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Implementing a Telephone Follow-Up Process for Patients with Poorly Controlled Type 2 Diabetes: A Nurse-Led Quality Improvement Project

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Implementing a Telephone Follow-Up Process for Patients with Poorly Controlled Type 2 Diabetes: A Nurse-Led Quality Improvement Project

by

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A DNP project submitted in partial fulfillment of the requirements for the degree of Doctor of Nursing Practice

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This is to certify that the DNP project final report by

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Has been approved by the DNP project team on

on March 29th, 2022

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Abstract

Background: Diabetes is the seventh leading cause of death in America with approximately 1.5 million people diagnosed yearly (ADA, 2020). The current problem in the practice setting is the lack of follow-up of patients with hemoglobin A1c's (HbA1c's) 9% or greater. The current workflow utilizes care coordinators to perform patient outreach to patients with diabetes and a HbA1c of 9% or greater. This workflow is not structured and consists of randomly selecting a patient with a HbA1c 9% or greater and placing one phone call to them to provide education.

Purpose: The purpose of the project was to develop and implement a structured clinic RN-led telephone follow-up process for patients with T2DM and a HbA1c of 9% or greater.

Methods: Interventions used throughout the telephonic follow-up align with the ADCES7 Self-Care Behaviors (ADCES7), a framework used to optimize care and education for patients with diabetes. This framework includes a focus on health coping, nutrition, exercise, medication adherence, blood glucose monitoring, reducing risk factors, and problem solving (Kolb, 2021). Patient activation, defined as level of patient activation (or engagement) related to self-management, was assessed during each call. Adherence to diet, blood glucose testing, medications, and exercise was also included in these assessments. Dashboard reports within the electronic record were run at the end of the implementation process to gather the results.

Results: Ten out of 11 patients enrolled in this QI project had a decrease in their HbA1c values with four of these bringing their HbA1c < 9%, one patient had an increase. The average HbA1c prior to intervention was 10.8%. Post-intervention the average HbA1c dropped to 8.8% indicating a 2% decrease. Several educational interventions were utilized with each patient during the telephonic follow-up. Disease education (67%), nutrition education (89%), and

physical activity education (41%) were utilized most frequently. Patient activation levels increased post-intervention, meaning patients became more engaged in their care over time.

Discussion: The implementation of the RN-led telephone follow-up process for patients with uncontrolled T2DM demonstrated an improvement in HgA1c and an increase in patient engagement. Organizations would benefit by implementing this process across primary care offices.

Phase 1: Problem Identification and Evidence Review

Problem Identification

Diabetes is the seventh leading cause of death in America with approximately 1.5 million people diagnosed yearly (ADA, 2020). Palta, et al. (2017) state that patients with uncontrolled diabetes have a significantly increased risk of cardiovascular disease (CVD) mortality (which is the leading cause of death in the United States) compared to patients with HbA1c's < 6.5%. The diabetes control and complication trial was a large-scale randomized control trial (RCT) that followed patients over 6.5 years and monitored them regularly for microvascular changes. The intervention group which practiced tight glucose monitoring and insulin therapy via pump or three insulin injections per day had slower progression of microvascular changes such as retinopathy, neuropathy, and nephropathy compared to participants with higher HbA1c (DCCT research group, et al. 1993). Microvascular changes such as these result in an increased risk of morbidity and mortality. Addressing poorly controlled diabetes is necessary to decrease hospitalizations, diabetes-related complications, and death. Patients partaking in the self-management of diabetes is the key to success (Nasab, et al. 2017).

Description of Local Problem

The current problem in the practice setting is the lack of follow-up of patients with HbA1c's 9% or greater. The current workflow utilizes care coordinators to perform patient outreach to patients with diabetes and a HbA1c of 9% or greater. This workflow is not structured and consists of randomly selecting a patient with a HbA1c of 9% or greater and placing one phone call to them to provide education and resources. There are no follow-up phone calls after the one call has been made. Crowe, et al. (2019) conducted a systematic review which found that

there was evidence from well-designed trials where registered nurse (RN)-led interventions were more effective in improving glycemic control, were more cost-effective, and demonstrated better patient satisfaction overall. These RN-led interventions had an emphasis on self-management rather than medical management, which ultimately led to its success (Nasab, et al. 2017). The studies included in this review found that patient satisfaction was linked to being more patient-centered and utilized frequent touch-points with the patient via telemedicine, phone calls, or in-person visits (Tan, et al. 2020).

Focused Search Question

When searching the literature, the following PICOT formatted question was used. (P) In patients with poorly controlled T2DM (I) how does telephonic follow-up by the RN post in-office visit (24-72 hours, 1 month, and 2 months) (C) compared with usual care (O) affect HbA1c's and patient activation level (T) at the patients 3-4 month follow up.

Evidence Review

External Evidence. A search was conducted using the scholarly databases CINAHL and MEDLINE. The keywords were diabetes, patient outreach, nursing, telephone follow-up, chronic disease management, medication adherence, and nurse. Limits/filters for CINAHL and MEDLINE included English language, published between 2015-2022, peer-reviewed, and geographic subset: USA. Appendix A displays the database, search terms, and results.

Internal Evidence. Currently, a non-structured RN-led process is being followed at the organization. One random phone call is placed to a patient with uncontrolled diabetes after being

identified on a dashboard report. After this initial phone call, no additional phone calls are placed leaving the patient with limited guidance and support.

Evidence appraisal, summary, and recommendations

Five pieces of evidence were reviewed and focused on RN-led telephonic follow-up for patients with poorly controlled T2DM. The Melnyk & Fineout-Overholt (2015) Nursing Evidence-Based Practice Research Appraisal tools were used to critically appraise the evidence and the synthesis tables are displayed in Appendix C and D. Literature chosen for this project included three systematic reviews, one randomized control trial, and one controlled trial without randomization. All five pieces of evidence showed a decrease in HbA1c with the use of telephonic follow-up.

Tan, et al (2020) discussed how frequent touch-points with patients helped keep them motivated in achieving their goals of lowering their HbA1c's. Several articles reviewed demonstrated a decrease in HbA1c with RN-led interventions (Crowe, et al 2019; Gorina, et al. 2018, Lee, et al. 2018). Nasab, et al. (2017) utilized RN-led interventions via telehealth to improve overall HbA1c in patients with uncontrolled diabetes. The recommended workflow includes primary care RNs to follow-up via telephone post in-office visit of HbA1c 9% or greater. According to the evidence, RN-led interventions helped decrease HbA1c, and in turn reduce hospitalizations, mortality, and morbidity (Nasab, et al. 2017).

