and care coordinators. Comprehensive care can be seen by bringing together large and diverse teams of care providers in order to meet the needs of their patients. Smaller practices may find themselves building virtual teams to link themselves and their patients to other providers and services within their communities (AHRQ, 2015). Integrating behavioral health care into primary care helps to fulfill

the comprehensive care model of the PCMH given that over half of primary care patients have a mental or behavioral health diagnosis, every medical problem has a behavioral health dimension, and most personal care plans require substantial health behavior changes (Baird et al., 2014). By incorporating comprehensive care in primary care it has been shown to lower ED utilization from 33.6 percent to 18.9 percent and increase the number of patients referred for mental health services when the care team included a behavioral health specialist (Nielsen et al., 2014).

Patient-centered care. As PCMH is comprehensive, it takes into consideration the whole person in patient care by providing relationship-based care (AHRQ, 2015). In order to treat the whole person the provider is required to understand and respect each patient's unique needs, culture, values, and preferences. In contrast to focusing on a specific disease or organ system, PCMH centers on the whole person including physical health, behavioral health, oral health and long term care support (Nielsen et al., 2014). Balachandra, Carroll, Fogarty and Finigan (2009) studied the PCMH in action with Vietnamese couples and noted the family and patient centered values were extremely important in obtaining informed consent and developing a trusting relationship between the patients and providers.

Meterko, Wright, Lin, Lowy and Cleary (2010) studied the impact of patient centered care on the patient-physician relationship and subsequent patient health-related behaviors, finding that better patient centered care was associated with a significantly lower hazard of death. They suggested while it is unclear as to why patients with more patient centered care had better outcomes, it is possible that it leads the patients to trust in the system, which in turn motivates patient adherence and actions resulting in better outcomes.

Coordinated care. Providers in the medical home are responsible for coordinating care across all elements among the healthcare system including specialty care, hospitals, home health

care, and community services (AHRQ, 2015). The coordination of care is particularly critical during times of transition between sites of care. Coordination begins to combat fragmentation, deemed the single most detrimental factor harming the quality and integrity of our health care system (Baird et al., 2014). Health care must be coordinated and integrated using shared registries, medical records, decision-making, revenue streams, and shared responsibility for each individual patient's plan of care (Baird et al., 2014). Team-based care and advances in health information technology have led to more reliable systems of referral and transition care management (Arend et al., 2012).

Uncoordinated care has been shown to lead to added costs due to duplicated services, preventable hospital readmissions and overuse of more intensive procedures (Nielson et al., 2014). Bronx Community Accountable Healthcare Network documented recent results from implementing better care coordination and found that hospital readmissions for diabetes complications were reduced by 28 percent, reduced hospital admissions for heart failure (1.46 to 1.2 inpatient admissions per member per year) as well as respiratory (0.41 to 0.32 inpatient admissions per member per year) complications (Nielson et al., 2014).

Accessible services. The medical home provides accessible services with shorter waiting times for urgent care needs, longer in-person office hours, electronic access to members of the care team, and around the clock telephone access (AHRQ, 2015). Enhanced access to care involves a redesigning of the schedule in order to allow patients to access their primary care provider with short notice (Arend et al., 2012). Newer options for patients to communicate with their primary care provider include phone consultations and various forms of electronic communication such as secure messaging to web-based patient portals which allow patients to view and manipulate components of their electronic health record, schedule appointments,

request medication renewals, access health education and disease self-management tools, or find community based resources (Arend et al., 2012).

Access to timely care is important to patients and their families. Researchers from the Pediatric Alliance for Coordinated Care in Boston collected data from physicians and families before and after implementing a PCMH and found that 68.4 percent of families reported it was easier to get the same nurse to talk to, 60.9 percent said it was easier to communicate with their child's doctor, 60.5 percent reported it was easier to get referrals from the doctor, and 61.4 percent said it was easier to get earlier medical care (Nielsen et al., 2014).

Quality and safety. The medical home is optimized by a systems based approach to quality and safety outcomes (Arend et al., 2012). Team members showcase quality improvement by engaging in activities using evidence-based practice and utilizing clinical decision-support tools to help guide shared decision making with patients and families (AHRQ, 2015). Practices achieving PCMH status are expected to demonstrate accountability by participating in a voluntary recognition process, such as that administered by the Blue Cross/Blue Shield (BCBS) or the National Committee for Quality Assurance (NCQA), discussed in the following section (Arend et al., 2012).

The Group Health Cooperative organization collected data from the first two years of their PCMH implementation and discovered that patients had a 2.30 times higher score for quality of doctor-patient interaction according to the Healthcare Effectiveness Data and Information Set (HEDIS) measurement (Nielsen et al., 2014). Increased quality and safety in an organization ultimately leads to better patient outcomes as well as overall decrease in cost. Researchers at the Community Care of North Carolina (CCNC) focused on quality improvement

and found significant cost savings such as a total statewide savings of approximately \$103 million in 2007 (Nielson et al., 2014).

The PCMH Recognition Process

Patient Centered Medical Homes have gained attention recently with many providers, payers, and policymakers promoting and adopting the PCMH model to improve quality, decrease spending, and enhance the essential functioning of primary care (Flieger, 2017). Implementation of the PCMH model requires constant innovation. While becoming PCMH recognized may appear daunting to practices, the overall benefits including financial incentives and reimbursement are great opportunities (National Committee of Quality Assurance [NCQA], 2014). A literature review by Nielson et al. (2012) discussed 13 peer-reviewed and 7 industry-generated articles completed in multiple states that evaluated the PCMH model and its effect on the triple aim outcomes. They showed promising results related to reimbursements and financial incentives. The Colorado Multi-payer PCMH Pilot article reported that every dollar the organization invested, an estimated return on that investment ranged between 2.5:1 and 4.5:1 (Nielson et al., 2012). Further, the BlueCross Blue Shield of Michigan Physician Group Incentive Program reported that practices with full PCMH implementation had savings of \$26.37 per member/per month (PMPM) (Nielson et al., 2012). Another study reviewed about implementation in Pennsylvania revealed that PCMH practices experienced a 160% return on investment (Nielson et al., 2012).

The PCMH is an alternative model to the current U.S. costly and fragmented model of care (NCQA, 2014). Through implementation of the medical home, practices have delivered higher quality care at lower costs while improving the patient-provider relationship (NCQA, 2014). There are options to choose from with becoming PCMH recognized. However, the

National Committee of Quality Assurance (NCQA) PCMH recognition is the most popular and widely used formal assessment program through which practices can gain PCMH designation. For practices to become NCQA-Recognized PCMH, there are six “must-pass” standards which practices must score at least 50 percent to receive recognition. They include the following: patient-centered access, team-based care, population health management, care-management and support, care coordination and care transitions, and performance measurement and quality improvement (NCQA] 2014).

Within the six must-pass elements, a total of 27 factors exist (Rittenhouse, Schmidt, Wu, & Wiley, 2014). When a facility is scored, a total of 100 points are possible (Rittenhouse et al., 2014). A scoring sheet has been provided and is located in Appendix A. It is required to pass all six elements by at least 50%. However, the total points determines what recognition level is granted. Level 1 is granted if 35 to 59 points are awarded, level 2 is granted if 60 to 84 points are awarded and level 3 is granted if 85 to 100 points are awarded (Rittenhouse et al., 2014). The report card and scoring that the NCQA uses to evaluate recognition is located in Appendix A.

The NCQA website provides information for practices to determine if their practice is eligible for PCMH recognition. First, the NCQA provides the standards and guidelines to practices and providers interested in becoming PCMH recognized for free. Within the standards and guidelines are explanations of requirements which every practice must meet to earn recognition status. The NCQA then provides a free 90-minute training session titled “getting on board” (NCQA, 2014). At this point, the organization can decide if it wants to proceed with the PCMH recognition journey (Green, Wendland, Carver, Rinker & Mun, 2012). If the organization desires to continue, it is important for the staff to attend the free standards and guidelines training. Once completed, the organization can begin to transform the practice, which

normally takes between 3 and 12 months. Finally, the practice needs to purchase an Interactive Survey System (ISS) tool and submit the application online. The intent of the ISS survey tool is to support preparation for a NCQA survey. The initial fee for a practice to obtain a survey tool license is \$80 (NCQA, 2016a). There is also application fee of \$550 per clinician for NCQA review and recognition.

The NCQA website provides a list of PCMH certified content experts with their contact information. These professionals have in-depth knowledge of the requirements, the application process and the documentation required for PCMH recognition (NCQA, 2016b). The content experts serve to assist organizations who are re-structuring their staff and site to earn PCMH recognition. Also, the NCQA establishes an engagement phase of PCMH. During this phase, the organization is matched with a NCQA facilitator. The facilitator answers questions, identifies educational needs, and provides approximately 3 check-ins over a 12-month period with the application reviewer before initial recognition is given (NCQA, 2016b).

Integrative Review Regarding PCMH Implementation

Strengths

Cost reduction. The medical home implementation has shown multiple benefits including significant cost reduction. Alexander and colleagues (2015) analyzed the cost and quality benefit of implementing PCMH for 2,218 nonpediatric Michigan primary care practices. Over a three-year data collection period, researchers discovered that those practices with full PCMH implementation were associated with a \$16.73 lower PMPM cost for adult patients as well as an overall 4.6 % increase in quality of care compared to those practices without PCMH implementation (Alexander et al., 2015). Colorado's Multi-Payer PCMH Pilot demonstrated notable reduction in emergency department visits by 15% and inpatient admissions by 18%

which yielded a return on investment of 4.5 dollars for every dollar spent (Bresnick, 2014). In Maryland, a PCMH program revealed a \$98 million savings of healthcare dollars and raised quality scores by nearly 10% in one year (Bresnick, 2014). Also, Fifield, Forrest, Burleson, Martin-Peele and Gillespie (2013) conducted a randomized trial focusing on the quality and efficiency of small practices transitioning to PCMHs. The researchers demonstrated a reduction of 3.8 ED visits per physician per year, which corresponded to savings of \$1,900 per physician per year (Fifield et al., 2013).

Improved patient outcomes and satisfaction. Practices who have implemented the PCMH model have revealed a positive correlation with patient outcomes and satisfaction. In 2012, researchers studied patient satisfaction among Veterans Health Administration patients participating in patient centered medical homes (Nelson et al., 2014). Using the Consumer Assessment of Healthcare Providers & Systems (CAHPS) PCMH survey which scored patient satisfaction on a scale from 0 to 10, where 0 is the worst possible and 10 is the best possible, patients associated with medical homes had a satisfaction rating of 9.33 compared to 7.53 for patients without a medical home (Nelson et al., 2014). In Minnesota, the HealthPartners Medical Group (HPMG) studied patient and consumer satisfaction and determined a significant improvement in satisfaction ratings and had a 5 percent increase in the chronic care quality measurements including diabetes, coronary artery disease, preventive services and generic medication use (Nielson et al., 2012).

An evaluation of 36 family practices implementing the PCMH model demonstrated overall better patient outcomes (Jaén et al., 2010). Specifically, the researchers demonstrated a 5 percent increase for chronic disease management outcomes which included coronary artery disease, hypertension, diabetes, and hyperlipidemia (Jaén et al., 2010). The Medical Home

initiative of Geisinger Health System in Pennsylvania evaluated diabetic quality measures after implementing the PCMH model (Bojadzievski & Gabbay, 2011). Results of their study were an increase in patients with an A1c score <7% (32.2 to 34.8 % of patients), an increase in patients with blood pressure readings <130/80 mmHg (39.7 to 43.9% of patients), and an overall increase in patients meeting all nine quality indicators (2.4 to 6.5% of patients) (Bojadzievski & Gabbay, 2011). Thus, the various reviews of the PCMH model demonstrated improved patient outcomes, satisfaction, and reduced healthcare spending with solid support for restructuring the primary care setting.

Return on investment. The PCMH model implementation requires an investment by practices in order to re-engineer their practice model to gain the overall benefits of PCMH. Investing in something new is always more appealing when there is sound evidence of a positive return on investment (ROI). For care delivery transformation efforts to be successful and sustainable, financial projections for PCMH models must reflect both revenues and expenses for calculating a realistic ROI (Gray & Aronovich, 2016). The Group Health Cooperative of Puget Sound in the Northwest piloted a PCMH and determined the total spending for PCMH enrollees was \$488 PMPM for PCMH patients and yielded an ROI of 1.5:1 (Grumbach & Grundy, 2010). The Geisinger Health System in Pennsylvania also reported saving an estimated 7%, or \$500 per member per year and achieved an ROI of more than 2:1 for its investment in its PCMH model (Grumbach & Grundy, 2010). The University of Pittsburgh Medical Center (UPMC) implemented a PCMH model among ten primary care settings and evaluated its impact on cost, service use, and clinical quality data for two years demonstrating an impressive return on investment of 160 percent (Rosenberg, Peele, Keyser, McAnallen & Holder, 2011).

