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Diabetes Education and Management

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DIABETES EDUCATION AND MANAGEMENT

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Abstract

Purpose: Implementation of a diabetic self-management and education program based on the 2017 national standards of care.

Background: Empowering patients with the knowledge to manage their diabetes in conjunction with provider's recommendations is essential. The American Association of Diabetes (2012) and American Association of Diabetic Educators (2017) have deemed the use of diabetic self-management education and support as the highest level of evidence-based practice to prevent and effectively manage the long-term complications of diabetes (Burke, Sherr & Lipman, 2014).

Methods: The project was implemented at a family practice clinic in south San Antonio, TX. A diabetic self-management and education team was identified and worked to improve the current diabetic education curriculum provided in established classes in order to match the 2017 national standards. Previously, only select patients enrolled in an external healthcare funding grant were referred to attend these classes. This project also improved the provider referral process and patient scheduling system to allow all patients the opportunity to attend. Project evaluation included weekly review of provider diabetic education referral rates and patient attendance in scheduled classes.

Results: The project improved the number of patient referrals for diabetic education from 0% to 11%. A sustainable diabetic education and self-management program was created to adhere to evidence-based practice guidelines.

Implications for Practice: The implications for practice identify how collaboration to implement evidence-based practice guidelines for diabetic education can be incorporated into a primary care setting and in a cost-effective and sustainable fashion.

Keywords: DSMES, diabetic education, diabetes self-management.

Diabetes Education and Management

The incidence of diabetes in the United States is dramatically increasing. In the most recent statistic report published by the Centers for Disease Control and Prevention (CDC), an estimated 30.3 million Americans were living with diabetes in 2015 (CDC, 2017a). However, the prevalence of diabetes is not evenly disbursed throughout the United States with some states having much higher rates. A national survey of adults diagnosed with diabetes revealed higher rates in the south and southeast regions of the United States (CDC, 2018). In 2014, the overall incidence of diabetes in Texas was 10.6% compared to 14.2% in Bexar County (Metropolitan Health District, 2016). If not managed properly the complications of diabetes can lead to kidney failure, heart disease, stroke, blindness, and even death (CDC, 2017a). The financial burden of diabetes is extremely high. The CDC (2017a) estimated the total costs placed on the United States in 2015 for diagnosed cases of diabetes totaled 245 billion dollars. The CDC (2017a) reports that the seventh leading cause of death in the United States is attributed to diabetes. Education is essential to effectively manage diabetes and prevent debilitating complications and death.

This project focused on the importance of diabetic education to control the progression of this devastating disease. The clinic in which the project was implemented is located within the southern area of San Antonio. An assessment of the clinic patient population and health care provider input revealed the need to focus on diabetic disease management due to the large number of patients with diabetes and the lack of current education delivery methods. A literature search was conducted to determine current evidence-based practice and guidelines reiterating the importance of this concern.

Statement of the Problem

Across south Texas there is a high incidence of diabetes, and many of these patients' disease processes are not well managed (National Minority Quality Forum, 2017). The clinic in which this project occurred was no exception. Several concerns within the clinic's processes make provisions for appropriate support and education difficult. The clinic had a high rate of diabetic patients that do not meet the standards set forth by the American Diabetes Association (ADA) Guidelines (2016). This was evident by the large amount of overweight or obese patients. These patients laboratory values were also checked for A1C, a minor component of hemoglobin to which glucose is bound. Many patients had A1C levels greater than 7%, indicating uncontrolled diabetes. It was identified that the limited amount of patient education and resources within the clinic was an area in great need of improvement. This was evident by the absence of an on-site diabetic educator and minimal amount of teaching materials available to enhance knowledge. As a result, an increased number of patients with poorly controlled diabetes are prevalent in the clinic. Provider time with patients is extremely limited preventing adequate diabetic teaching and assessment of patient understanding regarding disease process and management.

Background and Significance

Certain risk factors have been identified that increase the chances of an individual being diagnosed with diabetes. Ethnicity, educational level, income, body mass index, and inactivity all correlate to a higher incidence of diabetes (Metropolitan Health District, 2016). Many of the clinic patients are minorities and come from lower socioeconomic backgrounds. Additionally, providers must be able to provide teaching in accordance with culturally competent care. It is essential for health care providers to assess and gain a greater understanding of the cultural and

lifestyle needs that encompass their patients to develop successful treatment plans (Pal et al., 2015). That is difficult given the fast-paced environment in the clinic.

The management of diabetes requires a multidimensional approach with pharmaceutical, nutritional, and educational interventions (ADA, 2016). Patients must be provided with education to effectively manage their disease. The ADA (2012) and American Association of Diabetic Educators acknowledge the use of diabetic self-management education and support (DSMES) as the highest level of evidence-based practice to prevent and effectively manage the long-term complications of diabetes (Burke et al., 2014). DSMES is an educational program that is created to account for the unique needs of individuals with or at risk for diabetes. The primary focus of DSMES is changing the behavior of the individual while also encompassing the 10 standards set forth by the American Association of Diabetic Educators and ADA (Hass et al., 2013).

Traditionally, a certified diabetic educator has served as DSMES coordinator in an accredited program. The use of diabetic educators in the primary care setting is underutilized often times due to lack of registered nurses being employed in primary care settings (Burke et al., 2014). In response to this, the ADA now recognizes a variety of professionals to fulfill the DSMES coordinator role. Registered nurses, pharmacists, dietitians, and professionals with a baccalaureate education or higher with extensive education in diabetes may be DSMES coordinators (ADA, 2017). The use of DSMES results in increased patient knowledge of disease management and reduced chronic complications (Burke et al., 2014). A proposed solution would be creating a position for a diabetic educator. However, the cost for employing a diabetic educator was not a feasible option for this clinic. Patients are limited to the brief encounter they have with their primary care physician to learn more about diabetes management. The

implementation of a referral process to an existing diabetic class held within the clinic allows patients to learn more about diabetes management.

Assessment

The clinic is located in the south area of San Antonio within a residential neighborhood. The clinic is part of a group of several clinics with a central management office serving the residents of Bexar, Hayes, and Kendall counties. The clinic was first established in the 1970s by a charitable nun that dedicated her nursing service to serving patients in need of health care. The mission "To improve the health of those we serve with a commitment to excellence in all we do" (facility website, 2017) is demonstrated by the quality care provided to patients. However, due to being federally funded a great limitation is placed on the financial means to attain optimal patient care. This is demonstrated by the large volume of patients that must be seen to maintain productivity. The clinic is a family practice clinic, located to the rear of a one-story building, occupying approximately one third of the floor and serves patients age 17 years to the end of life.

Professionals

The clinic professionals consist of two physicians, four nurse practitioners, 12 medical assistants, three licensed vocational nurses, four front desk personnel, one office manager, and one assistant manager. The education of the providers' ranges from masters to doctoral level. Each individual care team consists of one provider and two medical assistants. One licensed vocational nurse is assigned for three providers. Thus, there are two care teams that three licensed vocational nurses function within the clinic. Licensed vocational nurses largely perform administrative duties with minimal patient interaction. The majority of time occupied by licensed vocational nurses includes fulfilling patient medication refills and issues with referrals not completed by medical assistants. The medical assistants have a large scope of responsibility

within the clinic. For example, medical assistants provide a great amount of nursing care to patients such as: immunizations, medication administration, urinalysis, and electrocardiograms. Having medical assistants function in this role is cost effective for the system.

