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Monitoring non compliant diabetic A1C levels

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Monthly Monitoring Of A1C Levels in Non Adherent Diabetic Patients

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Clinical Leadership Theme

Monthly monitoring Of A1C level laboratory values on diabetic patients and contacting those that have not had them checked within the past year, is the aim for this CNL project. As a CNL in this community based out-patient clinic, implementing this important data base review, addresses the competencies of leadership, systems analyst, patient advocate and educator. Identifying those diabetic patients that are past due for a laboratory review and implementing a specific process to monitor and follow up with them on a monthly basis, will increase the patients engagement with the healthcare systems and improve their health care outcomes overall, providing they respond to the communication and follow up.

Statement of the Problem

Monitoring and early identification of elevated A1C laboratory levels in the diabetic patient population, aids in early intervention, patient education and referrals to multidisciplinary teams that, with patient agreement and involvement, may improve their overall health care outcomes and decrease complications from their disease. The current diabetic clinical guidelines, published by the Department of Veteran Affairs healthcare system(VAHS)(2010), identifies laboratory screening of individualized target A1C levels to be an effective intervention, that may be used in coordination with diet, exercise, education, medication and patient self-management, to increase patient clinical outcomes. The VAHS has a policy in place that requires monthly monitoring for these patients by the clinical care team. My CNL project identified the need for follow up and consistent monthly monitoring in this setting. At the time of my RCA, the policy was not being implemented for a variety of reasons including inconsistent staffing and frequent staff turnover. With the lack of a consistent team, the monitoring did not take on a priority and was not completed for a year prior to my review of the database. As the CNL for this team, I began a

monthly review of the national database and discovered that one provider panel had one hundred and fifty diabetic patients. Of the one hundred and fifty patients, there were thirty five diabetic patients that did not have an annual A1C on record. These patients are the ones that require follow up through this proposed project. The CNL will be taking over making the follow up call in order to provide a more personal connection to the health care team and allow time to provide the patient with additional diabetic education and referrals.

Project overview

On a monthly basis, the CNL will review the VAHS national database that is used to track current diabetic patient laboratory values, specifically the A1C, to determine those patients that have not had a laboratory test for their A1C value within the past year. A list of those diabetic patients that are out of compliance with this testing will be generated from the database. Their medical records will be accessed by way of the secure electronic medical records (EMR) to confirm that the patients are current patients within this clinic. After completion of this review of the database and documentation of individual patients that are out of compliance, orders for laboratory testing will be placed by the nurse. The CNL will begin making the follow up contact and request that the patient get laboratory testing as ordered. The CNL will be able to make a more personal connection to the patients and provide health care information and education that may influence the patient's decision about compliance with recommendations and become more engaged in the development of their own diabetic health care plan.

The current process for contacting patients is to leave up to three messages for them, requesting that they return the call to the clinic. The final attempt is made through a letter that is mailed to the last known address, requesting the patient call our clinic for follow up. The system for attempting to make contact with the patients will remain the same. Once contact is made, the

CNL will personally take responsibility for discussing the request with the patient and provide

additional education and information while scheduling the follow up appointments. The specific

aim for this project is to increase the number of diabetic patients that have an annual A1C level

documented for review and evaluation by their health care team. Increasing the number of

diabetic patients that are in compliance with laboratory review, will allow the healthcare team to

offer them the best options for care. Increasing the number of diabetic patients who are having

their laboratory values monitored annually will provide data that will aid in determining the best

options for referrals and engagement in their health care plan.

Rationale

This project is the result of monthly monitoring of the A1C levels in all diabetic patients in the

VAHS. The national database is a shared source of information and data on a national level. The

current diabetic patient population that this project is monitoring has seen improvement during

each review cycle. The root cause analysis for this project indicated a need for continued

monitoring and follow up with this specific patient population, in order to keep them engaged in

their health care plan and allow for continued multidisciplinary referrals that may lead to

improved clinical outcomes. The NIH study on diabetes from 2013, asserted that there has been

an improvement in the monitoring and control of diabetes nationwide. There is also an ongoing

concern regarding the growing health care costs attributed to the care of diabetes throughout the

country. According to the National diabetes association (2013), California has one of the highest

health care expenditures attributed to the diabetic patient population than any other State in the

country. The monthly review of this data base by a staff nurse or the CNL and follow up contact

calls made by the CNL, will add a nominal cost to the overall clinic budget, no more than a few

hundred additional dollars in staff salary. Assuming the average hourly pay for a registered nurse

is fifty dollars and the time allotted for making monthly calls is three hours, the monthly cost to

the clinic will be one hundred and fifty dollars. The overall hospital and health care expenditures

saved by keeping the diabetic patient out of the hospital and actively engaged in monitoring their

own health and wellbeing is immeasurable. Considering the cost of an average two to three day

in hospital admission can cost in the thousands of dollars even with health care insurance, not to

mention the addition of specialty consults and prescriptions, the incentive to engage this diabetic

population is well deserved. According to the most recent Kaiser Family Foundation report