Barriers

Patient engagement. One of the most significant barriers and/or challenges of PCMH implementation is engagement of the patient population to become active partners in their own health care. Increased patient engagement results in higher levels of trust and reliance on his or her primary care provider instead of turning to the emergency department for care (Bresnick, 2014). In order to promote patient engagement many practices implementing PCMH models have created care manager or care coordinator positions (Green et al., 2012). As noted in the Affordable Care Act, engaging patients in their own health care relies on health literacy, or their ability to obtain, process, communicate, and understand the basic health information and services available to them (Koh, Brach, Harris, & Parchman, 2013). A recent health literacy survey revealed that only 12 percent of Americans are proficient in completing tasks considered as essential to successfully navigate the health system and act on given health information (Koh et al., 2013).

One effective method to address the challenge of patient engagement is to integrate a patient portal discussion into the office visit instead of mailing the information about the patient portal to the patient's home. Researchers in Virginia evaluated eight primary care practices and found that an increase average of 139% of patient portal enrollment among practices occurred when integrating the patient portal discussion during the office visit when compared to the mailed information strategy (Krist et al., 2014). Additionally, patients who take advantage of a patient portal are nearly 2.6 times more likely to remain patients (HealthIT, 2015).

Financial investment. Another notable challenge when implementing PCMH is the financial investment required to re-engineer the practice. The PCMH model is collaborative and requires investors, executives, and clinicians to be aware of everyone's concerns and requirements in order to do what is expected of them for PCMH purposes (Bresnick, 2014). It

takes time and money to train staff, create new positions, and redesign workflow to meet PCMH requirements (Green et al., 2012). A Rhode Island study on PCMH pilot implementation discovered that costs associated with practice transformation included \$30,991 as a one-time cost and \$147,573 in ongoing yearly costs (Colwell, 2016). Of note, more than 60% of those costs accounted for care management activities. Costs approximately between \$23,000 and \$90,000 per physician occur during the PCMH transformation process with most of the cost associated with technology, accounting for a total cost of \$15 per patient per month (Zimlich, 2013). The amount of money needed for change will ultimately depend on the existing Electronic Health Record (EHR) and workflow taking into consideration the amount of time and money needed to enhance the current process.

Time, dedication, and teamwork. Becoming PCMH recognized involves considerable time and dedication from the entire practice staff. The requirements of PCMH may take up to a year and a half for some practices to attain with all of the documentation, reports, and policy changes needed (Bresnick, 2014). Green et al. (2012) suggest one of the challenges of PCMH implementation is promoting physician buy-in. Primary care providers tend to leave the workforce with complaints of being overworked and poorly compensated. That being said, it is difficult to convince the primary care providers to take time out of their already hectic schedules to attend training for PCMH and spend more time documenting in a way which satisfies PCMH recognition standards (Green et al., 2012). PCMH implementation often requires changes be made to the existing structures or processes in practice and those changes may develop over different time intervals. Complex interventions, such as those that require many changes in the organization's process, may need to be introduced in increments and over an extended period of time to demonstrate intended results (Alexander et al., 2015). Also, many staff members may be

resistant to changes or revert to older, familiar ways of workflow which can impede the transformation process.

Best Practices to Attain PCMH Recognition

Attaining PCMH recognition is best achieved by dividing the process into three steps: learn it, earn it, and keep it (NCQA, 2015). These three steps are essential in attaining and sustaining the PCMH model in the primary care organization. While there has been research about the PCMH process, more research is needed to help provide healthcare professionals with guidance of best practices available when they desire to achieve the PCMH recognition.

Learn It.

To successfully become recognized as a PCMH, it is important to learn the processes, standards and guidelines of the model. For an organization to become recognized, it is necessary to determine if the organization site is eligible for PCMH recognition as well as determine which recognition organization will be utilized. Currently, two recognition programs are primarily utilized in Michigan: NCQA and Blue Cross Blue Shield (BCBS). The NCQA recognition program reimburses the Medicaid payers only, while BCBS reimburses Medicare, some Medicaid, and BCBS insured patients. When deciding which recognition program the organization wishes to utilize, the decision should primarily be based on the payer mix of the organization (Alexander et al., 2013). The targeted health clinic in a midsize Midwestern city primarily treats patients with Medicaid and Medicare insurance, therefore the NCQA is an appropriate selection as a recognition organization. The second step in learning the PCMH model to attain is becoming familiar with the standards and guidelines required by the recognition organization. This can be accomplished by reading the published standards and guidelines available without charge on the NCQA website ([NCQA, 2015).

Earn It

During the ‘earn it’ phase of PCMH attainment three things occur: training about NCQA PCMH standards and guidelines to inform staff and patients, transformation of the practice utilizing the NCQA standards and guidelines, and submission of proof documentation with the Interactive Survey System (ISS) tool ([NCQA, 2015]). The amount of time required for each organization to complete this step depends on the existing systems in place and how much transformation is needed to comply with the standards and guidelines. However, typically practices will spend between three and 18 months transforming their organization (NCQA, 2015). The minimum amount of time needed for transformation is three months due to the NCQA standards requirement of a minimum of three months worth of data for many of the NCQA PCMH elements (NCQA, 2016b).

Keep It

Becoming PCMH recognized is quite a cumbersome process as practices transform their patient care model to meet the required NCQA PCMH standards and guidelines. A great amount of time may be spent on training, redesigning workflow, and accumulating a substantial amount of proof documentation for the submission process. However, to maintain PCMH recognition is another goal to achieve. During the ‘keep it’ phase of PCMH attainment the healthcare professionals within the organization should focus on three concepts: promoting of NCQA recognition, upgrading the NCQA recognition status, and maintaining the NCQA recognition status (NCQA, 2016b). As the organization begins to achieve improved financial and health outcomes, it is important to continue to promote the PCMH model of care. By endorsing the PCMH model of care, the providers and organization can continue to promote a safe and

supportive culture, resulting in staff empowerment to identify and suggest new ideas (Zawora, 2011).

Additionally, PCMH is recognized on three different levels which organizations may fall into. Improving the level of PCMH recognition not only improves the organization's incentives and reimbursements, but also improves patient health outcomes due to better practices outlined by adhering to more PCMH standards. Lastly, to maintain PCMH recognition, providers are required to leverage health IT, clinical analytics, and workflow improvements in multiple different areas of practice (Bresnick, 2015). Primary care providers must demonstrate continuous improvement and commitment, which currently includes a recertification every three years (Bresnick, 2015). However, the NCQA PCMH guidelines are moving towards practices applying for recertification annually in hopes to improve practice adherence to the PCMH model (NCQA, 2016c).

Implications for Implementing PCMH

Extensive research has been conducted supporting that health care systems built on a health care delivery model, such as PCMH, deliver more efficient, effective, and equitable care when compared to systems that fail to invest in such systems (Grumbach & Grundy, 2010). However, many experts still question if the current studies suggesting that PCMHs can adequately solve current financial instabilities while improving patient care and outcomes are in fact adequate enough to invest in such a transition in the primary care setting. Grumbach and Grundy (2010) discussed a review of available research of PCMH interventions with the objective to update the public on the most current outcomes of the model. The published review includes studies involving more than a million patients, among multiple diverse practice settings, including private and public payers.

All the studies included in the review had comparable outcomes: improved quality of care, better patient experiences, and reductions in expensive hospital and emergency department utilization (Grumbach & Grundy, 2010). For example, in Florida the Metropolitan Health Networks-Humana the hospital days per 1,000 enrollees was reduced by 4.6% in the PCMH group when compared to an increase of 36% in the control group. Hospital admissions per 1,000 patients also dropped by 3% and emergency room expense was 12.9% lower for the PCMH group compared to the control group (Grumbach & Grundy, 2010). Furthermore, even more evidence is presented which supports that primary care services investing in becoming PCMH recognized produce a net savings in total health care expenditures. For example, the Johns Hopkins Guided Care PCMH Model showed a 24% reduction in total hospital inpatient days, 15% fewer ER visits, 37% decrease in skilled nursing facility days, and an annual net Medicare savings of \$75,000 per PCMH care coordinator in the practice (Grumbach & Grundy, 2010). Also, the Erie County PCMH model decreased duplication of services and tests, lowered hospitalizations rates, as well as accomplished an estimated savings of \$1 million for 1,000 enrollees (Grumbach & Grundy, 2010).

While the evidence above is important and must not be ignored, researchers presenting short-term and long-term outcomes need to be considered. The PCMH model's potential in decreasing emergency room use and hospital readmissions while improving patient health outcomes and satisfaction is well documented (Bresnick, 2016). However, as mentioned as a challenge to PCMH implementation, the initial cost of fulfilling PCMH can be intimidating. For the primary care setting to improve the quality of care a significant investment is required and the ROI is not always instant for providers. The RAND corporation, a nonprofit institution that

helps improve policy and decision-making, reported an initial cost of \$30,991, median annual costs of \$147,573 per practice, \$64,768 per clinician, and \$30 per patient (Colwell, 2016). Another study by Bresnick (2016) reported that the average costs to apply for NCQA 2011 PCMH certification reached nearly \$14,000 per physician. Furthermore, adding care team members such as care coordinators, nurses, and providers to manage increased patient demand for services requires time from the organization and money for training and new salaries. Currently in the U.S. primary care accounts for only six percent of the total health care budget. However, with the investment needed to support PCMH that increases primary care costs to only 7.8% of the health care budget (Bresnick, 2016). By only spending 1.8% more of the budget on the primary care setting, savings are documented in the non-primary expenditures such as reduced emergency department visits and hospital readmissions, PCMH is a good investment.

Conceptual Models

Conceptual models are used to provide a lens or framework to understand populations and phenomena. The Donabedian Model was used to evaluate the healthcare service delivery related to outcomes. The Plan-Do-Study-Act (PDSA) model was used as a framework to inform the implementation of evidence into practice for this project.

The Donabedian Model

The purpose of a conceptual model is to deliver a high level of understanding of the phenomenon of interest while guiding the intervention. The Donabedian model is a conceptual model suggesting that evaluation of care can be evaluated with three dimensions: structure, processes, and outcomes (SPO model) (Donabedian, 1988). The structure component “denotes the attributes of the settings in which care occurs” and includes properties such as finances, facilities, human resources, and equipment (Donabedian, 1988, p. 1745). The process

component identifies how the delivery of care is accomplished including moving the patient through the system, documentation practices, and provider activities (Donabedian, 1988). The outcomes component includes the result of the patient's care, knowledge, behaviors and outcomes as well as overall improvements in population health for the practice.

The Donabedian model was utilized to provide a comprehensive understanding of the implementation and evaluation of the PCMH documentation quality improvement project from the structure of the clinic's staffing model to the process of PCMH education and documentation, and ultimately leading to the outcomes of documentation compliance. The structure of the integrated primary care clinic included the physical infrastructure of the clinic, the staffing composition of the clinic, as well as the certified Electronic Health Record system in place. The processes to consider in the integrated primary care clinic focused primarily on the practice's current documentation system and training/education of staff related to the PCMH required documentation areas. Another process component to consider is the movement of the patient through the office during their visit including which staff they interact with and which staff members are responsible for documenting each aspect of their visit. The outcomes for this quality improvement project included healthcare staff adherence to required PCMH documentation as well as improved knowledge about PCMH requirements. The Donabedian model has been applied to the scholarly project and can be reviewed Appendix B with permission to use in Appendix C.

The PDSA Model

The Plan-Do-Study-Act Model (PDSA) focuses on the development, testing, and implementation of a quality improvement project (Gillam & Siriwardena, 2013). The PDSA cycle is comprised of four cyclical, repeating phases: Plan, Do, Study, and Act. During the

“plan” phase researchers must develop an intended plan for change, make predictions about what will happen and why, and develop a plan to test the implementation including who, what, when, and where factors of how the intervention will occur (Gillam & Siriwardena, 2013). The “do” phase involves the actual action of implementing the change. During the “study” phase of the PDSA model, it is necessary to analyze the data before and after the intervention, compare the data, reflect on what was learned during the intervention, and summarize the findings. (Gillam & Siriwardena, 2013). Finally, during the “act” phase of the model, recommendations for further modifications are considered and made to plan for the complete implementation of successful changes (Gillam & Siriwardena, 2013). The PDSA model has been applied to the scholarly project and can be reviewed in Appendix D with permission to use in Appendix E.

Need and Feasibility Assessment of the Organization/Population

The Model of Organizational Performance and Change (OPC) is a causal model that can be used to help guide leaders through the change process (Burke & Litwin, 1992). The OPC originated in the 1960's and integrated concepts from two organizational development change theories including the Implementation Change Theory and the Change Process Theory (Burke & Litwin, 1992). Porras and Robertson's (1987) Implementation Change Theory refers to the activities which must be undertaken to affect planned change and Woodman's (1989) Change Process Theory refers to the specific changes needed to occur based on the activities taken (Burke & Litwin, 1992). During the early years of the model, researchers agreed that organizational climate was clearly linked to psychological and organizational variables (Burke & Litwin, 1992). Today, the model is widely used to serve as the foundation for identifying underlying variables of a quality management system (Johnson, 2004). Burke and Litwin's model is based on two constructs: culture and climate. Climate is defined as an individual's

perception of how well the organization is managed while culture is viewed from the group level and considers the values and norms within the organization (Burke & Litwin, 1992). Both climate and culture influence the efficacy and receptivity to organizational change (Burke & Litwin, 1992).

