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Hemoglobin A1C Values in Patients with Two Types of Insurance

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Walden University
2024

Abstract

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MSN, South University, 2012

BSN, University of Memphis, 2002

Project Submitted in Partial Fulfillment

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Abstract

Diabetes is the seventh leading cause of death for adults in the United States. Evidence suggests that not all patients receive the same level of care and discrepancies may be based on the type of health care coverage they have. Providers use Hemoglobin A1C (A1C) as the primary test to indicate treatment success for persons with diabetes. Providers may be ordering this critical lab value differently based on the patient's insurance plan. In this project, A1C levels in diabetic patients receiving managed care versus traditional Medicare were evaluated. It is important to understand if potential disparities in care exist. The chronic care model was used to guide this project. A retrospective chart audit and statistical analysis was used to investigate A1C differences among 40 individuals aged 65 and above with diabetes. Deidentified A1C lab data spanning 4 months in 2023 were collected, with 20 data points for each group, comparing traditional Medicare and managed care patients. There were similarities in mean and median but differences in mode and variance. The traditional Medicare group had a mean of 6.01 and the managed care group had a mean of 6.35. The traditional Medicare group exhibited a wider A1C value spread, with the mode in the managed care group of 5.8 nearly aligned with standard therapeutic levels 5.7 or below. The *t* test resulted in a non-significant *p* value of 0.119, attributed to higher variance and a small sample size. The project suggests the need for emphasizing protocol compliance for diabetes management in each setting, but especially in the traditional Medicare group. Social change would be impacted if all providers consistently followed evidence-based guidelines for timely A1C assessments resulting in improved health outcomes for all adult patients with diabetes.

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Dedication

The writing of this project is dedicated to Elisha and Kaleb. Thank you for choosing me as your mother. I vow to be the best mother that I can be for I truly understand that this role is a gift from the Universe.

Acknowledgments

Special thanks to Dr. Evelyn Smith for your kindness and willingness to help despite the time of day. You are truly a blessing. To Dr. Brenda Deener-Stanton, thank you for opening your doors to assist me on this journey. I admire your administrative abilities as well as your consistent and unwavering work ethic. I am grateful to have gleamed your wisdom and knowledge. I am forever grateful.

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Section 1: Overview of the Evidence-Based Project

Introduction

In 2022, the Centers for Disease Control and Prevention (CDC) recognized that there are over 130 million adults affected annually by diabetes (CDC, 2022). Diabetes is the 7th leading cause of death in the United States with a total of 252,806 death certificates citing the disease as the primary cause or contributory factor for death (American Diabetes Association [ADA], 2018). Whether diagnosed or undiagnosed, the disease affects 12 million seniors aged 65 or above with 1.5 million new diagnosed cases annually (ADA, 2018). More than 20 years ago, the Institute of Medicine (IOM) report Crossing the Quality Chasm (2001) reflected on the need to avert and monitor chronic health conditions such as diabetes with prompt attention to providing interventions and quality care for patients with acute diagnosis of diabetes to decrease or eliminate chronic results. Years later, Leif et al. (2009) proposed in an IOM report that leaders involved in patient care are unenthusiastic about embracing the quality concerns that are problematic and that exist in healthcare systems. Leif et al. (2009) also stated that to see changes in the care delivery system, attention must be catered more towards rebuilding or revisiting the fundamental thinking patterns of culture particularly emphasizing tools such electronic health documentation rather than simply allocating more funding as a precursor towards quality care. Dailey (2013), in support of the IOM report, stated that quality care can be discerned and that patients have the right to request the highest level of care based on affordability. The Institute of Medicine (IOM) developed a framework that defined 6 areas that encompass quality care. The framework integrates effective, well

timed, patient-centered, economical, equitable, safe patient care (Agency for Healthcare Research and Quality [AHRQ], 2022). Standards of care are developed and published yearly by the American Diabetes Association (ADA) outlining treatment objectives, protocols, and guidelines along with measures to examine and determine efficiency of patient care (American Diabetes Association Diabetes Care, 2018). Traditional Medicare and managed care patients depend on providers to service their care needs through fair treatment based on safe ethical practices and integrity. Unfortunately, disparities exist in care practices for patients with traditional Medicare verses managed care (American Diabetes Association Diabetes Care, 2018). The Healthy People initiative, an advocate for improving disparities, has changed over time with the goal of enhancing health in the American population. Over twenty years ago, the goal of Healthy People 2000 was to decrease health disparities in Americans. In 2010, the plan was to eradicate health disparities all together. In Healthy People 2020, goals included ascertaining health equity, eradicating disparities, and improving health conditions (HealthyPeople, 2019).

The Centers for Medicare and Medicaid Services (CMS) developed an agenda called the Framework for Health Equity 2022–2032. The plan targets the reduction of health disparities and chronic disease in underserved communities (CMS, 2022). The plan's efforts are in alignment with individuals that have, or aid those who experience, chronic disease process, comorbidities, inadequate care, poor outcomes, and challenges in gaining access to quality care (CMS, 2022). Diabetes is one of the main diseases listed in the framework. Additionally, CMS's goal is to remain committed to improving patient care outcomes across the continuum with emphasis on safety, high quality meaningful

time spent with engaging with patients and family, educating on prevention and effective treatment regimens while being upfront and transparent (Schreiber et al., 2022).