(2013) retrieved from kff.org, the average daily rate for an in-patient hospital stay in California is

three thousand one hundred and twenty eight dollars. There are a few other considerations that

were identified through the root cause analyses (RCA) as indicated on the fishbone diagram. The

staffing issue and time allotment to make the follow up calls is not always predictable. The CNL

is responsible for the process of contacting the patients and offering additional encouragement

and education based on the current evidence based research and practice of care for the diabetic

population. The CNL will take three hours of protected time each month to review the database

and initiate these calls and follow up. With encouragement and consistent and clear

communications with the team, there will be successful implementation of this project.

Methodology

Lewins change theory identifies the need to unfreeze the staff from their current process before

implementing a new one. Through discussion and review of the proposed monthly monitoring of

the diabetic patient populations laboratory values and providing frequent updates on the status of

both the calls and the patients completion of laboratory testing, will allow the team to embrace

this new process or as Lewin would say, freeze it into their practice. The continued monthly

process of reviewing the database and ordering the needed laboratory testing, followed by the

CNL contacting the patients, will eventually refreeze into a routine practice process. This is an ongoing process that requires monthly data review on the national data SharePoint. Obtaining the current status of the diabetic patient populations' adherence to annual A1C testing is an important indicator of the wellbeing and engagement of the patient in their own health care plan. Through several PDSA cycles, this project has already shown that there is an improvement in patient engagement and referrals to multidisciplinary teams collaborating with their health care plans as indicated on the run chart attached. A continued monthly assessment will allow the nursing staff or CNL to check on the expected outcomes and follow up where necessary. After six months of consistent monitoring and follow up, there are only four patients out of compliance with A1C laboratory testing on an annual basis on this panel. These numbers indicate that there has been an improvement of seventy five percent compliance, which is more than the projected rate of twenty five percent overall improvement through June 2015.

Data source/Literature Review

The patient population in this study is the diabetic patient that is not in compliance with the best practice suggestions of obtaining annual laboratory monitoring and follow up and referrals with the health care team. This project will provide an intervention that offers increasing patient contact and scheduling by obtaining patient information through monthly monitoring of the data share drive. The comparison or alternative option is allowing the patients to self-schedule appointments and select referrals. This is the current practice in the clinic and it has not been effective or helpful for improving patient clinical outcomes.

The ideal outcome of this intervention/project will be an increase in patient engagement in their own health care and regular multidisciplinary follow up appointments with their care providers. Using the National Veteran Affairs Healthcare system (VAHS) data SharePoint, within the secure electronic medical records (EMR) system, this project is able to obtain diabetic patient laboratory information. According to the VAHS guidelines (2011), identification and screening of diagnosed diabetic patients for A1C levels and developing an individualized care plan will

improve patient engagement in the healthcare system and improve their clinical outcomes. This project will improve the A1C monitoring outcomes in the clinic as well as increase patient engagement in their health care plans. The monthly monitoring of the data SharePoint will provide the latest information on diabetic patients that are currently not adhering to the recommended follow up and allow the staff to make contact and encourage these patients to re-engage in the VAHS. The additional encouragement and educational information provided by the CNL during those follow up calls, will offer the patients the opportunity to become more informed and fully involved in their health care plan.

Timeline

This monthly monitoring project will commence on or around the 25th day of each month. The nurse will review the national data SharePoint for each diabetic patient on each provider panel. The nurse will place laboratory orders in the EMR for any patient identified as being out of compliance with the standard practice of checking the A1C laboratory value on an annual basis. The nurse will document this information on a copy of the list of patients from the database. The list will be used by the CNL to contact those patients identified as needing follow up and laboratory testing. If no contact is made, there will make three telephone attempts followed by mailing a letter to the last known mailing address. On the second Friday of each month, the clinical team meets for a review of this data and team meeting. The nurse will present the data collected, provide a summary of the project and open the discussion to the team for further brainstorming ideas for this project.

Expected Results

The expected results of increasing contact with diabetic patients that are out of compliance with their annual laboratory testing, is that the patients will obtain the requested laboratory testing. An additional outcome will be that the patients re engage in their health care and follow up with

suggested multidisciplinary referrals, leading to improved clinical outcomes, decreased healthcare costs, decreased hospitalizations and improved patient satisfaction and quality of life.