Phase 2: Project Planning

Project Goal

The purpose of the project was to develop and implement a structured clinic RN-led telephone follow-up process for patients with T2DM and a HbA1c of 9% or greater. This

improved workflow hopes to help patients with T2DM and HbA1c's 9% or greater understand their disease process and encourage shared decision-making.

Framework

The quality improvement methodology used for this project was the Model for Improvement: Plan-Do-Study-Act (PDSA) Cycle (IHI, 2021). PDSA cycles of change were conducted based on RN evaluation at each phone call.

Context

The project setting was an internal medicine office in the Northeast. There are approximately 17% (200/1,162) patients with poorly controlled T2DM (HbA1c >9%) in the practice. Participants include the RN in this office (DNP student), the providers, and the patients included in the QI project.

Key stakeholders

Amber Gomes, a Doctor of Nursing Practice student at Sacred Heart University, is conducting this project as part of her degree requirements. Sylvie Rosenbloom, DNP, APRN, FNP-BC, CDCES is the assigned Sacred Heart University QI project faculty advisor. Judy Petersen-Pickett MSN, RN is the site preceptor and interim nursing director for outpatient network in the organization. She ran reports to track progress periodically and find overall percentage change in patients with a HbA1c 9% or greater. Annie Kaisen, MSN, APRN, CDCES is the practice mentor and is a certified diabetes care and education specialist. The providers of this internal medicine practice and the patients are also key stakeholders in this process.

Buy-in was achieved by informing organizational leaders within the organization and meeting with the care coordination department. The interim nursing director and quality and safety nurse of the organization, who was the practice mentor for this QI project and was able to

help streamline this process. Organizing this team ensured that the care coordination department was informed of the new process.

Practice change/intervention

A proposed standard operating procedure (SOP) was created and submitted to the interim nursing director for review (see Appendix E). If the practice change were to be implemented in other practices throughout the organization, this SOP would be referenced by other RNs to duplicate the process. The SOP summarizes the process that RNs would take to complete the telephonic follow-ups. Patients would be identified via dashboard report in EPIC and the RN would make an outreach phone call to the patient and provide education and inform them of the following two phone calls that would be made. The RN would then add them to their 'My List' in EPIC and set reminders for each additional call.

Evaluation

Process Measures. Patients were added to the 'My List' feature in EPIC once identified on the dashboard report of HbA1c's 9% or greater. The QI project lead utilized the 'program intervention' template in EPIC and performed a telephonic follow-up at 24-72 hours, 1-month, and 2-months (See Appendix F). The QI project lead set reminders of when to contact individual patients for the 1-month and 2-month mark. The QI project lead documented each phone call attempt and kept track of this data within EPIC. An Excel spreadsheet was kept with no patient identifiers to collect aggregate data on patient interventions utilized. Only the QI project lead had access to the reports as well as the Excel document. No patient identifiers were be printed or stored.

Outcome Measures. The change in HbA1c from baseline to revisit, percentage of the overall reduction in HbA1c, and patient's level of activation (see Appendix G) at each phone call

was tracked throughout the duration of the pilot. Reports were by the site preceptor, Judy Petersen-Pickett, at the end of the pilot for accuracy.

Possible barriers to implementation

Barriers that might be encountered during this pilot include the inability to reach the patient via telephone for any of the 3 phone calls, reluctance from the patient to adhere to proposed changes, and lack of time to perform the outreach by the RN. Strategies to help mitigate these barriers include informing the patient at each encounter to expect the next telephonic follow-up on a specific date and time. Since the RN will be assessing the level of activation (engagement) at each phone call, goals of care and barriers to achieving these goals should be addressed so the RN will know how to better educate the patient. There may not be enough time for the RN to perform the telephonic follow-up phone call. Placing a space holder in the RN's schedule for 10 minutes per phone call may assist in mitigating this barrier.

Sustainment

Achieving sustainability for a new process is likely to occur when results from the implementation phase are improved from baseline. An action plan for reinforcement of the new process is necessary to ensure that offices do not relapse into old routines (Melnyk & Fineout-Overholt, p. 395, 2019). Strategies to help sustain this workflow include internal strategic reporting, graphs to display data trends to staff and clinicians, and monitoring data for deterioration trends (Cullen, et al., 2018).

Reporting positive trends to the staff and clinicians drives the workflow forward since they can see the progress being made. Utilizing process control charts to display the trends in data is visually helpful and easy to comprehend. Charts showing positive trends should be posted in a common area of the office so that both staff and patients can see the progress being made.

Monitoring the data via dashboard reports in EPIC is helpful to note any deterioration occurring. If deterioration in the data occurs at any point during the sustainability phase, re-education of the RN is appropriate (Melnyk & Fineout-Overholt, p. 395, 2019).

Timeline

The project began in September 2020 with the identification of a local practice problem. Key components that led up to the implementation process took place over the next 9 months such as evidence searches, buy-in from key stakeholders, and ethical merit review. The implementation of the proposed process took place from June 2021 through October 2021. For specific details of this timeline see Appendix H.

Resources

The QI project lead spent approximately 1.18% full-time equivalent (FTE) managing entire project. The QI project lead currently works 36 hours/4 days per week = 144 hours per month x 4 months = 576 hours. Reviewing reports and identifying uncontrolled patients with diabetes took about 5 minutes each morning x 64 days = 80 minutes. On average, the RN identified approximately 11 patients per month (depending on practice size) and performed the telephonic follow-up process. Each phone call took approximately 10 minutes x 3 phone calls = 30 minutes per patient = 330 minutes total. This means that approximately 410 minutes were spent completing this project (410 minutes = 6.8 hours/576 hours = 1.18% of the hours worked in 4 months. The QI project lead spent time implementing the process, running monthly dashboard reports and analysis, and creating a final PowerPoint presentation and abstract for dissemination purposes.

Ethical merit

Submission of a letter of intent and scholarly application to the Nursing Scientific Review Committee of the organizations Nursing Research and Evidence-Based Practice Steering Committee was required by the health system for project endorsement. After the review, it was determined that the project was not considered human subjects' research (See Appendix I for detailed letter)

It was determined by Sacred Heart University via the QI questionnaire that this project did not need to obtain institutional review board (IRB) approval and that it was a quality improvement project (See Appendix J for QI questionnaire).