The Model of OPC is based on an open-systems theory. The model is composed of twelve interacting, complex organizational variables which greatly impact the organizational structure in different amplitudes (Burke & Litwin, 1992). The model is represented by transformational and transactional factors (Burke & Litwin, 1992). Transformational factors refer to areas in which alteration is likely caused by interaction with environmental forces and may require entirely new behavior sets from the organization's members. This is represented in upper half of the model and includes the following: external environment, individual and organizational performance, mission and strategy, leadership, and organizational culture (Burke & Litwin, 1992). On the other hand, the transactional factors refer to the primary way of alteration via relatively short-term reciprocity among people and groups. Therefore, the lower half of the model includes the transactional variables: structure, management practice, systems, work unit climate, task and individual skills, motivation, individual needs and values, and individual and organizational performance (Burke & Litwin, 1992). See Appendix F for the SWOT analysis including the transactional and transformational factors.

The integrated primary care clinic is situated in a midsized Midwestern city with approximately 15.7% of residents living in rural communities (Community Health Needs Assessment, 2016). The racial composition of the county includes 75.7% White, 10.3% Black or African American, 9.9% Hispanic or Latino, 2.5% Asian, 0.7% American Indian/Alaska Native, and 0.9% from other races (AccessKent, 2016). The median household income is \$52,716 with

approximately 15.3% of persons living in poverty (United States Census Bureau, 2016).

According to the U.S. Census in 2011, the county's population included 11.3% age 65 years of age or older, 11.4% from 55 to 64, 14.2% from 45-54, 12.5% from 35-44, 14.3% from 25-34, 14.7% from 15-24, 14.4% from 5 to 14, and 7.2% under the age of 5 years (AccessKent, 2016). There are 8.0% of individuals with a disability under the age of 65 years and an alarming 10.7% of people under the age of 65 years who do not have health insurance as of 2016 (United States Census Bureau, 2016).

The integrated primary care clinic is located within this county. The clinic is designated as a Federally Qualified Health Center (FQHC). An FQHC is a community-based health center receiving funds from the Health Resources and Services Administration (HRSA) to provide primary care services in underserved areas (HRSA, 2016). The clinic is also designated as a level 2 PCMH, recognized by the NCQA 2014 standards (Heart of the City [HOTC], 2016). The county is a diverse community, with many of the residents uninsured. The clinic is one of the resources available to the county residents with chronic physical or mental health conditions. Within the integrated primary care clinic, the patient population includes Non-Hispanic White (37.0%), Hispanic/Latino (34.0%), Black/African American (28.4%), Asian (2.5%), American Indian/Alaska Native (0.4%), Native Hawaiian/Other Pacific Islander (0.4%), and more than one race (8.6%) (HRSA, 2016). Poverty is a major characteristic of the Clinic. In 2015, 96.8% of Clinic's patients were at or below 200% poverty (HRSA, 2016).

The integrated primary care clinic is a fully integrated health care clinic with a team-based approach to the management of chronic health conditions for individuals who are 18 years of age or older and have at least one chronic health condition (physical or behavioral) (HOTC, 2016). The integrated primary care clinic bases its healthcare delivery on the Chronic Care

Model and strives to completely integrate behavioral and physical health care using internists, a psychiatric nurse practitioner, nurses, health coaches (LMSW's), support coordinators, peer support specialists, medical assistants, and a physician's assistant (HOTC, 2016). The care is individualized per patient and may include services such as: primary care services, individual therapy, supports coordination, nursing services, psychiatric services, treatment groups, and peer support services (HOTC, 2016). Recently, the organization has undergone changes in the leadership positions including the program manager and the director of integration, who are new to their positions as of October 2016. The clinic also has been operating without a nursing supervisor and has experienced frequent turnover of medical assistant staff since the summer of 2016. With the change of leadership within the organization coupled with the commitment to training new support staff there has been a lack of communication between staff which leads to a break down in the original core policies and processes. While clear expectations and descriptions of each position exist at the organizational level, due to the staff turnover there is confusion about the expectations of each role at the practice level.

Through the organizational assessment and literature review it is evident the Clinic needs a quality improvement process to address the documentation practices by the staff for PCMH purposes. Currently, the Clinic utilizes three medical assistants, one part time nurse, five health coaches, two front desk staff, one program manager, three medical providers, and one psychiatric provider for patient care. Recently, the organization has undergone staff turnover so that approximately half of the aforementioned staff are new to the Clinic. Therefore, the new staff are still learning the new job requirements, new staff are training even newer staff members, and delegation with follow through has been failing.

The Clinic is also due for PCMH re-recognition in September of 2017. Through the organizational assessment of the Clinic it has been identified that the staff are unsure of PCMH requirements and the documentation needed to demonstrate adherence to the NCQA PCMH standards. Currently the Clinic is recognized as a level 2 PCMH after receiving 78.25 points during the initial 2014 NCQA survey (HOTC, 2016). Because the Clinic is already a level 2 PCMH, a streamlined process is available for them to focus on a few of the PCMH elements and factors, as specified by the NCQA (2015). In order to achieve level 3 recognition, the Clinic needs to receive a minimum of 85 out of 100 points (NCQA, 2015).

After discussion with the Program Manager as well as the Director of Quality, education of the staff about PCMH documentation was identified as a need. Also, the need for improved knowledge and standard documentation was an acknowledged need to improve patient care as a PCMH. Development of a PCMH toolkit with associated educational material was proposed as a solution. The toolkit is intended to be utilized by staff members including medical assistants, front desk staff, providers, health coaches, and nursing staff. The purpose of the toolkit is to provide staff with documentation guidelines as well as PCMH educational material stating the importance of such documentation in order to improve the documentation compliance and be successful in future PCMH recognition surveys. This project required the time and dedication of the staff to improve PCMH documentation. A visual representation of the organizational assessment was created through a strengths-weakness-opportunities-threats (SWOT) analysis (see Appendix F). Some of the identified barriers to implementing this project included the level of willingness of new staff to learn another process and finding time to train the staff with their already busy schedules due to staffing shortages. However, the strengths of implementing this project included: the eagerness of the new program manager to improve the quality of work done

in the Clinic, the availability of the necessary resources to complete the project, the potential improved overall patient outcomes, the improved documentation practices, and the potential for the Clinic to maintain and/or improve the PCMH level recognition.

Project Plan

Purpose of the Project

The purpose of this DNP scholarly project was to address the NCQA PCMH recognition status of the organization by developing a toolkit to improve PCMH knowledge and documentation compliance of the staff members. Doing so may lead to improved quality outcomes and better patient care documentation. The purpose of the project was addressed by answering two clinical questions: (a) What is the current state of knowledge and documentation practices within the organization regarding PCMH? (b) To what extent will a toolkit improve the current documentation practices of staff members regarding PCMH requirements?

Objectives

Efforts to address the clinical questions and improve PCMH knowledge and documentation practices within the Clinic were evaluated by developing the following objectives (A timeline of project activities is available in Appendix G).

- Development of a toolkit based on the NCQA PCMH documentation requirements that established the necessary documentation, roles of staff members regarding the documentation, where to find the required documentation, and information for future NCQA PCMH recognition surveys was created by June 27th, 2017.
- Addressed the knowledge of the organization's staff through pre-implementation questionnaires and providing information regarding education, documentation, and processes specific to staff documentation by June 27th, 2017.

- Collected and analyzed data through pre-and post-intervention questionnaires and chart audits and presented to the Program Manager and Director of Quality as supporting evidence for sustainability of the documentation toolkit by July 25th, 2017.

Type of Project

The DNP scholarly project was deemed by the Grand Valley State Human Research Review Committee to be a quality improvement (QI) initiative. A QI program is one which includes systematic activities organized and implemented by an organization to assess, monitor, and improve its quality of healthcare (HRSA, 2011). Within a QI framework, the continuous actions of an organization result in quantifiable improvement in services to a target group of patients. Furthermore, a QI initiative considers the organization's resources, activities, and outcomes and is directly linked to the approach of delivery (HRSA, 2011).

Upon completion of the organizational assessment, the organization's current process and knowledge level were evaluated in respect to completing the quality improvement intervention. The complete SWOT analysis can be found in Appendix F but the major findings are noted here:

Strengths. The strengths of the clinic include: the mission of the clinic is consistent with the PCMH model, individual staff are intellectually capable of learning, the organization has resources needed to perform essential tasks, and some of the PCMH standards are being performed with existing systems.

Weaknesses. The weaknesses of the clinic include: staff inconsistencies with following PCMH requirements since the 2014 survey, recent leadership changes, and staff shortages leading to existing staff needing to absorb tasks of other staff members.

Opportunities. The opportunities which exist within the clinic include: creating new systems for completing efficient workflow, enhancing individual tasks and skills, achieving overall better patient outcomes and better coordinated care, and decreasing healthcare costs.

Threats. The threats to implementing the intervention at the clinic include: lack of nursing supervisor in the clinic to train staff and/or assume responsibilities of PCMH, and the new program manager is unsure of what needs to be addressed for PCMH purposes.

Setting and Needed Resources

The setting for implementation of the DNP scholarly project was at an integrated primary care office in a Midwestern city. The resources needed to complete this project included the director of quality and the program manager as liaison for learning the organization's current practices. Other resources included the providers and staff in support of project elements such as the developed toolkit, time needed to educate the staff about the toolkit, being granted access to the Clinic's EHR, and time to gather the data for evaluation before and after the implementation. Additionally, resources such as the support of the program manager and staff members were considered for the continuance and sustainability of the toolkit development.

Design for the Evidence-Based Initiative

The Plan-Do-Study-Act framework served as a tool used to guide the interventions for this project (See Appendix D).

- **Plan:** The plan was to gather evidence on the current state of documentation practices by chart review regarding PCMH by the staff. Charts for date ranges 6/19/2017-6/23/2017 were reviewed. From the review of the charts, the DNP student developed a PCMH documentation toolkit to be utilized by staff members for documentation improvement. Associated educational materials were developed based on the identified areas of

improvement from the chart audits as well as in concordance with the NCQA PCMH guidelines to assist in implementation of toolkit (Appendix H). Survey data was collected before the educational intervention as well as two weeks after the intervention implementation.

- Do: The implementation of this project included gathering data on the current state of PCMH documentation practice by the staff to serve as a baseline for comparison. The DNP student and program manager collaborated with information technology staff to build a report generated from the Electronic Health Record identifying a specific group of patients to be utilized for the NCQA PCMH chart reviews. Staff were educated on the developed PCMH documentation toolkit during the end of one of their daily huddle meetings. The staff were given powerpoint slide presentations as well as presented with the toolkit and associated documents within the toolkit. Data was gathered two weeks after the intervention implementation again utilizing the NCQA chart audit record review workbook guidelines. Staff received feedback on the analyzed data during another huddle meeting after the project was completed.
- Study: The analysis of the before and after staff surveys was conducted using McNemar's Test looking for statistical significance. Results of the data were compiled and presented to the program manager and director of quality.
- Act: Based on the findings from the intervention implementation as evidenced by data analysis, future recommendations were made to improve the PDSA cycle involving PCMH documentation practices within the organization. Suggested changes to the intervention included future PDSA cycles addressing specific areas of identified weakness in PCMH documentation.

Participants

During the implementation phase of the project, the participants included the staff receiving the educational sessions. Almost the entire staff was present and willing to be involved in the toolkit education and complete the questionnaires. This included two medical providers, one psychiatric nurse practitioner, three medical assistants, two nurses, one community resource worker, two front desk staff, and five health coaches. The program manager and director of quality were involved in providing input to the toolkit development and the decision to sustain the toolkit for future utilization by staff members. Indirect participants include the patients who were being audited for the chart documentation analysis.

Measurement: Tools

The tools utilized for this DNP scholarly project included the NCQA provided Record Review Workbook to audit patient charts for documentation compliance. Another tool utilized for this DNP scholarly project was a DNP student developed questionnaire consisting of ten likert-style questions to evaluate staff perception on PCMH, associated documentation, and the usefulness of a PCMH toolkit. Data for analyzing PCMH documentation was gathered by performing a chart audit on 30 randomly selected patients within the organization. Those 30 patients were identified based on criteria defined in PCMH element 4A according to the NCQA guidelines (See Appendix I for NCQA population selection process). The NCQA provides practices with a record review workbook which is used as proof documentation for element 6. The criteria used for selecting patients for review is based on the factors of element 4A which include: behavioral health conditions, high cost/high utilization, poorly controlled or complex conditions, and social determinants of health. After collaborating with the information technology department, a report was built by the DNP student and program manager to

efficiently represent the clinic's patient population. Using the NCQA record review workbook guidelines, patients were randomly selected for chart audits looking for staff documentation compliance of the PCMH standards 3C, 4B, and 4C. The final percentage of correct staff documentation for components of the record review workbook was compared to the initial percentage data gathered. Data collection to support the changes in staff knowledge and perception regarding the PCMH toolkit intervention was gathered using pre- and post-intervention questionnaires (See Appendix J).