Nursing Relevance

As noted in one study by Abdulazeez et.al. (2014), there is an important link between patient compliance and treatment outcome. Medication adherence is a complex issue that requires the development of an effective intervention that would help improve clinical outcomes. Through this monthly monitoring project, those diabetic patients that are out of compliance with their annual laboratory monitoring and clinical follow up, are contacted and encouraged to get their lab work completed as ordered and follow up with their primary care providers for more coordinated care. The CNL will provide additional encouragement and education during those follow up phone calls which may lead to a more engaged and participatory patient in their own health care. This will lead to overall improved clinical outcomes and improved patient compliance.

Summary Report

The monthly monitoring of non-compliant diabetic patient laboratory values, through the national dashboard, allows the primary care clinic to assess those patients that require more intensive interventions, frequent contact and follow up. The AIM of this project is to improve patient compliance by forming a more personal connection with the CNL through these monthly calls and to improve the patients understanding of their disease processes with appropriate educational information supplied to them by the CNL. The outcome measure being monitored for this population is their A1C laboratory value. By following this value in the diabetic patients on specific provider panels, an indication of clinical improvement may be implied when the A1C

value decreases from the previous value of greater than 9%. The diabetic patient population being monitored in this primary care outpatient clinic are both male and female adults, age ranging from eighteen years of age and up to ninety two years of age. The policy of monthly monitoring for the A1C laboratory value in the diabetic patient population is a standard of care that has been set by the Veteran Affairs Health Care System (VAHS) for all facilities. The outpatient clinic where this project is being implemented had not been following the standard of care policy for a variety of reasons, including lack of enforcement by administration due to chaotic staffing issues and limited resources. The FMEA performed during this project identified the need for a more consistent implementation of the policy by the nursing staff. Bringing together the interdisciplinary staff within this primary care outpatient clinic to brainstorm solutions for this process revealed the barriers of limited staff and designated time to perform the monthly monitoring review of data and subsequent follow up calls. The team collaborated on best practices and determined to set aside three hours of protected time on Friday, in the third week of each month, in order for the nursing staff, in this case the CNL, to be able to review the national data dashboard and initiate contact with those diabetic patients that are identified as out of compliance with their A1C laboratory testing. As noted in the references for this paper, with the information obtained through research articles presented on the Diabetes Organization and the Veteran Affairs websites, the plan and rationale for this project was successfully developed. The initial review of the non-compliant diabetic patient population for this primary care clinic indicated that there were a total of thirty five patients who had not had their A1C evaluated in over one year. The total number of diabetic patients being followed in this group was one hundred and fifty patient overall. Data collection was obtained by way of accessing the national database. The process began with collecting the names and contact information for those specific

diabetic patients that were out of compliance. A clinical medical records review was completed on each of those patients. The review process included confirming patients had the diagnosis of diabetes in their problem list and that they were on diabetic medications. The next step in this process involved placing the order for the laboratory testing prior to contacting the patient. During protected time, the CNL initiates the call to each patient that has been identified. When the patient is reached, the CNL initially identifies herself and the purpose of the call, before asking if they have time to briefly discuss their current health status. Confirmation that they are still actively participating with the primary care clinic is also important. The amount of diabetic education that may be offered during these calls is dependent on how receptive the patients are to this offer. The CNL will offer encouragement and support throughout the call and request the patient come to get the laboratory testing and make a follow up appointment with their primary care provider. If there is no answer or response to up to three messages, a letter requesting the patient contact the primary care clinic will be mailed to the last known address. Upon review of the national data the following month, the CNL will evaluate which patients have completed the requested testing and which patients need to be contacted again to request follow up. During the second month of this project, the monthly review revealed that there were fifteen diabetic patients out of compliance on the same primary care panel of one hundred and fifty. This indicated that there was a decrease in the number of non-compliant diabetic patients. The implication of this process is an increase in patient engagement in their health care after the CNL made contact. As the process continues on a monthly basis, the number of non-compliant diabetic patients decreased and the probability of improved patient outcomes increased. The latest review of the national database shows that there are eight diabetic patients remaining on the non-compliant list that continue to need to be contacted and encouraged to follow up with

their health care provider. This project will be an ongoing process within the primary care clinic. The protected staff time will allow the nursing staff to follow up on the database review and contact those diabetic patients that remain out of compliance. Through dedicated staff time and with continued clinic policy enforcement of this monthly monitoring practice, those diabetic patients that are out of compliance with laboratory A1C testing and primary care provider follow up appointments, will continue to decrease and their individual health care outcome will improve.

