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Implementation of a SMART Goal Intervention for Diabetic Patients: A Practice Change in Primary Care

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Abstract

Self-management techniques have been shown to be useful practice tools for providers managing patients with chronic disease. One valuable aspect of self-management is goal setting, whereby the patient is directed to create highly attainable personal goals to modify a selected behavior. Through the attainment of these goals, the patient begins to experience confidence and improved self-efficacy in managing chronic diseases such as diabetes. This paper provides background on the use of SMART goals for diabetic patients, how this practice change supports Meaningful Use objectives and helps meet the requirements for future reimbursement opportunities. A thorough organizational assessment of a Midwest primary care clinic is shared, including its implications for introducing a practice change project. Key results include a positive change in the providers' attitudes in using SMART goals with diabetic patients. In addition, a cost analysis was completed to assist the office in creating a formal care management program. Results of the cost analysis are also discussed and include recommendations for a future care management program that incorporates SMART goals.

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Executive Summary

The purpose of this project was to educate the providers and nurses at a Midwest primary care clinic on ways to better engage diabetic patients through the development of SMART goals. SMART goals are highly specific, attainable, and short-term goals that assist in adapting healthy behaviors. This is especially helpful for diabetic patients as a significant portion of diabetes management is focused on improving diet and physical activity levels. The SMART goal concept was delivered via a staff in-service. The in-service also included information on care management requirements and how SMART goals can be applied to care plans. Finally, a pre-post provider survey was conducted to determine the acceptability and long-term sustainability of this simple intervention. The main results include survey findings that indicate provider acceptance and higher likelihood to use SMART goals with diabetic patients. Final recommendations include translating the SMART goal intervention in care planning for patients with other chronic conditions such as mental health disease and asthma. Additionally, it is recommended that the office should partner with future Doctor of Nursing Practice (DNP) students to allow for chart auditing and follow up on the impact of the SMART goals on patient outcomes. In addition, recommendations on how to begin the care management services include how to plan for staffing, role delineation, and choosing patients based on the insurance holder.

Introduction and Background

The prevalence of diabetes in the United States is on the rise. Recent reports show that more than 29 million people, or one in every 11 adults in the United States is currently living with this condition (Centers of Disease Control [CDC], 2014). Furthermore, this number is projected to rise to 48.3 million by 2050, or close to one in every three adults (CDC, 2010; Narayan, Boyle, Geiss, Saaddine, & Thompson, 2006). From years 2003-2006, rates of death from all causes were about 1.5 times higher among adults aged 18 years or older with diagnosed diabetes compared to those without diagnosed diabetes (CDC, 2014). Additionally, the CDC (2015) reports that every five minutes two people die of diabetes related causes and 14 adults are newly diagnosed with the disease.

As a result of rising diabetes diagnoses, the U.S. health care spending has been greatly impacted. Recent studies show that older patients living with chronic conditions such as diabetes, heart disease, and cancer are the costliest 1% of patients, accounting for more than 20% of all U.S. health care spending (Trapp, 2012). Given these drastic cost imbalances, major changes are taking place at the national level. The U.S. Department of Health and Human Services (USDHHS) has shifted its focus on reforming reimbursement models to support a fee-for-value patient-centered approach to care (Burwell, 2015). Alternative payment models, such as accountable care organizations and bundled-payment arrangements, will require that providers are accountable for the care that they deliver (Burwell, 2015). Further, incentives and reimbursement will be directly related to high value care that supports patient-centered medical homes, improved coordination of services, and an emphasis on population health (Burwell, 2015). These changes align with the Centers of Medicare and Medicaid Services (CMS)

Meaningful Use initiatives, which have set the standards for medical practice in the United States today.

While there may be changes in the health care delivery model in the near future, primary care offices remain the main source of health care for diabetic patients (Willens, Cripps, Wilson, Wolff, & Rothman, 2011). Unfortunately, many primary care offices are not equipped to handle the complex medical and psychosocial needs required in managing patients with chronic diseases such as diabetes (Willens et al., 2011). Current diabetes care guidelines call for the use of diabetes self management education (DSME) and support which empower patients to advocate for his or her own health (American Diabetes Association [ADA], 2015). According to the ADA (2015), DSME is "a skilled approach that focuses on helping those with diabetes make informed self-management choices" (p. S20). By improving the patient's ability to self-manage diabetes the result is a decrease in health care costs, improved patient self-efficacy, and improved care experience (Powers et al., 2015). Additionally, Norris, Lau, Smith, Schmid, and Engelgau (2002) report that DSME leads to immediate improvements in hemoglobin A1c (HgbA1c) levels. Furthermore, Sone et al. (2002) found that moderate improvements in glycemic control were maintained long term.

According to Bodenheimer, Lorig, Homan, and Grumback (2002), self-management education for diabetic patients involves the use of traditional patient education and the utilization of personal goal setting via the assistance of the provider. Mutual goal setting allows the patient to be actively involved in his or her care resulting in higher levels of empowerment and the creation of treatment plans that are more likely to be followed by the patient (Golin, DiMatteo, & Gelberg, 1996). Heisler, Bouknight, Hayward, Smith, and Kerr (2002) additionally note that

enhanced patient-provider communication and collaborative decision making result in greater patient satisfaction, adherence to treatment plans, and improved health outcomes.

The data have shown that education alone does not seem to be enough to successfully manage diabetic patients; rather an approach that includes collaborative decision making and goal setting is more likely to prepare the patient for success in managing his or her disease (Delamater, 2006; Glazier, Bajcar, Kennie, & Wilson, 2006; Norris, Engelgau, & Narayan, 2001). Diabetic patients who have partnered with providers to create personalized self-care goals have shown greater improvements in diabetic outcomes, including lowered HgbA1c scores, improved physical activity and dietary intake, and greater diabetes related self-efficacy (Miller & Bauman, 2014). As a low cost, easily administered intervention, enhancing patient engagement through the generation of attainable goals is one valuable way to improve the outcomes of diabetic patients in a primary care practice.

Problem Statement

This project has addressed the problem of how to get the practitioners to be more likely to engage diabetic patients through the establishment of short term, highly attainable, SMART goals. It has also better prepared the office to begin billing for care management services. This project was implemented at a Midwest primary care clinic with the majority of the patient population being of low socioeconomic backgrounds and with complex medical and psychosocial needs. In addition, this project has assessed the providers' acceptance of this practice change project and determined its long-term sustainability.

This practice change intervention was introduced to the providers during a staff in-service. The meeting provided information on the concepts of patient engagement, its roles in the Meaningful Use requirement and quality measures, SMART goal techniques, and where to

document in the electronic health record (EHR). The in-service also provided general information on the chronic care management reimbursement incentives and care management recommendations. Finally, the in-service included a discussion on how this intervention aligns with the office progression towards the patient-centered medical home model.

Evidence Based Initiative

After a thorough review of the literature, there is ample evidence indicating that incorporating patient engagement in the form of goal setting is an effective way to improve outcomes in diabetic patients. For this project, it is important to review the history of self-management techniques as well as discuss the use of SMART goals in engaging patients. The primary objective of this section will be to provide the reader with evidence supporting the use of goal setting in diabetic patients across a variety of settings. It will also provide background information on the theory of self-management, SMART goal techniques, and how this intervention aligns with patient centered medical care and Meaningful Use objectives. Finally, a review of the literature examining the use of self-management techniques in patients of low socioeconomic status will also be included.

Self-Management Origin, Evolution, and Elements

The term self-management first appeared in the mid 1960s in a book discussing the rehabilitation of chronically ill children written by Thomas Creer (Lorig & Holman, 2003). Stemming from the work of Albert Bandura and his development of the concept of self-efficacy, self-management refers to the patient being an active participant in the treatment of his or her illness (Lorig & Holman, 2003). Self-management was later introduced as an essential element in the chronic care model, which was developed to help primary care providers enhance the treatment of those living with chronic conditions (Bodenheimer, Wagner, & Grumbach, 2002).

According to Bodenheimer, Lorig, Holman, and Grumbach (2002), self-management education teaches patients problem solving skills so that when a patient is faced with a health care problem, the patient is equipped to make decisions and better manage the disease or circumstance (Bodenheimer, Lorig et al., 2002). Self-management programs typically address three tasks: the medical or behavioral management, role management, and emotional management (Lorig & Holman, 2003). Lorig and Holman (2003) also posit that self-management education needs to be focused on the patient and be directed at meeting individual concerns.

There are five core elements to self-management skills: problem solving, decision-making, resource utilization, forming of a patient/health care provider partnership, and taking action (Lorig & Holman, 2003). For this project, the element of taking action through action plans or short-term goals will be further explored. Lorig and Holman (2003) explain that the most important aspect of taking action is through the development of action plans or short-term goals. The goals need to be patient-generated, of short duration, and be specific, realistic, and highly attainable (Bodenheimer, Lorig et al., 2002; Lorig & Holman, 2003). The purpose of encouraging patients to create action plans and setting goals is to assist the patients in becoming more confident in managing their disease and problem solving (Bodenheimer, Lorig et al., 2002; Lorig & Holman, 2003).

The Integrative Literature Review: Purpose, Method, and Literature Search Results

There is evidence supporting the use of patient goal setting to improve the self-management of diabetes. Effective self-management techniques are represented by the ability to monitor one's condition and to modify cognitive, behavioral and emotional responses in a way that maintains a satisfactory quality of life (Barlow, Wright, Sheasby, Turner, & Hainsworth, 2002). Successful self-management includes an aspect of personalized goal setting or action

planning (Lorig & Holman, 2003). The purpose of this literature review is to examine the effectiveness of incorporating a patient goal setting intervention as a way to improve diabetes self-management and patient outcomes.

Methodology. Articles for this review were found using several databases including CINAHL, Cochrane Library, and Google Scholar. The search was limited to the last 15 years (January 2000 to April 2015). Search terms included the following key words and a combination of the keywords: diabetes, goal setting, SMART goal setting, self-management, diabetes mellitus, and primary care. For articles selected, a thorough review of the bibliographies was also conducted to determine if any other articles met inclusion criteria.

Inclusion criteria were stringent for this review in an attempt to focus on the specific aspect of goal setting in the primary care setting for the improvement of self-management of diabetes. The articles included needed to have studied adults (≥18 years old) with type 2 diabetes. Additionally, the focus of the review included articles that conducted an intervention directly at the primary care site or within the community. Articles including web-based interventions were excluded, as the primary intervention for this scholarly project will take place within an office with patients who have very limited computer access.

Systematic review of goal setting effectiveness in diabetes care. Much research has been done to evaluate the effectiveness of incorporating a goal setting intervention to promote behavioral change in diabetic patients. This intervention has been delivered in a variety of settings and through different modes of education. Improvements in diabetes related self-efficacy, HgbA1c, physical activity, and dietary intake are all notable outcomes seen in the various studies. In addition, Lafata et al. (2013) found that the more patients report engaging in

collaborative goal setting, the more likely they are to have higher perceived competency in managing their diabetes as well as heightened provider trust.

After completing a thorough review of the literature, the use of self-care goal setting can be applied in a variety of settings. The literature search revealed that this intervention was successfully conducted in one-on-one primary care visits, group educational settings, and via technology through computer programs. Typically, prior to creating a goal, patients received education via handouts, workbooks, CD-ROMS, group classes, or individually with diabetes educators. Group education included information about the diabetes disease state, dietary changes, physical activity and tools to aid in successfully self-managing diabetes (Corser, Holmes-Royner, Lein, & Gossain, 2007; Miller, Headings, Peyrot, & Nagaraja, 2012; Naik et al., 2011). One-on-one meetings were conducted in several of the articles and also included education regarding general knowledge about diabetes as a disease and assisted patients in creating personalized goals (Anderson, Christison-Lagay, & Procter-Gray, 2010; DeWalt et al., 2009; Estabrooks et al., 2005). Handouts and workbooks were additionally used to help aid patients in creating personal goals and were similar in that all were written in plain language, included evidence based information about diabetes and goal setting, and often provided examples of patient goals (Anderson et al., 2010; Corser et al., 2007; DeWalt et al., 2009).

Two of the key components frequently seen across many of the research trials were action planning and a measurement of the patient's level of confidence in attaining the goal (Anderson et al., 2010; DeWalt et al., 2009; Naik et al., 2011). DeWalt et al. (2009) explain that action planning includes five crucial elements: (a) it is patient generated not provider generated, (b) action plans are behaviors, not results, (c) the plan should be specific about what behavior, how, when, and where it will be done, (d) patients need to have confidence that they will

succeed, and (e) the plan is short term and ends with a decision to either maintain the behavior and/or to perform an additional behavior change (p. 219). Confidence level assessments were typically measured on a scale of 0 to 10, 10 being the most confident (DeWalt et al., 2009). Articles including a level of confidence when planning a goal, required participants to have a rating of 7 or higher in order to accept the action plan (Anderson et al., 2010; DeWalt et al., 2009). Miller et al. (2012) confirmed the importance of goal confidence in their research trial after finding that participants who perceived their goal to be too difficult were more likely to be less committed to their goals.

Goal setting in low socioeconomic populations. While the research is limited, goal setting for self-management of chronic disease has been successfully completed in patients of low socioeconomic status and diverse backgrounds. Expanding beyond the application of goal setting for diabetes alone, goal setting and action planning can be applied to various chronic diseases such as coronary heart disease, mental health disorders, and epilepsy. Handley et al. (2006) found that patients being treated at several underserved free clinics successfully applied goals to manage risk factors for coronary heart disease. Over half of the participants who created an action plan with his or her provider reported carrying out the chosen health behavior for at least a short period. This suggests that collaborative goal setting between the patient and provider is an effective strategy in promoting healthier behavior change in patients of low socioeconomic status.

Anderson et al. (2010) evaluated the impact of goal attainment and its influence on the self-management of glycemic control in a large community-based setting. The program took place over three and a half years at the largest federally qualified health center in Connecticut. Participants were largely urban, low-income, and Hispanic. Patients were able to independently

create behavioral goals, and at the end of the study Anderson et al. (2010) found that participants had an average decrease in HgbA1c of 0.9% per year. Furthermore, the more goals that the patients attained, the more likely they were to improve or maintain their levels of glycemic control (Anderson et al., 2010). This study aids in supporting the use of goal setting in patients of diverse backgrounds and socioeconomic status.

Mwanda (2014) used a psychoeducational intervention to address obesity in adult patients with severe mental health illness. During four, individualized psychoeducational sessions, Mwanda (2014) implemented strategies to help educate and engage patients in participating in healthy behavior changes in order to reduce the risk of antipsychotic drug-induced obesity. Participants were challenged to create personalized goals targeted at improving physical activity and dietary intake. Through this research, Mwanda (2014) discovered that the participants, primarily of low SES and with significant mental health disease, were able to successfully create, adapt, and meet their personalized diet and physical activity goals. Further, those that completed the psychoeducational sessions had significant improvements in their intake of fruits and vegetables and physical activity. Personal goal setting with supportive follow up in addition to simple tools such as measuring cups and educational placemats can be highly influential in aiding patients who experience significant barriers in making healthy, behavior changes.

In a systematic review of interventions to improve diabetes control in socially disadvantaged populations, Glazier et al. (2006) identified several key concepts that led to higher rates of patient success. Some of these features included culturally tailoring interventions to the patient, focusing on behavior-related tasks, giving feedback about the patient's control of his or her diabetes, and high intensity interventions (>10 contact times) over at least 6 months (Glazier

et al., 2006). The least effective interventions used only teaching focused on diabetes knowledge. This review indicates that the use of traditional diabetes education is likely not to be effective in managing patients of disadvantaged backgrounds. Instead, organizations and providers will need to tailor the intervention to the individual, take more time giving one-on-one attention, and have consistent follow up.

Finally, in a study comparing self-management skills of epileptic patients in high and low socioeconomic backgrounds, Begley et al. (2010) found no significant between-group differences in self-management abilities. Instead Begley et al. (2010) found that epilepsy self-management was not strongly associated with socioeconomic status. Surprisingly, results of this large survey actually revealed that patients of low SES had an overall higher average self-management score. This further supports that a SMART goal intervention can be applied to patients of various backgrounds and abilities.

Use of SMART Goals

Aligning with the five key concepts of action planning, the utilization of SMART goals is another important consideration in self-management education. The SMART goal acronym first appeared in a paper by George Doran in a 1981 issue of *Management Review* (Lawlor & Hornyak, 2012). SMART goals are written using the following guidelines: (a) Specific- simply written and define exactly what is being pursued; (b) Measurable- goals should be measurable so that there is tangible evidence that the goal has been accomplished; (c) Achievable- goals should stretch the person slightly so that the person feels challenged, but defined well enough so that goals are attainable; (d) Realistic- the goal is doable; and (e) Timely- the goal should be attainable over a short period of time (Lawlor & Hornyak, 2012).