Steps for Project Implementation

Please see Appendix G for DNP scholarly project timeline. During the implementation of the project, the DNP student:

- Performed organizational assessment and literature review to guide the design of the formal quality improvement program by January 9, 2017.
- Presented DNP project proposal to DNP project team in written and oral form by May 15, 2017.
- Submitted institution review board (IRB) application by June 6, 2017.
- Obtained IRB approval from university human research review committee by June 6, 2017.
- Presented DNP project proposal to Clinic's Research Team for approval to complete DNP project by June 9, 2017.
- Clinic's Research Team approved DNP quality improvement project by June 9, 2017.
- Built a report to fulfill the NCQA requirements for Element 4A after collaboration with the information technology department and subsequently generated from the EHR system to adequately represent the Clinic's patient population by June 21, 2017.

- Utilized the NCQA standards and guidelines for Element 4A to choose a random population of 30 patients to collect data on staff documentation practices. (See Appendix I for NCQA specific guidelines on choosing the patient population). Appendix K shows an example of the tool used to collect information related PCMH documentation compliance by June 21, 2017.
- The Clinic holds interdisciplinary team huddle meetings daily to discuss the patients' care who are to be seen during that day. All staff members are present during huddle meetings and provided a good opportunity for the DNP student to implement different aspects of the scholarly project. Pre-intervention questionnaires were distributed to staff regarding their current perception of NCQA PCMH documentation during a huddle meeting by June 27, 2017.
- A PCMH documentation toolkit was developed for the integrated primary care practice utilizing data from the staff's questionnaire responses and current literature (See Appendix L) by July 4, 2017.
- Educated the staff through a 20-minute educational session offered during the end of a daily huddle meeting which included the organization's staff. The education session was set up with power-point slides and associated handouts as well as the DNP student's presence. (See Appendix H for education materials) by July 11, 2017.
- The PCMH toolkit was implemented at the integrated primary care practice by providing staff with the physical PCMH documentation toolkit as well as creating a PCMH folder on the staff's company drive which allows everyone to access the material electronically by July 11, 2017.

- After a two-week period of implementation, data were collected and analyzed by utilizing the same NCQA record review procedure as described above. A report was generated to adequately represent the Clinic's patient population by July 25, 2017.
- Post-intervention questionnaires were distributed to staff regarding their new perceptions of PCMH documentation during a huddle meeting when clinical staff were available by July 25, 2017.
- The results of the questionnaires and documentation compliance were reviewed with the staff, the director of quality, and program manager on August 2, 2017.
- Defended the final DNP project at the University on August 15th, 2017.

Project Evaluation

The project evaluation included meeting the project objectives and producing deliverables. Once the PCMH toolkit protocols had been implemented for 2 weeks, data was recollected on the percentage of correct documentation practices regarding PCMH standards and requirements utilizing the same procedure as the initial data collection with the NCQA record review workbook as a guide. The data collected before the implementation was compared to the data collected post-implementation to determine the effectiveness of the toolkit using a paired t-test. Pre- and post-intervention questionnaires were compared to determine changes in staff knowledge and perception of PCMH documentation. Successful attainment of each objective is given below.

- A PCMH documentation toolkit was created and implemented to measure adherence to requirements of NCQA documentation by June 27, 2017.

Outcome measure: The integrated primary care practice's staff, program manager, and director of quality approved the criteria and PCMH toolkit based on current literature and

organizational needs. Data on all measurements related to PCMH documentation was obtained during July 11-July 25, 2017.

- Data reflecting the documentation of PCMH requirements was analyzed after the toolkit implementation using a paired t-test by August 1, 2017.

Outcome measure: Change in required PCMH documentation related to the PCMH documentation toolkit was statistically evaluated.

- The PCMH toolkit data was organized and presented to the program manager and director of quality by August 2, 2017.

Outcome measure: Presentation of data to the program manager and director of quality.

Ethical and Human Subjects Population

The scholarly quality improvement project included contact of human subjects during the DNP scholarly project. All necessary data was collected in a de-identified manner. An application was submitted to the University's Human Research Review Committee for IRB determination. The project did not meet the definition of covered human subject research according to current federal regulations. The project also did not require further review and was approved by the HRRC. The submission to the University's IRB took place on June 6, 2017 and received approval (Appendix M). The Integrated Primary Care Practice also had an internal IRB department which also deemed the project as a quality improvement project rather than human research. A presentation to the Clinic's research department was conducted on June 9, 2017.

Budget

The budget considerations for this project were limited. Instead of cost considerations, the scholarly project was time intensive. The cost of time from the manager and other staff within the organization was included during team meetings where time is already set aside for

team improvement. The program manager approved the DNP student to utilize this time as to minimize the impact to staff's workflow during the rest of the day. Considering the average wages of primary care physicians, physician assistants, nurse practitioners, certified nurse assistants, masters prepared social workers, front desk receptionists, program managers, and office nurses, the cost to educate and evaluate the staff was approximately \$275 (Pay Scale, Inc, 2017a; Pay Scale, Inc, 2017b; Pay Scale, Inc, 2017c; Pay Scale, Inc, 2017d; Pay Scale, Inc, 2017e; Pay Scale, Inc, 2017g; Sokanu, 2017, United States Department of Labor, 2017).

The majority of the cost of time came from the DNP student to design and implement the scholarly project. The DNP student time included the time to develop the quality improvement project, the time to implement the project in the organization, and the time to analyze the data generated during the project implementation. Using a national average for a quality improvement coordinator, the overall cost of the DNP student's time was approximately \$2,212 (Pay Scale, Inc, 2017f). See Appendix N for budget details of various healthcare professionals and DNP student. Other considerations for budget include the room and supplies utilized for the project. Considering the two separate rooms utilized during the project (the conference room for the education and the office for chart audits), and materials needed for the education handouts and toolkit development, the final budget included an additional \$500.44.

Stakeholder Support and Sustainability

The scholarly project and the identified interventions were new to the integrated primary care practice. For the last few years, the practice has gone through their workflow with the safety net of already being PCMH recognized level 2 in 2014. Since the 2014 PCMH survey period, the practice has undergone many changes in staff structure and many of the documentation processes for PCMH requirements are no longer followed. For the scholarly

project implemented, key stakeholders had to agree on a systematic method including protocols to address the PCMH required documentation which allows the practice to maintain and/or improve their PCMH level recognition. The interventions of creating a PCMH toolkit not only improved staff documentation knowledge, but provided the practice with a greater chance of becoming PCMH recognized at a level 2 or 3 status. Ultimately, with the implementation of improved PCMH documentation status and the achievement of level 2 or 3 PCMH status, the practice will provide better coordinated, comprehensive, and cost effective care for their patients (NCQA, 2015).

Currently, the key stakeholders at the Clinic (the program manager, director of quality, and staff) are enthusiastic and supportive of the proposed project. The professionals acknowledged the need for improved PCMH knowledge and documentation and the potential rewards for doing so. The key stakeholders were essential in determining the sustainability of the project as it will be the responsibility of the program manager, director of quality, and other staff members to continue to utilize the PCMH toolkit and make necessary improvements and updates in the future. Engaging the key stakeholders in the process of the development as well as presenting them with the overall findings of the project helped to ensure continued need and sustainability of the PCMH documentation toolkit.

Project Outcomes

The project outcomes were determined during the plan phase of the Plan-Do-Study-Act cycle, specifically during the project proposal to the organization and to the DNP project team. To answer the identified two-fold clinical question, three deliverables were developed: (a) development of a PCMH toolkit (b) education to staff to improve knowledge on PCMH, and (c) improved PCMH documentation by staff members. According to the Donabedian model, each

deliverable impacted the structure, process or outcome components. The PCMH toolkit improved the organization's structure by providing resources to staff. The education about PCMH impacted the organization's process by providing the staff with knowledge and information on what was expected and areas of improvement. The documentation by staff members improved the outcomes for the organization by potentially improving patient care, satisfaction, and efficiency of practices. The three deliverables are described more in detail below.

PCMH Toolkit

- Development of a toolkit based on the NCQA PCMH documentation requirements that established the necessary documentation, roles of staff members regarding the documentation, where to find of the required documentation, and information for future NCQA PCMH recognition surveys was created by June 27th, 2017.

Staff Education and Improved Knowledge

- Addressed the knowledge of the organization's staff through pre-implementation questionnaires and providing information regarding education, documentation, and processes specific to staff documentation by June 27th, 2017.
- Due to a small sample size of 15 staff members completing the questionnaires, statistics were used to analyze the results from the pre- and post-questionnaires. The statistical software, SAS, was utilized to perform McNemar's Test to compare the pre-and post-questionnaires.
- Out of the ten questions on the questionnaire, only two questions were significant for change; Question six with an exact p value of 0.0156 and Question eight with an exact p

value of 0.0313. Question six showed a 46.7% increase in positive responses while question eight showed a 40% increase in positive responses.

- Question 6: I know where to find resources related to PCMH
- Question 8: I understand the expectations for my PCMH documentation
- The remaining questions, while not statistically significant did show an overall positive difference from the pre- to the post-questionnaires, meaning there was an overall increase in perception of staff members.
- Table 1 includes the data for each question pre- and post-intervention implementation.

Table 1

Scoring of Pre- and Post-Intervention Staff Survey

	<u>Question Number</u>									
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6*</u>	<u>7</u>	<u>8*</u>	<u>9</u>	<u>10</u>
Pre-test positive	15	12	5	14	6	3	13	5	10	5
Pre-test negative	0	3	10	1	9	12	2	10	5	10
Post-test positive	15	12	6	14	9	10	14	11	13	10
Post-test negative	0	3	9	1	6	5	1	4	2	5
Exact p-value	--	--	1	--	0.25	0.0156	1	0.0313	0.25	0.0625

*Two Questions were statistically significant

Staff Documentation

- Collected and analyzed data before and after the PCMH toolkit implementation and presented to the Program Manager and Director of Quality as supporting evidence for sustainability of the documentation toolkit by July 25th, 2017.
- The SAS statistical software was again utilized to analyze the data from the pre- and post chart audits due to a sample size of 30 patients as required by the NCQA.
- In order to analyze the different factors within the three elements, the proportion of “yes” answers were compared in the pre- and post- chart audits using a paired t-test. For the purpose of NCQA, any “NA” answer counts towards a “yes”.
- The results were not statistically significant.

- For Element 3C which focuses on the comprehensive health assessment, there was actually a small decrease in the proportion of “yes” answers from the pre- to the post- audits. Ninety-five percent had a “yes” answer in the pre-audit and 94% had a “yes” answer in the post-audit. The majority of the “no” answers were due to the fact that factor 5, advanced care planning, was not addressed with more patients in the second round of audits than in the first.
 - For Element 4B which focuses on Care Management, there was no change due to the fact there were 100% yes answers in both the pre-and post- chart audits.
 - For Element 4C which focuses on Medication Reconciliation and Management, there was a slight increase in the proportion of “yes” answers from the pre- to the post-audits. Eighty-four percent had a “yes” answer in the pre-audit whereas 86% had a “yes” answer in the post-audit.
- Table 2 includes data from the pre- and post-intervention implementation chart audits.

Table 2

Scoring of Pre- and Post-Intervention Chart Audits

	Correct Documentation for Each Element		
	<u>3C</u>	<u>4B</u>	<u>4C</u>
Pre-test	95%	100%	84%
Post-test	94%	100%	86%
t-value	0.82	--	-0.43
Std Deviation	0.1117	0	0.2115

- Recommendations for improvement were suggested to the program manager such as:
 Focus on discussing advanced care planning with patients, giving patients information on new prescriptions and documenting doing so, and ensuring medication reconciliation after care transitions such as ER visits and hospitalizations.

Implications for Practice

The formal implementation of the quality improvement project had implications for the organization and the discipline of nursing. The use of the Donabedian model as a framework for the quality improvement project resulted in a comprehensive approach to PCMH knowledge and documentation improvement by assessing healthcare personnel's compliance to NCQA standards. The organization benefited from the ability to improve overall PCMH knowledge and identify documentation practices to be addressed in the near future, resulting in a potentially higher level of PCMH recognition and better overall patient care. The discipline of nursing was impacted by the presentation and publication of the results of the formal quality improvement project. In addition to the implications for practice, the strengths and successes of the Doctor of Nursing Practice project, weaknesses and difficulties of the DNP project, project sustainability, and project limitations were evaluated.

Strengths and Successes of the Project

There were a number of strengths and successes associated with this DNP scholarly project. The successes of the project included evaluation and assessment of the practice's current PCMH knowledge and the ability to improve that knowledge of the staff. Results showed statistically significant results on two of the ten questions on the survey. The improved perceptions came about by the successful development and implementation of a PCMH toolkit for the staff to utilize. The integrated primary care clinic will be able to use the improved knowledge to maintain or improve the current PCMH recognition level. The toolkit is available in electronic format as well as physical format to all Clinic staff. The program manager and director of quality were essential strengths to the project to allow for access and implementation of the scholarly project. The eagerness and openness of the staff to the scholarly project was also

a strength as the entire staff was interested in learning and improving any areas of practice for the Clinic.