Phase 3: Project Implementation

Implementation

The proposed project was to implement a structured telephonic follow-up at 24-72 hours, one month and two months post-clinic visit. Developing a process for the RN to initiate chronic disease management in primary care offices could help patients increase their self-confidence in managing their diabetes and in turn, improve disease control. Diabetes education for patients with T2DM is important to ensure successful self-management. Education regarding diet, exercise, blood glucose monitoring, and general information about the pathophysiology is critical for a patient to understand how to manage their diabetes and understand the implications of an elevated HbA1c. Merit-based Incentive Payment Systems (MIPS) and belonging to a Patient-Center Medical Home (PCMH) make it imperative to develop a policy that outlines a workflow to decrease HbA1c's and engage patients to help them achieve their short- and long-term goals. The purpose of the telephonic follow-up process was to identify knowledge gaps, provide education, and answer patient questions regarding their T2DM. Interventions used throughout

the telephonic follow-up align with the Association of Diabetes Care and Education Specialists-7 (ADCES7) Self-Care Behaviors, a framework used to optimize care and education for patients with diabetes (Kolb, 2021). This framework includes a focus on health coping, nutrition, exercise, medication adherence, blood glucose monitoring, reducing risk factors, and problem-solving (Kolb, 2021). Patient activation, defined as level of patient activation (or engagement) related to self-management, was assessed during each call (see Appendix G). Adherence to diet, blood glucose testing, medications, and exercise was also included in these assessments. Patient education was included as part of the telephone call. The duration of the implementation process was 4 months. Implementation of this project started in the beginning of June 2021 and was completed in October 2021.

All data was collected in real-time via the EPIC electronic health record (EHR) and dashboard report. The report was only accessed by the QI project lead. No information was printed or stored outside of the EHR. The QI project lead added patients to the 'My List' feature in EPIC once identified on dashboard report of HbA1c's 9% or greater. Outreach intervention utilizing the program intervention' template in EPIC was performed at 24-72 hours, 1-month, and 2-months. Reminders of when to call each patient were set from 'My List'. Each phone call was documented via 'telephone call' encounters, including failed attempts to reach, and kept track of. An Excel spreadsheet was kept with no patient identifiers to collect aggregate data on patient interventions utilized. Only the QI project lead had access to the reports as well as the Excel document. No patient identifiers were printed or stored.

Deviations from the original plan. Only a few deviations from the original plan occurred during the implementation phase of this project. At first, two nurses were going to be

carrying out this new process but only the QI project lead ended up doing so. This was to ensure continuity of care which patients appreciated. Initially, lab result call-backs post office visit and diabetes education calls were separated. Upon further evaluation, it made sense to pair them together to reduce the burden on the QI project lead and other office members.

Phase 4: Evaluation

Results and Interpretation

Demographics. The target population included patients with diabetes and HbA1c levels 9% or greater who visited the office and were not seeing an endocrinologist. Approximately 25 patients with HbA1c's 9% or greater were reviewed during the pilot timeframe. One primary care RN conducted all telephonic follow-up encounters. No vulnerable population was included in this project. Inclusion criteria included patients with T2DM ages 18 and above. Exclusion criteria included patients already being followed by the care coordination department or patients being followed closely by an endocrinologist. After performing a chart review on all 25 patients, it was determined that only 11 patients met the inclusion criteria. Fourteen patients were excluded since they were being followed closely by an endocrinologist (12) or being followed by care coordination (2).

Data Analysis. After telephonic follow-up to each patient over a period of four months, data was gathered utilizing the 'My List' feature in EPIC and running dashboard reports. HbA1c's pre-and-post intervention and levels of activation throughout the duration of calls were gathered.

Discussion and Summary of Results. Ten out of 11 patients enrolled in this QI project had a decrease in their HbA1c values with four of these bringing their HbA1c < 9%, one patient had an increase. The average HbA1c prior to intervention was 10.8%. Post-intervention HbA1c average dropped to 8.8% indicating a 2% decrease (see Appendix K). Several educational interventions were utilized with each patient during the telephonic follow-up. Disease education (67%), nutrition education (89%), and physical activity education (41%) were discussed with patients most frequently (See Appendix L for utilized interventions). Patient activation levels increased post-intervention, meaning patients became more knowledgeable and engaged in their care over time. Activation levels at call one averaged 2.27, 2.9 at call two, and 3.0 at call three. Patient activation scale runs from one to four with one indicating that the patient is not very knowledgeable and therefore not engaged and four indicating that the patient is highly knowledgeable and engaged.

Multidisciplinary teamwork is often utilized to improve outcomes. The implications of this project reflect positive outcomes for patients with uncontrolled diabetes. Patients participating in this intervention improved their HbA1c and patient level of activation. Allowing patients to partake in their own care plan increases patient engagement and awareness. Knowing that there would be a telephonic follow-up motivated patients to stay actively engaged. The interventions represent a nurse-driven, non-pharmacologic adjunct for patients with uncontrolled diabetes.

Phase 5: Dissemination

The goal of disseminating the evidence is to facilitate the transfer and adoption of the new process so that internal and external organizations can utilize the evidence to enhance

chronic disease management for T2DM (Melnyk & Fineout-Overholt, p. 547, 2019). Dissemination should occur within the internal organization (clinicians, staff, senior management, and the QI department) and external organizations (patients and other hospital-based health systems). Dissemination strategies for this process change include oral presentations, PowerPoint presentations, roundtable presentations, poster presentations, and presenting at organizational and professional committee meetings.

Disseminating evidence to external stakeholders can be done in various ways. The use of poster presentations and/or presenting at organizational committee meetings can bring awareness to the new process. Each year the organization holds a nursing research conference that is open to other organizations and allows nurses to submit abstract poster presentations for review. Submitting the abstract of this project to the conference is part of the dissemination plan. The final project write-up in manuscript format will be submitted to the *Clinical Diabetes and Endocrinology Journal* which publishes in collaboration with the University of Michigan.