The majority of patients are adults and range in age from 19 to 45 years old. The primary care practice profile (Appendix A) lists the approximate percentage of patient age distribution within the clinic. Patient appointments are for preventative, chronic, and acute care visits. According to data from providers the most common patient diagnoses in the clinic consist of: diabetes, hypertension, cholesterol, and acute pain. Approximately 50 diabetic patients are seen daily in the clinic. The primary ethnicity of patients within the clinic is Hispanic. Three of the providers are bilingual enabling the clinic to accommodate the large portion of Spanish speaking patients.

Problem-Focused Assessment

An assessment of the clinic revealed that current diabetic education material consisted of one pamphlet in both English and Spanish. Additionally, providers reported that some patients seen within the clinic are illiterate and this material is not helpful to them. Diabetic education classes are provided twice a month at four clinical sites across the city for patients that have been selected for a healthcare funding ministry grant, but not previously available to other patients. This grant serves only a small population of the patients within the clinic leaving many without access to the class or other diabetic education resources. In order to remain eligible for the grant, patients must have an A1C greater than 9 and complete educational requirements. Patients must attend a beginner and intermediate two-hour class and meet individually with a diabetic nurse educator. The class could be available for all patients within the clinic to attend, yet patients are not being referred by providers. The maximum class size is 24 patients and grant patients have

priority for registration in the classes, but they are rarely full and could easily accommodate additional referred patients. Topics discussed in the class relate to hypertension, cholesterol, and diabetes.

The Health Resources and Services Administration has deemed the clinic a Federal Tort Claims Act organization and is a federally qualified health center (HRSA, n.d.). In previous years, a diabetic education class was offered for all patients on site every Monday. However, when it was determined that group classes would not be reimbursed due to the clinic being federally qualified health center, the program was discontinued. According to the Centers for Medicare and Medicaid (2013) in order for a federally qualified health center to be reimbursed for DSMES the patient must have a one-on-one meeting with a certified diabetic educator not linked to any other billable services. Previously one of the nurse practitioners volunteered to become a board certified advanced diabetes manager. This nurse practitioner is experienced in diabetes management and also speaks Spanish fluently. However, this plan was discontinued because group diabetic education classes would not be reimbursed and there is not time for one-on-one instruction with such a high volume of patients seen daily. Classes were moved to a more centralized location and are offered at various dates and times. Prior to this project implementation, only patients enrolled in the grant were referred to attend. No other formal education is provided to other patients since the weekly group classes were discontinued.

Needs Assessment

A needs assessment was conducted in the steps outlined by Watkins, Meiers, & Visser (2012). The process involved the completion of a thorough and systematic approach to assess potential gaps within the organization. A strategic gap was identified relating to the decreased amount of diabetic education provided to patients. The clinic had a low priority to address this

gap secondary to the need for professionals obtaining new skill requirements, the hiring of additional staff, and financial costs. In addition, the financial incentive to adjust current practices was low because of their federally qualified health center status and did not necessitate a change. The current methods in place for diabetic education include one book in English and a pamphlet in both English and Spanish. These educational materials are not sufficient due to a variety of reasons. First, some patients within the clinic are illiterate. Additionally, providing written information without assessing patient literacy is unacceptable (Beck et al., 2017). The current amount of education available for patients is not in accordance with 2017 ADA standards (Beck et al., 2017). Patient appointment times have recently been adjusted from 15 minute to 10 minute increments. This short amount of time is not adequate to assess patient needs and provide needed education.

Providers stated that diabetic teaching is documented in patient records. However, it is minimal if provided at all, and it cannot be billed because it does not meet the standards for federally qualified health center reimbursement and the clinic receives financial assistance from the government (Health Resource and Service Administration, n.d.). Centers for Medicare and Medicaid will not reimburse a federally qualified health center unless the DSME is provided on a one-on-one basis with a certified provider. In addition to the lack of incentive to provide adequate education, the diabetic education class encompasses other patient issues, such as hypertension. It is not currently a comprehensive diabetic education class, does not include discussions of diabetic medication management, and does not meet the 2017 DSMES guidelines.

Applying for grant assistance to increase diabetic education is not feasible. Providers also stated that the clinic no longer applies for grants of any kind to offset the inability to recuperate the expenses. There is a lack of funding and reimbursement related to implementation and

sustainment of individualized diabetic self-management plans, and therefore the clinic provides only minimal services related to diabetic education. The current methods being implemented for diabetic education within the clinic are not in accordance with ADA and American Association of Diabetic Educators recommendations. Though the cost is low for the activities that are currently being implemented it is not an acceptable method of educating diabetic patients.

The microsystem assessment revealed the clinic has an extremely high need for additional methods to improve diabetic education for patients. This education must be culturally appropriate and individualized (ADA, 2017). The three main barriers identified in the clinic assessment preventing patients from accessing diabetic education included: minimal provider time, finances, and the lack of a diabetic education program. Provider and patient time is extremely limited. On average, the providers have less than ten minutes to spend with each patient. The average amount of time that is reimbursed by Centers for Medicare and Medicaid for DSMES is a one-hour individual class (CMS, 2013).

Readiness for Change

The organization was assessed for the implementation of evidence-based practice using the Advancing Research and Clinical Practice Through Close Collaboration Mode. The organizational culture, strengths, and barriers were identified (Melnyk, Fineout-Overholt, Giggleman, & Choy, 2017). The readiness of the organization for change revealed positive results. Providers and office management acknowledged that diabetic patients within the clinic needed additional education. However, the clinic did not have the funding to hire a certified diabetic educator. Additionally, increasing provider time with diabetic patients was not an option due to the strict patient quota needed to meet financial budgets. The clinic does have the technological capacity to deliver educational videos, but it is not currently well utilized.

First, ADA standards were reviewed to determine current guidelines for DSMES. Stakeholder buy in was then achieved by providing health care professionals within the clinic with current ADA standards and publications. The current diabetic education class curriculum was reviewed with licensed vocational nurse educator and clinic doctor of nursing practice (DNP) to determine areas in need of improvement to meet ADA guidelines. A patient Diabetic Self-Assessment tool listed in Appendix B, was created based on suggestions from clinic DNP, advanced practice registered nurses and licensed vocational nurse educator based on ADA recommendations.

In order to assess patient educational preferences a Diabetes Questionnaire was created by the DNP student and given to 30 established diabetic patients within the clinic. Questionnaires were available in both English and Spanish. The questionnaire can be reviewed in Appendix C. The purpose was to obtain a baseline for language, educational preferences, and the willingness to use new technology. Patients were also asked if they had ever attended a class to help manage diabetes or would be willing to do so. The results of the survey revealed that the majority of patients would be willing to attend an educational class and use a free application for their cellular phone to help manage their diabetes.

Methods to ease electronic health record (EHR) patient referral to diabetic classes were identified based on provider feedback. Providers primarily utilized verbal orders for medical assistants to schedule ministry grant patients to the existing class. This was largely due to the current EHR process being tedious, thus work-arounds were utilized. Meetings with the information technology (IT) department were conducted to assess potential strengths and readiness to change. The willingness of IT to assist in the process of project implementation was instrumental (Appendix D).