Weaknesses and Difficulties of the Project

There were a number of difficulties associated with the DNP project. The primary difficulty was related to the electronic health record (EHR). Learning the documentation system and practice of the staff was challenging. Selecting the patient population to be used for the chart audits was difficult. After discussing the necessary factors and filtering criteria, the program manager and DNP student had to meet with the information technologists to design and run the report for the Clinic. A significant weakness of the project was the short timeframe for the education and implementation of the DNP project. Only two weeks were available between the educational session and the post-implementation data collection. Due to the short time period, the post-intervention data did not demonstrate change in most areas. Another weakness was the project may have been too broad given the limited evaluation and implementation period. Also, the staff members were also being trained in other areas such as behavioral health, as well as other tasks related to PCMH, which distracted from the DNP student's specific project. These difficulties and weaknesses of the DNP project were related to the limitations of the project.

Limitations

There were several limitations to the DNP scholarly project in the integrated primary care clinic. The project's data analysis was limited by the short, two-week evaluation period. The low number of staff members available for completing the questionnaires was also a limitation. The most significant limitation for the DNP project was perhaps the staff itself. There were numerous newer employees including the program manager as well as absence of significant

staff such as a nursing supervisor. This made the project difficult to implement due to uncertainty of job requirements and responsibilities. Reviewing the strengths, weaknesses and limitations of this PDSA cycle provided helpful information to the integrated primary care clinic to inform future PDSA cycles regarding PCMH improvement.

Project Sustainability

After completion of the DNP project, it was necessary to identify a sustainability plan to maintain the use of the PCMH toolkit developed during the project. The quality improvement project components were integrated into the structure and process of the integrated primary care clinic. The PCMH toolkit was provided in physical format as well as uploaded onto the company's internal folder for the clinic. Multiple formats ensure the availability of the information for all clinic staff when they wish to access the information. The PCMH information may be used in the orientation of new employees to ensure areas of need are addressed as well as give basic PCMH information and expectations for the new staff. The program manager will assume responsibility of the PCMH toolkit and has agreed to make any changes or updates to the material as needed. The following recommendations were suggested by the DNP student to address the project weaknesses and limitations in order to promote the project sustainability:

- Further explore the documentation practices for PCMH by staff members
 - Focus on improving discussion and documentation about advanced care planning, providing information to patients about new prescriptions, and reconciliation of medications following care transitions such as ER visits and hospitalizations.
- Establish an orientation training for PCMH to be incorporated and valued at the beginning of the new staff member's orientation period

- Consider more involvement from the Registered Nurse and/or the future Nursing supervisor with PCMH management

DNP Essentials

The Doctor of Nursing Practice Essentials outline the core competencies that must be included within a DNP program (American Association of Colleges of Nursing [AACN], 2006). All DNP graduates are educated to enter a variety of roles and therefore, the DNP Essentials address the foundational competencies necessary to all nursing practice roles (AACN, 2006). Each Essential will be explored with the purpose of highlighting the evidence of enactment by the DNP student during the DNP scholarly project.

Essential I: Scientific Underpinnings

The first DNP Essential requires the ability to analyze and evaluate knowledge and information from multiple sources and disciplines to improve the delivery of health care to patients (AACN, 2006). The DNP student enacted Essential I by utilizing theories and evaluating current practice approaches at the integrated primary care setting. The literature review and organizational assessment fulfilled this Essential through the analysis and evaluation of the relevant, up-to-date evidence based practice to guide the design for the DNP project.

Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking

The second DNP Essential focuses on organizational and systems leadership to improve patient health outcomes while eliminating health disparities (AACN, 2006). The DNP student enacted Essential II through the evaluation of the organizational assessment and development of a PCMH toolkit to improve the organization's current practice which ultimately improves patient outcomes.

Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice

The third DNP Essential emphasizes the scholarship, application, and translation of research into practice (AACN, 2006). The DNP student exhibited skill in this Essential through the research and development of the literature review of evidence-based practice to guide the project design. The appraised literature was translated and applied to all aspects of the quality improvement project. The DNP student also fulfilled this Essential through the adoption of quality improvement methodologies to guide the project such as the PDSA cycle.

Essential IV: Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care

The fourth DNP Essential requires an aptitude for the utilization of information technology to enhance and support the delivery of healthcare to patients and populations (AACN, 2006). The DNP student demonstrated skill in this Essential by collaborating with the information technologists to create and run an original report to effectively represent the integrated primary care clinic's patient population for the PCMH requirements. The DNP student also generated multiple other reports from the clinic's EHR system during the organizational assessment. The DNP student demonstrated competency in this Essential also through the protection of patient privacy and human rights by using an encrypted hard drive for data storage and applying for and receiving the institutional review board determination.

Essential V: Health Care Policy for Advocacy in Health Care

The fifth DNP Essential includes health care policy for advocacy in health care to design, influence, and implement health care policies through institutional decision making or organizational standards (AACN, 2006). The DNP student exhibited skill in this essential by advocating for the DNP role within the Clinic with interdisciplinary staff members. Also, by

creating a PCMH toolkit, the DNP student was able to affect the workflow of the clinic to improve patient health care.

Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes

The sixth DNP Essential includes interprofessional collaboration within care teams to improve health delivery systems (AACN, 2006). The DNP student enacted this Essential by collaborating with the information technology department to create and generate the report used for chart audits in the DNP project. The DNP student was also able to routinely meet with the key stakeholders from different professional arenas such as the quality department and manager. Additionally, the DNP student collaborated and employed effective communication and collaborative skills to interact with the entire clinic staff including the nurses, medical assistants, health coaches, front desk staff, medical providers, and social worker.

Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health

The seventh DNP Essential involves the capability to approach the provision of health care with an attitude of disease prevention and health promotion for populations (AACN, 2006). The DNP student enacted this Essential through the evaluation and implementation of the PCMH toolkit which provides the organization with information to enhance the PCMH status of the clinic, leading to better patient and population health outcomes.

Essential VIII: Advanced Nursing Practice

The eighth DNP Essential focuses on the expertise of the advanced practice nurses in assessing and understanding the physical, psychological, cultural and socioeconomic aspects of health care (AACN, 2006). This Essential was enacted by the DNP student through the

assessment of the organization and developing an educational training and PCMH toolkit to improve the overall knowledge and documentation skills related to PCMH. The DNP student also evaluated the DNP project and made recommendations for future improvement in the area of PCMH for the integrated primary care clinic.

Dissemination of Outcomes

An essential part of the Doctor of Nursing Practice project is the dissemination of the project outcomes (including the follow-up plan) to the organization and community of scholars. Dissemination of the DNP scholarly project included presentations related to the PCMH toolkit to the key stakeholders at the integrated primary care clinic, the staff of the clinic, as well as to the clinic's research department. The DNP student also presented and defended the scholarly project to the advisory team on August 15th, 2017. The DNP student also submitted the final project to Scholarworks and the university for doctoral project publication. The DNP student may also seek further opportunities to disseminate project outcomes by presenting the project at appropriate conferences.

Conclusion

Current research on health care systems built on a health care delivery model, such as PCMH, suggest that models deliver more efficient, effective, and equitable care when compared to systems that fail to invest in such systems (Grumbach & Grundy, 2010). However, many experts still question if the current studies suggesting that PCMHs can adequately solve current financial instabilities while improving patient care and outcomes are in fact adequate enough to invest in such a transition in the primary care setting. More research is needed to determine the ultimate effectiveness of such care delivery models. For practices already recognized as a PCMH it is necessary to continue providing the expected coordinated, comprehensive, and cost

effective care in order to maintain PCMH recognition (NCQA, 2015). Improving knowledge and documentation not only fulfills the NCQA PCMH standard requirements, but also allows providers to truly consider comprehensive patient care and allow for better coordination of care. With continuation of PCMH recognition and utilization of the tools developed in this DNP project, the integrated primary care clinic can become a better medical home for its patients and provide overall better patient care.

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Appendices

Appendix A

NCQA Scoring

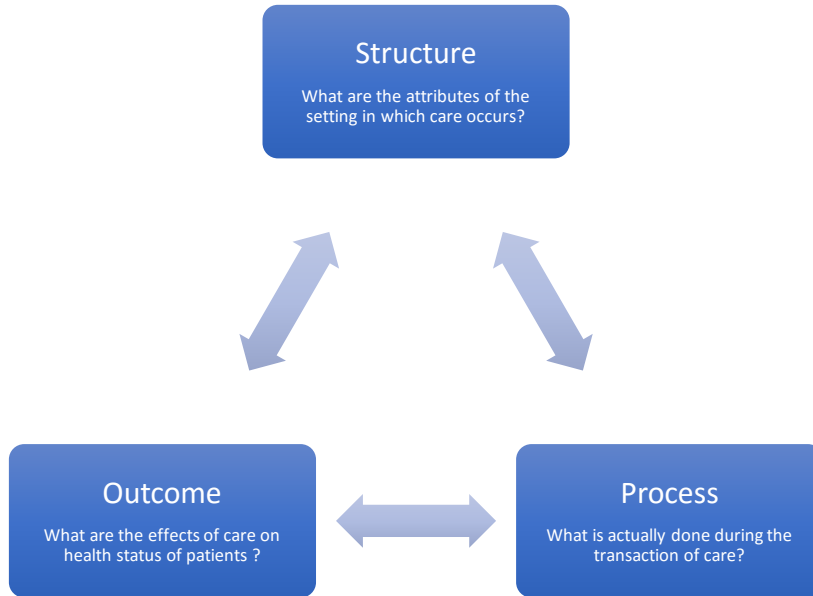
Recognition Level	Required Points	Must-Pass Elements
Level 1	35-59	<ul style="list-style-type: none"> - 6 of 6 elements are required for each level - score for each Must-Pass element must be > or equal to 50%
Level 2	60-84	
Level 3	85-100	

NCQA Standards

Points	Standard Element	Must-Pass=50% Score
10	PCMH 1: Patient-Centered Access	
4.5	Element A Patient-Centered Appointment Access	Must Pass
3.5	Element B 24/7 Access to Clinical Advice	
2	Element C Electronic Access	
12	PCMH 2: Team Based Care	
3	Element A Continuity	
2.5	Element B Medical Home Responsibilities	
2.5	Element C Culturally and Linguistically Appropriate Services (CLAS)	
4	Element D The Practice Team	Must Pass
20	PCMH 3: Population Health Management	
3	Element A Patient Information	
4	Element B Clinical Data	

4	Element C Comprehensive Health Assessment	
5	Element D Use Data for Population Management	Must Pass
4	Element E Implement Evidence-Based Decision Support	
20	PCMH 4: Care Management and Support	
4	Element A Identify Patients for Care Management	
4	Element B Care Planning and Self-Care Support	Must Pass
4	Element C Medication Management	
3	Element D Use Electronic Prescribing	
5	Element E Support Self-Care and Shared Decision Making	
18	PCMH: Care Coordination and Care Transitions	
6	Element A Test Tracking and Follow-Up	
6	Element B Referral Tracking and Follow-Up	Must Pass
6	Element C Coordinate Care Transitions	
20	PCMH 6: Performance Measurement and Quality Improvement	
3	Element A Measure Clinical Quality Performance	
3	Element B Measure Resource Use and Care Coordination	
4	Element C Measure Patient/Family Experience	
4	Element D: Implement Continuous Quality Improvement	Must Pass
3	Element E: Demonstrate Continuous Quality Improvement	
3	Element F Report Performance	

Appendix B: Donabedian Model



1. **Structure**
 Components:
 Federally Qualified Health Center, up-to date equipment, certified Electronic Health Record system in place, newly hired staff, already PCMH recognized. Three medical providers, one part time nurse, and three medical assistants.

2. **Process** Components:
 Assess the practice’s current documentation system and knowledge about PCMH guidelines, educate staff on PCMH including the process and required documentation. The development of the PCMH toolkit will be provided to staff to aid in maintaining PCMH recognition and assist staff in improving their documentation practices.

3. **Outcome**
 Components:
 Improved knowledge about PCMH and the specific roles for documentation of care. Improved staff satisfaction and improved patient care related to the PCMH toolkit provided

Appendix C: Approval to Use Donabedian Model

JAMA

Title: The Quality of Care: How Can It Be Assessed?

Author: Donabedian, Avedis

Publication: JAMA

Publisher: American Medical Association

Date: Sep 23, 1988

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License Number	4153220666878
License date	Jul 20, 2017
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
Format	print
Portion Number of figures/tables/images	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 Patient Centered Medical Home Toolkit for an Integrated Primary Care Practice
Expected completion date	Aug 2017
Requestor Location	Lyndsay Randall 5427 Russell Rd TWIN LAKE, MI 49457 United States Attn: Lyndsay Randall
Publisher Tax ID	36-0727175
Billing Type	Credit Card
Credit card info	Visa ending in 9942
Credit card expiration	03/2019
Total	40.00 USD




Appendix D: PDSA Model




PDSA model used courtesy of The W. Edwards Deming Institute®

Appendix E: Approval to Use PDSA Model

Inquiry reply - use of PDSA model  Inbox x   

 **Bill Bellows** <bill@deming.org> 4:54 PM (1 minute ago) ☆  

to me 

Lyndsay - good afternoon...