References

Abdulazeez, F., Omole, M., & Ojulari, S. (2014). *Medication Adherence amongst Diabetic Patients in a Tertiary Healthcare Institution in Central Nigeria* (1596-9827). Retrieved from http://www.tjpr.org

American Association of Colleges of Nursing. (2007, February 2007). *White Paper on the Education and role of the Clinical Nurse Leader* [Press release]. Retrieved from http://www.aacn.org

Diabetes Fact Sheet [Fact Sheet]. (n.d.). Retrieved from http://www.who.gov

Eugene C. Nelson, Paul B.Batalden and Marjorie M. Godfrey. (2007). Quality by Design: a clinical microsystems approach. San Francisco, CA: Jossey-Bass

Harvey, J. N., & Lawson, V. L. (2008). The importance of health belief models in determining self-care behaviour in diabetes [Special issue]. *Diabetic Medicine*, (26). http://dx.doi.org/10.1111/j 1464-5491

Hoerger, T., Segel, J., Gregg, E., & Saaddine, J. (2007). Is glycemic control improving in U.S. adults? [Supplemental material]. *Diabetes Care*, *31*(1), 81-84. http://dx.doi.org/10.2337/dc07-1572

Management of Diabetes: Clinical Practice Guidelines [Issue brief]. (2010). Retrieved from http://www.healthyquality.va.gov

Management of Diabetes [fact sheet]. (2013). Retrieved from http://www.diabetes.org

NIH study shows big improvement in diabetes control over past decades [issue brief]. (2013). Retrieved from http://www.nih.gov

Phillips, L., Barb, D., Yong, C., Tomolo, A., Jackson, S., Olson, D., ... Long, Q. (2015). Translating what works: A new approach to improve diabetes management

[Supplemental material]. *Journal of Diabetes Science and Technology*.

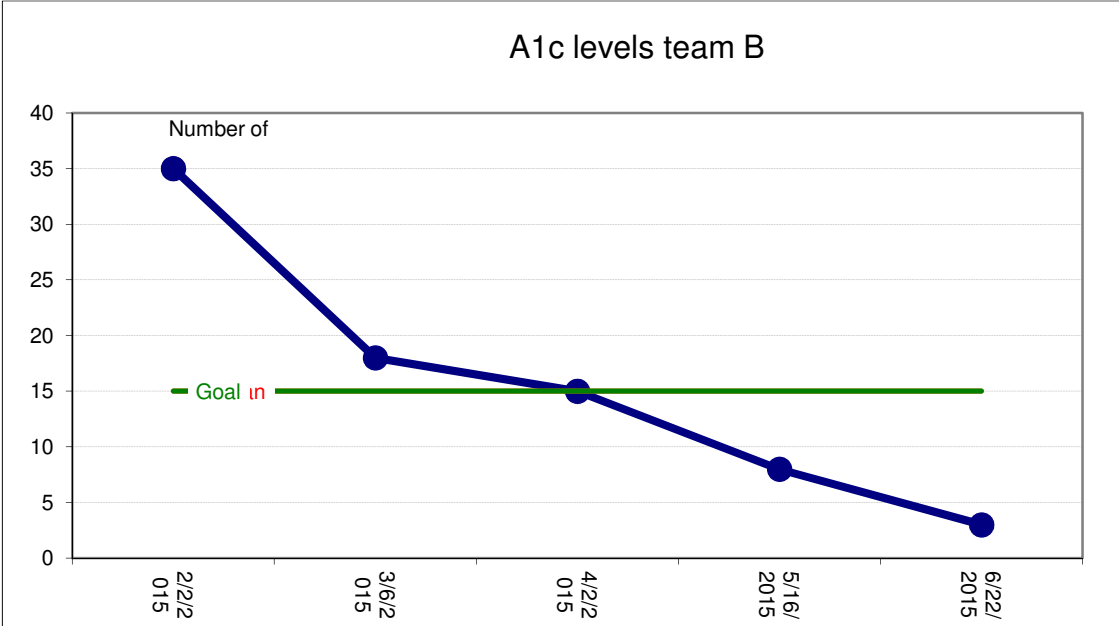http://dx.doi.org/10.1177/1932296815576000

Pogach, L. (2011). *VA-D0D update of Diabetes guidelines: What clinicians need to know about absolute risk of benefits and harms and A1C laboratory accuracy*. Retrieved from http://www.va.gov/federalpractitioner

Veteran Affairs and Department of Defense. (n.d.). *Clinical practice guideline for management of diabetes*. Retrieved from http://www.healthquality.va.gov

Veteran Affairs Health Care System. (n.d.). *Clinical performance measures*. Retrieved from https://vaww.r01.cdw.va.gov/sites/V21/Dashboards

A1c levels team B

- Strengths-National data base-staff collaboration

- Weakness- Limited staff, frequent staff turnover-non adherence to policy

- Opportunities-team centered, patient focused clinical staff

- Threats-staff turnover-technology failures-time commitment

Lack of
review of
National
database

No Policy
implementa
tion

Limited Clinic
staff
comprehensio
n

No
Designated
staff

No
Protected
time

Staff shortages

No enforcement of
policies

Limited time to
complete all tasks

**Non Compliant
Diabetic patient**