Provider and patient cues to attend diabetic classes were reviewed based on provider feedback. The clinic currently utilizes a system that sends a text message, a day prior to patient appointments, and this was identified as a potential way to remind patients of their scheduled classes. The use of promotional materials such as class posters in patient rooms was not approved by office management. The addition of diabetic class promotion to interactive teaching portal in exam rooms was also considered, but was also not approved.

Project Identification

The purpose of the project was to utilize the 2017 National Standards to implement a sustainable DSMES program for all patients with diabetes age 18 years and above and treated at the clinic in question.

The objectives of this project are:

1. 60% of diabetic patients will be started on DSMES by being referred to a diabetes education class
2. 60% of diabetic patients will be scheduled for diabetic class by medical assistants before leaving their appointment
3. 50% of patients will attend the diabetic educational class

Summary and Strength of the Evidence

Diabetic education is a multidimensional process that must involve the patient, health care providers, family, and community. A primary first step is to assess what the patient believed contributed to the diagnosis of diabetes. A study that investigated the causation beliefs among Spanish speaking patients revealed five key points. Patients believed that stress was the highest contributor followed by heredity, lifestyle, poor eating habits, and a stressful family/home environment (Concha, Mayer, Mezuk, & Avula, 2016). Understanding the perceptions that

patients have of acquiring an illness is an important aspect for providers to consider. The role of a health care provider is to be both culturally understanding, but also provide accurate information and treatment methods. Prior to implementing any changes, a patient assessment must be done in order to tailor an appropriate treatment plan.

Prior studies such as the Pili Ohana project revealed that ethnic groups achieve better results in disease management when a program implements cultural beliefs. A sense of community and classes that are provided a patient preferred language are essential (Kaholokula et al., 2014). The social support that a patient receives can either impact diabetic management in a positive or negative manner, demonstrating that this social dynamic of a patient must be assessed (Fortmann et al., 2015). Integrating cultural aspects is an essential component of diabetic care and education. Language is an instrumental component of an individual's culture. Providing educational materials in patients preferred language is method to promote culture and enhance synthesis of new information.

The ADA and American Association of Diabetic Educators promote the use of DSMES as the national standard for diabetic education (ADA, n.d.). Patient access to DSMES has resulted in an increase of knowledge that reduces acute and long term complications of diabetes. Existing research reveals that the gold standard for diabetic education and disease management continues to be DSMES. Regardless of the setting, individual or group, the outcomes remain positive. Patients that have received DSMES demonstrate not only a better understanding of managing their illness, but also increased clinical outcomes such as reduction in A1C and increased medication compliance (Burke et al., 2014). The creation of a DSMES program may be a more cost effective option for primary care clinics as opposed to a single diabetic educator.

A DSMES program must be accredited by either the American Association of Diabetic Educators as a Diabetic Education Accredited Program or the ADA in order to meet the reimbursement requirements of the Centers for Medicare and Medicaid Services (AADE, 2017). The American Association of Diabetic Educators requirements for program accreditation are extensive. The National Diabetes Prevention Program is a course created by the CDC to decrease the risks associated with type 2 diabetes. The CDC partners with public and private organizations to deliver National Diabetes Prevention Program courses across the United States. Courses can be taken online or in person, and the class length of a National Diabetes Prevention Program is a year. Currently in San Antonio there are five locations that offer the National Diabetes Prevention Program course. The National Diabetes Prevention Program is eligible for Medicare and some private insurance reimbursement. However, if an individual does not have Medicare or insurance there may be fees (CDC, 2017b). The financial cost and time constraints to complete a National Diabetes Prevention Program may actually deter patients from attending.

The creation of such programs as the National Diabetes Prevention Program or diabetic education using DSMES continue to be beneficial and a standard for diabetic care. Stakeholder engagement, cultural care, educational preferences, transportation, and finances are all obstacles that must be addressed. Increasing patient access to DSMES has demonstrated increased knowledge of self-care resulting in a reduction of acute and long term complications of diabetes (Burke et al., 2014). However, the barriers that prevent patients from attending such courses will continue. The Emory Latino Diabetes Education Program demonstrated how environmental factors can serve as potential barriers for patient access to care. As a result, patients were educated on utilizing problem solving techniques and methods of realistic goal setting to

overcome potential obstacles for care (Rotberg, Greene, Ferez-Pinzon, Mejia, & Umpierrez, 2016).

The national standards consist of 10 elements that incorporate evidence-based practice as a foundation for DSMES program structure. The primary focus is to promote a patient centered approach that results in increased knowledge and management of diabetes (Beck et al., 2017). A detailed explanation of the Standards for Care is listed in Appendix E. The 2017 ADA and American Association of Diabetic Educators 10 National Standards for DSMES include:

- Internal structure
- Stakeholder input
- Access to population served
- Quality coordinator overseeing DSMES
- DSMES team
- Curriculum
- Individualization
- Ongoing support
- Participant progress
- Quality improvement

Methods

The project was based on evidence-based quality improvement. The intervention targeted 100% of all diabetic patients seen at the clinic over a 6-week period who attended an updated diabetic education class held within the health care system. The intervention took place between February through April of 2018. The Diabetes Education and Management project was approved

by the clinic's administrators, the DNP student's mentor, and the university's internal review board as a quality improvement project.

Project Intervention

The step by step description of the project is included in the Intervention Action Plan (Appendix F). It includes each step, when each step is to be completed, supplies necessary, estimated costs, and assignment of accountability. Major steps of the project included**:**

- Overall design of the DSMES program according to 2017 National Standards
- Implementation of an enhanced diabetic education curriculum and course structure that meets the ADA standards
- Implementation of a structured referral and scheduling process for diabetic education classes
- Staff and provider education of the plan
- Evaluation plan to monitor project success

Improvement of the Diabetic Education Curriculum

Curriculum enhancement consisted of assessment, the use of organizational facilitators, and senior leadership approval. The DNP student observed an ADA accredited DSMES class within a local agency to assess curriculum components. Ideally, the current class would be broken into two separate sessions. The first focusing on diabetes management and the second on diabetic nutrition. However, this was not a feasible option for the organization. All curriculum changes required a meeting to gain the approval of the organization chief of clinical affairs. The licensed vocational nurse educator was enthusiastic to update the current education and served as a facilitator for change.

The class PowerPoint was updated to educate patients on signs and symptoms of hypoglycemia and hyperglycemia. A greater emphasis was placed on nutrition and goal setting. All patients were to be provided with nutritional books in addition to enrollment of online resources from Cornerstones4Care. The group setting served as an excellent method for patients to discuss new information as well as share experiences related to their illness. Methods to promote medication adherence were also implemented. Patients were provided with information on medication assistance programs in addition to a pharmacy that had a contract with the organization for medication discounts. Sources of existing support such as churches and online support groups were identified to meet patient needs of ongoing support.

New Referral and Scheduling Process

Collaboration with the IT department was instrumental to create a simplified referral process. Multiple meetings were held with IT to create a process that would allow for both simplified provider referral and specific reports to measure project objectives. Two specific reports were built into the EHR to measure the total number of diabetic patients seen and the number of referrals completed by providers. The reports were able to be adjusted to specific dates for data collection. This was not only essential to monitor project status, but also a sustainable method of measurement for long term clinical outcomes.