Thanks for your inquiry, which I have inserted below:

Comments: I am a GVSU DNP student working on my final scholarly project. For the project I am hoping to utilize the PDSA model as an implementation model for my project of "Development of a Patient Centered Medical Home Toolkit for an Integrated Primary Care Practice". I am hoping to get permission from The Deming Institute to utilize the model.

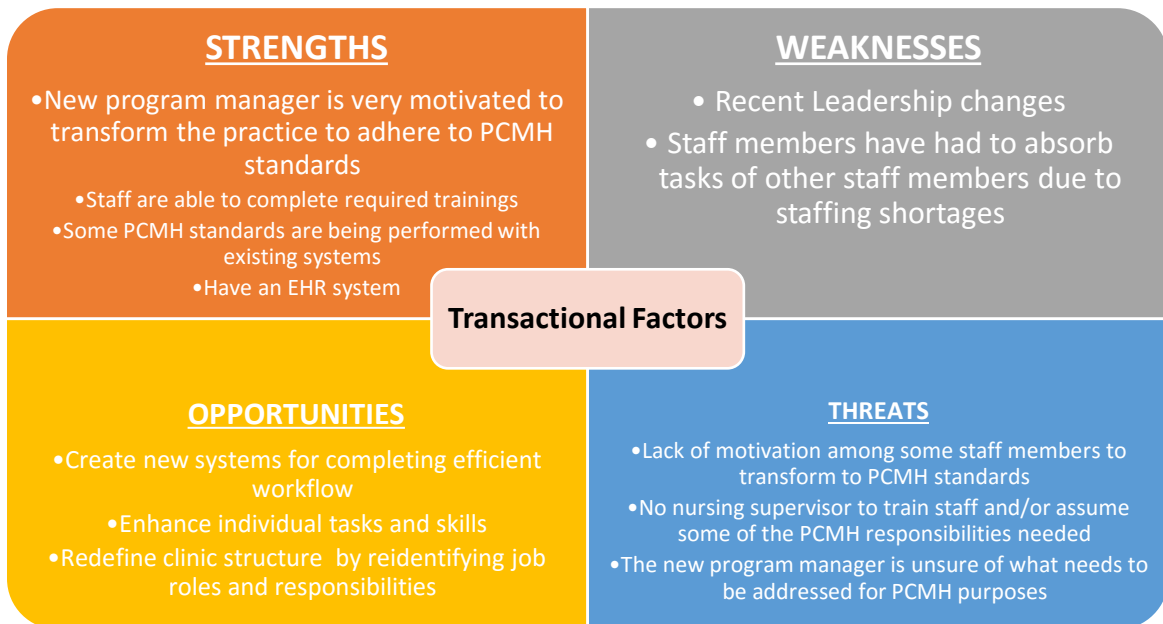
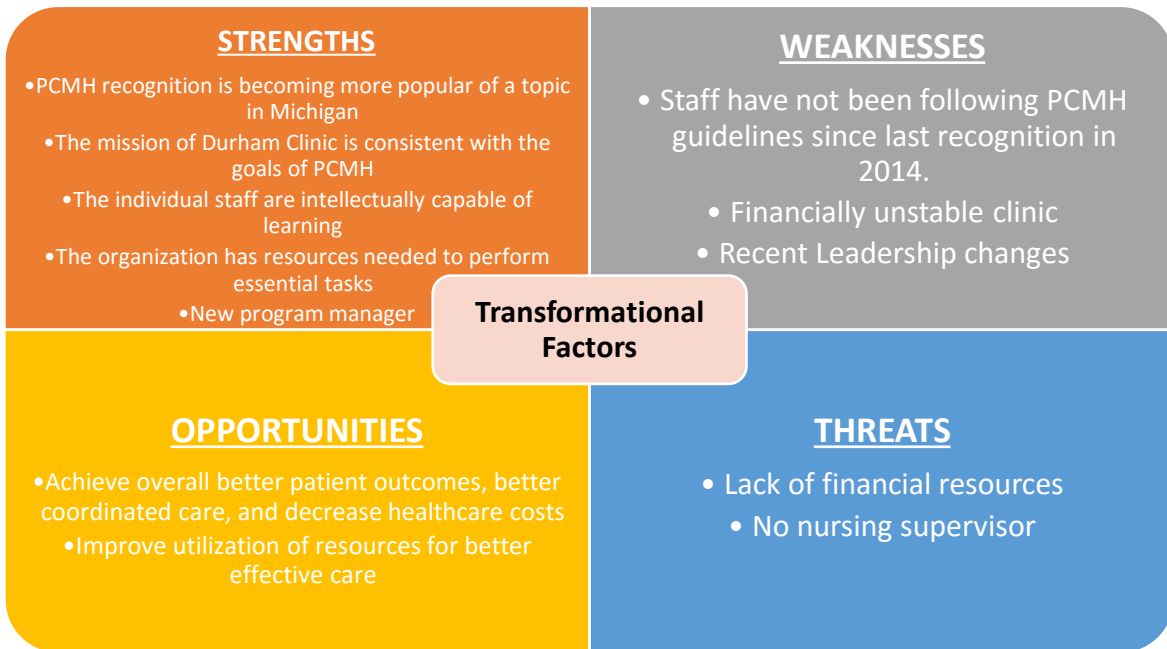
You are also most welcome to use the PDSA model, which you can find at <https://deming.org/management-system/pdsacycle>

All we ask is you include the following statement in your material, "PDSA model used courtesy of The W. Edwards Deming Institute®."

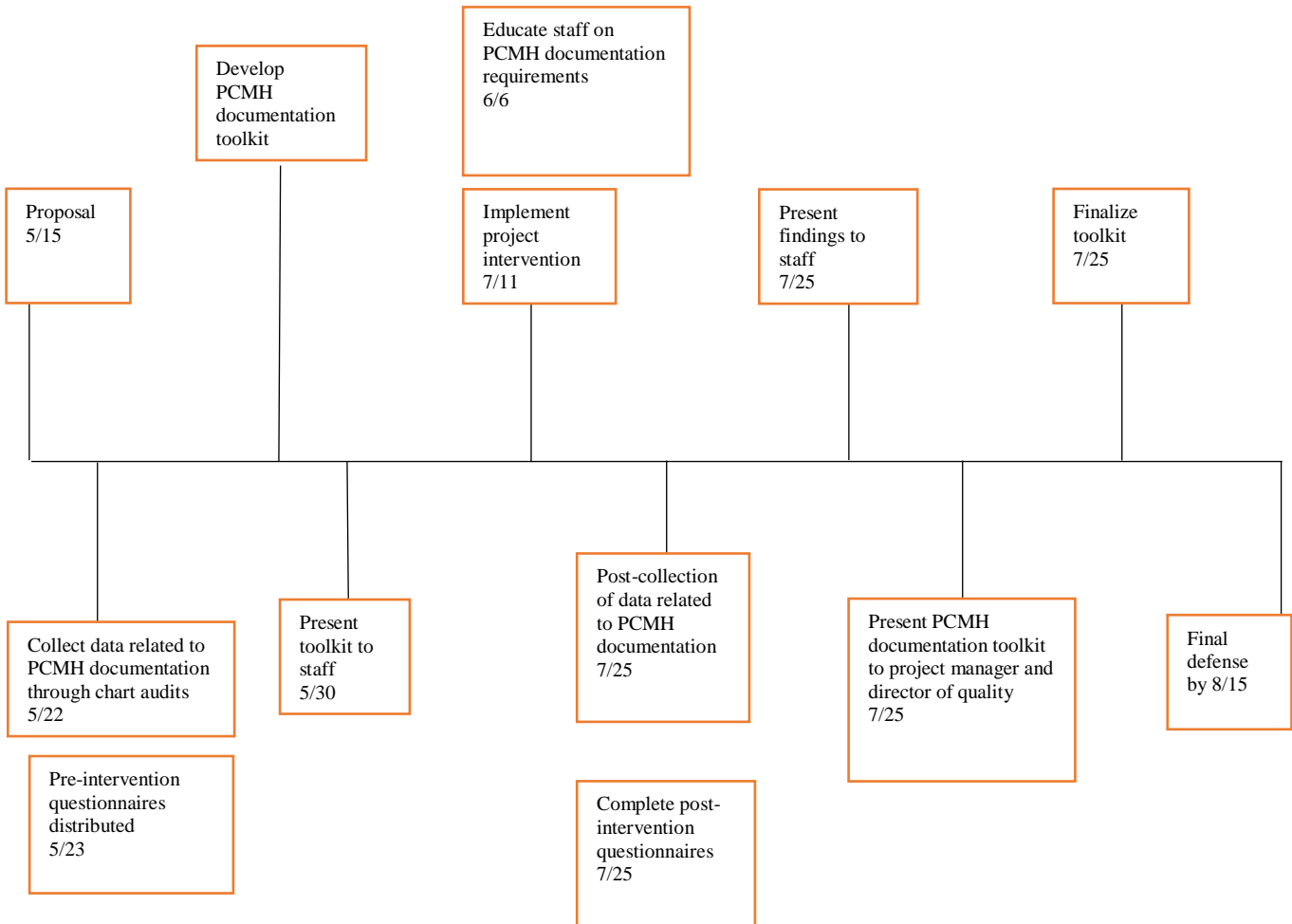
Best...
Bill

Appendix F

SWOT Analysis of the Clinic using Burke and Litwin’s Model of Organizational Performance and Change



Appendix G Implementation of Project Timeline



Appendix H: Staff Education Materials

<h3>The Patient-Centered Medical Home Documentation Toolkit</h3>	<h4>What is a Patient-Centered Medical Home?</h4> <ul style="list-style-type: none"> The Patient-Centered Medical Home (PCMH) is a primary care model with a goal of transforming primary care practices to deliver health care which is by definition patient-centered. PCMH principles include: <ul style="list-style-type: none"> Comprehensive Care <ul style="list-style-type: none"> Interdisciplinary team Patient-Centered Care <ul style="list-style-type: none"> Understanding and treating the whole person respecting their unique culture and values Coordinated Care <ul style="list-style-type: none"> Primary care physician serves as coordinator for all and any specialty services the patient may need Accessible Services <ul style="list-style-type: none"> Providing more options for patients to access their primary care medical home Quality and Safety <ul style="list-style-type: none"> Team members engage in evidence-based practices and participate in continuous quality improvement processes
<h4>The NCQA Recognition Process</h4> <ul style="list-style-type: none"> The National Committee of Quality Assurance (NCQA) is one accrediting body which Durham utilizes to maintain PCMH recognition. According to the current 2014 NCQA guidelines, it is necessary to submit proof documentation every 3 years in order to achieve and maintain PCMH recognition. Practices must follow the 2014 standards and guidelines (summary provided in handout form) Beginning in 2018, the NCQA will require practices to submit documentation annually. 	<h4>Why is this important for me to learn?</h4> <ul style="list-style-type: none"> In order to fulfill the PCMH requirements it is necessary to have complete documentation of what the practice has been doing to show it has been practicing as a PCMH. All staff are essential in providing the documentation that NCQA requires. Having knowledge of PCMH allows for healthcare professionals to be aware of the requirements and provide the necessary patient care and associated documentation.
<h4>Strengths of Current Documentation Practices</h4> <p>Areas Where Documentation is Strong in Durham</p> <ul style="list-style-type: none"> Barriers to care Demographic information Depression screening Identifying treatment goals and self management plan Reconciling medications 	<h4>Weaknesses in Current Documentation Practices</h4> <p>Areas Where Documentation is Not as Clear in Durham</p> <ul style="list-style-type: none"> Advanced Care Planning Information given to patients/families/caregivers on prescriptions Assess Understanding of medications (with dates of assessment)
<h4>How to Improve Documentation for PCMH</h4> <ul style="list-style-type: none"> Enhance your knowledge about PCMH Make it routine in your daily work Be aware of and utilize the available resources in the Clinic Ask questions when you are uncertain of how, where, when, what to document in different situations 	<h4>The PCMH Documentation Toolkit</h4> <p>Outline for PCMH Documentation Toolkit</p> <ul style="list-style-type: none"> Introduction to the Patient-Centered Medical Home <ul style="list-style-type: none"> Overview of the Patient-Centered Medical Home Importance of PCMH Recognition National Committee of Quality Assurance Recognition Process <ul style="list-style-type: none"> NCQA standards and Guidelines Levels of Recognition Current level of Recognition for the Clinic Responsibilities of Staff members for PCMH purposes <ul style="list-style-type: none"> Description of Staff member job and responsibilities for PCMH documentation Quick Resource Guides/Summaries for Staff <ul style="list-style-type: none"> Summary of PCMH elements and associated documentation requirements Document of where the NCQA record review workbook information was found What to Expect Moving Forward
<h4>What Resources Will Be Available?</h4> <ul style="list-style-type: none"> Physical resources <ul style="list-style-type: none"> PCMH documentation toolkit Other coworkers Digital resources (located in a folder on the s:/drive) <ul style="list-style-type: none"> PCMH documentation toolkit Links to the NCQA and AHRO websites 	<h4>Questions?</h4> <p>In the eyes of any outside party:</p>  <p>IF IT WAS NOT DOCUMENTED..... IT DID NOT HAPPEN</p>