Action planning guidelines and the SMART goal principles are very similar and can be highly efficient in aiding patients in creating self-care goals. Lorig and Holman (2003) explain that short-term action plans involve a period of 1-2 weeks, are behaviorally specific, realistic, and have to be something that the person is fairly confident about accomplishing. An example of a SMART goal to improve physical activity in diabetes may be "this week I will walk at least three times for 30 minutes." For this project, providers will be educated on the use of SMART goals in order to help patients create their own action plans and self-care goals for their diabetes management.

Goal Setting and Meeting Objectives for Meaningful Use

Meaningful Use, a federal initiative driven by the Centers of Medicare and Medicaid Services (CMS), is a three-phase program transforming how health care is delivered in the United States. According to the U.S. Department of Health and Human Services (USDHHS, n.d.a), "the three stages of meaningful use are designed to support eligible professionals and hospitals with implementing and using electronic health records (EHR) in a meaningful way to help improve the quality and safety of the nation's healthcare system" (para. 2). The goal of Meaningful Use is that, upon the completion of all three stages, there will be better clinical outcomes, improved population health outcomes, increased transparency and efficiency, empowered individuals, and more robust research data on our health systems (HealthIt.gov, 2015).

In order to prepare health care professionals for the changes, these stages were activated over a five-year period from 2011-2016. This is of high importance for primary care providers because all eligible health care professionals must meet the requirements of each stage in order to qualify for the CMS incentive programs (HealthIT.gov, 2015). Furthermore, the U.S.

Department of Health and Human Services (n.d.a) reports that after 2015, Medicare will require that all health care professionals and hospitals that are Medicare eligible must meet all stages of Meaningful Use or face possible financial penalties.

Stage 1 of Meaningful Use incentives directed eligible professionals (EPs) and hospitals to update electronic health record (EHR) programs to ones that can record, store, and report clinical quality measures (USDHHS, n.d.b). Stage 2 built upon the enhanced electronic records, and required EPs to further advance the EHR programs to support patient portal access in order to enhance patient engagement and communication with providers (Taglicod, 2013). Stage 3 will focus on providers demonstrating and reporting improved health care outcomes (Myers, 2015).

Key elements for both stage 2 and 3 are a heightened focus on patient engagement and care coordination. More recently, CMS began to recognize care management as a key component in primary care for patients with chronic conditions. Beginning January 2015, CMS is now offering reimbursement for non-face-to-face care coordination services for Medicare benefited patients. These services must take at least 20 minutes of clinical staff time, be directed by a physician or other qualified health care professional, and have the following required elements: (a) the patient must have two or more chronic conditions expected to last at least 12 months; (b) the chronic conditions place the patient at significant risk of death, acute exacerbation/decompensation, or functional decline; and (c) a comprehensive care plan has been established, implemented, revised and monitored (USDHHS, 2015).

This reimbursement offer requires the creation of a care plan that is patient-centered and based on a physical, mental, cognitive, psychosocial, functional, and environmental assessment—including an inventory of resources that is comprehensive of all health issues (USDHHS, 2015). In addition, the care plans need to be accessible to the patient electronically

and documented in the medical record. Diabetes falls within one of the chronic conditions covered within this reimbursement program. Additionally, an important aspect of the care plan includes the implementation of a measureable goal (USDHHS, 2015). The utilization of self-care goals and implementing a care plan into the EHR system could help providers at this Midwest primary care clinic gain additional reimbursement potential, while also demonstrating improved population health.

Evidence Summary

After a review of the literature, it is apparent that goal setting for people with type 2 diabetes mellitus can be successfully implemented in the primary care setting. Goal setting was associated with many positive outcomes, including improvements in self-efficacy, HgbA1c levels, physical activity, dietary intake, and diabetes knowledge. This review confirms that there is quality evidence supporting the use of a goal setting intervention to assist patients in making positive behavior changes to improve their management of diabetes.

Furthermore, facilitating an intervention that is suited to help educate and support patients dealing with a chronic health condition, such as diabetes, may be beneficial in improving the level of independence and quality of life in many individuals. This intervention will also help support meeting Meaningful Use objectives as it focuses on improving patient outcomes and partnering with patients to meet national quality measures. This review offers valid information and strong evidence supporting the use of goal setting. It is advisable to consider a care plan that includes a patient generated self-care goal related to diabetes as a way to improve the overall health of the patient and diabetic population being managed at this Midwest Primary care clinic.

Conceptual Models

Conceptual models are used to aid in implementing evidence into practice. This section will describe how the social cognitive theory and the Promoting Action on Research Implementation in Health Services (PARiHS) Framework can be used to support this SMART goal intervention and self-management of diabetic patients. The social cognitive theory is grounded on the idea of self-efficacy and its impact on a person's ability to carry out behaviors. This theory will be applied to the SMART goal concept. The PARiHS framework will aid in the actual implementation of the project by examining the strength of the evidence and the organization's readiness to change.

Social Cognitive Theory

The theory and mechanisms behind behavioral change are presented well in the work of Albert Bandura. According to Bandura (2004) the social cognitive theory "specifies a core set of determinants, the mechanism through which they work, and the optimal ways of translating this knowledge into effective health practices" (p. 144). Bandura (2004) explains that the key determinants include: (a) knowledge of health risks and benefits of health practices, (b) perceived self-efficacy of control over one's health behavior, (c) outcome expectations about the expected costs and benefits for various health behaviors, (d) the health goals people set for themselves and plans and strategies to meet the goals, and (e) the perceived facilitators and barriers to the changes a person seeks.

At the core of these determinants is self-efficacy, as self-efficacy affects behavioral change directly and also influences the other determinants (Bandura, 2004). Self-efficacy refers to the expectancy that one is capable of executing a specific behavior in a particular situation (Bandura, 1977). It represents the confidence that a person has in his or her ability to maintain

control in a given situation or when facing a problem (Bandura, 1977). Essentially, those with high levels of self-efficacy are more likely to believe in favorable outcomes, exhibit behavior that overcomes challenges, and maintain behavioral change (Bandura, 2004). This project aims to positively influence self-efficacy through the attainment of reasonable, manageable, and highly specific goals. A diagram of this model can be found in Appendix A.

This project intends to help improve the self-efficacy and confidence in diabetic patients being managed at a Midwest primary care clinic. Bandura's social cognitive theory provides the underpinning for this phenomenon and also the implementation of the project. Utilizing the core determinants mentioned by Bandura (2004), this project aims to provide patients with the knowledge and support necessary to exhibit behavioral change. Bandura (2004) theorizes that health habits are not changed through will alone, rather through an act of self-regulation. Self-management is a learned behavior that aligns with self-regulation as it directs a person in monitoring personal health habits. It also uses goal setting and incentives to help guide and maintain behavior change (Bandura, 2004).

For this project, the providers will be educated about their responsibility for delivering education to the diabetic patients about lifestyle habits that affect their health. Bandura (2004) expressed that "knowledge of health risks and benefits creates the precondition for change" (p. 144). Patients have to first understand that certain health habits are detrimental before positioning themselves to change a behavior. Additionally, the use of SMART goals will help the providers to assist the patient in creating short, highly attainable and realistic goals, that will serve to enhance the patient's level of self efficacy and confidence in managing his or her diabetes.

Promoting Action on Research Implementation in Health Services (PARiHS) Framework

In addition to Bandura's social cognitive theory, the PARiHS framework will guide the implementation of this scholarly project. Originally created in 1998, the PARiHS framework is a theoretical framework developed as a guide to implement evidence-based clinical practice (Kitson, Harvey, & McCormack, 1998). The framework consists of three essential elements that influence the success of implementation: evidence, context, and facilitation. A diagram of this model can be found in Appendix B.

Kitson et al. (2008) explain that evidence encompasses many sources of knowledge including: research evidence, clinical experience, patient preferences and experiences, and local experiences. In addition, the process of implementing this evidence involves discussion and negotiations on the benefits, risks, and advantages of progressing from something old to new (Kitson et al., 2008). Context, which refers to office culture, leadership, and internal readiness to change, also varies among organizations. Some contexts are more conducive to implementation of evidence and usually include those that have transformational leaders and strong feedback and evaluative mechanisms (Kitson et al., 2008). Facilitation refers to the facilitator of the implementation project, and strong facilitation is determined by state of receptiveness and acceptance of the implementation project (Kitson et al., 2008). Facilitators work to make the process of implementation easier for the team.

A thorough review of the evidence shows that best practice methods for diabetic patients include elements of self-management and patient engagement. One method to activate the patient in enhancing his or her self-management behaviors is through the collaborative development of patient-centered goals. During the implementation of this project, this facilitator will present this evidence to the providers as a tool that can be used to enhance the current management of

diabetic patients. The negotiation of how best to present this type of patient tool will be discussed in an in-service, where providers will be able have open dialogue and practice creating SMART goals.

Kitson et al. (2008) discuss that context is strengthened by learning organizations, transformational leadership, and by appropriate monitoring, evaluation, and feedback mechanisms. This primary care clinic has an office culture that supports working with students and integrating new practice ideas. In addition, the staff consistently demonstrates outstanding teamwork and has a manager that is actively present and supportive. Knowing these qualities, a practice change project should be well received and valued by this Midwest clinic.

Kitson et al. (2008) explain that the broad definition of facilitation is the "human support, guidance, learning, and coaching provided by the facilitator" (p. 7). A strong facilitator makes things easier for others (Kitson et al., 2008). With this in mind, during the implementation of this project, this facilitator will strive to make this intervention as simple as possible as behavior change for the provider is just as difficult as it is for the patient. This will be accomplished through recognizing efficiency as a high priority for the providers. Ways in which the implementation will support this is by providing educational materials to the patient prior to the appointment, demonstrating where goals can easily be documented in the electronic health record, and using a simple SMART goal framework. Feedback during the in-service and implementation phases of the project will be sought out and actively used to help better modify the intervention to the office for ongoing facilitation.

Needs and Feasibility Assessment of the Organization

Project Site

The chosen site for this scholarly project is a primary care clinic in a Midwest city that serves both pediatric and adult patients. Unique to this office, is that it is one of the few nurse-managed health centers in the state of Michigan. The office staff includes one full time family nurse practitioner, a full time pediatric nurse practitioner, and two additional part-time family nurse practitioners. The office additionally staffs two registered nurses (RN), one office manager, a front office coordinator, and several part-time office assistants. The office has provided care to over 10,000 patients in addition to housing an immunization and travel clinic and serving as a student compliance visit center. Currently, about 50% of the patients have Medicaid coverage and the remaining 50% are a combination of Medicare and private insurers, with very few self-pay patients.

Key Stakeholders

There were several key stakeholders identified during the organizational assessment phase of the project. One of the most important stakeholders is Dr. Kathy Watt, a Ph.D prepared nurse practitioner that has agreed to be this author's project mentor. She is motivated in partnering with her patients, and is interested in assisting the office in maximizing reimbursement opportunities. In addition to her primary care services, Dr. Watt also has expertise in mental health disorders and motivational interviewing techniques. This additional knowledge will be beneficial for this project as she has experience in working with patients in modifying behaviors. She will be instrumental in aiding in the project's implementation and in troubleshooting any unforeseen barriers.

In addition to Dr. Watt, there are two other family nurse practitioners that are also key stakeholders for this project. This project supports the implementation of a practice change that has the potential to disrupt the current workflow. Conversely, the project also provides the office with an opportunity to improve on the quality of care delivered and to be better positioned for incentive opportunities. That said, having strong provider buy-in will be especially important for the long-term sustainability of this practice change initiative.

An additional key stakeholder is the interim office manager. This individual will ultimately be giving this author permission to implement this scholarly project. Fortunately, it is apparent that he is highly motivated to find new ways to generate revenue for the clinic and welcomes changes that support this initiative. Currently, he has hired outside consultants to assist in identifying ways to incorporate changes that will enhance workflow, efficiency, and maximize the staff's strengths. He is also extremely interested in improving patient retention and developing strategies to gain new patients.

The registered nurses working at the clinic are also key stakeholders to this project. Likely they will assist in educating diabetic patients on potential goals and will also need to be confident in answering patient questions. As one of the long term goals of the project is to start billing for the chronic care management (CCM) code, one of the registered nurses will likely need to be more active in the care management that is required for this program. Fortunately, one of the registered nurses is already become certified as a registered care manager, as it is a goal of the office to be more proficient in offering care management services.

Finally, the patients will also be key stakeholders in this project. Currently, there are 56 active diabetic patients being treated amongst the three primary care providers. Of these patients, 36 are females and the remaining are males. These patients are from all races: with 26 patients

identifying themselves as Caucasian, 22 as black, four as Hispanic, one as Indian, and one as Asian. The mean age of these patients is 47 years, and approximately 80% have Medicaid or a combination of Medicare/Medicaid coverage. Without the support of these patients and a willingness to participate in goal setting, this intervention will not be useful. It will be extremely important to adequately educate staff on the effectiveness of patient engagement and partnership when managing chronic diseases. It is with this special partnership that patients will be more likely to engage in a goal setting intervention.

Organizational Assessment Tool

Developed as an extension of the Promoting Action on Research Implementation in Health Services (PARiHS) framework, the Organizational Readiness to Change Assessment (ORCA) tool was used to assess the three essential elements that influence successful implementation of evidence based practice: evidence, context, and facilitation (Stetler, Damschroder, Helfrich, & Hagedorn, 2011). In preparation for this project, the ORCA survey was utilized to more objectively assess the clinic's readiness to change. The 74-item questionnaire consists of three major sections that correspond to the PARIHS framework's core elements of evidence, context, and facilitation. This survey was completed by this author alone, to help further examine the organization and plan for the implementation of this project. A copy of this survey can be found in Appendix C. An evidence score was not calculated, as a review of the evidence was thoroughly discussed in the literature review phase of this scholarly project.

The context section of the questionnaire contains six subscales, which are used to assess culture, leadership, measurement, readiness to change, and resources (Helfrich, Li, Sharp, & Sales, 2009). The context section has a reliability score of $\alpha = 0.85$ (Helfrich et al., 2009). Each item is scored from 1 to 5, with 5 indicating higher readiness to change and 1 indicating lower

readiness to change. The overall context score for the clinic was 3.9, which indicates an overall favorable contextual score that suggests that the clinic is amenable to change.

The facilitation section of the ORCA tool is used to assess leadership characteristics, roles, style, resources, and evaluation (Helfrich et al., 2009). The facilitation assessment serves to help individuals and teams understand what they need to change and how to go about making a change (Helfrich et al., 2009). It is comprised of nine elements focused on evaluating the organization's internal capacity for change (Helfich et al., 2009). This section of the tool has a reliability score of $\alpha = 0.95$. The overall facilitation score is 3.81, showing a favorable internal capacity for change within the project site.

This survey offered great insight on areas of strengths, weaknesses, and potential barriers to the success of this scholarly project. The survey highlighted an office culture that was open to change and identified strong leadership characteristics that will aid in the implementation of the project. An area of low scoring in both the context and facilitation scales was office resources. Lower scoring in this section reflects barriers in terms of budgeting, training, staffing, and facilities support. With this in mind, the ORCA survey provided sufficient information and indicated overall scores that are in support of a practice change project.

SWOT Analysis

In addition to a formal ORCA assessment, a SWOT analysis was also conducted to further gauge the clinic's capacity to embrace this scholarly project. According to Harrison (2010) a SWOT (strengths, weaknesses, opportunities, and threats) analysis is a useful tool to aid project facilitators in analyzing an organization's internal strengths and weaknesses, to show opportunities for growth and improvements, and also to identify external threats that may hinder

a project's survival. Throughout the organizational assessment phase, several elements in each category were identified and will be discussed in the following section.

Strengths. Organizational strengths are internal factors that support outstanding organizational performance (Harrison, 2010). At this Midwest clinic, several internal strengths were identified including: staff that is willing to work with students, previous work with dissertation project implementation, a high functioning electronic health record system (Athena™), and a strong commitment to high quality care. More recently, the office has also been highly motivated in meeting Meaningful Use criteria and expanding on incentive opportunities. These strengths are reflected in the high contextual score in the ORCA survey and represent an office environment that is amenable to practice change projects.