Staff/Provider Education

Following completion of finalized class curriculum and clinic DNP approval, providers and medical assistants were educated on the new process. Providers were educated on the importance of DSMES and clinic goals to adhere to ADA standards. They were shown how to complete the referral using the new process in the electronic health record. Office staff and medical assistants were educated in a separate session on the new clinic process for referring all diabetic patients to DSMES class. They were shown how to view and complete the referral as

ordered and how to schedule the patient into one of the classes at the various locations across the city.

Evaluation Plan

The evaluation phase consisted of weekly assessments of provider referral rates, patient attendance, educational supply status, and DSMES team feedback. The evaluation plan is based on comparison of referrals to the DSMES classes and anticipated attendance in those classes with the patient census at the clinic. The specific plan to evaluate the success of each outcome is as follows:

Outcome #1, 60% of diabetic patients will be started on a DSMES by being referred to diabetes education classes, was measured through comparison of the daily patient census for all patients diagnosed with diabetes and the list of referrals to DSMES classes. The timeline for measurement was weekly starting mid-February and continuing through April 2018 (approximately 7 weeks). This information was gathered from the EHR.

Outcome #2, 60% of diabetic patients will be scheduled for diabetic educational class, was measured weekly by reviewing the EHR for all patients with an ordered referral and verifying their registration in the class. The timeline for measurement was weekly starting mid-February and continuing through April 2018 (approximately 7 weeks).

Outcome #3, 50% of patients will attend the diabetic educational class, was measured monthly by reviewing data obtained from the class attendance rosters and comparing that with the list of those patients scheduled for that session. The timeline for measurement was mid-February through April 2018 (approximately 7 weeks).

Biweekly meetings were conducted between the DNP student and licensed vocational nurse nurse educators to review additional areas in need of improvement and to maintain

adequate supplies for the classes. Additionally, patient feedback following classes were reviewed. This allowed the licensed vocational nurse and DNP student to identify topics that worked well or possibly needed to be considered for future classes.

Setting/Population

The project took place at a clinic located in the south side of San Antonio, Texas. For the year of 2017, the clinic had 7,969 diabetic patients that were seen by providers. All patients 18 years and older, currently seen at the clinic and diagnosed with diabetes were possible candidates for inclusion in the project. Previously only ministry grant patients were referred to the diabetic education class. This project could increase the number of potential attendees significantly. The goal was to have all patients with diabetes referred to the classes.

Organizational Barriers and/or Facilitators

Assessment of the clinic identified a few barriers that inhibited the progression of the project. Implementing the new referral method process required frequent reminders and cues in the EHR to ensure that referrals were ordered. Providers and medical assistants within the clinic are extremely busy with a high patient visit load. Incorporating a new process added to the overall workload.

The clinic is not reimbursed for patients attending group DSMES classes due to their federally qualified health center status. The lack of reimbursement could have contributed to a bias and decreased the number of referrals to the class. Additionally, ministry grant patients have priority to attend classes. This could result in a delay for all clinic patients attending classes within the clinic simply due to space constraints. Though classes are offered two times per month within the organization, patient attendance can be inhibited due to personal barriers such as language, transportation, class times, and financial limitations.

Facilitators for the implementation of the project included the providers' support, access to free educational materials, and an existing diabetic education class structure that only needed updating. The classes were previously held two times per month at this clinic location, but system-wide classes are offered four times per month at other locations. The class is free and available for all patients to attend.

The health care providers acknowledged that the patients with diabetes are in need of additional education on managing their illness. Providers were in support of referring patients to the diabetic education class to improve health outcomes. A formal letter of support was provided by one of the providers who also serves as the DNP student mentor (Appendix G) demonstrating their support for the project.

Another facilitator was the current EHR system. The clinic uses an EHR where referrals can easily be ordered by providers. This system was easily adapted to meet the needs of the projects and easily sustainable at its completion. In the event that number of referrals exceed the maximum amount of patient spots available, additional providers of DSMES are available at no cost to the patient with a provider referral at a different institution in the same area of the city.

Additionally, quality educational materials were available in English and Spanish at no cost from Cornerstones4Care, a division of Novo Nordisk pharmaceutical company. These books were easily ordered and their stock was easily replaceable through an online account system that was set up for the licensed vocational nurse educators.

Ethical Considerations

The project was approved by University of the Incarnate Word's Internal Review Board as a quality improvement project. Full internal review board approval was not warranted, but the project design was approved by the DNP student mentor within the clinic and the DNP student

project advisor at the university. All data obtained from the project was de-identified and kept on a password protected computer and placed in a secure location. Additionally, any paper-based survey materials or information with patient identifiers was kept in a locked file cabinet within the clinic. Following project completion and data was collated into a digital protected file, all paper documentation was placed in Health Insurance Portability and Accountability Act secured bins at the clinic.

Results

Demographics collected for the project included; age, sex/gender, and race/ethnicity (see Table 1 for an illustration of the patient demographics).

Table 1

Diabetic Class Patient Demographics

Category	Number
Male	45
Female	28
Hispanic	60
Non-Hispanic	13
Age 30-40	7
Age 41-50	23
Age 51-60	28
Age 61-70	13
Age 70 +	2

Note: Obtained from NextGen Electronic Health Record

Objective #1, 60% of diabetic patients will be started on a DSMES by being referred to diabetes education classes. Results revealed a total of 11% of patients with a diagnosis of diabetes were referred. Though the anticipated objective was not reached, this was still a significant increase. Prior to implementation of the project, the provider referral rate was zero (see Table 2 for an illustration of the provider weekly referrals). The referral numbers were increasing weekly, except week 7 due to spring break. The referrals ranged from 10 to 20 in weeks 2 and 5 respectively.

Table 2

Referrals for Diabetic Patients

Week	Diabetic Patients	Referrals
Week 1	205	11
Week 2	129	10
Week 3	157	19
Week 4	137	19
Week 5	160	20
Week 6	143	18
Week 7	119	13

Note: Obtained from NextGen Electronic Health Record

The total number of patients seen in the clinic during the project period was over 10,500 and the number of patients diagnosed with diabetes was 1,050. Of those diagnosed, there were 110 referrals total. Some of these patients were referred multiple times by the same or a different provider. Provider one had the most patient referrals; conversely, provider six had the least

amount of referrals. The front desk scheduled three patients: unknown provider (see Table 3 for an illustration of the total referrals completed by providers).

Table 3

Total Referrals Completed by Providers

Provider	Referrals
Provider 1	37
Provider 2	6
Provider 3	7
Provider 4	7
Provider 5	18
Provider 6	2
Unknown Provider	3

Note: Obtained from NextGen Electronic Health Record

Objective #2, 60% of diabetic patients will be scheduled for diabetic educational class. One hundred percent of patients that were referred were actually scheduled for class prior to clinic departure the day of their appointment**.**

Objective #3, 50% of patients will attend their scheduled diabetic education class. Following project completion 22 out of the 73 total scheduled patients have attended the classes as of the end of April. Due to classes being offered only 2 times per month at the clinic where data collection took place, the majority of patients are still awaiting their first-class session. The attendance rate for the months of March, April, and May increased overall (see Table 4 for an illustration of the diabetic class attendance). The month of May had an additional 43 patients

currently projected to attend the classes, but the first class had not yet occurred at the time of the project completion.