HANDOUTS:

NCQA Scoring

Recognition Level	Required Points	Must-Pass Elements
Level 1	35-59	<ul style="list-style-type: none">- 6 of 6 elements are required for each level- score for each Must-Pass element must be > or equal to 50%
Level 2	60-84	
Level 3	85-100	

Table for Renewal Under PCMH 2014

Points	PCMH 2014 Standards and Elements	Documentation or Attestation?
10	PCMH 1: Patient-Centered Access	
4.5	1A: Patient-Centered Appointment Access MUST-PASS	Documentation
3.5	1B: 24/7 Access to Clinical Advice	Attestation
2	1C: Electronic Access	Attestation
12	PCMH 2: Team-Based Care	
3	2A: Continuity	Attestation
2.5	2B: Medical Home Responsibilities	Attestation
2.5	2C: Culturally and Linguistically Appropriate Services (CLAS)	Attestation
4	2D: The Practice Team MUST-PASS	Documentation
20	PCMH 3: Population Health Management	
3	3A: Patient Information	Attestation
4	3B: Clinical Data	Attestation
4	3C: Comprehensive Health Assessment	Documentation
5	3D: Use Data for Population Management MUST-PASS	Documentation
4	3E: Implement Evidence-Based Decision-Support	Attestation
20	PCMH 4: Care Management and Support	
4	4A: Identify Patients for Care Management	Documentation
4	4B: Care Planning and Self-Care Support MUST-PASS	Documentation
4	4C: Medication Management	Documentation
3	4D: Use Electronic Prescribing	Attestation
5	4E: Support Self-Care and Shared Decision-Making	Attestation
18	PCMH 5: Care Coordination and Care Transitions	
6	5A: Test Tracking and Follow-Up	Attestation
6	5B: Referral Tracking and Follow-Up MUST-PASS	Documentation
6	5C: Coordinate Care Transitions	Attestation
20	PCMH 6: Performance Measurement and Quality Improvement	
3	6A: Measure Clinical Quality Performance	Attestation
3	6B: Measure Resource Use and Care Coordination	Documentation
4	6C: Measure Patient/Family Experience	Attestation
4	6D: Implement Continuous Quality Improvement MUST-PASS	Documentation
3	6E: Demonstrate Continuous Quality Improvement	Documentation
3	6F: Report Performance	Attestation
0	6G: Use Certified EHR Technology	N/A

Appendix I: NCQA's Patient-Centered Medical Home (PCMH) 2014

Record Review Workbook (RRWB) General Instructions Updated 3.28.16

Purpose of the Record Review Workbook

There are three elements in PCMH 2014 that require an accurate estimate of the percentage of patients for whom the practice has documented the required information in its medical records. The RRWB calculates the data entered and scores each factor based on a sample of patient records. The elements are: **PCMH 3C—Comprehensive Health Assessment: PCMH 4B—Care Planning and Self-Care Support: Must-Pass Element PCMH 4C—Medication Management: Factor 1 is a Critical Factor and thus required for the practice to score any points for PCMH 4C.** Refer to each element in the PCMH 2014 Standards and Guidelines for details about scoring PCMH 3C, 4B, and 4C.

Step 3: Select patient records for review.

1. Identifying Patients for Care Management (PCMH 4A)

The intent of the element is that the practice uses defined criteria to identify true vulnerability—a single criterion, such as cost, may not be an appropriate indicator of need for care management. **Factor 6 is a critical factor and is required for practices to receive a score above 0% on this element.** Although patients can be identified for care management by diagnosis or condition, the emphasis of care must be on the whole person over time and managing all of the patient's care needs. The practice adopts evidence-based guidelines and uses them to plan and manage patient care.

The practice may identify patients through a billing or practice management system or electronic medical record; through key staff members; or through profiling performed by a health plan, if profiles provided by the plan represent at least 75 percent of the patient population. The practice considers how its comprehensive health assessment (PCMH 3, Element C) supports establishing criteria and a systematic process for identifying patients for care management. The practice receives credit for each factor (1–5) included in its criteria for identification of patients for care management. A patient may fall into more than one category (factor) and may be included in some or all of these counts. The practice uses criteria to create a registry of patients identified as likely to benefit from care management. There may be more than one set of processes and criteria to identify specific types of patients.

2. Number of Patients You will be selecting 30 patients identified as appropriate for care management and who had a **care visit related to the selection criteria defined in PCMH 4 Element A.** These will be the patients reviewed in your medical record review. You will review the same 30 patient files for all three of the elements in this

Record Review Workbook. There must be a total of 30 patients. **The identified criteria for the patients in the sample must match those identified in PCMH 4 Element A.**

3. Patient Selection Patient Selection Using Visit Date Choose patients meeting the criteria from PCMH 4 Element A, based on visit dates. Go back one month from the date you are selecting your patient sample and choose the weekday nearest that date. Select the first 30 patients who meet the criteria from PCMH Element 4A and who had a care visit related to any one or more of the selected criteria. Continue to go back one day at a time until you have identified 30 patients for your sample. **Patient Selection Using Another Method of Random Selection** Any other method of random selection of patients must be pre-approved by NCQA. The requisite number of 30 patients still applies.

4. Data collection period The practice may go back 12 months (with a 2-month grace period) for documentation of each item in the patient's medical record for Elements 4B and 4C. The practice determines how often information is updated in Element 3C, based on evidence-based guidelines.

5. Create and Keep a List of Patients Using any unique identifiers you use internally, create a list and number the patients you have selected with the criteria sequentially from 1-30. Patients can be entered in the Record Review Worksheet in this order.

IMPORTANT: KEEP THIS MASTER LIST IN CASE YOUR PRACTICE IS AUDITED, BUT DO NOT SEND IT TO NCQA.

Appendix I: Documentation Criteria for Elements 3C, 4B, and 4C**NCQA RECORD REVIEW WORKBOOK REQUIREMENTS****3C: COMPREHNSIVE HEALTH ASSESSMENT**

- 1-Age/Gender appropriate immunizations and screenings
- 2-Family/Social/Cultural characteristics
- 3-Communication Needs
- 4-Medical History of patient and family
- 5- Advanced Directive
- 6-Behaviors affecting Health
- 7-Mental health/substance use history of patient and family
- 8-Developmental History (Pediatric populations only)
- 9-Depression Screening for adults and adolescents using a standardized tool
- 10-Assessment of health literacy

4B: CAREPLANNING AND SELF CARE SUPPORT

- 1-Patient preferences and functional/lifestyle goals
- 2-Identified treatment goals
- 3-Assess and addresses potential barriers to meet goals
- 4- Include a self-management plan
- 5-Plan provided in writing to the patient/family/caregiver

4C: MEDICATION MANAGMENT

- 1/2-Medication reconciliation for patients of care transitions
- 3-New prescription information provided to patients
- 4-Assess understanding of meds
- 5-Assess patient response to meds
- 6-Document over-the-counter medications, herbal therapies and supplements

Appendix J

Education Pre-and Post Assessment PCMH Tool Kit Evaluation

For each of the statements below, circle the response that best characterizes how you feel about the statement, where 1= Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5=Strongly Agree

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1 I understand the goal of the PCMH model	1	2	3	4	5
2 I know the core principles of PCMH	1	2	3	4	5
3 I understand what NCQA stands for	1	2	3	4	5
4 I understand why it is important for me to learn about PCMH	1	2	3	4	5
5 I am confident in my documentation abilities for PCMH purposes	1	2	3	4	5
6 I know where to find resources related to PCMH	1	2	3	4	5
7 I believe a PCMH documentation toolkit will help my documentation abilities for PCMH purposes	1	2	3	4	5
8 I understand the expectations for my PCMH documentation	1	2	3	4	5
9 I feel comfortable asking questions about PCMH documentation to other staff members	1	2	3	4	5
10 I believe there are more barriers than strengths which exist to providing accurate PCMH documentation	1	2	3	4	5

Appendix L: PCMH Toolkit



**Patient
Centered
Medical Home
Toolkit**

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- C. 2017 PCMH Scoring
- D. Crosswalk for 2014-2017 Guidelines
- E. Glossary of PCMH Terms

Introduction to the Patient Centered Medical Home

Overview of the Patient Centered Medical Home

The concept of PCMH has roots as early as 1967 when the American Academy of Pediatrics (AAP) first introduced the term “medical home” describing the role of primary care as a repository of medical records for their chronically ill children (Arend, Tsang-Quinn, Levine, & Thomas, 2012). The AAP later expanded the definition of PCMH to include primary care that is accessible, continuous, comprehensive, coordinated, family-centered, and culturally effective (Arend et al., 2012). Obtaining PCMH recognition allows primary care providers and their organizations to achieve concepts outlined in the triple aim: improved patient outcomes, improved patient experiences, and improved value of care (American Academy of Family Physicians [AAFP], 2015).

Importance of PCMH Recognition

Cost reduction. The medical home implementation has shown multiple benefits including significant cost reduction. Alexander and colleagues (2015) analyzed the cost and quality benefit of implementing PCMH for 2,218 non-pediatric Michigan primary care practices. Over a three-year data collection period, researchers discovered that those practices with full

PCMH implementation were associated with a \$16.73 lower PMPM cost for adult patients as well as an overall 4.6 % increase in quality of care compared to those practices without PCMH implementation (Alexander et al., 2015). Colorado's Multi-Payer PCMH Pilot demonstrated significant reduction in emergency department visits by 15% and inpatient admissions by 18% which yielded a return on investment of 4.5 dollars for every dollar spent (Bresnick, 2014).

Improved patient outcomes and satisfaction. Practices who have implemented the PCMH model have revealed a positive correlation with patient outcomes and satisfaction. In 2012, researchers studied patient satisfaction among Veterans Health Administration patients participating in patient centered medical homes (Nelson et al., 2014). Using the CAHPS PCMH survey which scored patient satisfaction on a scale from 0 to 10, where 0 is the worst possible and 10 is the best possible, patients associated with medical homes had a satisfaction rating of 9.33 compared to 7.53 for patients without a medical home (Nelson et al., 2014). In Minnesota, the HealthPartners Medical Group (HPMG) studied patient and consumer satisfaction and determined a significant improvement in satisfaction ratings and had a 5 percent increase in the chronic care quality measurements including diabetes, coronary artery disease, preventive services and generic medication use (Nielson et al., 2012).

Also, an evaluation of 36 family practices implementing the PCMH model demonstrated overall better patient outcomes (Jaén et al., 2010). Specifically, the researchers demonstrated a 5 percent increase for chronic disease management outcomes which included coronary artery disease, hypertension, diabetes, and hyperlipidemia (Jaén et al., 2010). The Medical Home initiative of Geisinger Health System in Pennsylvania evaluated diabetic quality measures after implementing the PCMH model (Bojadziewski & Gabbay, 2011). Results of their study were an increase in patients with an A1c score <7% (32.2 to 34.8 % of patients), an increase in patients

with blood pressure readings <130/80 mmHg (39.7 to 43.9% of patients), and an overall increase in patients meeting all nine quality indicators (2.4 to 6.5% of patients) (Bojadziewski & Gabbay, 2011). Thus, the various reviews of the PCMH model demonstrated improved patient outcomes, satisfaction, and reduced healthcare spending and fully supports the restructuring of the primary care setting.

Return on investment. The PCMH model implementation requires an investment of practices in order to re-engineer their practice model to gain the overall benefits of PCMH. Investing in something new is always more appealing when there is sound evidence of a positive return on investment (ROI). For care delivery transformation efforts to be successful and sustainable, financial projections for PCMH models must reflect both revenues and expenses for calculating a realistic ROI (Gray & Aronovich, 2016). The Group Health Cooperative of Puget Sound in the Northwest piloted a PCMH and determined the total spending for PCMH enrollees was \$488 PMPM for PCMH patients and yielded an ROI of 1.5:1 (Grumbach & Grundy, 2010). The Geisinger Health System in Pennsylvania also reported saving an estimated 7%, or \$500 per member per year and achieved an ROI of more than 2:1 for its investment in its PCMH model (Grumbach & Grundy, 2010). The University of Pittsburgh Medical Center (UPMC) implemented a PCMH model among ten primary care settings and evaluated its impact on cost, service use, and clinical quality data for two years demonstrating an impressive return on investment of 160 percent (Rosenberg, Peele, Keyser, McAnallen & Holder, 2011).

National Committee of Quality Assurance (NCQA) Recognition

Process

NCQA standards and Guidelines

In order to obtain PCMH status it is necessary to be recognized by a reputable organization such as the National Committee of Quality Assurance (NCQA) or the Blue Cross Blue Shield of Michigan (BCBSM). Choosing the correct accrediting organization for a specific practice depends on the types of insurance covered at the practice. While there are a few options for choosing the accrediting body to recognize a practice's PCMH status, Durham Clinic utilizes the NCQA because the majority of its patients have Medicare/Medicaid insurance rather than the Blue Cross/Blue Shield insurance. The NCQA is a private, not-for-profit organization dedicated to improving health care quality. Since its inception in 1990, NCQA has been a central figure in driving improvement throughout the health care system, helping to elevate the issue of health care quality to the top of the national agenda. According to the current 2014 NCQA guidelines, it is necessary to submit proof documentation every 3 years in order to achieve and maintain PCMH recognition. Practices must follow the 2014 standards and guidelines (summary provided in handout form). Beginning in 2018, the NCQA will require practices to submit documentation annually.