Weaknesses. Organizational weaknesses are referred to as factors that will increase health care costs or reduce health care quality (Harrison, 2010). Similar to strengths, weaknesses are also internal in origin and can pose a threat to project objectives. During the organizational assessment, there were some notable weaknesses that may hinder the success of the project. These weaknesses include: providers feeling overwhelmed by busy schedules and complex patients and competing responsibilities of the registered nurses. In order to have full provider buy-in and sustainability of the project, this practice change must be presented in a way that will not be perceived as disruptive, but rather a productive use of provider time. In addition, fully utilizing the registered nurses in a care management role will also take much of the follow up burden off the providers and offer future monetary value.

Opportunities. Utilizing this type of project will provide the clinic with ample opportunities for growth and financial return. Some of the main opportunities include the ability to offer a new service to patients with multiple care needs. In addition to reimbursement gains,

offering this type of service may also entice other patients to visit the practice for similar services. As a nurse-managed health care system, being up to date with current practice standards and being leaders in the community are also significant considerations for this type of project.

Other opportunities include improving the communication between other specialty practices. This coordination will be enhanced through the activation of the care management platform in Athena™. This free to activate service, will allow for more efficient documentation of correspondence between specialty services and outside agencies. It will also be the place care management services will be documented as well as the individualized patient care plan. This documentation will be necessary to begin billing for care management services. The goal setting intervention will also likely lead to improved patient outcomes and adherence to care plans. There is also the opportunity for enhanced patient and provider satisfaction through the shared ownership of managing chronic diseases such as diabetes. Finally, this type of intervention can be easily translated to the management of other chronic conditions.

Threats. Threats to this project also need to be identified and considered before moving forward. Some of the main threats include competing demands in the office, reallocation of staff time and roles, and multiple projects being started simultaneously. Additionally, there may be a lack of interest from patients in this type of intervention. Also threatening to the project is that patients will need to agree to be enrolled in the chronic care management program, as there is a chance of shared cost depending on the insurance coverage. Moving forward, recognizing, understanding, and preparing the staff for these potential threats will help remove potential barriers in the implementation of this project.

Organizational Needs Assessment

According to Lamb and Lamb (2011), an organizational needs assessment accomplishes three main objectives: (a) it is a systematic way to analyze an organization's priorities and concerns from both a stakeholder and consumer perspective; (b) it investigates the performance of the organization in relationship to its mission and goals; and (c) it analyzes the knowledge and ability of the organization's members. Upon completion of the organizational needs assessment, the data were used to better help prioritize the objectives and strategies needed to fully implement this scholarly project.

Based on the observations and interviews of employees at the clinic, several organizational needs were identified and will be discussed. Providers voiced an overall low level of knowledge regarding patient goal setting and utilization of self-management techniques. Additionally, providers had limited knowledge of the SMART goal application. The SMART goal acronym is based on the following goal setting guidelines: (a) Specific, (b) Measureable, (c) Achievable, (d) Realistic, and (e) Timely (Lawlor & Hornyak, 2012). Both providers and support staff will need in-service training to address the methodology, utilization, and effectiveness of patient generated SMART goals and how it aligns with the 2016 standards of care set by the American Diabetes Association.

In addition to the overall low level of knowledge and application of goal setting, many of the providers were unaware of reimbursement opportunities, such as the chronic care management (CCM) coding. The staff is currently working with a consultant on improving their Meaningful Use goals, but little is being done to incorporate additional reimbursement opportunities. The providers, support staff, and upper management will need education regarding the CCM coding, its requirements, and the long-term investment potential.

The electronic health record system, Athena™, will also need to be updated. While Athena™ has a care management platform built into its system, it has not been activated at the clinic. There will likely need to be an in-service on how to use this application as well as a discussion on the types of patients that will qualify for this billable program. Protocols and documentation standards will also likely be needed, as well as a discussion on RN and provider responsibilities to meet the guidelines for this program. This project will mainly focus on providing education on the use of SMART goals, where to document the goals in the EHR, and begin planning for a formal care management program. There are vast opportunities for future DNP students to continue developing protocols and workflow restructures to utilize this billing opportunity.

Macro Level Assessment

A macro level needs assessment serves to help project facilitators identify and resolve gaps between the actual and desired quality of outcomes to the organization's clients (Kaufman, Rojas, & Mayer, 1993). When an organization is concerned with the quality of care and satisfaction of patients, a macro level assessment is a valuable tool, as it can serve to guide necessary change. Upon finishing a macro level assessment of this Midwest clinic, there were some additional needs identified.

From a broader perspective, the healthcare field is rapidly evolving and health care organizations are changing to meet government and state regulations. This is mainly due to changes in reimbursement protocols set forward by CMS. Beginning with the Meaningful Use initiatives, this three-stage program is transforming how health care is delivered in the United States. While the subject of Meaningful Use was discussed in great length in the literature review portion of this project, it is important to note the shift from a fee-for-service reimbursement

model to a fee-for-value. This type of restructuring will strongly impact how the clinic is reimbursed in the future and is a driving force behind the importance of improving patient engagement.

In order to meet the fee-for-value requirements, Gilbert (2012) notes that health delivery models need to focus on both improved care outcomes and reduced care costs. In order to do this, both the patient and provider need to be actively involved (Gilbert, 2012). Organizations will need to demonstrate this partnership via shared plans of care that are specific to the patient and disease (Gilbert, 2012). An important element to this approach is centering care around the patient. Actively engaging diabetic patients in creating a goal that can be documented in a care plan is a first step in preparing the clinic to move towards meeting the requirements for fee-for-value reimbursement.

Examining the specific characteristics of the diabetic patients in the practice helps to better recognize how macro system needs are being met. There are approximately 56 adults with diabetes being actively managed by the primary care nurse practitioners. After a review of the charts of each diabetic patient, several key characteristics were consistent amongst all of the providers and patients. Almost all of the patients had body mass indexes (BMIs) in the obese or morbidly obese range. Additionally, with the exception of two patients, all had at least one or more chronic conditions such as peripheral vascular disease or hypertension. Special instructions given to the patient were typically charted, and most often addressed diet and exercise, and occasionally blood sugar monitoring. It was identified that there was only one encounter in which a provider discussed goal setting with a patient.

While the providers are mostly meeting the requirements for Meaningful Use and diabetes management, it is clear that the patients may still have suboptimal outcomes. This is

evident by the elevated BMI and HgbA1c levels. As the literature has shown, goals set by diabetic patients most often address diet and exercise modification (Estabrooks et al., 2005). To help address these deficits, patients will also need education about goal setting and examples of common diabetes related goals. Incorporating a brief, patient educational brochure to be given prior to the appointment will help patients identify specific areas that they may want to change. This education will direct patients on ways to be more actively engaged in managing diabetes and, over time, that should result in improved patient adherence, improved HgbA1c levels and BMIs, and heightened patient satisfaction.

Analysis of Assessment Data

The PARiHS framework recognizes three main elements that determine the success of a project: evidence, context, and facilitation (Helfrich et al., 2009). Helfrich et al. (2009) note that evidence refers to the stakeholder's perceived strength of the evidence, while context is defined as the quality of the environment for which the evidence is implemented. The third element, facilitation, refers to the process of how the evidence is implemented (Helfrich et al., 2009). These three components helped this researcher analyze the data from this organizational assessment to better recognize the project site's strengths, weaknesses, and potential barriers to the project's success.

The stakeholders in the organization must perceive the evidence to be strong and beneficial to practice in order to be accepted into the organization. A discussion with the key stakeholders reveals that this goal setting intervention, along with the creation of a reimbursement opportunity, is a valuable project for the practice. Providers, while consistently offering diabetic education, are doing little to more actively engage their diabetic patients in co-managing their disease. With education on the evidence supporting the use of goal setting to

improve diabetic control, providers are willing to implement this intervention. Additionally, providers are very interested in the potential reimbursement opportunity that will be available from creating a care plan that demonstrates patient engagement.

The organizational assessment also revealed that the clinic is already working toward modifying workflow to allow for improved efficiency and enhanced RN responsibility. The site is highly motivated to better utilize its RN in a care management role and is working on making changes to office workflow to better support this effort. While this project will take some additional provider time, it will be important to remind the stakeholders that this intervention and the initiation of a care plan will ultimately support its goal of enhancing their care management services.

The ORCA scoring revealed a high contextual score, which represents an environment that is supportive of change. The interim office manager and providers revealed attitudes that will positively impact the success of the project. The staff is mindful of Meaningful Use and is actively seeking new reimbursement opportunities that have come forward with these government changes. This project will align well with the office goals and priorities at this time.

The facilitation of the project took into consideration the competing demands in the office by using a brief intervention that can easily be uploaded into the electronic health record. All efforts were made to limit provider time, as this was identified as the most significant barrier. Patients, providers, and support staff were given adequate education prior to the implementation into patients' appointments to help with the ease of the project's facilitation. Additionally, this author was present in the office during the implementation phase of the project to help further support the staff. Furthermore, the project was continually reevaluated and adapted to better meet the needs of the patients and providers.

Project Implementation

This project was implemented at a Midwest primary care clinic. The key concepts of diabetes self-management and the use of SMART goals were presented to the providers and registered nurses during a staff in-service. This meeting took place during the staff lunch and lasted approximately one hour. A copy of the power point presentation provided during the in-service can be found in Appendix D. During the in-service, detailed information on SMART goals was presented as well as examples of SMART goals. The providers and nurses were given instruction on where to chart goals in the electronic health record. Meeting attendees were also given time to practice goal setting amongst each other. A screen shot of the area to document and pull forward goals during subsequent patient encounters can be found in Appendix E.

A review of the care management requirements and billing opportunities was also discussed with the meeting attendees. During this time, a cost analysis of the current office care management practice was presented to the meeting attendees. This cost analysis took into consideration the total cost and time required to manage one complex patient being treated at the office over one month's time. This was based on the median salaries of nurse practitioners, registered nurses, and office coordinators in the city in which the office is located. Time for various care management services was estimated from interviews with the providers, nurses, and office coordinator. These activities included telephone calls with the patient, referral time, and coordinating with outside services. The time spent was then multiplied by the hourly wage of the person responsible for each service. It was then totaled to provide the estimated cost of caring for one complex patient over a month long period. This analysis aided the offices' movement towards billing for care management services. No patient identifiers were included in or required for this analysis. A copy of the cost analysis can be found in Appendix F.

The facilitator created pre and post surveys on SMART goal knowledge, current practice standards, attitudes, and confidence in utilizing this intervention. These surveys were delivered electronically to the providers one week before and two weeks after the meeting to assess acceptability and sustainability. A copy of the surveys can be found in Appendices G and H. Finally, a patient education brochure was created for the diabetic patients that includes topics such as basic diabetes information, physical activity and dietary intake recommendations, and ideas for SMART goals. This patient education flyer can be found in Appendix I.

Purpose of Project with Objectives

The purpose of this project was to educate the providers at a Midwest primary care clinic in ways to better engage diabetic patients through a goal setting intervention. Additionally, this project has helped the office prepare for a potential reimbursement opportunity that will utilize a comprehensive care plan that can include patient generated goals. The primary outcomes include data from the provider survey, a patient information brochure on diabetes, and a comprehensive cost analysis that can be used to justify a care management service.

Type of Project

This practice change quality improvement project educated the providers on the latest evidence on ways to actively engage diabetic patients in making healthy behavior change. This type of practice change aligns well with Meaningful Use initiatives as well as current trends in patient centered health care delivery approaches. This is highly important, as providers will no longer be reimbursed for services rendered, but rather for the quality of care provided. Providing the clinic with an opportunity to better partner with complex patients with many needs may lead to better adherence to care plans and overall improved quality outcomes.

Setting and Needed Resources

This project took place at a Midwest primary care clinic and was aimed at type 2 adult diabetic patients. At this time, the project has been limited to diabetic patients; however, as explained to the providers, this intervention can be easily translated to patients living with any chronic disease, including, but not limited to, coronary heart disease, obesity, and mental health disorders. The main resource needed to successfully implement this type of intervention is time. Extra time will be required for the providers to adequately engage the patient to create mutually agreed upon SMART goals. This time may be shortened with the use of the patient handout that can be given to the patient prior to the appointment or during the triage phase. This handout includes information on diabetes, recommended physical activity and dietary intake, and examples of SMART goals. With this type of educational material, the patient may be better prepared to discuss goal setting with the provider.

Additionally Athena™**,** the electronic health record system at this office, recently updated the EHR for the primary care setting. Included in this update was a dedicated patient goal section in the assessment and plan portion of the EHR. This addition includes a drop down for suggested goals, a free text area, and options for the length of time to meet the goal. This time varies from one week to long term. In addition, the patient goal section has a check box for the providers to indicate whether or not the goal has been met. This streamlined version of Athena™ will aid in reducing the time required

Additional resources include the support of the registered nurses, as they will also likely be answering questions and engaging patients in creating goals. After the in-service, there was definite interest in the care management program and activating the chronic care management platform in Athena™. Therefore, moving forward the registered nurse will be taking leadership

in managing these patients and following up on the goals. Finally, Athena™ Information Technology (IT) department was also a valued resource, as this project facilitator required assistance in investigating the chronic care management platform and determining where the goals could be documented in the updated version of Athena™.

Design for the Evidence-Based Initiative

This project was completed in several steps. After obtaining a determination that this was a quality improvement project from the university's Human Research Review Committee (Appendix J), the facilitator began the project implementation. The first step in implementing this project was to work with Athena™ to learn more about the chronic care management platform. This included watching a webinar created by Athena™ on care management and printing Athena's™ recommended guidelines on initiating care management in the clinic. A template to document the goals was not necessary as the updated version of Athena™ already had a section for patient goals in the assessment and plan portion of the EHR. These goals can be easily carried forward to subsequent encounters for easier tracking and reviewing. Unfortunately, Athena™ does not offer a training view with practice patients in the care management platform, so the office will have to decide when to activate this platform to begin officially offering and billing for its care management services.

Prior to the in-service, this facilitator also finalized a patient education handout. This handout was created based on the American Diabetes Association (2016) guidelines on diet and physical activity. In addition this handout includes examples of SMART goals to further assist the providers and patients. This handout was written at a sixth grade level and followed the recommendations of the U.S. Department of Health and Human Services (2009) *Simply Put*

guide for creating easy to understand materials. This handout was included in the in-service and can be copied for future encounters. A copy of this handout can be found in Appendix I.

A PowerPoint presentation was created to present the SMART goal intervention. The in-service allowed adequate time for discussion on SMART goal writing and coaching of patients. During the in-service, the providers and nurses were also given instruction on where to document the goals in the EHR. In addition, the providers and nurses were given instruction on how to pull forward goals during subsequent visits. One week prior to the in-service, the selected providers and nurses completed the pre-survey, which assessed the general knowledge of SMART goals, self-management, techniques, and current practice. The post-survey was electronically delivered two weeks after the in-service to the same providers and nurses. The post survey aided in assessing the acceptability and long-term sustainability of this intervention.

Finally, using the total number of eligible patients, a cost benefit analysis was conducted for the care management program. This document was presented at the in-service and included a breakdown of the total cost and earnings per patient utilizing care management services. This analysis is helpful for the clinic as it provides quantifiable data that can aid in completing a full return on investment document for a care management program.

Participants

The main participants for this project included three nurse practitioners, three registered nurses, and the office manager. There was no patient contact or patient information needed for this project, other than the total number of Medicare patients eligible for care management. The providers', nurses', and manager's primary role was to actively participate in the in-service. Providers will now have the option of using this evidence-based intervention in the future with diabetic patients.

Measurement

A pre and post surveys were used to measure provider knowledge and acceptability of the intervention. This was considered as the primary outcome for this project. In addition, a cost analysis was completed to help the office determine the potential for a care management program.

Steps for Implementation of the Project, Including Timeline

The full outline of the project was described in the evidence-based initiative portion of this proposal. Below on Table 1 is a proposed timeline for the anticipated implementation and evaluation of this scholarly project.

Project Evaluation Plan

The main objective of this program was to assess the acceptability of a SMART goal intervention aimed at diabetic patients being treated at a Midwest primary care clinic. This was evaluated via the pre and post surveys with the staff. The facilitator of this project was responsible for administering and collecting these surveys. In addition, this facilitator was responsible for educating the staff on the appropriate place to document goals within the EHR.

Finally, the total number of potential Medicare patients (n=89) that qualify for the care coordination management program was used to help complete a cost analysis to justify the need for this type of program. This information included a breakdown of the overhead cost of each enrolled patient and the potential earnings. This information was presented to the staff and with positive results; this may offer future DNP students' opportunity for scholarly work.