The Healthy People 2020 focus encompasses promoting healthy lifestyles while decreasing disparities by way of access to health care specific to meeting patient care demands and needs by applying the use of evidence-based interventions (Schreiber et al., 2022). The Center for Medicare and Medicaid Service (CMS) has collaborated with local health care providers and established partnerships with providers in public health, the community, social service agencies, and to the patient population to accomplish the goals to build and strengthen relationships with all entities associated with Medicare (CMS, 2022). The concern is providers caring for diabetic patients with Medicare plans in community or managed care sectors may not always adhere to the standards of care protocols therefore increasing their risk for complications. Hemoglobin A1C (A1C) testing recommendations are at least two times a year for patients with stable glycemic control or every 3 months for patients who are unstable or not meeting treatment goals (ElSayed et al., 2023; HbA1c, 2021). Glucose links to hemoglobin (protein located in red blood cells) after it reaches the bloodstream. The A1C test recognizes the average of glycemia over a 3-month period (CDC, 2022). The test is the primary tool for assessing glucose control and predicting future diabetes complications. The target goals for nonpregnant adults are < 7% without significant hypoglycemia (ElSayed et al., 2023).

Problem Statement

Care provided to patients covered by traditional Medicare should be equitable to that of managed care patients. The Center for Medicare and Medicaid Service has

partnered with providers to treat and manage patients with disease processes such as diabetes; however, providers are not always compliant with treatment regimens for which reimbursements are available (Rushforth et al., 2016). The Affordable Care Act has been steadfast in calling attention to preventive medicine and primary care. In recent years, initiatives such as insurance modifications, increased compensation to primary care providers, financial support, physician coaching and teaching are incentives to gravitate providers toward primary care (CMS, 2022). These initiatives through CMS are designed to enhance quality of care, patient outcomes, decrease patient cost for services, and enforce standards of care for providers treating this population to support more efficient high quality health care (CMS, 2022). CMS has determined that the parameters of diabetic treatment include (a) history and physical exams, (b) initial health assessments, (c) medication therapy, (d,) hemoglobin A1C, (e) GFR and/or creatinine levels, (f) timely foot examinations, and (g) referrals for retinal exams must be rendered to diabetics in a timely manner to prevent rampant complications and strengthen quality and longevity of life (CMS, 2022). In this project, I focused on understanding the differences in A1C levels in diabetic patients receiving managed care versus traditional Medicare.

Purpose Statement and Meaningful Gap

The purpose of the project was to understand A1C values in Medicare patients verses managed care patients and disseminate findings to appropriate healthcare providers and organization management to use for framework towards change interventions. The meaningful gap in practice for this doctoral project was a lack of understanding of the differences that may exist in A1C levels in diabetic patients aged 65

or above in Medicare populations compared to managed care. This lab value represents the primary benchmark for measuring treatment/management success (ElSayed et al., 2023). Understanding the difference between these two populations HbA1C values will provide insights into provider management decision-making for both populations of patients.

Practice Focused Question

Is there a difference in Hemoglobin A1C levels for adults aged 65 and over with traditional Medicare verses managed care?

Nature of the Doctoral Project

I used a retrospective chart review for this project. I collected and analyzed the data with adherence to HIPPA laws to protect privacy. I was provided deidentified data by way of chart reviews from the medical records of diabetic patients, over 65 years of age, with traditional Medicare and those with managed care in a community and private clinical setting. Analysis included descriptive and inferential statistics.

Gap-In-Practice

I had the potential to address the gap-in-practice by bringing awareness to providers regarding the lack of consistency of A1C levels among patients with Medicare versus patients with managed care insurance plans. Addressing the importance of consistent A1C testing via provider education could improve detection of elevated blood glucose levels, implementing treatment regimens based on protocol, and preventing complications which could be detrimental to the patient.

Significance

In this project, I provided information to support providers consistently order A1C levels for diabetic patients regardless of their insurance status. The findings of this project may result in a change in practice and may encourage providers to monitor A1C readings to determine if blood glucose levels are being properly managed. The project findings may result in improved patient outcomes, enhanced effective communication between provider and patients, prevented complications, and prevented untimely patient demise. Such measures would potentially bridge the gap in practice while positively improving social change.

Assumptions and Limitations

I assumed that primary care providers deliver care to all patients based on honesty, ethics, and impartiality without regard to insurance benefits. I assumed that providers order lab testing for Medicare and manage care patients according to the standards outlined by the CDC/CMS. I also assumed that care is provided based on provider accountability and in accordance with patient care needs. Limitations to this project included health disparities in the diabetic population. There may have been missing or incomplete data in the data set provided. Limitations also may have included not considering ethnicity or co-morbidities for the diabetic population which could change the data being collected. Typically, limitations are analyzed prior to conducting the project which offers the opportunity to reduce constraints as much as possible (Grove et al., 2020). Results of this DNP project may not be generalizable to other healthcare insurance groups beyond the project setting.