Levels of Recognition

The PCMH is an alternative model to the current U.S. costly and fragmented model of care (NCQA, 2014). Through implementation of the medical home practices have delivered higher quality care at lower costs while improving the patient-provider relationship (National Committee of Quality Assurance [NCQA], 2014). There are options to choose from with

becoming PCMH recognized. However, the National Committee of Quality Assurance (NCQA) PCMH recognition is the most popular and widely used formal assessment program which practices can gain PCMH designation. For practices to become NCQA-Recognized PCMH, there are 6 “must-pass” standards which practices must score at least 50 percent to receive recognition and include the following: patient-centered access, team-based care, population health management, care-management and support, care coordination and care transitions, and performance measurement and quality improvement (National Committee of Quality Assurance [NCQA], 2014).

Within the 6 must-pass elements, a total of 27 elements exist (Rittenhouse, Schmidt, Wu, & Wiley, 2014). When a facility is scored, a total of 100 points are possible (Rittenhouse et al., 2014). The scoring is broken down as follows:

Recognition Level	Required Points	Must-Pass Elements
Level 1	35-59	<ul style="list-style-type: none"> - 6 of 6 elements are required for each level - score for each Must-Pass element must be > or or equal to 50%
Level 2	60-84	
Level 3	85-100	

It is required to pass all 6 elements by at least 50%. However, the total points determines what recognition level is granted. Level 1 is granted if 35 to 59 points are awarded, level 2 is granted if 60 to 84 points are awarded and level 3 is granted if 85 to 100 points are awarded (Rittenhouse et al., 2014).

Current level of Recognition for the Clinic

In 2014 HOTA Durham Clinic applied for PCMH recognition for the first time. During that submission period Durham Clinic was able to become a level 2 recognized PCMH. The NCQA scored Durham Clinic a total of 78.25 points out of a possible 100 points. In order to achieve level 3 recognition status the practice needed 6.75 more points.

Responsibilities of Staff members for PCMH purposes

Medical Assistant. The Medical Assistant is responsible for the following tasks to follow

PCMH requirements:

- Documenting the following:
 - Family/social/cultural characteristics
 - Communication Needs
 - Medical History of Patient and Family
 - Advanced Care Planning
 - Behaviors affecting health
 - Mental Health/Substance Abuse History of Patient and Family
 - Providing Plan in Writing to Patient/Family/Caregiver
 - Reviews and reconciles medications patients received from care transitions
 - Review and reconcile medications with patients/families of care transitions
 - Provide information about new prescriptions to patients/families/caregivers
 - Document over-the-counter medications, herbal therapies and supplements
- Running Reports according to the Clinic's Policies and make follow up calls as needed:

- Diabetic Measures
- Referrals
- No Shows
- Not Recently Seen
- Mammogram Screening
- Colonoscopy Screening
- Cervical Cancer (Papsmear) Screening
- Influenza/HPV Screening
- Scan in information received from other specialty/referral offices

Front Desk (PRS). The PRS staff are responsible for the following tasks related to

PCMH:

- Documenting the following:
 - Family/social/cultural characteristics
 - Communication Needs
 - Provide information about new prescriptions to patients/families/caregivers
- Assist in Running Reports according to the Clinic's Policies and make follow up calls as needed:
 - Diabetic Measures
 - Referrals
 - No Shows
 - Not Recently Seen
 - Mammogram Screening
 - Colonoscopy Screening
 - Cervical Cancer (Papsmear) Screening
 - Influenza/HPV Screening
- Updating Patient information:
 - Insurance
 - Demographic Information
 - Preferred Language
 - Communication Needs/Barriers

Health Coach. The Health Coach is responsible for documenting the following tasks

related to PCMH:

- Family/social/cultural characteristics
- Communication Needs
- Medical History of Patient and Family
- Advanced Care Planning
- Behaviors affecting health
- Mental Health/Substance Abuse History of Patient and Family
- Depression Screening using a Standardized Tool
- Assessment of Health Literacy
- Patient Preferences and functional/lifestyle goals addressed
- Identify Treatment Goals
- Address barriers to meeting goals
- Including a Self-Management Plan
- Providing Plan in Writing to Patient/Family/Caregiver

Nurse. The Nurse is responsible for the documenting the following aspects of PCMH:

- Family/social/cultural characteristics
- Communication Needs
- Medical History of Patient and Family
- Advanced Care Planning
- Behaviors affecting health
- Mental Health/Substance Abuse History of Patient and Family
- Depression Screening using a Standardized Tool
- Assessment of Health Literacy
- Patient Preferences and functional/lifestyle goals addressed
- Identify Treatment Goals
- Address barriers to meeting goals
- Including a Self-Management Plan
- Providing Plan in Writing to Patient/Family/Caregiver
- Reviews and reconciles medications patients received from care transitions
- Review and reconcile medications with patients/families of care transitions
- Provide information about new prescriptions to patients/families/caregivers
- Assess understanding of medications
- Assess response to medications and barriers to adherence for patients
- Document over-the-counter medications, herbal therapies and supplements

Medical Provider. The Medical Provider is responsible for documenting and/or ensuring the following factors are documented for PCMH:

- Family/social/cultural characteristics
- Communication Needs
- Medical History of Patient and Family
- Advanced Care Planning
- Behaviors affecting health
- Mental Health/Substance Abuse History of Patient and Family
- Depression Screening using a Standardized Tool
- Assessment of Health Literacy
- Patient Preferences and functional/lifestyle goals addressed
- Identify Treatment Goals
- Address barriers to meeting goals
- Including a Self-Management Plan
- Providing Plan in Writing to Patient/Family/Caregiver
- Reviews and reconciles medications patients received from care transitions
- Review and reconcile medications with patients/families of care transitions
- Provide information about new prescriptions to patients/families/caregivers
- Assess understanding of medications
- Assess response to medications and barriers to adherence for patients
- Document over-the-counter medications, herbal therapies and supplement

Quick Resource Guides/Summaries

2014 NCQA PCMH Standards

Points	Standard Element	Must-Pass=50% Score
10	PCMH 1: Patient-Centered Access	
4.5	Element A Patient-Centered Appointment Access	Must Pass
3.5	Element B 24/7 Access to Clinical Advice	
2	Element C Electronic Access	
12	PCMH 2: Team Based Care	
3	Element A Continuity	
2.5	Element B Medical Home Responsibilities	
2.5	Element C Culturally and Linguistically Appropriate Services (CLAS)	
4	Element D The Practice Team	Must Pass
20	PCMH 3: Population Health Management	
3	Element A Patient Information	
4	Element B Clinical Data	
4	Element C Comprehensive Health Assessment	
5	Element D Use Data for Population Management	Must Pass
4	Element E Implement Evidence-Based Decision Support	
20	PCMH 4: Care Management and Support	
4	Element A Identify Patients for Care Management	

4	Element B Care Planning and Self-Care Support	Must Pass
4	Element C Medication Management	
3	Element D Use Electronic Prescribing	
5	Element E Support Self-Care and Shared Decision Making	
18	PCMH: Care Coordination and Care Transitions	
6	Element A Test Tracking and Follow-Up	
6	Element B Referral Tracking and Follow-Up	Must Pass
6	Element C Coordinate Care Transitions	
20	PCMH 6: Performance Measurement and Quality Improvement	
3	Element A Measure Clinical Quality Performance	
3	Element B Measure Resource Use and Care Coordination	
4	Element C Measure Patient/Family Experience	
4	Element D: Implement Continuous Quality Improvement	Must Pass
3	Element E: Demonstrate Continuous Quality Improvement	
3	Element F Report Performance	

PCMH DOCUMENTATION HINTS

The following section provides information on PCMH and required documentation for the 2014 Standards and Guidelines. Within NextGen are multiple areas where each factor may be found to meet the requirements. Areas which need improvement are in Italics.

3C-COMPREHNSIVE HEALTH ASSESSMENT

1-Age/Gender appropriate immunizations

- Immunization template, Care Sentry, MICR

2-Family/Social/Cultural

- Histories tab

3-Communication Needs

- Care Management documentation, LMSW assessment documentation, EHR Alert, Preventative Exam/Wellness documentation

4-Medical History

- Histories

5- *Advanced Directive*

- Care Management documentation, Advanced Directive tab

6-Behaviors affecting Health- (dental, 2nd hand smoke etc)

- Social history-Tobacco CS-bottom

7-Family history of mental health substance Abuse

- Behavioral Health Assessment, Social Histories

8-Depression Screening

- Histories- Screening Tools Tab, Care Sentry

10-Health Literacy

- care management documentation, “verbalized understanding”, PCP notes re: issues w/ health literacy

4B-CAREPLANNING AND SELF CARE SUPPORT

1-Patient preferences and functional goals

- care management, behavioral health notes, provider treatment goals, scanned care management goal

2-Identified treatment goals

- Patient Plan, LMSW treatment goals

3/4-Assess and addresses barriers

- care management documentation, LMSW documentation, provider documentation about non-compliance w/ meds etc

5-Patient plan provided

- generated document

4C-MEDICATION MANAGMENT

1/2-Med reconciliation

- med module or intake – Medication reconciliation box checked

3-*New Prescription Information*

- print drug handout, provider Master documentation, LMSW documentation re: BH meds, pharm visit, care management visit

4-*Assess understanding of medications*

- In provider documentation, Care management note

5-Assess patient response to medications

- In provider documentation, Care management note, LMSW note

6-Document OTC meds, herbal therapies and supplements

- Intake page, PCP documentation, LMSW note, Care Management note, medication module

What to Expect Going Forward

NCQA is continuously striving to improve the Patient Centered Medical Home. Beginning in 2018 practices wishing to become/remain PCMH recognized through the NCQA will be required to report annually rather than every three years. By requiring practices to report every year instead of every three years, the hope is to encourage providers and practices to truly adhere to the standards of a PCMH by continuously working towards quality improvement, patient satisfaction, cost reduction, and better overall practice. The following section provides information about the annual PCMH reporting requirements as is available.

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Appendix

- A. 2014 Standards and Guidelines
- B. 2017 Standards and Guidelines
- C. 2017 PCMH Scoring
- D. Crosswalk for 2014-2017 Guidelines
- E. Glossary of PCMH Terms

Appendix M: IRB Approval



DATE: June 6, 2017

TO: Lyndsay Randall

FROM: Grand Valley State University Human Research Review Committee

STUDY TITLE: [1078060-1] Development of a Patient-Centered Medical Home Toolkit at an Integrated Primary Care Clinic

REFERENCE #: 17-249-H

SUBMISSION TYPE: New Project

ACTION: Not Research

EFFECTIVE DATE: June 6, 2017

REVIEW TYPE: Administrative Review

Thank you for your submission of materials for your planned research study. Upon review of the aims and description of your study, it has been determined that this project *DOES NOT* meet the definition of covered human subjects research* according to current federal regulations. The project, therefore, *DOES NOT* require further review and approval by the HRRC.

According to your study description, you are conducting a *project to develop a PCMH toolkit to be used to train medical support staff at the Durham Clinic. This project will result in a scholarly paper and it is not generalizable* which therefore *does not meet the federal definition of research according to 45 CFR 46.102 (d), which states that "research is a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge"*.

Should you change the aims and activities of your project such that it would then meet the definition of human subjects research, please cease any contacts with potential human subjects until such time as you submit the project protocol to the HRRC and receive the committee's approval to proceed. Should you change the aims and activities of your project such that you are unsure if it meets the definition of human subjects research, please submit a new Non-Human Research Determination Form for review by the Office of Research Compliance and Integrity.

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

Respectfully,

Office of Research Compliance and Integrity

Appendix N: Doctor of Nursing Practice Project Budget

Table H1: Staff Expenditures for Education Training and Questionnaire Completion				
Title	Number	Average Hourly Wage	Number of Hours	Cost
Primary care physician	2	96.54	0.5	96.54
Physician assistant	1	45.82	0.5	22.91
Nurse practitioner	1	48.77	0.5	24.385
Office nurse	2	22.05	0.5	22.05
Certified nurse assistant	3	11.83	0.5	17.745
LMSW	5	23.54	0.5	58.85
Front desk staff	2	13.12	0.5	13.12
Program manager	1	18.89	1	18.89
Room (<3 people)	1	30.5	15	457.5
Room (6-10 people)	1	48.9	0.5	24.45
TOTAL=				756.44

Table H2: DNP Student Expenditures for Quality Improvement Program				
Activity Type	Number	Average Hourly Wage/Cost	Number of Hours	Cost
Project Development	1	33.51	48	1608.48
Project Implementation	1	33.51	8	268.08
Project Analysis	1	33.51	10	335.1
Binder	1	6.29	1	6.29
Paper for handout and toolkit	1	0.016	245	3.92
Page dividers (A-Z)	1	5.29	1	5.29
Page dividers (1-10)	1	2.99	1	2.99
TOTAL=				2230.15