Ethics and Human Subjects Protection

This project was presented to the Grand Valley State University Human Research Review Committee (also the GVSU IRB) to validate the level of risk for participants. After review, this

project was deemed to be non-research and was given official permission to move forward with the in-service (see Appendix J).

Table 1

Project Timeline

Phase	Milestone	Estimated Timeframe
I: Investigate where to chart goals in Athena™ and create the patient educational handout. Administer the first pre in-service survey	Webinar on care management platform is completed. Use the "train" mode to practice charting goals in Athena™. Patient handout is printed for in-service. Collect surveys. Finish PowerPoint presentation	1-2 days- See appendix E for EHR documentation
II: Create a cost analysis for the CCM program	Consider the total number of Medicare patients, overhead cost per patient, and potential earnings per patient.	1-2 weeks- see appendix F for copy of the cost analysis
III: Conduct in-service	Present the SMART goal intervention, providers have adequate time to practice SMART goals. Instruct providers on where to document goals. Discuss the care coordination management program	1.5 hours- see appendix D for PowerPoint presentation
IV: Evaluation	Post-implementation surveys will be administered 2 weeks after the in-service, modify template as needed	1 week- See appendix G and H for pre and post survey questions

Budget

There was very little cost associated with this scholarly project. The providers and staff were asked to take part in an in-service, which was scheduled to minimize clinical time. This was accomplished by scheduling the in-service during a previously planned meeting time so that

there was limited schedule disruption or loss of revenue due to missed appointment opportunities. The intervention itself was cost free, as well the goal documentation in Athena™.

Project Outcomes

As a result of the in-service introducing SMART goals and care management opportunities, key outcomes include results from the pre and post surveys, steps to activate Athena's™ care management platform, and billing for care management services. In-service attendees included the office manager, one adult nurse practitioner, one family nurse practitioner, and two registered nurses. Unfortunately, one of the family nurse practitioners was unable to attend the meeting. Materials from the in-service, including the PowerPoint presentation and patient educational handout, were given to that provider at a later date. Three nurse practitioners and two registered nurses completed the pre and post surveys and results will be discussed in the following sections.

Analysis of Pre-In-Service Survey Results

Based on the results of the pre-survey of the providers and nurses, four of the five reported seeing at least four diabetic patients per week. As seen in Table 2, results varied on the amount of time spent on providing education on physical activity, dietary recommendations, glucose monitoring, medications and plans of care, from 0-1 minute to five plus minutes. The majority of the responses fell in the 0 to 3 minute range, indicating that the providers are spending just a brief amount of time discussing patient controlled variables such as diet and exercise. This is an important finding, as diabetes self-management skills centers around managing the day-to-day activities that influence the progression of the disease. The providers and nurses were also asked to rate the frequency that they believed the patient adhered to a care plan. Three rated patient adherence as occasionally and the other two responded rarely. Finally,

when asked about prior SMART goal knowledge, only two respondents reported having prior knowledge of this skill.

Table 2

Pre-In-Service Responses to Time Spent on Education and Care Planning During Appointments with Diabetic Clients (N=5).

	0-1 min n (%)	2-3 min n (%)	4-5 min n (%)	5+ min n (%)
Education on physical activity	3 (60)	2 (40)	0 (0)	0 (0)
Education on dietary recommendations	1 (20)	4 (80)	0 (0)	0 (0)
Education on glucose monitoring	2 (40)	2 (40)	1 (20)	0 (0)
Education on medications	1 (20)	2 (40)	1 (20)	1 (20)
Discussing the plan of care with the patient	1 (20)	2 (40)	2 (40)	0 (0)
Total	8	12	4	1

A five-point scale ranging from never to always, was used to identify the current practice behaviors of the providers at this primary care clinic. As seen in Table 3, surveyed behaviors included using motivational interviewing to engage diabetic patients, using SMART goals to change unhealthy behaviors, providing printed educational material, discussing dietary and physical activity recommendations, and considering the diabetic patient as a partner in decision-making and plan of care. A patient generated SMART goal was the least likely behavior to be utilized by the providers. A discussion regarding dietary and physical activity recommendations was more likely to occur during the appointment, with the exception of one person indicating

that she never discussed physical activity. Additionally, the survey responses revealed that, in general, the patient is considered a partner in decision-making and plans of care.

Table 3

Frequency of Providers' Use of Intervention Skills with Diabetic Patients, Pre-In-Service (N=5)

	Never n (%)	Seldom n (%)	Sometimes n (%)	Often n (%)	Always n (%)
Use motivational interviewing to engage diabetic patients	0 (0)	2 (40)	0 (0)	3 (60)	0 (0)
Use patient generated SMART goals to change unhealthy behaviors	2 (40)	2 (40)	0 (0)	1 (20)	0 (0)
Provide printed educational material to your diabetic patient	1 (20)	0 (0)	2 (40)	2 (40)	0 (0)
Discuss dietary recommendations with your diabetic patient	0 (0)	0 (0)	2 (40)	3 (60)	0 (0)
Discuss physical activity recommendations with your diabetic patients	1 (20)	0 (0)	1 (20)	3 (60)	0 (0)
Consider the diabetic patient as a partner in making decisions regarding his or her plan of care	0 (0)	0 (0)	1 (20)	3 (60)	1 (20)
Total	4	4	6	15	1

Similar to the practice behavior analysis described above, a five point scale measuring the provider's confidence in certain diabetes management skills was also used in the pre-survey. As seen in Table 4, the respondents have varied responses from "not at all confident" to "extremely confident" in using motivational interviewing, doing patient generated goal setting, delivering diet and physical activity recommendations, using SMART goals, and partnering with the patient to create a plan of care. Overall, the confidence levels matched the responses in the previously

discussed intervention skill frequency questions, in that responses indicated a higher level of confidence in delivering diet and physical activity recommendations, partnering with the patient in creating a care plan, and using motivational interviewing to engage the patient. In general, the providers reported an overall low level of confidence in using SMART goals.

Table 4

Participant Confidence in Intervention Skills for Treating Diabetic Patients Pre-In-Service (N=5)

	Not at all n (%)	Slightly n (%)	Moderately n (%)	Very n (%)	Extremely n (%)
Using motivational interviewing to engage diabetic patients	1 (20)	0 (0)	2 (40)	1 (20)	1 (20)
Using patient generated goals to assist in behavioral change	0 (0)	1 (20)	2 (40)	2 (40)	0 (0)
Delivering the American Diabetes Association recommendations for diet and exercise	0 (0)	0 (0)	4 (80)	1 (20)	0 (0)
In using SMART goals to create personalized, highly attainable goals	2 (40)	2 (40)	1 (20)	0 (0)	0 (0)
Partnering with the patient to create a collaborative care plan	0 (0)	0 (0)	1 (20)	4 (80)	0 (0)
Total	3	3	10	8	1

Finally, the respondents were asked to rate on a three-point scale from not helpful to extremely helpful how useful motivational interviewing, patient generated goals, and collaborative care plans were in managing diabetic patients. As seen in Table 5, four respondents reported that motivational interviewing is somewhat helpful, while one reported motivational

interviewing to be extremely helpful. This is consistent with the behavior and confidence questions on motivational interviewing, as responses exhibited an overall high level of confidence in motivational interviewing, with the exception of one person who reported having no confidence at all in this technique.

Table 5

Respondents' Assessment of Helpfulness of Intervention Skills to Create Behavior Change in Diabetic Patients Pre-In-Service (N=5)

	Not at all helpful	Somewhat helpful	Extremely helpful
Using motivational techniques to engage the diabetic patient in behavioral change	0 (0)	4 (80)	1 (20)
Creating patient-generated goals to either start or maintain a healthy behavior change	0 (0)	2 (40)	3 (60)
Partnering with patients to create a collaborative care plan to manage diabetes	0 (0)	1 (20)	4 (80)
Total	0	7	8

Also seen in Table 5, respondents reported that creating patient-generated goals was found to be somewhat helpful by two respondents and extremely helpful by the other three. This was somewhat surprising because the providers reported generally low confidence and utilization of SMART goals. That said, SMART goals are a more specific type of patient-generated goal, so goals may be discussed during the office visit but are not generally in a SMART format. Finally, consistent with the confidence scoring in the use of collaborative care plans, four respondents indicated that collaborative care plans were extremely helpful in managing diabetic patients

while one responded that care plans were somewhat helpful. This is useful information as care plans will be an important component of care management reimbursement opportunities.

The pre-survey results were helpful in planning for the provider in-service. Not surprising, the survey indicated a low level of knowledge and confidence in using SMART goals, which was a key focus during the meeting. The facilitator was somewhat surprised by the heavily favored result of care plan use, as there was no evidence in the electronic health care records that indicated that care plans are being documented. It is undetermined how each provider and nurse create care plans, what details are included in the care plans, and how the patient is individually involved in the plan of care. A more specific set of questions related to care plans would have been helpful for this project. This may have revealed specific perceptions of care plan use and how care plans are formed with the patient.

Because motivational interviewing is helpful for SMART goal use and care planning, the overall high level of confidence of providers in using motivational interviewing to engage diabetic patients was encouraging. Motivational interviewing is complementary to assisting patients in SMART goal setting and self-management skills. Welch, Rose, and Ernst (2006) explain that motivational interviewing methods "provide opportunities to help patients assess for themselves what might be important or possible and how change might be achieved" (p. 5). The spirit of motivational interviewing consists of working collaboratively to empower the patient, respect patient autonomy, and elicit change (Welch et al., 2006). The idea is that while the clinician is the expert in medical care, the patient is the expert in self-change and knowing what will and will not work in terms of behavior change (Welch et al., 2006). The providers' and nurses' prior knowledge and experience in motivational interviewing are helpful in aiding patients in creating SMART goals and individualized care plans.

Based on the results of the pre-survey, the in-service was heavily focused on the introduction of SMART goals, where to document the goals, and how care plans can be utilized in the chronic care management platform in Athena™ for reimbursement opportunities. Based on the information shared during this meeting, the post-survey results were expected to show an increase in confidence in using SMART goals and reveal that the providers and nurses are more likely to use this tool.

In-Service Discussion

Two nurse practitioners, two registered nurses, and one office manager were present during the staff in-service. The presentation began with a background on diabetes and its rising prevalence. This was followed by dialogue on how these statistics compared to the state of Michigan epidemiological diabetes statistics and, more specifically, to the patient population served at this Midwest primary care clinic. This was accompanied by a discussion on the changing reimbursement models of fee-for-service to fee-for-value. Included in this discussion was that patient activation and engagement are key elements to the fee-for-value model as well as for patient-centered medical homes (PCMH). The office manager confirmed that he would like the office to attain PCMH designation and all attendees noted having some prior knowledge on the reimbursement changes.

The concept of diabetes self-management was introduced as an ADA (2016) recommended complementary therapy and from that point, the SMART goal background and technique was shared. This included examples of SMART goals, an explanation on where to document the goals in the electronic health care record, and the presentation of the patient educational handout. A brief discussion on the use of motivational interviewing to assist the patient in creating the SMART goals also took place during this time. Following this

presentation, participants expressed concern on the requirement for prompt frequency of follow when using SMART goals as well as what to do with non-compliant patients. As confirmed by the office manager and other attendees, discharging non-compliant patients, was not an option for this office. One potential solution discussed was to enhance the care management services to better manage these high-risk patients.

At this time during the in-service, the use of SMART goals in care plans for care management was introduced to the meeting attendees. As explained during the meeting, SMART goals could be used in care plans and serve as a key element to encouraging self-management skills. One proposed idea for the short-term follow-up required of SMART goals, would be that the registered nurses would conduct the follow-up phone calls and reevaluate the goal progress. The nurses could assist the providers in helping the patients adapt and create new goals to build better self-management skills and self-efficacy. The progress toward goals would then be documented in the overall plan of care for the patient. High-risk, non-adherent patients would make ideal candidates for care management services and frequent follow-up.

As the discussion on care management progressed, the cost analysis of the care management service was presented to the meeting attendees. The cost analysis detailed the specific roles and time spent for one patient being care managed at the clinic. This analysis was very helpful in indicating the various requirements of care management that the office is already completing and areas they may want to reevaluate for the future. This included the nearly 100 minutes spent on the telephone with the patient, which far exceeds the 20 minutes of non face-to-face time required of the Medicare care management incentive (USDHHS, 2015).

Based on the median salaries in the city where the office is located and multiplied by the time spent doing various tasks such as telephone calls, referrals, and coordinating services, the

total cost of managing one complex patient was $173.97 per month. When multiplied by the 12 complex patients that are currently being care managed, the total cost is $2,087.64 per month or approximately $25,000 per year. At this time, the office is not billing for any time spent on care management services, which at a minimum could include $42.60 per Medicare patient per month enrolled in the chronic care management incentive. The office manager reported having knowledge on new incentive programs that are Medicaid specific, which could greatly aid in potential earnings for the office and add to the cost analysis in creating a full return on investment. A return on investment assessment was not included for this project, but would be an excellent project for a future DNP student.

In addition to the cost analysis, printed information from the Michigan Primary Care Transformation Project (MiPCT) detailing billable care management codes was also given to the meeting attendees. A copy of this document can be found on the MiPCT.org website under resources. This information was given to the attendees as an example of the various care management services that can be billed based on multiple insurance carriers. Examples of billable services include telephone interactions, coordination of care, advanced directive counseling, and chronic care management (MiPCT, 2015). This information was helpful to all of the meeting attendees, as they could compare the aspects of care management they were already completing and dialogue on areas that need to be modified or enhanced. The cost analysis, the MiPCT billable codes, and Athena's™ built-in care management platform seemed to be very helpful information presented during the meeting and will aid the office in building a formal care management position. Even more encouraging, is that the office staff voiced an understanding and acceptance of the use of SMART goals for care planning.

Analysis of Post-In-Service Survey Results

Following the in-service, a two-week post in-service survey was completed to measure the impact and sustainability of the SMART goal intervention. This survey was helpful in comparing the attitudes, behaviors, and confidence in using SMART goals, as well as confidence providing specific diabetic patient information, and partnering with the patient to create a plan of care. The overall results of the survey indicated a positive impact of the in-service and a high likelihood that the providers and nurses will utilize SMART goals in practice.

After the in-service, the survey respondents reported spending more time in all areas of diabetes education, including diet and physical activity recommendations, glucose monitoring, medications, and plans of care. As seen in Table 6, one of the most notable changes was that the providers and nurses reported spending time educating on lifestyle modifiers. All of the providers were spending 2-3 or 4-5 minutes on these modifiers. This is an important shift in practice as these categories represent lifestyle variables that the patient has control over changing. Hopefully, with an emphasis on discussing these important educational elements, patients will be more likely to make behavior changes that support an enhanced ability to self-manage their diabetes.

In addition to assessing the time spent with diabetic patients, there was also a positive change in the likelihood of utilizing specific behaviors such as motivational interviewing, patient-generated SMART goals, educational printed material, discussing physical activity and dietary intake recommendations, and considering the patient as a partner when making decisions. As seen in Table 7, the majority of responses fell into the “very” and “definitely” categories of likelihood to use these behaviors. No one responded as “never” or “seldom” to use these skills, which demonstrates the positive impact of the in-service materials. These findings are

complementary to the time being spent with diabetic patients and will aid in patients receiving ample time and education on lifestyle modifying behaviors and potential for the creation of SMART goals.

Table 6

Post-In-Service Responses to the Time Spent on Education and Care Planning During Appointments with Diabetic Patients (N=5)

	0-1 minute n (%)	2-3 minutes n (%)	4-5 minutes n (%)	5+ minutes n (%)
Education on physical activity	0 (0)	4 (80)	1 (20)	0 (0)
Education on dietary recommendations	0 (0)	1 (20)	4 (80)	0 (0)
Education on glucose monitoring	0 (0)	3 (60)	2 (40)	0 (0)
Education on medications	0 (0)	3 (60)	2 (40)	0 (0)
Discussing the plan of care with the patient	0 (0)	2 (40)	2 (40)	1 (20)
Total	0	13	**11**	1

There was also a change in the providers' and nurses' perceived confidence in exercising specific behaviors such as motivational interviewing, using patient-generated goals, delivering the American Diabetes Association recommendations for diet and exercise, using SMART goals, and partnering with the patient to create a collaborative care plan. The area of greatest change was from a rating of moderate confidence level in these skills to very confident. As seen in Table 8, this added confidence will potentially ensure that the behaviors are more likely to be carried out and that the diabetic patient will be getting the most impactful office experience.