Table 4

Diabetic Class Attendance

Category	Scheduled	Attended
March	9	6
April	31	18
May	43	

Note: Obtained from NextGen Electronic Health Record

Discussion

The new referral process created by IT worked well when utilized by providers. This demonstrated that the internal referral and scheduling system designed for this project worked as planned. The importance of the collaboration and teamwork with the IT department was essential for project success. All patients with referrals were scheduled for their class on the same day prior to leaving the clinic. Confirming that a patient is scheduled for the class prior to departing the clinic insures that effective communication between providers and medical assistants resulted in an extremely positive outcome. Not only does this insure that provider referrals are completed promptly, but prevents any delay in patient care.

The number of attendees at the second class on April ninth was much less than anticipated; 19 patients were scheduled and only six attended. This was due to an error in intercommunication with the scheduling system involving automatic reminder calls for referrals. Automatic reminder calls were only performed for patients with provider visits, not those scheduled for education classes. Unfortunately, it was not possible to have patients scheduled for

the education class added to the automatic reminder system. This resulted in no patients scheduled for the April class receiving a reminder call as anticipated. This was immediately addressed by discussing the concern with the licensed vocational nurse diabetic educator and a new plan was designed. The diabetic educator now contacts each person registered the day of or the day prior to the class to remind them they are scheduled. All patients that missed the April class session were called and rescheduled for a different class date. This new process resulted in 100% attendance at the next education class in April. This is time intensive for the diabetic educators, but they felt rewarded due to the increased attendance, and feel it continues to be valuable. Some patients also reported anecdotally that they would not have attended had the educator not contacted them directly. This does add an increased workload for the diabetic educators, and should be considered in the sustainability plan in order to protect their time from being reallocated to other responsibilities within the health care organization. The continued increase in attendance can serve as validation for this change.

Prior to the project intervention patients were not receiving any diabetic education outside of their 10-minute provider visits. The major success of this project is that patients are now given the opportunity to learn about diabetes and methods to prevent the long-term complications at no charge to them. The immediate results observed during the intervention revealed positive patient feedback regarding the class structure. Some patients asked to attend a second class. Despite the setback regarding patient reminder calls the project still had 24 patients scheduled for a class and 43 more ready to attend in the next month. The project continues to improve the lives of these patients and has the potential to improve their overall health outcomes.

Relation to Other Evidence

The implementation of this project demonstrated how DSMES continues to be beneficial for both the management and prevention of the acute and long term complications of diabetes similar to the majority of literature reviewed (Beck et al., 2017; Burke et al., 2014; Fortmann et al., 2015; Kaholokula et al., 2014; Rotberg et al., 2016). Patients that participated in the project demonstrated a greater level of knowledge regarding dietary changes, medication adherence, and the use of community resources (Rotberg et al., 2016). In addition, providers were able to witness first-hand how patient attendance to a diabetic education classes resulted in increased patient diabetes awareness. However, as Beck et al. (2017) describe, a major barrier to the implementation of a DSMES program continues to be financial reimbursement. Due to the clinic being a federally qualified health center, group DSMES classes could not be reimbursed at the project site. This was problem that significantly contributed to decreased provider referral rates.

Additionally, certain cultural barriers such as a primary Spanish speaking population were present among patients. Allowing for the provision of diabetic educational materials to be provided in the patient's language of choice proved to be beneficial (Rotberg et al., 2016). Through observation and interactions, patients described financial resources and social support as a barrier for attendance to scheduled diabetic classes (Fortmann et al., 2015; Rotberg et al., 2016). Due to the debilitating progression of diabetic eye complications, some patients were unable drive a vehicle and depended on family members as a source of transportation (CDC, 2017a). Additionally, some patients were unable to read printed educational materials due to diabetic eye complications (CDC, 2017a).

The importance of social support and a sense of community was noted in educational classes. Patients were able to share personal stories of success and learn in team environment

(Fortmann et al., 2015). For example, during a diabetic education class one patient shared how his brother had not managed his diabetes well that led to dialysis treatments and a tragic passing. The group shared their condolences for this patient and it also brought about the potential fatal complication of diabetes. Family members were welcome and encouraged to attend classes. Likewise, Kaholokula et al. (2014) demonstrated how patients develop a stronger sense of community when interacting with others at the diabetic classes.

Limitations

The time frame to complete project interventions was limited. Establishing changes in a large organization was difficult. Implementing the needed changes to the curriculum was longer than anticipated. All curriculum changes required the approval of senior leadership and nurse educators. The coordination of all people involved in the approval process was difficult to achieve. Additionally, establishing the new referral process with IT required multiple meetings over several weeks. Although this proved to be a strong collaboration it was difficult to coordinate within such a large organization and within such a limited timeframe.

Patient referrals did not increase to the projected volume of 60%, only to 11%. This was, however, an improvement from the previous rate of zero. There are various reasons for the lower than expected rate and they proved to be barriers within the project. The implementation of a brand-new referral process required several changes to the culture of the clinic. Previously only patients enrolled in the ministry grant program were referred to diabetic education class because it was a requirement from the program. Having providers refer all diabetic patients was a significant change. The referral and scheduling process required an additional step from the providers and medical assistants. This new change required an adjustment in the clinic culture, but did result in an improved outcome.

Limited patient appointment times of 10 minutes also served as a barrier. The clinic is very fast paced and providers do not have the time to do a lot of education. The six providers saw over 10,500 patients in a 7-week period (about 1,500 per week). This also proved problematic in the new process because originally the diabetic education book and reminder card was to be given to all patients when they were scheduled for their class. Shortly after starting the process the providers decided the medical assistants should not do that because it was delaying care. The book distribution had to be moved to the classes. This meant that patients not attending a class received no educational materials at all.

Provider buy-in was key to success. Providers had varying levels of referral rates regardless of the volume of diabetic patients seen. An educational opportunity for providers to refer all patients with a long-term diagnosis of diabetes was identified. Some did not feel it was necessary for patients who they felt managed their care well. So, they did not offer the class to their patients. Future education could focus on this and to offer the opportunity 100% of the time and allow for the patient to choose rather than the provider. Also, providers stated that some patients refused to be referred. There was not a way to monitor patient refusal other than provider feedback and future projects should include a way to monitor this. Additionally, a lack of provider motivation within the clinic could be due reimbursement not being offered for patients to attend due to the organization being a federally qualified health center. Without reimbursement, the intervention could fall lower on the priority list.

Long term clinical indicators as to the success of this project are not able to be measured in such a limited time. In one study, assessments of A1C, body mass index, blood glucose monitoring and medication compliance performed at 3, 6, and 9 month increments

revealed improvements following DSMES (Fortmann et al., 2015). Future projects with a longer time frame could consider including this.

Recommendations

There is a great amount of potential for success and sustainability. Due to being a federally qualified health center there is no reimbursement for group DSMES classes, only if patients attend individual education sessions with a certified diabetic educator. Ministry grant patients are required to complete a one-on-one session with the educator. If the organization had the educators become certified, then individual counseling sessions could be reimbursed. Increasing the amount of individual sessions would be financially beneficial because they could submit for reimbursement to Medicare/Medicaid for every patient who attends, for both patients referred by providers as well as the ministry grant patients.

Another recommendation is to edit the EHR/IT system to allow for automatic reminder calls for both provider visits and classes. This would allow for more time for the diabetic educators to focus on teaching and curriculum enhancement. It would also ensure that all patients are getting the reminder appropriately and in a timely manner.