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Appendix A

Table 1. CINAHL Database

Search Terms	Number of hits	Number of title & abstract reviewed	Number of full-text articles reviewed	Number of articles selected for this review without duplicates
Diabetes	4,485	0	0	0
Diabetes AND Patient outreach	7	3	2	1
Diabetes AND Nursing	702	3	1	1
Diabetes AND Telephone follow up	25	5	3	3
Diabetes AND Chronic Disease Management	152	3	0	0
Diabetes AND Medication adherence	410	4	1	0
Diabetes AND Medication Adherence AND Nurse	17	2	0	0

Table 1. MEDLINE Database

Search Terms	Number of hits	Number of title & abstract reviewed	Number of full-text articles reviewed	Number of articles selected for this review without duplicates
Diabetes	207,146	0	0	0
Diabetes AND Patient outreach	30	4	1	0
Diabetes AND Nursing	6,860	2	1	1
Diabetes AND Telephone follow up	96	3	1	0

Diabetes AND Chronic Disease Management	815	3	1	1
Diabetes AND Medication adherence	1,810	1	0	0
Diabetes AND Medication Adherence AND Nurse	62	4	1	1

Appendix B

First Author (Year)	Purpose	Level of Evidence/Type of Evidence	Sample/Setting	Major Variables Studied and their Definitions	How Major Variables were Measured	Findings	Appraisal: Worth to Practice
Gorina, M. et al (2018)	To evaluate the effectiveness of primary health care educational interventions undertaken by nurses to improve metabolic control and/or chronic disease management in individuals with Type 2 diabetes mellitus, hypertension, and hypercholesterolemia.	Level 1 – Systematic Review	A review of randomized controlled trials published between 2000 and 2015.	Lifestyle - nutrition, physical activity, tobacco, and alcohol use. Self-care and knowledge of the disease and its impact. Adherence – patient adherence to medical treatment. MD visits – visits to specialists for poor control management. Hemoglobin A1c result – laboratory test used to measure glycemic control.	Measurements varied from study to study. Chart review, Report audits, etc.	Group interventions, face-to-face interventions and telephonic interventions were shown to have statistically significant effect on glycemic control.	Strong evidence to show nurse led interventions for diabetics can improve glycemic control, medication adherence and appointment adherence. Appraisal: High

Crowe, M. et al (2019)	To determine the clinical effectiveness (glycemic control, other biological measures, cost-effectiveness and patient satisfaction) of primary care nurse-led interventions for diabetes.	Level 1 – Systematic Review	18 randomized control trials were used for review.	Hemoglobin A1c result – laboratory test used to measure glycemic control. Lifestyle - nutrition, physical activity. Blood pressure – mean systolic/diastolic measurements.	Measurements varied from study to study. Chart review, Report audits, etc.	Mean hemoglobin A1c and glycemic control improved in majority of the trials.	Strong evidence to show nurse led interventions for diabetics can improve glycemic control, blood pressure control and appointment adherence. Appraisal: High
Nasab, M. et al (2017)	To improve glycemic control using nurse led group interventions and telehealth interventions.	Level 3 – Case control study	142 people with type 2 diabetes. Iran	Fasting blood sugars Blood pressure Lipid Panel	Questionnaire and lab results were gathered at baseline and then 3 months later.	Results showed a significant difference between the two groups in FBS after 3 months of intervention	Evidence to show that nurse led interventions via group or telephone improved blood sugars. Appraisal: Moderate
Lee, P. et al (2018)	The objective of this study is to conduct a systematic review and meta-analysis of systematic reviews of randomized controlled trials to	Level 1 – Meta-analysis and Systematic Review	Four systematic reviews and/or meta-analyses met the inclusion criteria and	Hemoglobin A1c	Network meta-analysis were performed to gather data from all	All four reviews concluded that telehealth interventions have the potential in	Evidence showed that telehealth interventions help to reduce hemoglobin A1c.

	create an evidence-base for the effectiveness of telehealth interventions on glycemic control in adults with type 2 diabetes.		were included in this review. Included reviews were published between the years 2009 and 2015.		systematic reviews. Interventions varied between studies.	improving glycemic control in people with type 2 diabetes. However, when they pooled the HbA1c results from the 25 RCTs included in the four reviews, only 14 studies reported a significant improvement in telehealth intervention versus usual care group.	Appraisal: High
Tan, C. et al (2020)	This randomized controlled trial examined the effect of a diabetes self-efficacy enhancing program (DSEEP) on older adults with type 2 diabetes. This included a 1-day workshop as well as	Level 2 – Randomized Control Trial	113 participants. Singapore.	Pre and post-test – diabetes self-efficacy Hemoglobin A1c – lab test	Questionnaires were collected from participants. Clinical data was gathered from the medical record.	General self-efficacy increased and hemoglobin A1c's decreased at the end of the study.	Provides feedback on how self-efficacy as well as telephonic follow-up helps to improve glycemic control.

	phone calls by the registered nurse every 2 weeks.						Appraisal: High

Appendix C

Level of Evidence Synthesis Table

Article Number	1	2	3	4	5
Level I: Systematic review or meta-analysis	X	X	X		
Level II: Randomized controlled trial					X
Level III: Controlled trial without randomization				X	
Level IV: Case-control or cohort study					
Level V: Systematic review of qualitative or descriptive studies					
Level VI: Qualitative or descriptive study, CPG, Lit Review, QI or EBP project					
Level VII: Expert opinion					

1. Crowe, et al. 2019
2. Gorina, et al. 2018
3. Lee, et al. 2018
4. Nasab, et al. 2017
5. Tan, et al. 2020

Appendix D

Outcome Synthesis Table

Article	1	2	3	4	5
Hemoglobin A1c	↓	↓ OR =	↓	↓	↓
Nutritional Habits	NE	↑	NE	NE	NE
Physical Activity	NE	↑	NE	NE	NE
Tobacco/Alcohol	NE	ND	NE	NE	NE
Medication Adherence	NE	↑	NE	NE	NE
Blood Pressure	↓ OR =	↓ OR =	NE	ND	NE
Total Cholesterol	↓ OR =	NE	NE	NE	NE
LDL	NE	↓	NE	ND	NE
Triglycerides	NE	NE	NE	ND	NE
Self-Efficacy	NE	NE	NE	NE	↑
Health-related Quality of Life	NE	NE	NE	NE	↑

Key: NE – not evaluated, ND – No difference, ↓ - Decrease, ↑ - Improvement, = - Equal to

(Since some of the articles were meta-analysis and systematic reviews the results of some may have improved, decreased or stayed equal as reflected in the table.)