Table 7

Providers' Likelihood of Using Intervention Skills with Diabetic Patients (N=5)

	Definitely Not n (%)	Probably not n (%)	Possible n (%)	Very Probably n (%)	Definitely n (%)
Use motivational interviewing to engage diabetic patients	0 (0)	0 (0)	1 (20)	3 (60)	1 (20)
Use patient generated SMART goals to change unhealthy behaviors	0 (0)	0 (0)	1 (20)	2 (40)	2 (40)
Provide printed educational material to your diabetic patient	0 (0)	0 (0)	1 (20)	2 (40)	2 (40)
Discuss dietary recommendations with your diabetic patient	0 (0)	0 (0)	0 (0)	3 (60)	2 (40)
Discuss physical activity recommendations with your diabetic patients	0 (0)	0 (0)	0 (0)	3 (60)	2 (40)
Consider the diabetic patient as a partner in making decisions regarding his or her plan of care	0 (0)	0 (0)	0 (0)	3 (60)	2 (40)
Total	0	0	3	16	**11**

Finally, in analyzing the helpfulness of motivational interviewing, creating patient-generated goals to either start or maintain a healthy behavior change, and partnering with the patients in creating a collaborative care plan to better manage diabetes, there were some positive improvements in results. Of those surveyed, 80% reported that all three techniques were extremely helpful when working with diabetic patients. This is a modest improvement from the pre-in-service results, especially in the areas of motivational interviewing and creating patient-generated goals. While motivational interviewing was not covered in depth in the in-service, the

meeting and materials presented revisited the importance of these skills when working with patients with chronic disease.

Table 8

Participants' Confidence in Intervention Skills for Treating Diabetic Patients Post-In-Service (N=5)

	Not at all n (%)	Slightly n (%)	Moderately n (%)	Very n (%)	Extremely n (%)
Using motivational interviewing to engage diabetic patients	0 (0)	0 (0)	3 (60)	2 (40)	0 (0)
Using patient generated goals to assist in behavioral change	0 (0)	0 (0)	1 (20)	4 (80)	0 (0)
Delivering the American Diabetes Association recommendations for diet and exercise	0 (0)	0 (0)	1 (20)	3 (60)	1 (20)
In using SMART goals to create personalized, highly attainable goals	0 (0)	0 (0)	1 (20)	3 (60)	1 (20)
Partnering with the patient to create a collaborative care plan	0 (0)	0 (0)	0 (0)	4 (80)	1 (20)
Total	0	0	6	**16**	3

The post-in-service survey results overall favored the use of SMART care goals, creating partnerships with the patient, creating collaborative care plans, and prioritizing appointments to include a discussion on modifying behaviors related to diet and exercise. These results indicate that this type of intervention may continue long-term, and, more importantly, may be used to support care management services. The survey results provide quantifiable evidence that the in-service adequately met the educational needs of the providers and nurses at the office.

Additionally, the survey results indicate that this type of in-service and intervention will be a beneficial tool for the providers and nurses at this Midwest primary care clinic.

Implications for Practice

This practice change, quality improvement project was well suited for this Midwest primary care clinic. Its implementation will better prepare the office for reimbursement opportunities through the attainment of a full functioning care management service. The use of SMART goals embedded into the electronic health record will allow for more seamless tracking and recording of progress of diabetic patients. In addition, once the office has officially activated the care management platform in the electronic health record, the goals can easily be applied to the care plans, which is a requirement for care management reimbursement.

Summary of Important Successes and Difficulties

The most important success of this project was that the providers and nurses reported a higher confidence and likelihood to use SMART goals for diabetic patients. The post-in-service results also showed that the providers and nurses felt that motivational interviewing, goal-setting, and collaborative care plans were extremely helpful elements in managing diabetic patients. More importantly, it is believed that this intervention is sustainable as it can be applied to care plans during care management services in the future. Additionally, easy to incorporate and evidence-based interventions, such as SMART goals, offer significant value to time constrained providers.

Through the material presented at the in-service, the office is now one step closer to solidifying and billing for their care management services. The cost analysis was informative in determining the roles and time required for the various tasks related to care managing a patient. The analysis revealed that many of the required components of a care management program are

being completed with the exception of documenting a patient-centered care plan. With the activation of the chronic care management platform in Athena™, the office will have more seamless access to care plan templates that will fulfill this requirement. The staff at this clinic reports that this platform will be activated in the electronic health record in the near future.

Some of the main difficulties voiced by the providers and nurses of the SMART goal intervention was the complexity and challenging nature of the patient population being served at this primary care clinic. The patients are largely of low socioeconomic status, of varying races, and with complicated psychosocial needs. The providers were skeptical that the care plans would be consistently followed, regardless of the effort to use SMART goals and regular follow up. After these concerns were raised, a discussion on how to handle patients who consistently fail to meet the established quality measure outcomes set by the office and indicative of pay-per-performance reimbursement took place. Unfortunately, there is not a definite solution for these types of patients. Instead, the clinic will likely need to begin collecting and evaluating patient outcomes from a broader approach, and then select reportable quality measure outcomes based on the areas in which they are excelling. However, patient-created attainable goals may help these complex patients begin to work on healthy behavior change.

In addition, a risk adjustment may need to be performed to account for differences in social determinants of health, which can greatly impact the overall health outcomes of individuals. However, with the providers actively engaging and individualizing care, the patients may be better prepared to acknowledge and work through some of the aforementioned socioeconomic barriers. A formal risk assessment was outside the scope of this project, but may be an excellent opportunity for future DNP scholarly work.

Project Strengths and Weaknesses

This project had both strengths and weaknesses. Two of the key strengths were that this type of intervention is low cost and supported by the American Diabetes Association (2016) guidelines. Additionally, this type of practice change is relatively easy to incorporate and can be utilized by both the providers and nurses. Moreover, the use of SMART goals aids in creating care plans to better monitor and track patient progress and outcomes. Ideally, the SMART goals will be a key element in the plans of care for care managed patients and will support the care manager's effort in building patient's self-management skills.

Another project strength was the delivered cost analysis of a care management program. The cost analysis was helpful in highlighting the office's capabilities in creating a billable care management service. It provided a detailed breakdown of the current cost incurred by the office for its care management of one complex patient. As mentioned in the in-service discussion portion of this paper, the analysis calculated the time spent by each staff member in contact with the patient, from the provider to the office coordinator, and totaled the cost per month for one patient. Most revealing in this analysis was that the office was completing almost all of the tasks required for billing for care management, with the exception of a collaborative care plan. In addition, the cost analysis can be used in the future to aid in a full return on investment document that can be used to help support hiring additional staff. The hiring of additional support staff may be required if one of the two registered nurses is designated to a full time care manager position.

Finally, two other great strengths were the utilization of the theoretical frameworks to help guide this project. As indicated in the ORCA assessment, the office's contextual score was quite high, indicating an organization that was amenable to change. The office culture and staff closely followed the contextual score in that all of the providers, nurses, and the office manager

were engaged and interested in the material presented during the in-service. This was extremely helpful to the facilitator of the project and also adds to the long-term sustainability of this intervention.

Bandura's social cognitive theory was also very useful and played a large role in planning for this project. With the providers and nurses emphasizing the patient-provider relationship and taking time to assist the patient in creating SMART goals, the overall long-term outcome may be enhanced patient self-efficacy in managing diabetes. Self-efficacy will be heightened through the attainment of short-term, realistic, goals that will be regularly followed-up with the staff at this clinic even for complex patients. The building of self-efficacy will help the patient have confidence in maintaining control in his or her diabetes over a lifetime.

The primary weakness of this project was that there was no plan for studying the long-term effects of using SMART goals for diabetic patients. To fully assess its sustainability and effects in this clinic, a more in-depth chart review over a longer period of time is required. This chart review would include looking at the patient outcomes including HgbA1c levels, other physiologic markers (weight, blood pressure), and diabetes related self-efficacy. This type of follow-up presents a great opportunity for future DNP students that would aid in the office success in using this intervention and in ensuring positive patient outcomes. Finally, an additional weakness to consider is that SMART goal setting requires a change in practice, which is a difficult task for many providers. So even if the providers and nurses report confidence in this skill, the survey and this project did not measure the actual demonstration of this intervention over a significant period of time. This would be an important outcome to evaluate in the future.

The creation of a formal care management program could itself be a DNP scholarly project. In addition to a cost analysis, a complete workflow and needs assessment would likely need to be completed before activating a full time care management position at the clinic. Additionally, the office serves primarily Medicaid insured patients, so a more in depth analysis of the requirements of each Medicaid program would also need to be completed prior to billing for care management services. While SMART goals will be an important aspect of the care plans used in care management, getting this type of service started is an essential first step.

Relation to the Evidence and Healthcare Trends

The use of care plans, SMART goals, and care management services align well with current health care trends and the latest evidence for diabetes treatment. With the enacting of the Affordable Care Act, the delivery of health care in the United States has rapidly changed. Beginning with Meaningful Use and its three stages, health care organizations have had to adopt significant changes within the primary care setting, with the ultimate goal being to improve health care delivery and outcomes in the United States. Currently, primary care clinics are working towards becoming designated as patient-centered medical homes (PCMH) fitting within the medical neighborhood model.

The PCMH model has been proposed as a solution for delivering better chronic care and in aiding with the primary care crisis (Bojadzievski & Gabbay, 2011). According to the U.S. Department of Health and Human Services (n.d.c.), the PCMH includes five functions and attributes including comprehensive care, patient-centered care, coordinated care, accessible services, and quality and safety. Based on the Chronic Care Model, the PCMH has been utilized in the primary care setting as a better model to manage chronic disease. Aligning with the American Diabetes Association (2016) guidelines to care, the PCMH supports the important

elements of a patient-centered approach to care, self-management support, patient empowerment, and team based care (Bojadzievski & Gabbay, 2011).

A key element to managing diabetic patients in the PCMH model is the active use of self-management (Bojadzievski & Gabbay, 2011). As discussed previously, self-management teaching includes lifestyle modification, problem-solving skills, motivation, and emotional support. Gutnik et al. (2014) explain that goal setting is an important element to self-management education. More specifically, the use of action plans or SMART goals serves as a fundamental starting point in leading to behavior change (Gutnik et al., 2014). The use of action plans and SMART goals support the PCMH transformation, as this is an evidence-based approach to self-management support, which is a requirement of PCMH designation (Gutnik et al., 2014).

The role of the care manager is also fundamental to the PCMH model and in managing complex diabetic patients. In the PCMH model, the care manager can provide the close follow-up necessary in treating high-risk patients who are more likely to face barriers to adherence (Bojadzievski & Gabbay, 2011). While this primary care clinic has many aspects of a PCMH, the teaching of self-management skills is still minimal. As the office moves forward in designating a specific person for care management, education on self-management skills and the use of care plans and goal setting will be more consistent.

Limitations

This project does have some limitations. First, the intervention itself is limited to adult type 2 diabetic patients at a single, Midwest primary care clinic. Additionally, as this was not a research project, this facilitator did not collect data on how SMART goals impact behaviors of diabetic patients and if there were improvements in HgbA1c, other physiological markers

(weight loss, blood pressure, etc.), or diabetes related self-efficacy. Rather this project was aimed at introducing a complementary, evidenced-based intervention to the providers and nurses caring for adult diabetic patients.

A full chart review to confirm the use of SMART goals in care plans was also not conducted. While the survey results showed favorable attitudes towards incorporating this type of intervention, a chart analysis would have better confirmed its acceptability and sustainability in the clinic. Finally, this intervention may have been strengthened if the office was already using the chronic care management platform in Athena™. This would have allowed for easier documentation and possibly more consistent follow up with care managed patients.

Recommendations

Based on the analysis of the strengths, weaknesses, and limitations, several recommendations can be made to assist in the success of this clinic and this project. Ideally, the office should continue to partner with future DNP students to continue the follow up and collecting of outcomes related to the SMART goal intervention. The future student would be a positive presence in the office and will aid in the consistency in which goals and care plans are being documenting in the EHR. In addition, the future student could assist in the translation of the SMART goal intervention to patients with other chronic conditions. It is the recommendation of this author that the office should consider goal setting in patients with mental health disorders. A large proportion of the patients treated at the clinic are diagnosed with mental health disease. Mutual goal setting may support these patients in becoming more independent and successful in managing their daily activities. Continuing to include goal setting and care planning in the electronic health record will ultimately support the office's progression towards patient-centered medical home designation.

To begin billing for the care management services, several more stages must be considered. First, the office should work with a DNP student to complete an additional workflow analysis and/or needs assessment. This will prepare the office in determining how to designate roles to support this program. Furthermore, a workflow analysis would be beneficial in completing a return on investment document, should the analysis reveal the need to hire additional staff. This analysis needs to be done prior to the activation of Athena's™ care management platform to ensure that the office has the infrastructure in place to be successful with this service.

The next recommendation would be to begin services for patients based on the insurance carrier. The office should select patients for care management depending on the insurance that the patient carries. One insurance carrier should be selected at a time to better guarantee that the office is fulfilling the requirements of that insurance company. As the office is able to demonstrate competency and success in meeting requirements for one insurance carrier, they can then expand the care management services to additional insurance companies. Medicare and Medicaid often have specific requirements that differ between programs, so by using a slow approach, the office will be more likely to meet the requirements and capture all of the potential earnings. A future DNP student could be utilized to examine the various requirements for the Medicaid programs and select patients that qualify for care management services.

Reflections on the Enactment of the DNP Essentials

Chism (2016) notes that the DNP degree was created to meet the increased need of advanced practiced nurses required to face the complex and challenging demands of our nation's rapidly evolving health care system. The advanced practice nurse prepared at the doctoral level has specific training at using information technology, creating and disseminating evidence-based

practice, and collaborating with all healthcare disciplines (Chism, 2016). This preparation is gained through the attainment of eight essential competencies determined by the American Association of the Colleges of Nursing (AACN, 2006). In addition, Chism (2016) describes the DNP graduate in several roles that include an expert clinician, an educator, a political advocate, an information specialist, and a leader. Within these five roles, the eight essentials of the DNP prepared nurse are exemplified.

The DNP as an Expert Clinician

As an expert clinician, essentials III, IV, VI, and VIII support the requirements of this role (Chism, 2016). Essential III is concerned with clinical scholarship and analytical methods for evidence based practice. This essential highlights the importance of implementing evidence-based practice, examining practice outcomes, and developing methodologies to improve quality of care. As a practice change project, the implementation of the SMART goal intervention considered the best practice for diabetic patients and introduced an evidence-based tool to the primary care providers. It aimed at improving the quality of care provided to a designated population of patients and may significantly impact the outcomes for diabetic patients long-term.

In addition to introducing a practice intervention, the facilitator also fulfilled essential IV, which relates to information systems-technology. This essential assisted in having knowledge to navigate the electronic health record, running quality reports, working with Athena's™ information technology personnel, and discovering the care management platform in Athena™. Essential VI, which describes interprofessional collaboration for improving patient and population health, was also utilized to support the expert clinician role. Without the collaborative effort of the providers, nurses, and office staff, this project would have quickly failed. This

project took into consideration the opinions and needs of the staff and aimed to create a tool that could enhance the services the office was already offering.

Finally, Essential VIII Advanced Nursing Practice was used to complement the expert clinician role. This project required knowledge on the diabetes disease state; it implemented a therapeutic intervention, and introducing a tool that will enhance the patient-provider relationship. Additionally, the leadership skills required to complete this challenging project also assist in meeting the competencies for this essential. Having competencies in all of the above mentioned essentials will be critical to the development of an expert clinician and will greatly influence the future practice of this facilitator.

The DNP as a Political Advocate

Chism (2016) explains that the "DNP graduate has the capacity to engage proactively in the development and implementation of healthcare policy at all levels, including institutional, local, state, regional, federal, and international levels" (p. 150). This responsibility is achieved through gaining competency in essential V, which pertains to health care policy for advocacy in health care. This project, while not making major policy changes at a high level, did take into consideration the current trends in healthcare delivery and policy at a national level. The macro level assessment helped this facilitator gain the knowledge and experience required of this essential. It also positioned the facilitator to be a leader in presenting nationwide policy changes and further aided in enacting the role of a DNP as a political advocate.

The DNP as an Educator

Through the attainment of the DNP degree, graduates are prepared with enhanced knowledge to improve practice and patient outcomes, develop competencies for complex roles, gain leadership skills, and work collaboratively with all members of health care professions

(Chism, 2016). The DNP as an educator is developed through the advanced knowledge and skill in translating research into practice and as leaders in the healthcare field. Gaining competencies in all eight essentials prepares the DNP to fulfill the educator role. During the in-service, this facilitator was able to perform as an educator by presenting the latest evidence based recommendations for diabetes. This project fulfilled aspects of each of the eight essentials and through professional role modeling, scholarship, leading an in-service, and clinical practice opportunities, the knowledge gained gives this facilitator more perspective on this unique DNP role.