Provision for education materials to be distributed to all patients at the time of their visit would also be helpful in ensuring all patients are educated about their diabetes. That was not possible in this project, but still has been proven effective in other studies (Rotberg., et al 2016). In order to continue improving patient outcomes a broader net should be cast to catch all diabetic patients and provide them with updated educational materials. That is the responsibility of all primary care providers.

Implications for Practice

Changing the culture of a system requires many interventions that include theory based initiatives, addressing cultural and clinic norms and increasing expectations to reflect evidence

based standards of care (Johnson & May 2015). This project demonstrated how difficult and timely it is to make cultural changes in a large organization. Though there was improvement, the initial objective goals were not attained, and a great part of this was due to the time limitation for this project. A1C measurement should ideally be monitored in 3 month increments (Fortmann et al., 2015). There is a knowledge gap regarding successful methods for the implementation of new changes within a large and small organizations; therefore, more research in this area is needed.

Despite not meeting the objective goals, this project revealed a necessary area of study and errors that can be corrected for future studies. Moreover, the role of the doctorally prepared advanced practice registered nurse in this project required a large amount of interprofessional collaboration among health care professionals, identifying areas in need of improvement, the implementation of guidelines to improve safety and patient outcomes, and utilizing resources such as technology. The DNP advanced practice registered nurse has the expert clinical skills, education, and credentials that are recognized within the medical community and respected. The completion of this project did result in a change process within the clinic. The project utilized the implementation of DSMES guidelines in a cost-effective manner that is sustainable.

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Appendix A

Primary Care Practice Profile

Patients

Age Distrubition of Patients	**%**
Birth- 10 Years	0
11- 18 Years	0
19-45 Years	60
46-64 Years	20
65-70 Years	15
80 + Years	5

Top Diagnosis/Conditions
1. Diabetes
2. Hypertension
3. Hyperlipidemia
4. Musculoskeletial Pain
5. Gastrointestinal Isues
6. Upper Respiratory

Top Referrals
1. Podiatry
2. Optometry
3. Pain Management
4. Neurology
5. Gasteroentology

Patient Satisfaction Scores	92% average
Patient Census	
Daily	150
Weekly	750
New Patients Last Month	158
Disenroling Patients Last Mont	217
Provider Encounters Per Year	4500
Out of Practice Visits	N/A

Disease Specific Health Outcomes
Diabetes HgA1c= ADA < 7
Hypertension B/P= JNC 8 Goals
LDL < 100

Frequent Patient visits
Diabetes Management
Acute Pain Complaints
Cholesterol Managemnt

Other Clininical Microsystem Interaction
Pharmacists
Home Health
Hospital Systems

Professionals

MD Total	2
NP Total	4
RN Total	0
LVN Total	3
MA Total	12
Secretarie/Front Desk	4
Float/On Call	N/A

Processes

		Hours of Operation	**System Services**	**Appointment Type**	
Patient Cycel Time	Minimal v	Mon-Fri 0800-1900	E-mail	New Patient/Comprehensive	20
			Web site	Acute	10
			Phone Follow-up		
			Phone Care Management		
			Protocols/Guidelines		

Patterns

Daily Huddle	**Thursday Weekly Hudle**	**Monthly Meeting**	**Quarterly Meeting**
Patient Census	15-20 Mins focus on Weekly Con	1 hour staff	2 Hours Staff

Appendix B

Diabetes Self-Assessment Tool

Name:_____ Date:_____

Date of Birth: ___/___/___ Age: _____ Gender: F M

What is your language preference: English_____ Other _____

Phone: Home (_____)_____\

1. What type of diabetes do you have? Type 1___ Type 2___ Pre-diabetes___ GDM___ Don't Know___

2. Do you take diabetes medications? Y___ N___

3. What is the last grade of school you have completed? _____

4. Are you currently employed? Y___N___ What is your occupation? _____

5. Marital Status: Single___ Married___ Divorced___ Widowed___

6. From whom do you get support for your diabetes? Family___ Co-workers___ Healthcare providers___ Support groups___ No one___

7. Do you have a meal plan for diabetes? Y___ N___

8. Do you drink alcohol? Y___ N___

9. Do you exercise regularly? Y___ N___

10. Do you check your blood sugars? Y___ N___ Blood sugar range: _____ to _____ How often: Once a day___ 2 or more/day___ 1 or more/Week___ Occasionally___

11. In the last month, how often have you had a low blood sugar reaction: Never___ Once___ One or more times/week___ What are your symptoms?_____

12. Can you tell when your blood sugar is too high? Y___ N___ What do you do when your sugar is high? _____

13. Check any of the following tests/procedures you have had in the last 12 months: dilated eye exam___ foot exam___ dental exam___

14. In the last 12 months, have you: used emergency room services? Y___N___

15. In your own words, what is diabetes?_____

16. How do you learn best: Listening___ Reading___ Observing___ Doing___

17. Do you have any difficulty with: hearing___ seeing___ reading___ speaking___

18. Do you have any cultural or religious practices or beliefs that influence how you care for your diabetes? Y___ N___

Please describe_____

19. What concerns you most about your diabetes? _____

20. What is hardest for you in caring for your diabetes? _____

21. What are you most interested in learning from these diabetes education sessions?_____

_____

Appendix C

Diabetes Questionnaire

Name: _____ Age: _____

1. What is your preferred language?
-English
-Spanish
-Other

2. Do you own a cell phone?
-Yes
-No

3. Has your doctor diagnosed you with diabetes?
-Yes
-No

4. What does diabetes mean to you? Can you explain what it is?

5. Would you use a free application on your cell phone to help track your blood sugar and diet to help your doctor treat your diabetes?

6. We would like to provide more education to you about diabetes. How do you prefer to learn about diabetes?
-Reading
-Class room instruction
-Watching videos
-Internet searches
-Doctor/Nurse teaching me while here

7. What is the current method that you use to learn about managing your diabetes?
-Internet
-Television
-Books
-Family/friends with diabetes
-Doctors/nurses
-none