1. Crowe, et al. 2019

2. Gorina, et al. 2018

3. Lee, et al. 2018
4. Nasab, et al. 2017
5. Tan, et al. 2020

Appendix E

Proposed Standard Operating Procedure

Title: The role of the RN in the management of patients with diabetes and Hemoglobin A1c's 9% or greater in the ambulatory setting.

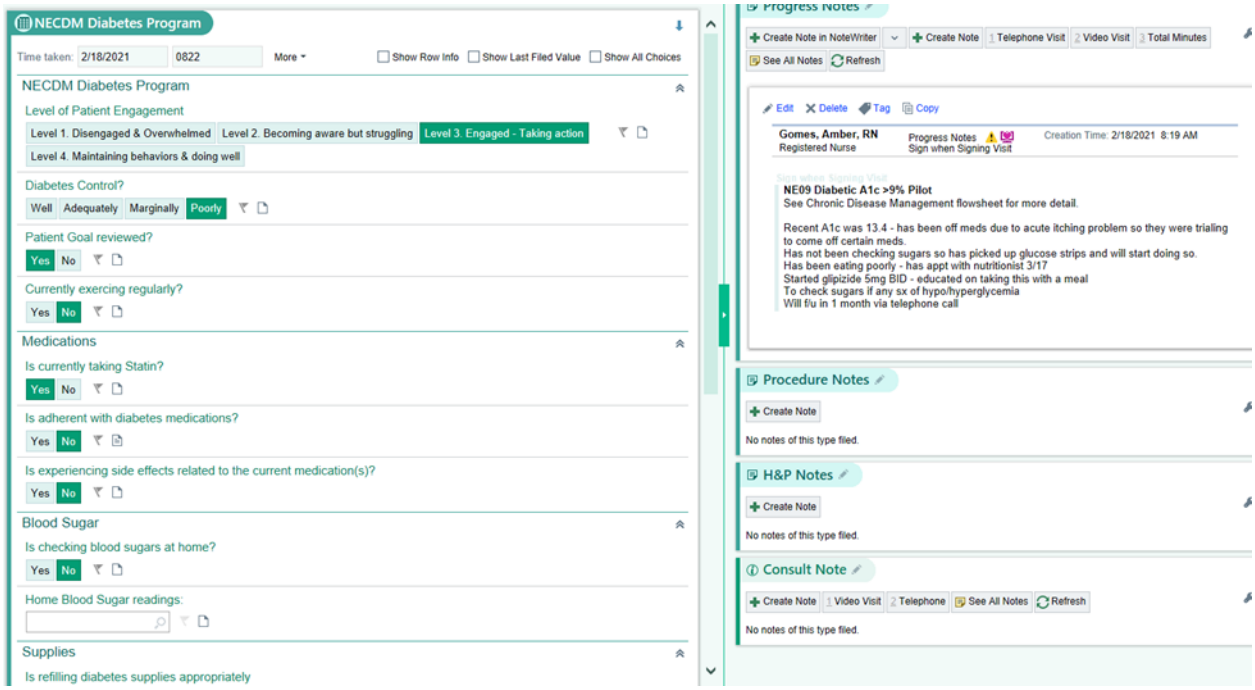
PURPOSE: To provide care for patients with diabetes and HbA1c's 9% or greater by implementing a RN-led telephonic workflow.

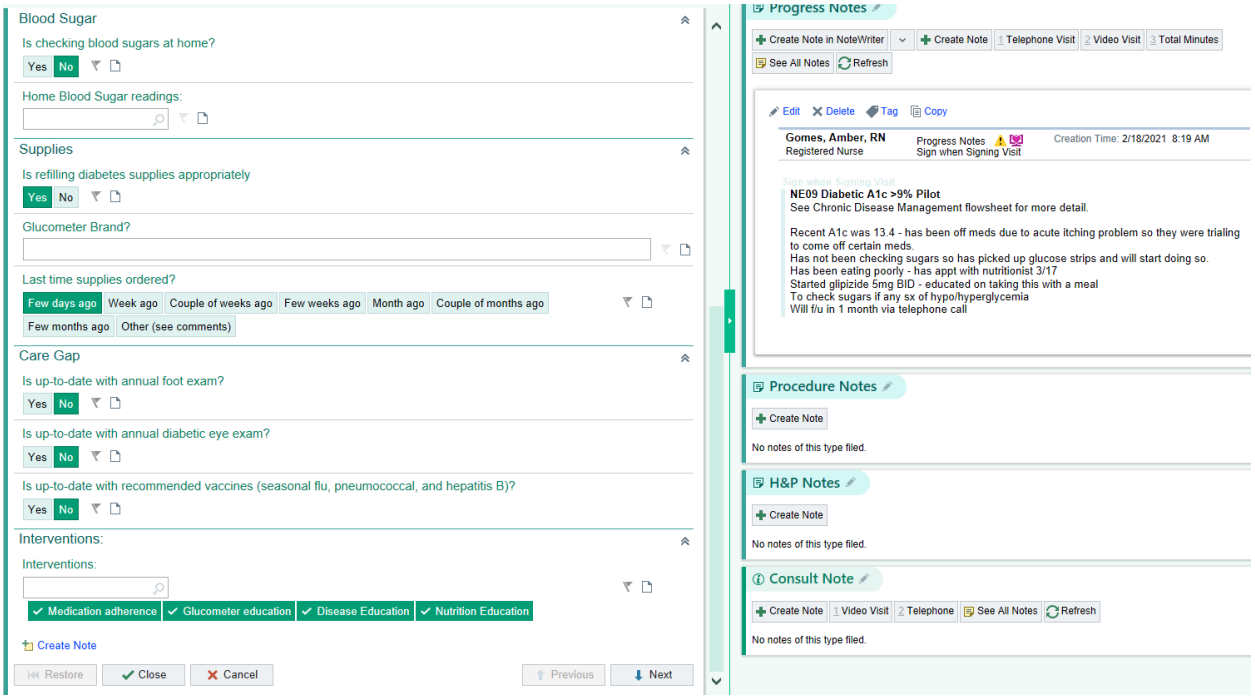
Standard Operating Procedure:

1. Patients who meet telephonic outreach criteria:
    a. Patient who is in the office and has a point of care test (POCT) done with a result of a HbA1c 9% or greater.
    b. Patient who has bloodwork done at the lab with a result of a HbA1c 9% or greater.
2. Once patient meets the inclusion criteria the following workflow is performed:
    a. Patient is advised by the provider that a telephone call will be placed to them within 72 hours post visit.
    b. Listed under the 'Quality Performance Dashboard' in EPIC the RN will run the 'Hemoglobin A1c Poor Control (9% or greater)' report daily.
    c. Filter options can be utilized to narrow down date of HbA1c, primary care physician, age of the patient, etc. if needed.
    d. Chart review is performed by the RN to review the patient's medications, last visit note, treatments, and recent labs.
    e. Call is then placed by RN to the patient using a 'patient outreach' encounter.
        I. Reason for call is 'Chronic Disease Management'.
        II. Outreach type is 'Diabetes'.
        III. Progress notes can be utilized to document any pertinent information discussed.
        IV. The program interventions flowsheet is utilized for every patient to develop patient specific goals and interventions.
        V. Within the program interventions flowsheet, the RN can document key items such as patient activation levels, diabetic control, blood sugars, medication adherence, health care maintenance items, patient goals and interventions.
    f. The RN will advise the patient of telephonic outreach program so that patient is aware they will receive 2 more calls prior to their next follow-up visit.
    g. Add the patient to 'My List' in EPIC for tracking and follow-up purposes (this list can be edited to add and remove patients at any time)
    h. Set reminder from 'My List' for the next phone call; This triggers a 'patient reminder' message to be sent on the day of needed follow-up.
3. Telephonic follow-up will be made subsequently at 1 month and 2 months using the above process.
4. Patient will return to the office for a repeat HbA1c (at the 3-month mark).
5. If HbA1c is <9% the patient no longer requires telephonic follow-up.

If HbA1c continues to be 9% or greater than the patient will be re-enrolled in the telephonic follow up led by the RN.

Appendix F


NECDM Diabetes Program
Time taken: 2/18/2021 0822 More
Show Row Info Show Last Filed Value Show All Choices
NECDM Diabetes Program
Level of Patient Engagement
Level 1. Disengaged & Overwhelmed
Level 2. Becoming aware but struggling
Level 3. Engaged - Taking action
Level 4. Maintaining behaviors & doing well
Diabetes Control?
Well Adequately Marginally Poorly
Patient Goal reviewed?
Yes No
Currently exercing regularly?
Yes No
Medications
Is currently taking Statin?
Yes No
Is adherent with diabetes medications?
Yes No
Is experiencing side effects related to the current medication(s)?
Yes No
Blood Sugar
Is checking blood sugars at home?
Yes No
Home Blood Sugar readings:
Supplies
Is refilling diabetes supplies appropriately
Progress Notes
Create Note in NoteWriter
Create Note
1 Telephone Visit
2 Video Visit
3 Total Minutes
See All Notes
Refresh
Edit
Delete
Tag
Copy
Gomes, Amber, RN
Registered Nurse
Progress Notes
Sign when Signing Visit
Creation Time: 2/18/2021 8:19 AM
NE09 Diabetic A1c >9% Pilot
See Chronic Disease Management flowsheet for more detail.
Recent A1c was 13.4 - has been off meds due to acute itching problem so they were trialing to come off certain meds.
Has not been checking sugars so has picked up glucose strips and will start doing so.
Has been eating poorly - has appt with nutritionist 3/17
Started glipizide 5mg BID - educated on taking this with a meal
To check sugars if any sx of hypo/hyperglycemia
Will f/u in 1 month via telephone call
Procedure Notes
Create Note
No notes of this type filed.
H&P Notes
Create Note
No notes of this type filed.
Consult Note
Create Note
1 Video Visit
2 Telephone
See All Notes
Refresh
No notes of this type filed.


Blood Sugar
Is checking blood sugars at home?
Yes No
Home Blood Sugar readings:
Supplies
Is refilling diabetes supplies appropriately
Yes No
Glucometer Brand?
Last time supplies ordered?
Few days ago
Week ago
Couple of weeks ago
Few weeks ago
Month ago
Couple of months ago
Few months ago
Other (see comments)
Care Gap
Is up-to-date with annual foot exam?
Yes No
Is up-to-date with annual diabetic eye exam?
Yes No
Is up-to-date with recommended vaccines (seasonal flu, pneumococcal, and hepatitis B)?
Yes No
Interventions:
Interventions:
Medication adherence
Glucometer education
Disease Education
Nutrition Education
Create Note
Restore
Close
Cancel
Previous
Next
Progress Notes
Create Note in NoteWriter
Create Note
1 Telephone Visit
2 Video Visit
3 Total Minutes
See All Notes
Refresh
Edit
Delete
Tag
Copy
Gomes, Amber, RN
Registered Nurse
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To check sugars if any sx of hypo/hyperglycemia
Will f/u in 1 month via telephone call
Procedure Notes
Create Note
No notes of this type filed.
H&P Notes
Create Note
No notes of this type filed.
Consult Note
Create Note
1 Video Visit
2 Telephone
See All Notes
Refresh
No notes of this type filed.

Appendix G

PATIENT ACTIVATION			
LEVEL 1 **DISENGAGED & OVERWHELMED** Individual is passive and lacking confidence. Knowledge is low, goal orientation is weak, and adherence is poor.	**LEVEL 2** **BECOMING AWARE, BUT STRUGGLING** Individual has some knowledge, but large gaps remain. They believe health is largely out of their control, but can set simple goals.	**LEVEL 3** **TAKING ACTION** Individual has the key facts and is building self-management skills. They are striving toward good behavior change, and are goal-oriented.	**LEVEL 4** **MAINTAINING BEHAVIORS** Individual has adopted new behaviors, but may struggle at times of stress or change. Maintaining a healthy lifestyle is a key focus.
PATIENT PROFILE: -Does not understand the role they should play in managing their health. -Does not believe or understand that they hold the key to their health and functioning. "My doctor is in charge of my health."	**PATIENT PROFILE:** -Lacks knowledge about their condition, treatment options, and/or self-care options. -Has little experience or success with behavior change "I could be doing more."	**PATIENT PROFILE:** -Has minimal confidence in handling certain aspects of their health. -Has the basic facts of their condition and treatments "I am part of my health."	**PATIENT PROFILE:** -Has made most of the necessary behavior changes, but may have difficulty maintaining over time or during stress. "I am my own advocate"
ACTIVATION OBJECTIVE: Promote belief that an active member role is important, starting with self-awareness.	**ACTIVATION OBJECTIVE:** Support the building of confidence and knowledge necessary to take action.	**ACTIVATION OBJECTIVE:** Initiate new behaviors and improve health.	**ACTIVATION OBJECTIVE:** Resilience even under stress & able to plan for difficult situations.