The DNP as an Information Specialist

As mentioned in Chism (2016), healthcare providers face many challenges daily. These include healthcare insurance, changes in healthcare delivery, and an aging population, that demand for better-prepared and informed health care professionals. The DNP curriculum has addressed this challenge through competencies in Essentials II, III, IV, and V. Competencies in these essentials allow the DNP prepared nurse to fulfill several information specialist roles including project managers, consultants, educators, researchers, product developers, decision support and outcomes managers, advocates for policy development, and nurse informatics executives. While this project did not fulfill each of these roles, it did give the facilitator valuable experience in each of the eight essentials and complements the development of the DNP as an information specialist role.

The DNP as a Leader

This project challenged this facilitator to take on a leadership position in the development, planning, implementation, and evaluation of this project. Starting with examining the evidence and assessing the organization, all eight essentials were required to carry out this

project. Chism (2016) explains that "leadership and collaboration are integral aspects to every potential role a doctor of nursing practice graduate may assume" (p. 39). Leadership skills are essential to any role exhibited by the DNP prepared nurse whether as an educator, an executive, or clinician (Chism, 2016). Through the leadership skills attained through this project, this facilitator will be better prepared for problem solving, advocating, and being a role model. While not claiming mastery in the DNP as a leader, this project and experience in all eight essentials has definitely better prepared this facilitator for future practice as a primary care clinician who can lead practice change.

Plans for Dissemination of Outcomes

The outcomes of this project will be disseminated during an oral presentation at the Grand Valley State University Center for Health Science campus. Key attendees to this presentation will include this doctoral student's committee and any other faculty, staff, students, or community members interested in attending. All office staff at the Midwest primary care clinic chosen for this project will be invited to attend the oral presentation.

Conclusion

This project demonstrated that a brief, SMART goal intervention can be accepted and utilized in practice for diabetic patients being managed in the primary care setting. As a low cost, complementary tool, the use of SMART goals better positions the providers and nurses to partner with the patient to meet health targets set by the patient. More importantly, SMART goals support the development of self-management skills, which enable the patient to manage chronic diseases over a lifetime. In addition, the cost analysis offered significant insight in the development of a care management program. The in-service and information delivered will

better position this primary care clinic to start billing for the services that they are currently providing.

Treating patients of low socioeconomic backgrounds and with significant barriers to health can be perplexing and time-consuming. Challenging providers to step outside of the traditional patient-provider relationship may be one step in the right direction of individualizing care for this complex patient population. Medications and education do not fully meet the needs of diabetic patients. This is a life-long and progressive illness, that if not well controlled leads to severe and costly outcomes. Strategies that partner the patient and provider in sharing in successes and failures will eventually lead to a stronger patient relationship built on trust. While SMART goals is a brief, and even rudimentary intervention, building a culture in an office that keeps the patient at the center of care will ultimately assist in improving patient outcomes and the care experience.

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Appendices

APPENDIX A

[Bandura's Social Cognitive Theory's] Structural Paths of Influence Model

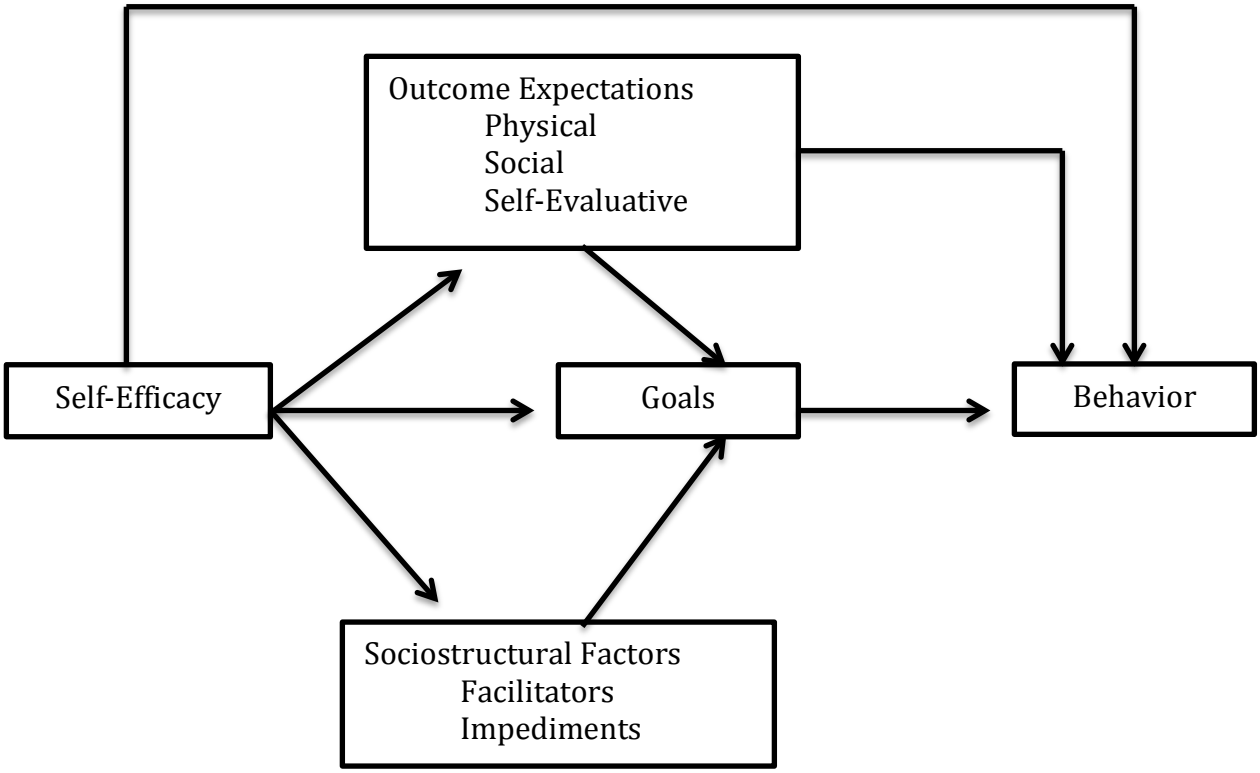


Figure 1. Structural paths of influence wherein perceived self-efficacy affects health habits both directly and through its impact on goals, outcomes expectations, and perception of sociostructural facilitators and impediments to health promoting behavior. Adapted from "Health Promotion by Social Cognitive Means," by A. Bandura, *Health Education and Behavior, 31*, p. 146. Used with permission (Appendix K).

APPENDIX B

PARiHS Diagnostic Grid

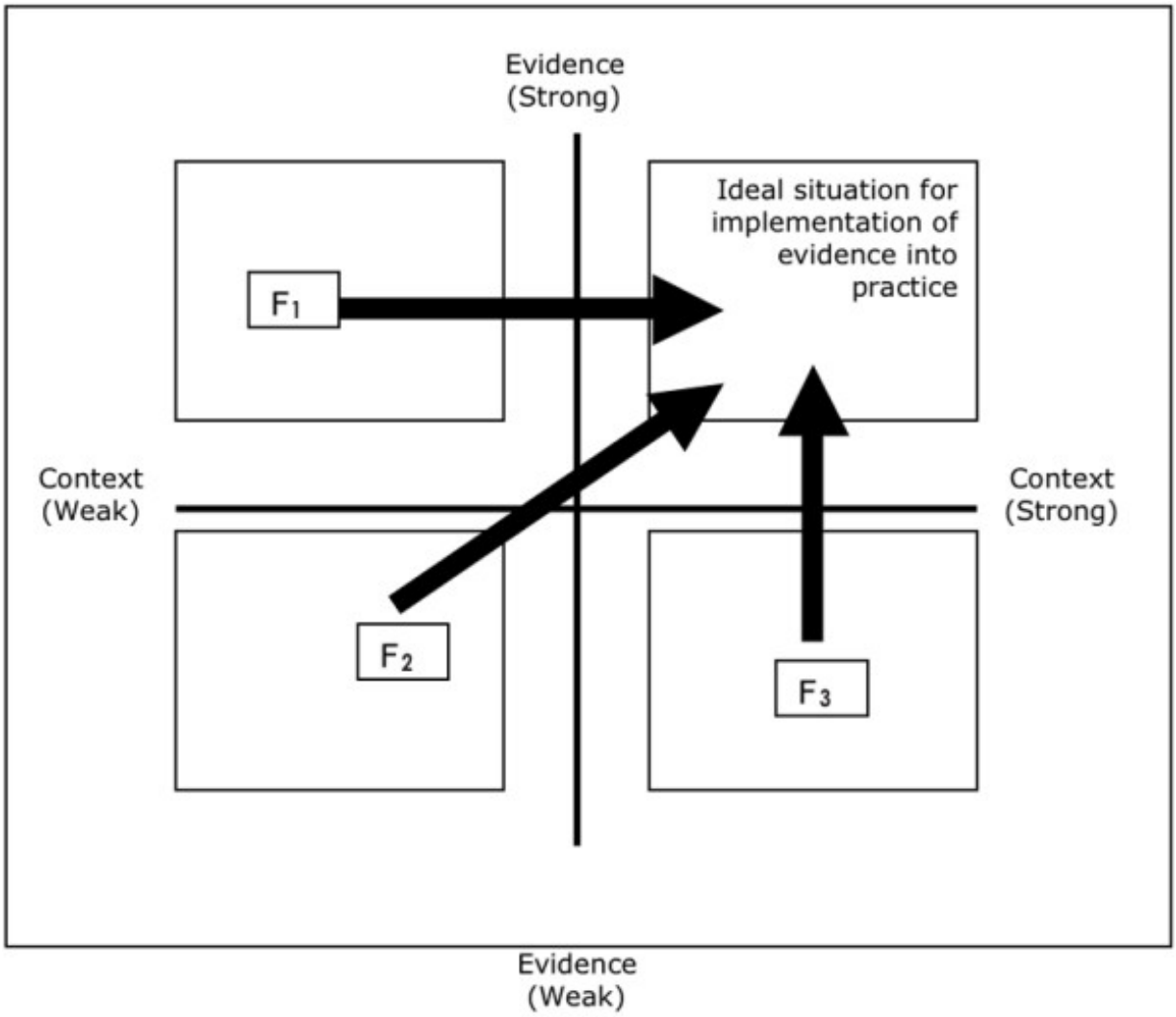


Figure 2. PARiHS Diagnostic and Evaluative Grid. Adapted from "Evaluating the Successful Implementation of Evidence into Practice Using the PARiHS Framework: Theoretical and Practical Challenges," by A.L. Kitson, J. Rycroft-Malone, G. Harvey, B. McCormack, B. Seers, and A. Titchen, 2008, *Implementation Science, 3*, p. 9. Used with permission (Appendix L).

APPENDIX C

ORCA Survey Questionnaire

Assessment of Organizational Readiness for Evidence-Based Health Care Interventions

Name of Station: _____

I. Evidence Assessment

Based on your assessment of the evidence basis for this statement, please rate the strength of the evidence in your opinion, on a scale of 1 to 5 where 1 is very weak evidence and 5 is very strong evidence:

very weak	weak	neither weak nor strong	strong	very strong
1	2	3	4	5

Now, please rate the strength of the evidence basis for this statement based on how you think respected clinical experts in your institution feel about the strength of the evidence, on a 1 to 5 scale similar to the one above:

very weak	weak	neither weak nor strong	strong	very strong
1	2	3	4	5

For each of the following statements, please rate the strength of your agreement with the statement, from 1 (strongly disagree) to 5 (strongly agree)

(Research) The proposed practice changes or guideline implementation:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
a) are(is) supported by RCTs or other scientific evidence from the VA	1	2	3	4	5
b) are(is) supported by RCTs or other scientific evidence from other health care systems	1	2	3	4	5
c) should be effective, based on current scientific knowledge	1	2	3	4	5
d) are(is) experimental, but may improve patient outcomes	1	2	3	4	5
e) likely won't make much difference in patient	1	2	3	4	5

outcomes					

(Clinical Experience) The proposed practice changes or guideline implementation:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
a) are supported by clinical experience with VA patients	1	2	3	4	5
b) are supported by clinical experience with patients in other health care systems	1	2	3	4	5
c) conform to the opinions of clinical experts in this setting	1	2	3	4	5
d) have not been attempted in this clinical setting	1	2	3	4	5

(Patient Preferences) The proposed practice changes or guideline implementation:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
a) have been well-accepted by VA patients in a pilot study	1	2	3	4	5
b) are consistent with clinical practices that have been accepted by VA patients	1	2	3	4	5
c) take into consideration the needs and preferences of VA patients	1	2	3	4	5
d) appear to have more advantages than disadvantages for VA patients	1	2	3	4	5

II. Context Assessment

For each of the following statements, please rate the strength of your agreement with the statement, from 1 (strongly disagree) to 5 (strongly agree).

(Culture) Senior leadership/clinical management in your organization:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
a) reward clinical innovation and creativity to improve patient care	1	2	3	4	5
b) solicit opinions of clinical staff regarding decisions about patient care	1	2	3	4	5
c) seek ways to improve patient education and increase patient participation in treatment	1	2	3	4	5

(Culture) Staff members in your organization:

a) have a sense of personal responsibility for improving patient care and outcomes
b) cooperate to maintain and improve effectiveness of patient care
c) are willing to innovate and/or experiment to improve clinical procedures
d) are receptive to change in clinical processes

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

(Leadership) Senior leadership/Clinical management in your organization:

a) provide effective management for continuous improvement of patient care
b) clearly define areas of responsibility and authority for clinical managers and staff
c) promote team building to solve clinical care problems
d) promote communication among clinical services and units

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

(Measurement) Senior Leadership/clinical management in your organization:

a) provide staff with information on VA performance measures and guidelines
b) establish clear goals for patient care processes and outcomes
c) provide staff members with feedback/data on effects of clinical decisions
d) hold staff members accountable for achieving results

strongly disagree	disagree	Neither agree nor disagree	agree	strongly agree
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

(Readiness for change) Opinion leaders in your organization:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
a) believe that the current practice patterns can be improved	1	2	3	4	5
b) encourage and support changes in practice patterns to improve patient care	1	2	3	4	5
c) are willing to try new clinical protocols	1	2	3	4	5
d) work cooperatively with senior leadership/clinical management to make appropriate changes	1	2	3	4	5

(Resources) In general in my organization, when there is agreement that change needs to happen:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
a) we have the necessary support in terms of budget or financial resources	1	2	3	4	5
b) we have the necessary support in terms of training	1	2	3	4	5
c) we have the necessary support in terms of facilities	1	2	3	4	5
d) we have the necessary support in terms of staffing	1	2	3	4	5

III. Facilitation Assessment:

For each of the following statements, please rate the strength of your agreement with the statement, from 1 (strongly disagree) to 5 (strongly agree):

(Characteristics) Senior leadership/clinical management will:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
a) propose a project that is appropriate and feasible	1	2	3	4	5
b) provide clear goals for improvement in patient care	1	2	3	4	5
c) establish a project schedule and deliverables	1	2	3	4	5
d) designate a clinical champion(s) for the project	1	2	3	4	5

(Characteristics) The Project Clinical Champion:

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
a) accepts responsibility for the success of this project	1	2	3	4	5
b) has the authority to carry out the implementation	1	2	3	4	5
c) is considered a clinical opinion leader	1	2	3	4	5
d) works well with the intervention team and providers	1	2	3	4	5

(Role) Senior Leadership/Clinical management/staff opinion leaders:

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
a) agree on the goals for this intervention	1	2	3	4	5
b) will be informed and involved in the intervention	1	2	3	4	5
c) agree on adequate resources to accomplish the intervention	1	2	3	4	5
d) set a high priority on the success of the intervention	1	2	3	4	5

(Role) The implementation team members:

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
a) share responsibility for the success of this project	1	2	3	4	5
b) have clearly defined roles and responsibilities	1	2	3	4	5
c) have release time or can accomplish intervention tasks within their regular work load	1	2	3	4	5
d) have staff support and other resources required for the project	1	2	3	4	5

(Style) The implementation plan for this intervention:

	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
a) identifies specific roles and responsibilities	1	2	3	4	5
b) clearly describes tasks and timelines	1	2	3	4	5
c) includes appropriate provider/patient education	1	2	3	4	5
d) acknowledges staff input and opinions	1	2	3	4	5