8. Have you ever taken a course or class in how to manage your diabetes yourself?
- Yes
- No
-Don't know / Not sure

9. Would you be willing to attend a group class to learn more about managing your Diabetes?
-Yes
-No

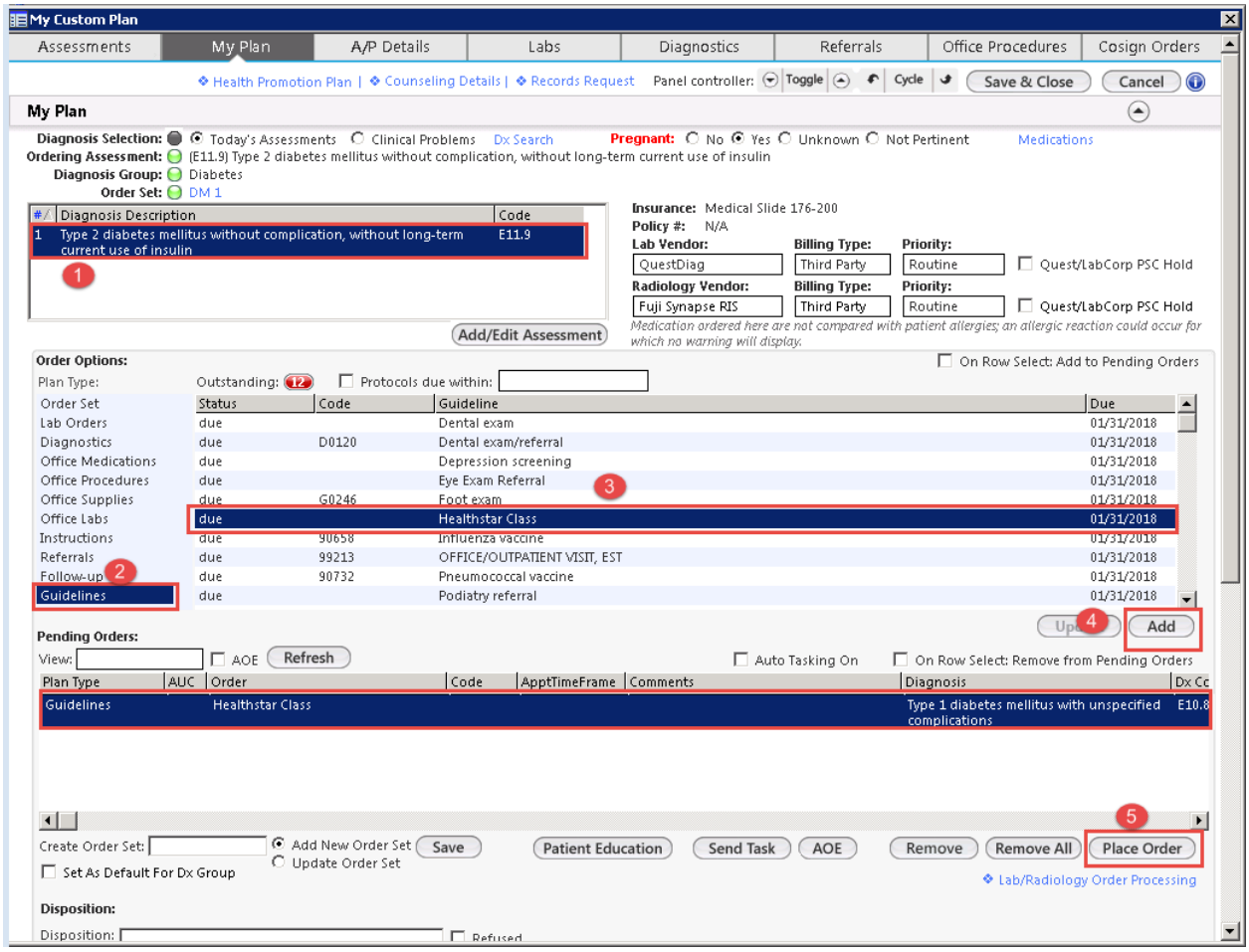
10. What do you think would help you manage your diabetes better?

Appendix D

Diabetes Health Star Class Patient Process

The following process will be followed for Diabetic Patients

1. The Care Guidelines Diabetes protocol auto applies to patients with the diagnosis of Diabetes in their chart
2. From My Plan, click on Guidelines, place the order for the Health Star Class
   From Care Guidelines, on the Diabetes protocol, place the order for the Health Star Class
3. At Check out, the Medical Assistant will schedule the patient in PM on the Health Star Class template. The Medical Assistant will also update the order to reflect the class date scheduled, changing the order status to 'scheduled'.
4. When the patient arrives for the class, the Quality Department will use Order Management to update the order to 'Completed'/ appointment kept.
5. Reports will be created to reflect orders for the Health Star Class and their status.



Appendix E

2017 National Standards for DSMES

DSMES Standard		Plan for Addressing Standard	Accountability	Outcomes
I	Internal Structure	Mission and Goals of the program, where the DSMEs services are incorporated	DNP student and Team	Produce Mission Statement and 3 goals for the program
II	Stakeholder Input	Seek ongoing input from valued stakeholders and experts to promote quality and enhance participant utilization	Advisory Group Membership Includes: coordinator (LVN), quality improvement (DNP), curriculum supervisor (DNP & APRN), patient representatives, physician representation (Medical director)	Advisory group: Will have yearly planning and review meeting. Will get input from patients and local churches. Includes Pre-project survey of patient education preference Informal input from Endocrinology Providers
III	Access to Population Served	Review population served at yearly advisory meeting regarding barriers and facilitators	Reviewed at annual Advisory Group Meeting	Consider: -Access to classes -Transportation -Demographic characteristics of patient population -All providers on track for supporting patients to attend -Use of technology to improve

				adherence and participation
IV	Quality Coordinator	Quality coordinator is designated and has additional education to serve in this role.	DNP, that is qualified for this role.	Maintenance of certification (15 CEUs)
V	DMSES Team	Must include RN or Reg. Dietician and multidisciplinary team approach. Required 15 hours of CNE if not a CDE	DNP and APRN are not currently BC-AND certified, 15 CNE credits will be required	Completion of 15 hours of CNE per year specific to Diabetes
VI	Curriculum	Written curriculum reflecting current evidence-based practice guidelines and evaluation outcomes. Individualization required and focus on core content areas.	Approved and Supervised DNP and administered by LVN, agency diabetic educator	80% of patients with diabetes are enrolled. 80% of patients with diabetes are referred to class. 60% of patients with diabetes attend 2 classes and f/u individual meeting with LVN educator within 3 months of 1st apt.
VII	Individualization	Led by patient with assessment and support by team members.	Given at class meeting and helps to guide individualized sessions.	Diabetic Self-Assessment Tool; created by DNP student, based on ADA tool.
VIII	Ongoing Support	Awareness of ongoing support and select what is best for individualized care.	Educational materials provided with additional classes, support groups, and online support options.	Address patient needs and concerns based on course feedback

IX	Participant Progress	Monitor if patients are achieving personal DSME goals.	LVN DM educator will set goals with each patient during first class. F/u with patient at individualized session at month 3, and again at f/u phone call month 6.	Goals are re-evaluated at 3 months, 6 months, and each year thereafter at provider visit.
X	Quality Improvement	Coordinator will measure impact and effectiveness by conducting systematic evaluation of processes and outcome data.	LVN DNP APRN	Quality improvement meetings held quarterly

Appendix F

Intervention Action Plan

Action Plan					
Task	Materials	Space	Finance / Budget	Time Frame	Personnel
Review ADA standards for DSMES	ADA Standards of Care	N/A	N/A	October 2017	DNP student
Achieve buy-in from stakeholders for mission and goals of program	ADA Publications, Healthy People 2020, evidence-based practice standards of care	Clinic	N/A	November-December 2017	DNP student
Review current curriculum with LVN educators	Health Star Class outline and educational resources	Clinic	N/A	November 2017	DNP student LVNs
Develop new curriculum with LVN input adhering to ADA standards and class evaluation	ADA DSME Standards	Clinic	N/A	November-December 2017	DNP student APRNs LVNs
Develop patient diabetes self-assessment tool	ADA self-assessment of diabetes management questionnaire	Clinic	N/A	November 2017	DNP student APRNs LVNs
Develop LVN individual patient meeting assessment tool	ADA self-assessment of diabetes management questionnaire	Clinic	N/A	November 2017	DNP student APRNs LVNs
Order supplemental educational materials from Cornerstones4Care	English and Spanish carb counting and meal planning books	Clinic	N/A	November-December 2017	DNP student
Work with IT to add Health Star referral to order set	Electronic health record	Clinic	N/A	December 2017	DNP student IT specialist