Appendix H

	Doctor of Nursing Practice Project Roadmap	
Component	**Definition**	**Date Done**
Phase 1: Problem Identification and Evidence Review		
Clinical Inquiry including background and significance of problem	Describe local problem and its significance. Include data to frame local problem.	9/15/20
Organizational priority	Summarize information that supports topic/problem is an organizational priority.	9/15/20
Searchable Question	Write a focused, searchable question using an established method (e.g. PICO).	10/1/20
Evidence Search	External evidence • Summarize search strategy (e.g. databases, keywords, filters/limits, criteria for article selection, tools for critical appraisal). Include practice-based evidence (e.g. evidence-based solutions that experts/other health systems have implemented to address practice problem).	10/4/20
	Internal evidence • Summarize applicable unit/community/department/hospital/organizational level data or data required for national entities (e.g. CMS, NDNQI, AHRQ).	10/4/20
	Perform needs assessment if applicable.	10/4/20
Evidence appraisal, summary, and recommendations	Organize evidence that answers focused clinical question in a clear concise format (e.g. table or matrix).	11/8/20
	Appraise literature for quality and applicability of evidence using established method (e.g. Johns Hopkins Nursing EBP Research Evidence Appraisal Tool, Joanna Briggs Institute Critical Appraisal Tools, Fuld Institute for EBP critical appraisal tools etc.).	11/21/20
	State recommendations(s) and link to evidence strength and quality and risk/benefits.	11/21/20
Phase 2: Project Planning		
Project goals	State intended, realistic outcomes of project using established method (e.g. SMART criteria).	1/24/21
Framework	Select framework/model to guide implementation (e.g. EBP model, QI framework, Change model).	1/24/21

Context	Describe project setting and participants or population, or other elements that are central to where the change will occur.	1/24/21
Key stakeholders	Identify agencies, departments, units, individuals needed to complete the project and/or affected by project, and strategies to gain buy-in.	1/24/21
Practice change/intervention	Provided detailed description of practice change or intervention (e.g. new or revised policy).	3/4/21
Evaluation	Summarize plan for evaluating the effectiveness of the practice change. Identify applicable process and outcome data to be collected/tracked and tools to do this. Identify the methods for analyzing/interpreting the data (e.g. control, run or Pareto charts).	3/4/21
Possible barriers to implementation	Identify possible barriers and implementation strategies to mitigate these barriers.	3/4/21
Sustainment	Identify strategies to sustain the change.	3/4/21
Timeline	Create a realistic timeline for project completion.	3/4/21
Resources	Identify all resources (e.g. indirect and direct) needed to complete the project.	3/4/21
Ethical merit	Identify and obtain the required review and approval needed for implementation (e.g. institution, community agency, IRB).	6/20/21
Phase 3: Implementation		
Implement project	Carry out the project using selected implementation framework/model.	6/28/21
	Track any deviations/changes from the project plan.	Thru 10/28/21
Phase 4: Evaluation		
Results/Interpretation	Using an established method (e.g. run or control charts) display data and interpret project outcomes.	11/3/21
	Report evaluation of the effectiveness of the practice change, including extent the practice change was implemented (process outcome) and extent to which the desired outcome(s) were achieved.	11/3/21
Return on investment	Identify the final resources that were used to implement the project. Calculate and report the return on investment.	2/20/22
Phase 5: Dissemination		
Traditional	Disseminate to the project setting in a manner meaningful to them (e.g. executive report, poster, presentation at a meeting, poster with QR code to access details of project, etc.)	Complete by 4/15/22
	Disseminate in the format required by the academic institution (e.g. poster, public presentation) and	

	Prepare final project write-up using established reporting guidelines (e.g. EPQA, SQUIRE) and academic institution requirements.	
Non-traditional	Develop a website to display project, use personal or program social media (e.g. Twitter, Facebook) to share project information.	N/A

Appendix I

TO: XXXXXXXXXXXXX

FROM: XXXXXXXXXXXXXXXX**,** Nursing Scientific Review Committee Chair
(On behalf of the Nursing Research and Evidence-Based Practice Committee)

DATE: 4/19/2021

RE: Implementing a Workflow to Enhance Patients' Self-Management of Diabetes and Hemoglobin A1c Levels of 9% or Greater: A Nurse-Led Quality Improvement

---

Thank you for your letter of intent.

On behalf of the Nursing Scientific Review Committee of XXXXXXXXXXXXX, your project has been reviewed and endorsed.

After committee review, the main purpose of the project was determined to improve the quality of care. Given the nature of the project, it is not seeking to generalize knowledge, generate new knowledge, or create a scientific inquiry. The project is not considered human subjects research.

Please review comments in the attached document for consideration as you develop your Scholarly Application specifically:

- How PHI will be maintained and kept secure and confidential
- Interrater reliability between 2 nurses conducting follow-up visits
- Scripting used for content of follow up calls be ensure information is accurate – confirm with faculty advisor and Annie Kaisen

You may now proceed with completing the Scholarly Project Application (attached to this email). Please be sure that your XXXXXX Scholarly Mentor and faculty advisor have reviewed your application. Your faculty advisor may then send the completed application directly to me.

Please let me know if you have any questions.