(Style) Communication will be maintained through:

a) regular project meetings with the project champion and team members
b) involvement of quality management staff in project planning and implementation
c) regular feedback to clinical management on progress of project activities and resource needs
d) regular feedback to clinicians on effects of practice changes on patient care/outcomes

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

(Style) Progress of the project will be measured by:

a) collecting feedback from patients regarding proposed/implemented changes
b) collecting feedback from staff regarding proposed/implemented changes
c) developing and distributing regular performance measures to clinical staff
d) providing a forum for presentation/discussion of results and implications for continued improvements

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

(Resources) The following are available to make the selected plan work:

a) staff incentives
b) equipment and materials
c) patient awareness/need
d) provider buy-in
e) intervention team
f) evaluation protocol

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

(Evaluation) Plans for evaluation and improvement of this intervention include:	strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
a) periodic outcome measurement	1	2	3	4	5
b) staff participation/satisfaction survey	1	2	3	4	5
c) patient satisfaction survey	1	2	3	4	5
d) dissemination plan for performance measures	1	2	3	4	5
e) review of results by clinical leadership	1	2	3	4	5

Used with permission (Appendix M)

APPENDIX D

In-Service PowerPoint Presentation

6/21/16

The Use of SMART Goals as a Tool to Better Engage Diabetic Patients

Mackenzie M. Swanson , BSN RN
Grand Valley State University
Kirkhof College of Nursing
June 3, 2016

Purpose

- Discuss ways to better encourage diabetic patients being treated at the GVSU FHC to become more actively involved in self-managing his or her diabetes (or other chronic condition)
- Introduce the concept of SMART goals
- Discuss how patient generated goals can be documented in the EHR and can help with care planning and case management services
- Finally, talk about case management reimbursement opportunities

Background and Significance

- About 29 million people, or 1 out of 11 adults is living with this diabetes (CDC, 2014).
- The prevalence is on the rise, and reports project that by 2050, 1 out of 3 adults will have diabetes (CDC, 2010; Narayan, Boyle, Geiss, Saaddine, & Thompson, 2006).
- Every 5 minutes two people die of a diabetes-related cause and 14 adults are newly diagnosed! (CDC, 2015)

Significance

- $245 billion on medical costs and lost work (CDC, 2014)
- Elderly patients living with chronic conditions such as diabetes, heart disease, and cancer, are the costliest 1% of patients, accounting for more than 20% of all U.S. health care spending (Trapp, 2012).
- Reimbursement moving towards fee for value rather fee for service, to emphasize prevention
- Providers will be reimbursed based on patient outcomes rather than services provided.

Moving Forward

- Primary care offices are typically the main source of health care for diabetic patients (Willens, cripps, Wolff, & Rothman, 2011).
- Patient centered care supports value-based reimbursement and PCMH models.
- Collaborative decision making and goal setting is more likely to position the patient to better manage his or her diabetes (Delamater, 2006; Norris, Engelgau, & Narayan, 2001)

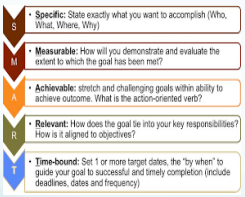
ADA Guidelines

- The ADA (2016) recommends the use of diabetes self management education (DSME)
- DSME is a "skilled approach that focuses on helping those with diabetes make informed self-management choices" (ADA , 2016, p525).
- SM improves the patients ability to manage his diabetes resulting in decreased health care costs, improved self-efficacy, and improved care experiences (Powers et al., 2015).

DSME

- SM education involves the use of personal goal setting (Bodenheimer, Lorig, Holmam, & Grumback, 2002).
- Mutual goal setting actively engages the patient resulting in higher levels of empowerment and creation of care plans that are more likely to be followed by the patient (Golin, DiMatteo, & Gelberg, 1996).
- Research supports the use of SMART goals for diabetic patients showing greater improvements in HgbA1c scores, improved physical activity and dietary intake, and diabetes related self-efficacy (Miller & Bauman, 2014).

SMART Goals



- Take a large problem and scale it down to a feasible size
- Short term, attainable, with the goal of instilling long term healthier choices and behaviors

SMART Goals

- Goals need to be:
  - Patient centered
  - Short duration
  - Specific, realistic, and highly attainable
- Confidence level of >7

(Bodenheimer, Lorig et al., 2002; Lorig & Holman, 2003).

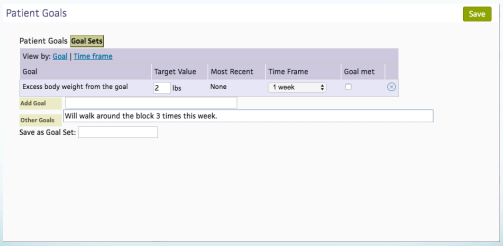
Examples of SMART Goals

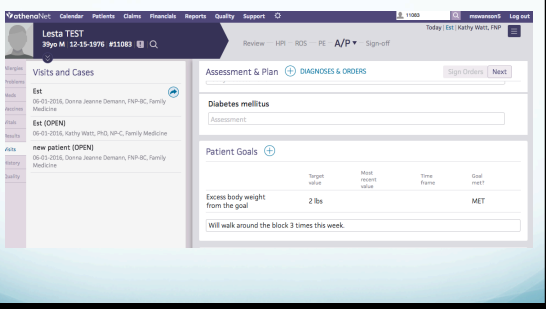
- **Diet**:
  - "This week I will substitute an apple as an afternoon snack instead of a handful of potato chips"
  - "This week I will add one vegetable serving during my dinner"
- **Exercise**:
  - "Over the next two weeks, I will walk around my block at least 4 nights after work"
  - "This week when I am watching TV, I will get up and dance through every commercial"

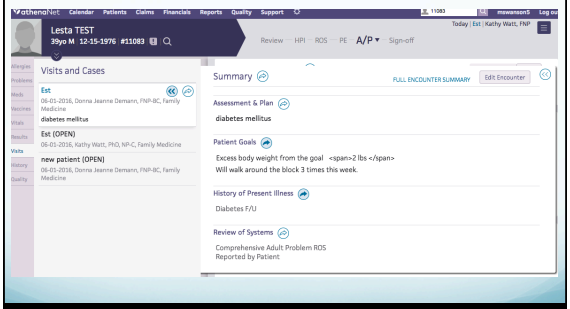
Creating SMART Goals

- Key: The goals need to be attainable and short term!
  - Want to enhance the patient's confidence in managing his or her disease.
  - Hope to develop behaviors that turn into habits for long-term change
  - As more goals are attained, the patient gains more confidence and are more likely to create additional goals and maintain healthier behaviors

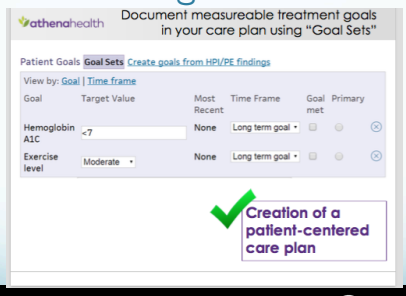
Documentation







Charting for Case Management



Cost Analysis of CM for One Complex Patient

- Based on the the median hourly wage for 1.0 FTE
  - Nurse Practitioner: $47.08
  - RN: $33.56
  - Office Coordinator: $30.44

Cost of Services per Patient for 1 month

- Face to Face 30 minute appointment
  - NP $23.54
- 60 minutes of referral time
  - Office Coordinator= $30.44
- Coordinating care by RNs
  - Phone calls with patient up to 100 min =$44.74
  - Lab work and follow up ~ 10 min= $ 5.59
  - Prior Auths ~ 25 =$13.75
  - Phone calls with VNA, outside agencies ~ 60 minutes = $33.56
  - Pill boxes ~ 40 min = $22.35
- TOTAL TIME: 325 minutes (almost 5 ½ hours)
- TOTAL COST per month per patient = $173. 97

Potential Reimbursement Opportunities

- CCM in Athena- free to activate
- Medicare reimbursement opportunity $42.50/ month
- PH Medicaid reimbursement for telephone calls
- At minimum, worth investigating what we can bill
- At least for telephone calls with the patient.
- Care plans and goal documentation are a vital components to CM and PCMH designation

Implications for Practice at GVSU FHC

- SMART goals work well for primary care providers and RNs working with diabetic patients
- Can be easily incorporated into care plans for case management
- Recommended by the American Diabetes Association
- Helps patient gain confidence in behavior change that will lead to long term healthier habits and improved diabetes control and self-efficacy
- Case management is not life long, there is an end date, it is our job to help the patient get to their optimal level of health and feel confident self-managing their disease.

THANK YOU!! & Questions!

Thanks so much for participating in the lunch and learn! It is greatly appreciated ☺

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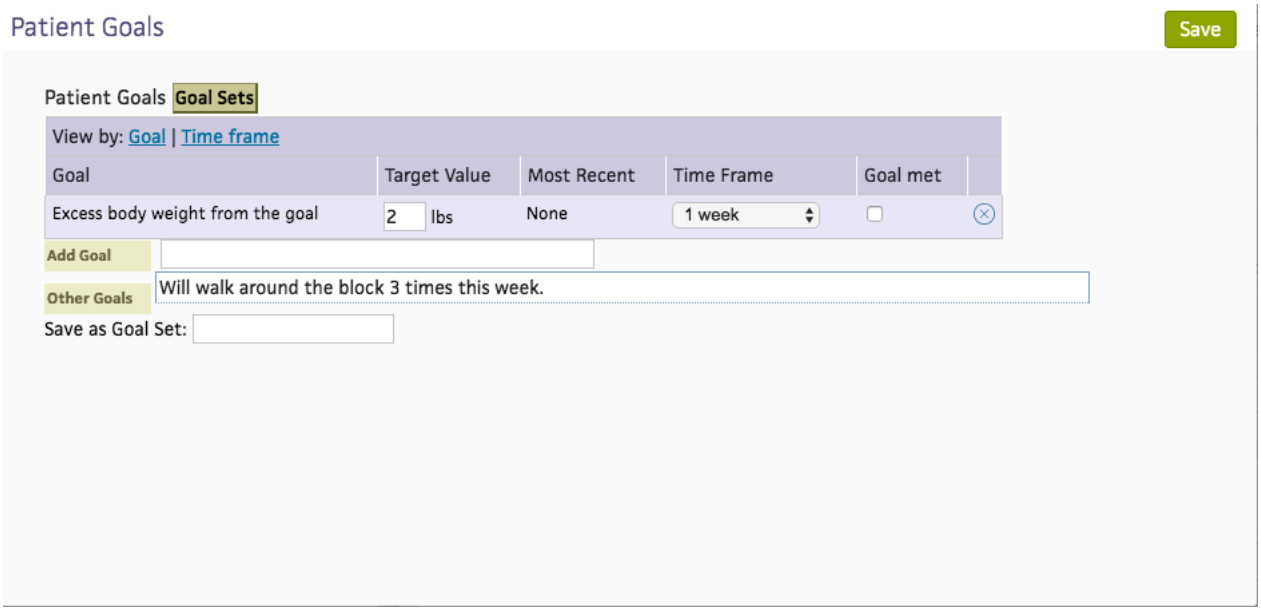
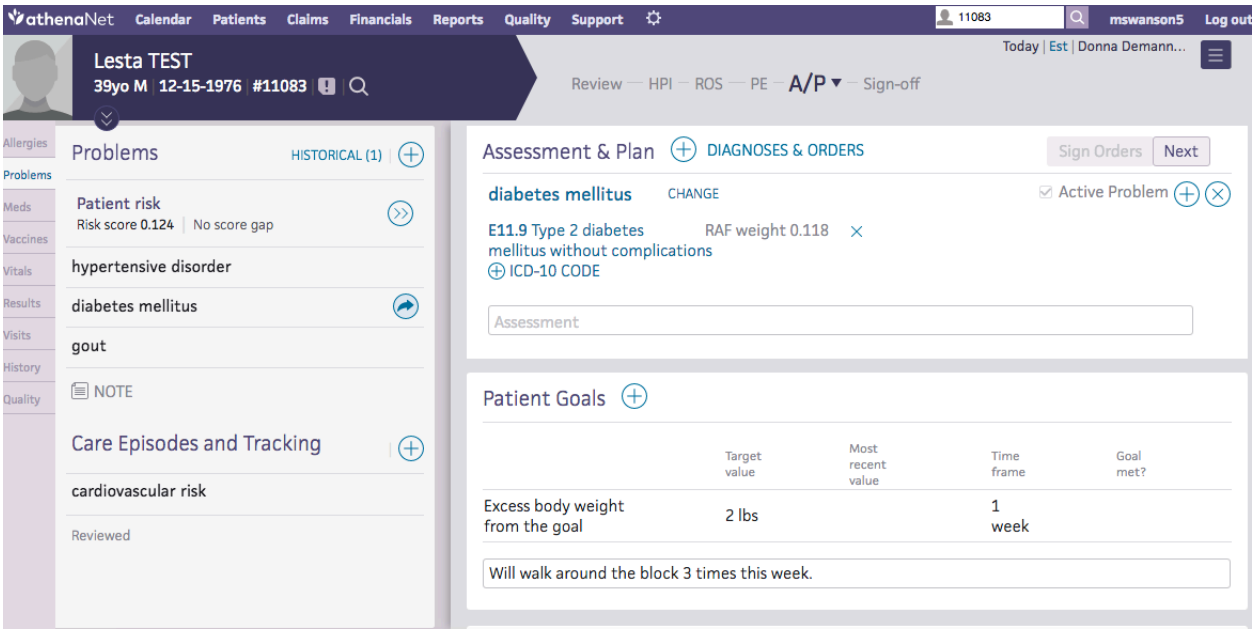
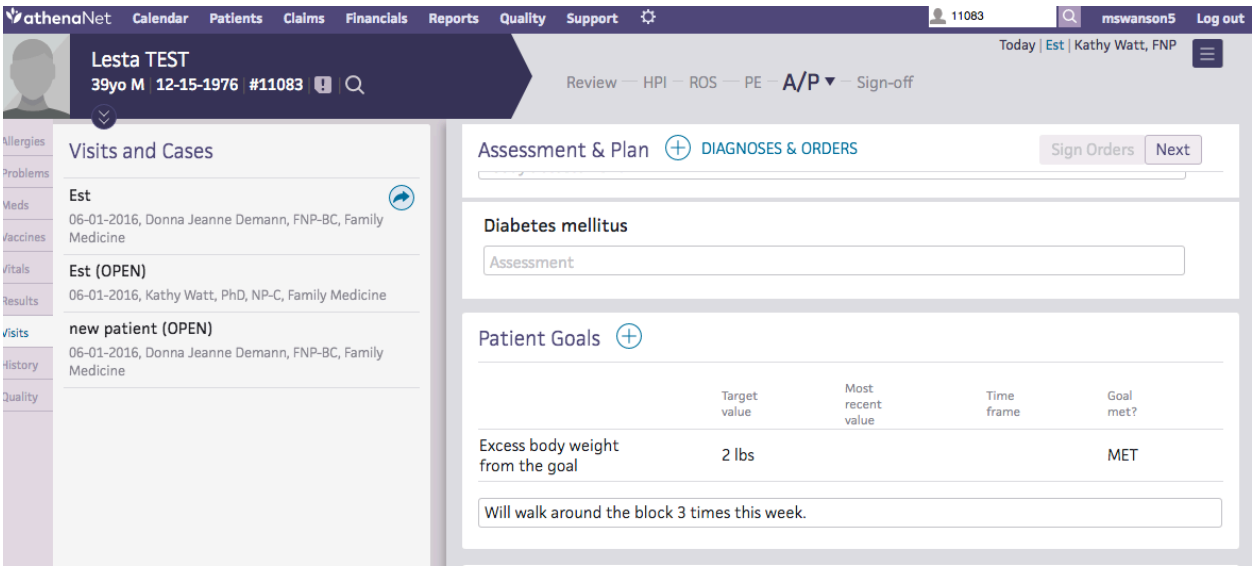
APPENDIX E

Screenshots of Goal Documentation in Athena™






athenaNet
Calendar
Patients
Claims
Financials
Reports
Quality
Support
11083
mswanson5
Log out
Today | Est | Kathy Watt, FNP
Lesta TEST
39yo M | 12-15-1976 | #11083
Review — HPI — ROS — PE — A/P — Sign-off
Visits and Cases
Est
06-01-2016, Donna Jeanne Demann, FNP-BC, Family Medicine
Est (OPEN)
06-01-2016, Kathy Watt, PhD, NP-C, Family Medicine
new patient (OPEN)
06-01-2016, Donna Jeanne Demann, FNP-BC, Family Medicine
Assessment & Plan
DIAGNOSES & ORDERS
Sign Orders
Next
Diabetes mellitus
Assessment
Patient Goals
Target value
Most recent value
Time frame
Goal met?
Excess body weight from the goal
2 lbs
MET
Will walk around the block 3 times this week.