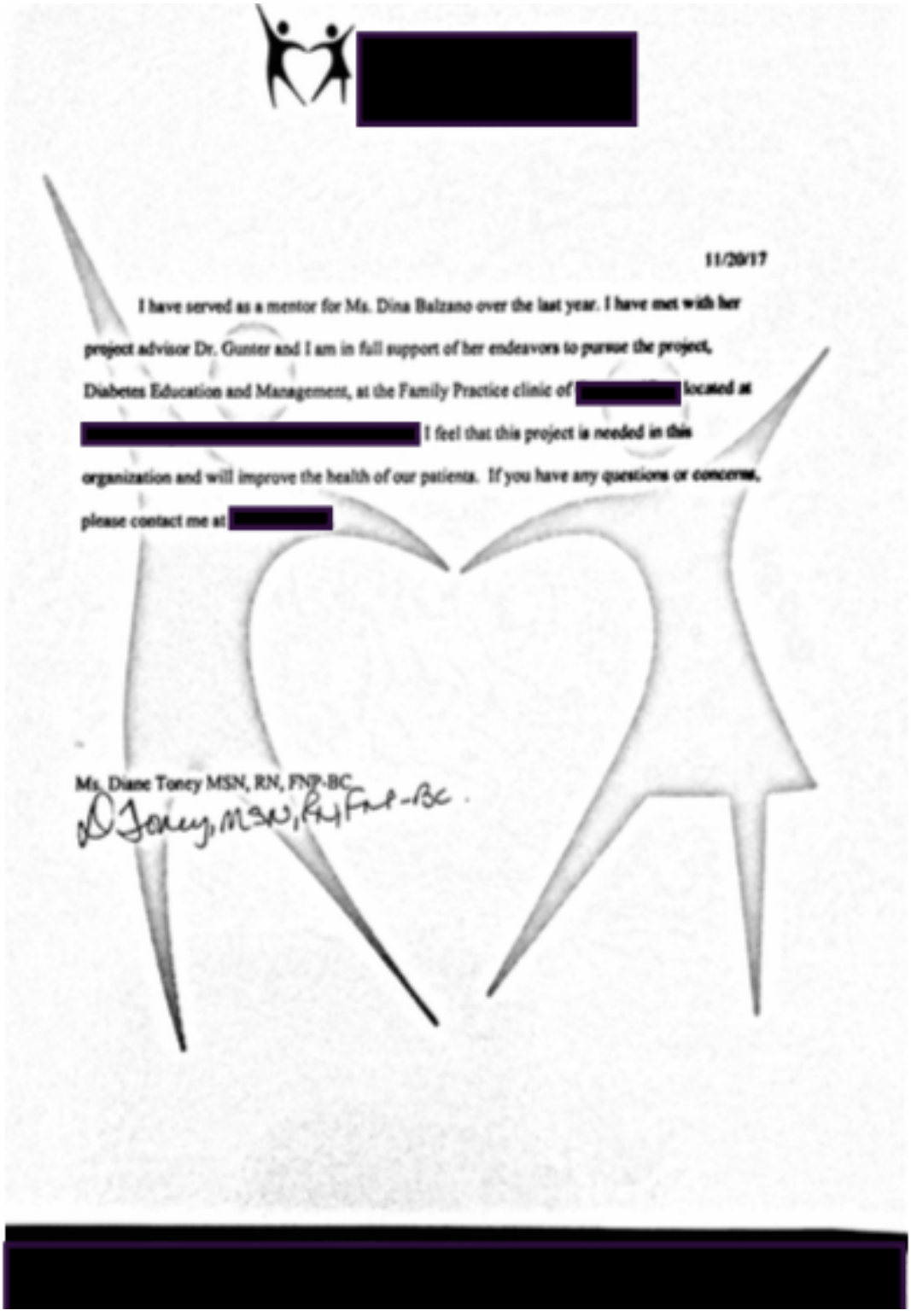
Assess method of tracking patient attendance	Electronic health record	Clinic	N/A	December 2017	DNP student IT specialist LVNs Office manager
Approval from office management to add Health Star class status to dashboard	Electronic health record	Clinic	N/A	December 2017	DNP student IT specialist Office manager
Develop provider/patient cue for attending class	Interactive teaching portal, electronic health record	Clinic	N/A	December 2017	DNP student IT specialist Mentor
Contact IT department regarding interactive teaching portal display	Interactive teaching portal	Clinic	N/A	December 2017	DNP student IT specialist
Assess patient reminder system	Telephone/text reminder system	Clinic	N/A	December 2017	DNP student IT specialist MAs
Implement use of patient reminder cards for classes	Print out of scheduled class	Clinic	N/A	December 2017	DNP student MAs APRNs
Implement scheduling of class prior to patient departure from clinic	Scheduling system	Clinic	N/A	December 2017	DNP student MAs APRNs
Implement appointment scheduling of second and individualized appointment system	Scheduling system	Clinic	N/A	December 2017	DNP student LVNs
Obtain input from providers and office staff regarding new process	N/A	Clinic	N/A	December 2017	DNP student APRNs LVNs MAs Office manager
Assess existing support systems	Internet, local churches	Clinic	N/A	December 2017	DNP student

available for patients outside of clinic					
Implement 6 month follow up call with patients	Scheduling system	Clinic	N/A	January 2018	DNP student LVNs MAs
Review finalized curriculum	Health Star curriculum	Clinic	N/A	January 2018	DNP student APRNs LVNs
Teach office staff new procedure	Power point presentation	Clinic	N/A	January 2018	DNP student
Teach providers new policy for Health Star attendance	Power point presentation	Clinic	N/A	January 2018	DNP student
Implement class display on interactive teaching portal	Interactive teaching portal	Clinic	N/A	January 2018	DNP student IT specialist
All supplies in place	Appointment cards, educational books, curriculum forms, pre/post patient assessment	Clinic	N/A	January 2018	DNP student
Go Live	N/A	Clinic	N/A	February - April 2018	DNP student APRNs LVNs Medical assistants
Weekly assessment of provider referral process	Electronic heath record	Clinic	N/A	February - April 2018	DNP student
Weekly assessment of supplies	Appointment cards, educational books, curriculum forms, pre/post patient assessment	Clinic	N/A	February - April 2018	DNP student LVNs MAs
Biweekly meeting with LVNs	N/A	Clinic	N/A	February - April 2018	DNP student LVNs

Monthly review of patient satisfaction via class evaluations	Class evaluation forms	Clinic	N/A	February - April 2018	DNP student LVNs
Evaluation Plan					
Track total number of diabetic patients seen weekly; amount referred scheduled for Health Star class	Electronic health record/dashboard	Clinic	N/A	February - April 2018	DNP student IT specialist Office management
Monthly follow up with LVNs for patient participation	Patient roster	Clinic	N/A	February - April 2018	DNP student LVNs

Appendix G

Project Letter of Support



[redacted]

11/20/17

I have served as a mentor for Ms. Dina Balzano over the last year. I have met with her project advisor Dr. Gunter and I am in full support of her endeavors to pursue the project, Diabetes Education and Management, at the Family Practice clinic of [redacted] located at [redacted] I feel that this project is needed in this organization and will improve the health of our patients. If you have any questions or concerns, please contact me at [redacted]

Ms. Diane Toney MSN, RN, FNP-BC

D Toney, MSN, RN, FNP-BC

[redacted]