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IHI Open School: A Catalyst for Change for Improving Diabetes Outcomes in an NP Clinic

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Purpose: To share my doctoral work on how Plan-Do-Study-Act (PDSA) cycles quality improvement methods improved the percentage of diabetic patients receiving standardized, appropriate diabetic care to 90% over 90 days in a primary care setting.

Background: The evidence has shown decreased mortality and improved diabetic patient outcomes when evidence-based clinical practice guidelines are followed (ADA, 2018b). Studies continue to demonstrate a patient-centered approach to patient engagement with glycemic management, weight management, blood pressure control, podiatry, and ophthalmology referrals as a crucial component for improved patient outcomes (Inzucchi et al., 2015). For continuous improvement of diabetic patient results, the evidence continues to stress a multidisciplinary team approach for improved quality care outcomes (ADA, 2018b; O'Connor et al., 2011).

Rationale: In 2017, every 21 seconds a person in the United States was diagnosed with diabetes (CDC, 2017). According to the 2018 American Diabetes Association (ADA) data and statistics, diabetes resulted with an economic burden of \$327 billion dollars for 2017, demonstrating a 26% increase from 2015 (ADA, 2018a). Diabetes is arguably one of the costliest diseases our nation faces. Prior to this project, no standard routine best practices were followed for diabetic patients at this small chaotic clinic. Consequently, diabetic patients were receiving sub-optimal care. A chart audit of diabetic patients showed a significant gap in care, with 75% of patients having a Glycated Hemoglobin (HbA1C) of more than 8%, 25% having inadequate blood pressure control, and 100% had one or more preventative care measures not completed.

Methods: The team was aware of quality improvement (QI) concepts, but none had participated in an actual QI project, making it the first for this short-staffed chaotic practice. The project was based on IHI's Open School rapid-cycles quality improvement methods. This project was implemented through four Plan-Do-Study-Act (PDSA) cycles with focused tests of iterative change occurring every two weeks over an eight-week period. The cycles addressed four areas of concentration: team engagement, patient engagement, and two process changes which were, 1) Diabetes Care Measure Checklist (DCMC) , and 2) preventative care referrals. This project utilized four process measures to determine what interventions were performed as planned to affect the six outcome measures. The six outcome measures included the team member's scores on the survey, the number of patients empowered to make goals, the mean score of the completed Diabetes Care Measure Checklist , the mean score of the DCMC captured in the Electronic Medical Record (EMR), and the number of preventive patient referrals. Operational definitions were established for each Test of Change (TOC) to prevent ambiguity. Subsequent, TOC for further PDSA cycles were developed on data from the run charts and feedback from the team as well as patients. Data were collected and analyzed using run charts, chart audits, and surveys. The data on the run charts and feedback were reviewed to modify subsequent interventions accordingly.

Interventions: Primary interventions included education sessions, team meetings, morning huddles, patient engagement tool to empower diabetic patients to make goals, diabetes care measure checklist utilization, and preventative care referrals.

Outcomes Achieved/Documented: Final results for PDSA cycle four demonstrated 91.25% of patients received standardized, appropriate diabetic care an improvement from 27%, team confidence increasing to 4.5 on a Likert scale from 2.5, diabetic patients empowered to create goals 84% improving from 33%, diabetes care measures reviewed via checklist 92% of the time improving from 39%. Definitely, demonstrating an improvement of diabetic patients receiving standardized, appropriate diabetic care. Team engagement played a crucial role in this QI initiative, demonstrating the importance of team confidence, but the team's sense of confidence had even greater impact. There was a direct correlation between team cohesiveness and overall team engagement, affecting all tests of change interventions, processes, and outcomes. Morning huddles were instrumental in improving team dynamics and cohesiveness, which was demonstrated to be a key component in the success of this QI project.

Lessons Learned: The importance of seeking out new processes, ideas, and support from team members paramount. Understanding that team dynamics and cohesiveness are pivotal in a QI project. Appreciating, that it's the art of learning from your team that helps improve the process of change to be achieved. The major success of this project was the process of change affecting the overall team thus, resulting in improved diabetes patient care.

Conclusions: Despite the numerous challenges along the way, this QI project improved patient-centered standardized, diabetes care in this small chaotic practice. Demonstrating that quality improvement methods of rapid PDSA cycles can be used as a catalyst for change to assist NP led practices to improve diabetes outcomes as well as overall patient care.

Title:

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Keywords:

Improving Clinical Outcomes, Patient-Centered and Quality Improvement Methods

References:

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Abstract Summary:

The participant will understand and discuss how to use rapid cycle quality improvement methods used by the Institute for Healthcare Improvement (IHI) Open School as a catalyst of change to improve patient care, team engagement, patient engagement and clinical outcomes in a primary care NP led clinic.

Content Outline:

Aim: The participant will learn how to be empowered to be a catalyst for change using the IHI Open School rapid cycle quality improvement methods of Plan-Do-Study-Act (PDSA) cycles of iterative tests of change to lead a quality improvement project.

Introduction: Background on IHI Open School methods for Quality Improvement.

Body: What Tools do Change Agents Need

Tools for Healthcare Improvement

Review methodology needed to initiate change using the IHI Open School tools

Review the tools that IHI Open School has set up to assist change agents to initiate healthcare improvement within their environment, connecting and collaborating. (e.g assessing gaps).

Conclusion: Start Change

Be the catalyst you want within healthcare

First Primary Presenting Author

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Author Summary: Dr. Newton is a family nurse practitioner at Baylor Scott and White

Pflugerville, Texas. With over 17 years of critical care nursing experience. Recently completing her doctorate in 2018 from Frontier Nursing University with the legacy of Mary Breckenridge, the founder who was passionate about working with under-served populations. Dr. Newton is passionate about providing patient-centered care to optimize her patients' lifestyle and improve their quality of life.