APPENDIX F

Cost Analysis of Treating One Complex Patient

Median Salaries for 1.0 FTE in Grand Rapids, MI

- Nurse Practitioner: $ 97,942
- Registered Nurse: $69, 782
- Office Coordinator: $63, 323

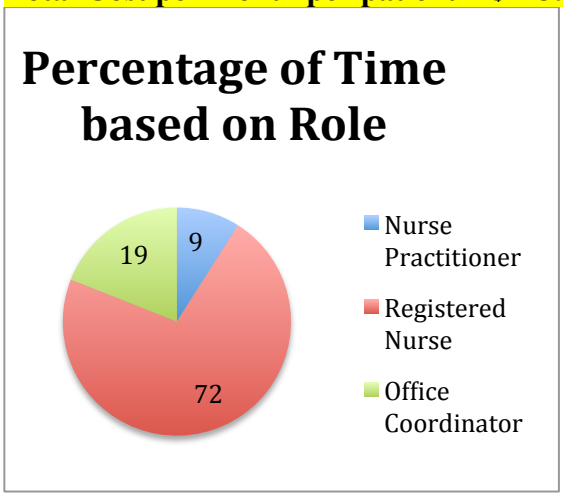
Median Hourly Wage based on 1.0 FTE median salaries for Grand Rapids, MI: (Salary/52 weeks/40)

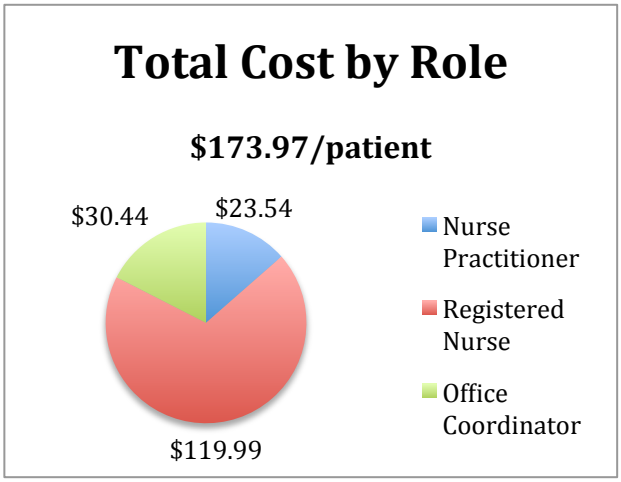
- NP: $47.08
- RN: $33.56
- Office Coordinator: $30.44

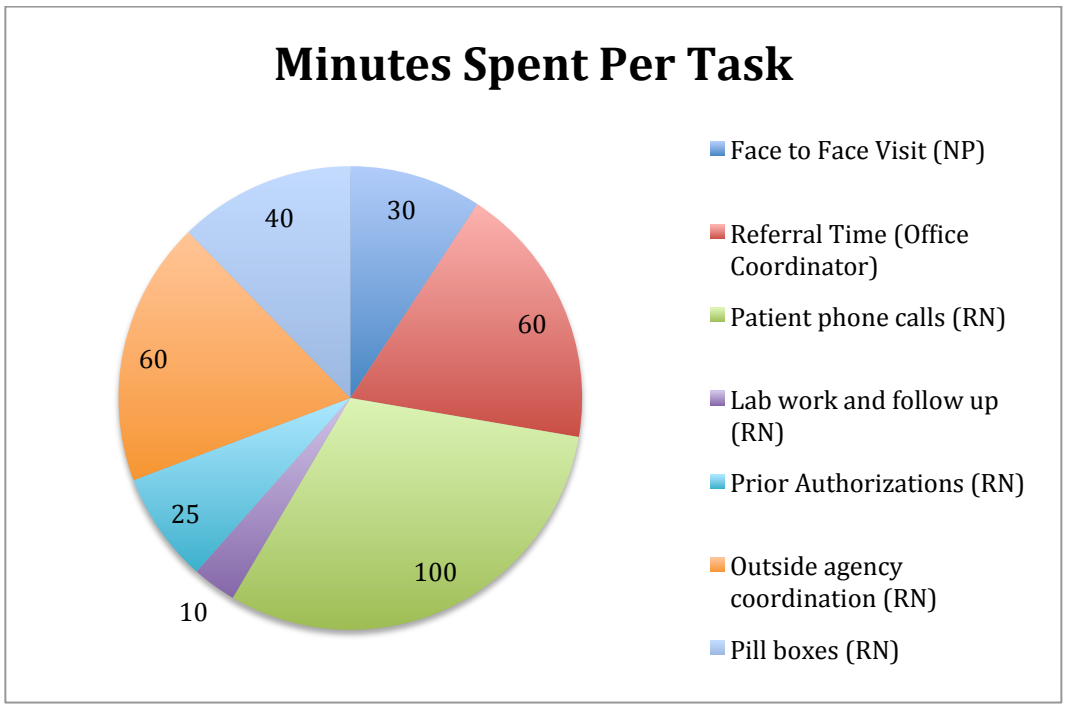
Cost of services for one complex patient per month:

- Face to face 30 minute appointment
  - NP cost=$23.54
- 60 minutes of referral time
  - Office coordinator=$30.44
- Coordinating care done by RN's
  - Phone calls with patient ≈ 100 minutes = $44.74
  - Lab work (done in office) and follow up ≈ 10 min = $5.59
  - Prior authorizations ≈ 25 min = $13.75
  - Phone calls with visiting nurses, agencies, etc. ≈ 60 min = $33.56
  - Pill boxes ≈ 40 min = $22.35

Total Time ≈ 325 minutes
Total Cost per month per patient ≈ $173.97







One Potential Reimbursement Opportunity:

Chronic Care Management Medicare Reimbursement Program (99490)

- Total Medicare Patients: 89
- Medicare reimbursement=$42.60 per patient per month

Total potential revenue per month: $3,791.40

Future Recommendations:

- Determine which Medicaid programs reimburse for care management
  - Priority Health, Meridian, BCN, BCBS, Molina
  - Consider selecting patients for CM based on coverage
- May consider starting with a small group of patients based on coverage to begin care management services
- Activate CCM in Athena™
- Assign roles (Consider delegating tasks/time for improved efficiency)

APPENDIX G

Pre-Survey

Patient Engagement Pre-Survey

Diabetes is a chronic disease affecting many individuals. In addition to basic diabetes education and counseling, self-management strategies, including goal setting, is an important aspect of diabetes management. This survey will be used to assess the current practice standards and attitudes regarding diabetic treatment at your office.

1. On average how many diabetic patients do you see per week?

2. Given a 15 minute diabetic follow-up appointment, how much time do you spend doing the following?

	0-1 minute	2-3 minutes	4-5 minutes	5+ minutes
Providing education on physical activity?	○	○	○	○
Providing education on dietary recommendations?	○	○	○	○
Providing education on glucose monitoring?	○	○	○	○
Providing education on medications?	○	○	○	○
On discussing the plan of care with your diabetic patients?	○	○	○	○

3. In general, how frequently do you believe that your diabetic patients adhere to a set care plan (i.e.: follow exercise recommendations, correctly self monitor glucose, take medications)?

4. Are you familiar with SMART goals?

5. How helpful do you find the following when working with diabetic patients?

	Not at all helpful	Somewhat helpful	Extremely helpful
Using motivational interviewing techniques to engage the diabetic patient in behavioral change?	○	○	○
Creating patient-generated goals to either start or maintain a healthy behavior change?	○	○	○
Partnering with patients to create a collaborative care plan to manage diabetes?	○	○	○

6. How often do you do the following?

	Never	Seldom	Sometimes	Often	Always
Use motivational interviewing to engage diabetic patients?	○	○	○	○	○
Use patient-generated SMART goals as a strategy to change unhealthy behaviors?	○	○	○	○	○
Provide printed educational material to your diabetic patients?	○	○	○	○	○
Discuss dietary recommendations with your diabetic patients?	○	○	○	○	○
Discuss physical activity recommendation with your diabetic patients?	○	○	○	○	○
Consider the diabetic patient as a partner in making decision regarding his or her plan of care?	○	○	○	○	○

7. How confident are you in doing the following?

	Not at all	Slightly	Moderately	Very	Extremely
Using motivational interviewing to engage diabetic patients?	○	○	○	○	○
Using patient generated goals to assist in behavioral change?	○	○	○	○	○
In delivering the American Diabetes Association recommendations for diet and exercise?	○	○	○	○	○
In using SMART goals to create personalized, highly attainable, goals?	○	○	○	○	○
Partnering with the patient to create a collaborative plan of care?	○	○	○	○	○

APPENDIX H

Post-Survey

After completing the patient engagement in-service, please reflect on your current practice when working with diabetic patients.

1. In the past two weeks, how many diabetic patients have you seen in the office?

2. In the past two weeks, given a 15-minute diabetic follow-up appointment, how much time have you spent on the following?

	0-1 minute	2-3 minutes	4-5 minutes	5+ minutes
Providing education on physical activity?	○	○	○	○
Providing education on dietary recommendations?	○	○	○	○
Providing education on glucose monitoring?	○	○	○	○
Providing education on medications?	○	○	○	○
On discussing the plan of care with your diabetic patients?	○	○	○	○

3. Since the in-service 2 weeks ago, how helpful do you find the following when working with diabetic patients?

	Not at all helpful	Somewhat helpful	Extremely helpful
Using motivational interviewing techniques to engage the diabetic patient in behavioral change?	○	○	○
Creating patient-generated goals to either start or maintain a healthy behavior change?	○	○	○
Partnering with patients to create a collaborative care plan to manage diabetes?	○	○	○

4. Since the in-service 2 weeks ago, how likely are you to do the following?

	Definitely not	Probably not	Possibly	Very probably	Definitely
Use motivational interviewing to engage diabetic patients?	○	○	○	○	○
Use patient-generated SMART goals as a strategy to change unhealthy behaviors?	○	○	○	○	○
Provide printed educational material to your diabetic patients?	○	○	○	○	○
Discuss dietary recommendations with your diabetic patients?	○	○	○	○	○
Discuss physical activity recommendation with your diabetic patients?	○	○	○	○	○
Consider the diabetic patient as a partner in making decision regarding his or her plan of care?	○	○	○	○	○

5. Since the in-service 2 weeks ago, how confident are you in doing the following?

	Not at all	Slightly	Moderately	Very	Extremely
Using motivational interviewing to engage diabetic patients?	○	○	○	○	○
Using patient generated goals to assist in behavioral change?	○	○	○	○	○
In delivering the American Diabetes Association recommendations for diet and exercise?	○	○	○	○	○
In using SMART goals to create personalized, highly attainable, goals?	○	○	○	○	○
In partnering with the patient to create a collaborative plan of care?	○	○	○	○	○

APPENDIX I

Patient Education Handout

Ideas to Better Manage Your Diabetes

Eat Smart!

Eat more vegetables and fruit
Watch your portions
Drink sugar-free drinks
Learn the healthy plate (1/2 veggies, ¼ protein, ¼ carbs)
Cut down on fried foods
Substitute fruit for a sweet snack
Try using a smaller plate

Get Moving!

Take the stairs
Park farther away from the store
Rent an exercise video
Walk with your kids, grandchildren or dog
Dance through commercials

Personal Health Habits

Cut down or stop smoking
Take your meds as instructed
Check your blood sugar
See an eye doctor every year
Check your feet regularly

Create a SMART Goal!

Specific
Measureable
Attainable
Realistic
Timely

"I will substitute a fruit instead of a piece of candy for dessert."

"I will take the stairs at work everyday for the next week."

"I will dance through the commercials during my favorite TV show."

APPENDIX J

Determination Letter from the Human Research Review Committee

DATE:	May 18, 2016
TO:	Mackenzie Swanson
FROM:	Grand Valley State University Human Research Review Committee
STUDY TITLE:	[904369-1] The Implementation of a SMART Goal Intervention for Diabetic Patients: A Practice Change in Primary Care
REFERENCE #:	
SUBMISSION TYPE:	New Project
ACTION:	NOT RESEARCH
EFFECTIVE DATE:	May 18, 2016
REVIEW TYPE:	Administrative Review

Thank you for your submission of materials for your planned research 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.

If you have any questions, please contact the Research Protections Program at (616) 331-3197 or rpp@gvsu.edu. The office observes all university holidays, and does not process applications during exam week or between academic terms. Please include your study title and reference number in all correspondence with our office.

*Research is a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge (45 CFR 46.102 (d)).

Human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains: data through intervention or interaction with the individual, or identifiable private information (45 CFR 46.102 (f)).

Scholarly activities that are not covered under the Code of Federal Regulations should not be described or referred to as *research* in materials to participants, sponsors or in dissemination of findings.

APPENDIX K

Permission Email from Albert Bandura for Social Cognitive Theory

Albert Bandura
To: Mackenzie Swanson
Re: Copyright permission

April 15, 2016 at 8:27 PM

AB

permission granted.

Albert Bandura

From: Mackenzie Swanson <swansmac@mail.gvsu.edu>
Sent: Monday, April 11, 2016 9:15 AM
To: Albert Bandura
Subject: Copyright permission

Hello Dr. Bandura,
My name is Mackenzie Swanson. I am obtaining my Doctor of Nursing Practice at Grand Valley State University in Grand Rapids, Michigan. As part of my program requirements, I am completing a scholarly project that is focused on enhancing patient engagement and self care of diabetes through the attainment of patient generated goals. I plan on using your social cognitive theory and specifically the aspects of self-efficacy as a theoretical guide for the implementation of my project. I would like to include a copy of the structural paths of influence flow chart from your 2004 article Health Promotion by Social Cognitive Means in my final project. This will be published and uploaded to ScholarWorks upon graduation. At your convenience, please let me know if you would allow me to do this. Thank you so much. If you have any further questions please let me know.

Mackenzie Swanson

APPENDIX L

Permission Email from Alison Kitson for PARiHS Model

Alison Kitson
To: Mackenzie Swanson
RE: Copyright Persmission

April 11, 2016 at 8:17 PM
Inbox - Gmail

Dear Mackenzie,

Very happy for you to use the evaluative grid.

Best wishes,

Alison

--
Professor Alison Kitson RN, BSc(Hons), DPhil, FRCN, FAAN
Dean of Nursing
School of Nursing

T. +61(0) 8 8313 0511
The University of Adelaide

From: Mackenzie Swanson [mailto:swansmac@mail.gvsu.edu]
Sent: Tuesday, 12 April 2016 1:58 AM
To: Alison Kitson <alison.kitson@adelaide.edu.au>
Subject: Copyright Persmission

Hello Dr. Kitson,
My name is Mackenzie Swanson. I am obtaining my Doctor of Nursing Practice at Grand Valley State University in Grand Rapids, Michigan. As part of my program requirements, I am completing a scholarly project that is focused on enhancing patient engagement and self care of diabetes through the attainment of patient generated goals. I plan on using your PARiHS model as a framework for implementing this project. I would like to include a copy of your PARiHS diagnostic and evaluative grid for my final project. This will be published and uploaded to ScholarWorks upon my graduation. At your convenience, please let me know if you would allow me to do this. Thank you so much. If you have any further questions please let me know.

Mackenzie M. Swanson

APPENDIX M

Permission Email from Christian Helfrich for ORCA Tool

Helfrich, Christian D
To: Mackenzie Swanson
RE: [EXTERNAL] ORCA tool

Today at 3:30 PM

HC

Hi Mackenzie, please call me Christian, and you have my permission to use & publish on the ORCA, although you don't need it. The ORCA was developed as part of US government work and is in the public domain. I'd love to see papers you publish on this work. Best regards,
Christian

From: Mackenzie Swanson [mailto:swansmac@mail.gvsu.edu]
Sent: Tuesday, July 05, 2016 7:33 AM
To: Helfrich, Christian D
Subject: [EXTERNAL] ORCA tool

Hello Dr. Helfrich,
I emailed you several months ago to get permission to use the ORCA tool for my scholarly project that I am completing through Grand Valley State University in Grand Rapids, MI. In addition to permission to use the ORCA tool, I also need formal permission to publish my work on scholarworks with your tool. At your convenience, please let me know if this is ok with you. Thanks so much, if you have questions feel free to send them my way.

Mackenzie Swanson