CC:

File

Faculty Advisor

Scholarly Mentor

Appendix J

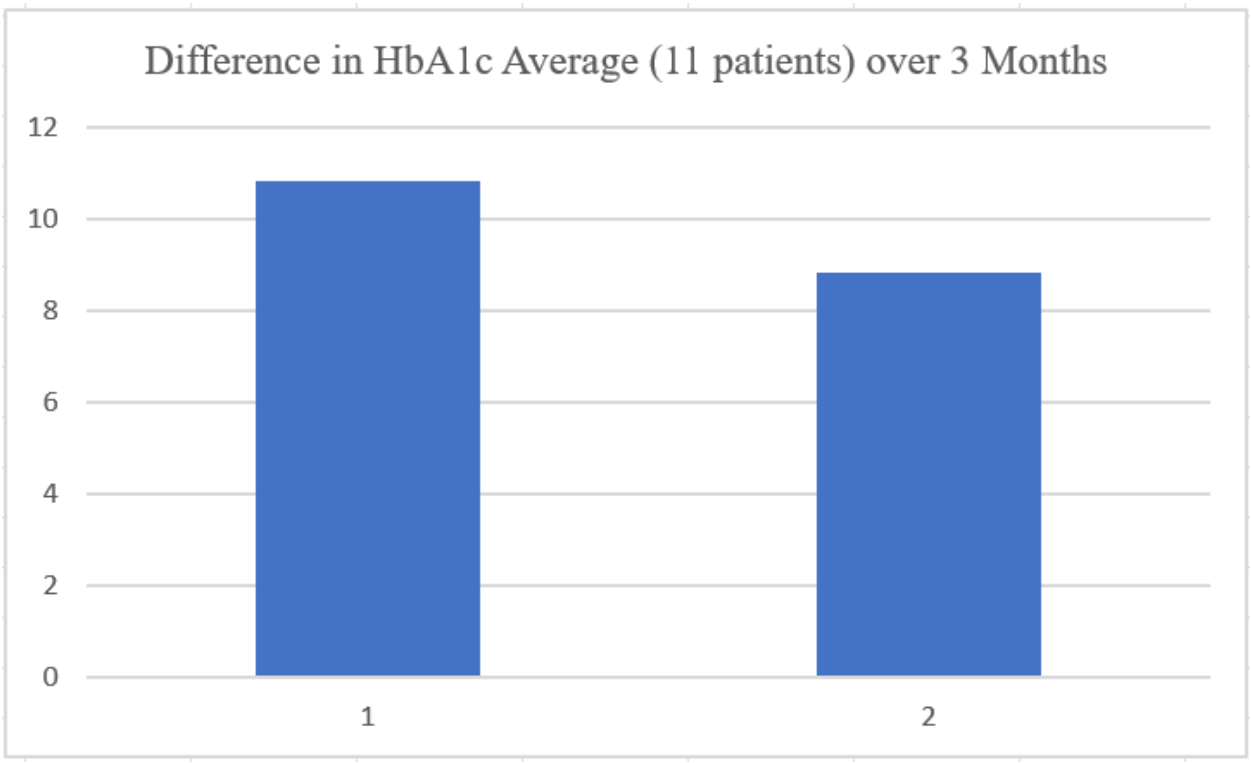
Differentiating Quality Improvement and Research Activities Tool

Question	Yes	No
1. Is the project designed to bring about immediate improvement in patient care?	X	
2. Is the purpose of the project to bring new knowledge to daily practice?	X	
3. Is the project designed to sustain the improvement?	X	
4. Is the purpose to measure the effect of a process change on delivery of care?	X	
5. Are findings specific to this hospital?	X	
6. Are all patients who participate in the project expected to benefit?	X	
7. Is the intervention at least as safe as routine care?	X	
8. Will all participants receive at least usual care?	X	
9. Do you intend to gather just enough data to learn and complete the cycle?	X	
10. Do you intend to limit the time for data collection in order to accelerate the rate of improvement?	X	
11. Is the project intended to test a novel hypothesis or replicate one?		X
12. Does the project involve withholding any usual care?		X
13. Does the project involve testing interventions/practices that are not usual or standard of care?		X
14. Will any of the 18 identifiers according to the HIPAA Privacy Rule be included?		X

Adapted from Foster, J. (2013). Differentiating quality improvement and research activities. Clinical Nurse Specialist, 27(1), 10–3. https://doi.org/10.1097/NUR.0b013e3182776db5

An answer of yes to all of the items in l-l0 and no to all of the items in 11-I4 indicates that this project meets criteria for a Quality Improvement Project. It also indicates that the project does not qualify as human subjects' research and does not have to go through the Institutional Review Board at Sacred Heart University.

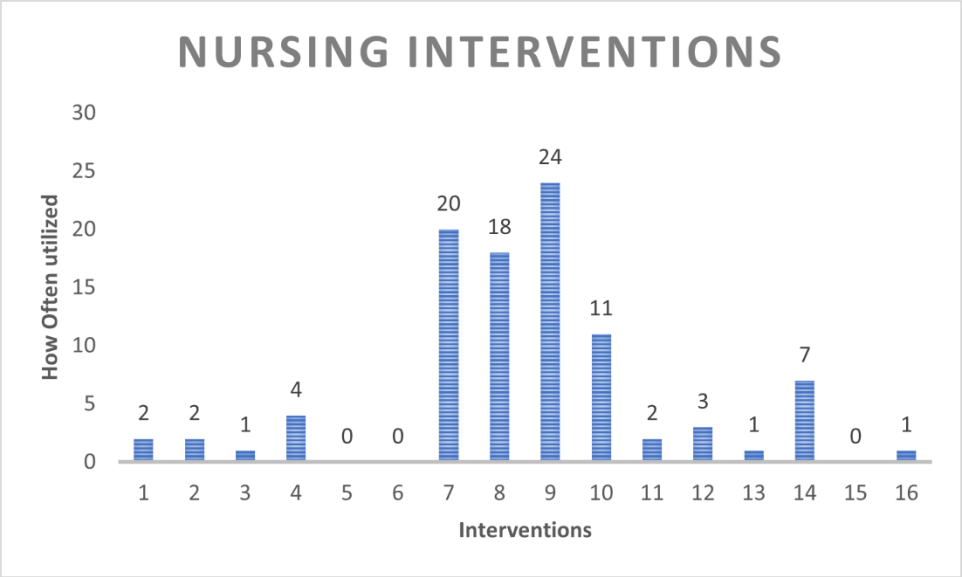
Appendix K



1 – Average HbA1c pre-intervention (10.8%)

2 – Average HbA1c post-intervention (8.8%)

Appendix L



KEY:

Interventions

1. Make referral for diabetes education
2. Have office schedule an appointment to address care gaps
3. Communication with PCP/endocrinologist about patient needs
4. Assist with obtaining glucometer supplies
5. Refer to insurance case management
6. Refer to community health workers to assess barriers
7. Schedule follow-up telephone check-in
8. Disease education
9. Nutrition education
10. Physical activity education
11. Symptom management
12. Glucometer education
13. Address psychosocial issues
14. Reminder to complete health maintenance topics
15. Referral to home care
16. Medication adherence