Definition of Terms

Centers for Medicare and Medicaid Services (CMS): A federal agency based in the United States that works with the Department of Human Services that directs health programs in collaboration with insurance portability standards, Medicaid, and Medicare (CMS.gov, 2023).

Diabetes: A endocrinological disorder of carbohydrate metabolism that results from a combination of genetic and environmental factors due to insufficient secretion or use of insulin production with associated symptoms of polyuria (increase urine production), polydipsia (increased thirst), polyphagia (increase hunger), and weight loss (Britannica, 2023).

Disparities: A difference in treatment regimens that analytically and adversely impact less advantageous groups of people based on gender, socioeconomic background, race, and environment (Healthy People, 2019).

Hemoglobin A1C: A level used to monitor serum blood glucose levels to prevent complications such as heart disease, renal disease, and problems with vision.

Managed Care: A healthcare delivery system designed to oversee use, quality of service, and price of expenditures (Centers for Medicare and Medicaid Services, n.d.).

Medicare: A government insurance plan for people over 65 years of age who have paid into the plan (Centers for Medicare and Medicaid Services, n.d.).

Retrospective: Review of past information (Merriam-Webster, 2023).

Stakeholder: A vested member or group within a community with focus of improving healthcare and patient outcomes; an individual or entity who is involved in or impacted by a set of events or course of action (Merriam-Webster, 2023)

Summary

My focus in this DNP project was to understand prescribing practices related to the use of A1C assessment for patients who are 65 or older with diabetes in two groups, those who have traditional Medicare and those who have managed care healthcare coverage. Understanding current practice will support education for healthcare providers and ultimately improve patient outcomes. Section 2 will include a review of the current literature and the theoretical framework that informed this project.

Section 2: Review of Literature and Theoretical and Conceptual Framework

Literature Review

Hemoglobin A1C screenings are essential for the assessment, measurement, and management of diabetic control. In a study conducted in 2018, Gopalan and colleagues examined 25 participants with an average age of 56.8 years of age. Gopalan et al. (2018) assessed patient involvement in participating in self-care, adherence of medication, management of diabetic symptoms, and documentation of glucose monitoring. Twenty-two out of 25 of the participants reported similarities with A1C levels based on their knowledge of A1C readings. Common barriers noted in the study included a decrease in provider/patient communication and inadequate diabetic instruction (Gopalan et al., 2018).

When assessing A1C, there are numerous types of information that may affect participants' valuations when managing their diabetes control. Awareness is key, when providers are tuned in to different processes that change the way the patient views managing their diabetes control, then patient-centered care improves. Not only are improvements seen with patient care, but informed, effective communication with provider/patient relationship are enhanced while improving patient outcomes (Gopalan, 2018).

Edupuganti et al. (2019) conducted a study with 76 residents with diabetes consisting of eight teams/settings at a residential clinic located at Beaumont Hospital. The writers acknowledged that the American Diabetes Association set forth guidelines yearly establishing strategies with the goal of preventing major complications associated

with diabetes mellitus (Edupuganti et al., 2019). Edupuganti et al. (2019) compared private clinics to residential clinics identifying substandard care by providers of diabetic patients that showed decreased compliance based on ADA guidelines. The quality improvement project (QI) was intended to enhance diabetic care in resident clinics by using A1C levels and guidelines from the ADA guidelines (Edupuganti et al., 2019).

In 2019, the *National Healthcare Disparities Report* examined the importance of having access to complete, quality healthcare services for all Americans. This access includes patient equity, encouraging health maintenance, prevention, and disease management. Additionally, the report discussed eliminating disability and unexpected, untimely demise of the patient. Goals outlined in the report targeted adequate healthcare within the system, timely access to care, receiving timely care, continuity of care to establish a working provider/patient (AHRQ, 2022).

Correspondingly noted in the AHRQ (2019) report was the specific attention for timely access to care as a method to safeguard positive patient outcomes and reduction of cost. Encouraging patients to stay within network while providing education to enhance knowledge base of the overall healthcare system for more desirable experiences is discussed. The lack of healthcare insurance was determined to be a major contributing factor to disparities in access to health care services with particular emphasis on race and ethnicity. Patients with healthcare insurance were more likely to receive more consistent and greater quality, healthcare delivered in a timely manner in comparison to patients without health insurance (AHRQ, 2022). Care practices delivered by primary providers are the chief resource for medical management in the majority of diabetic patients.

Providers are presented with many obstacles when addressing various dynamics associated with medical and psychosocial needs of the diabetic population. Lengthy time periods between patient care appointments and decreased time spent with patients may result in a lack of appropriate treatment and less concentrated analysis of the complexities of diabetic patient care issues (AHRQ, 2022).

The 2019 National Healthcare Quality and Disparities Report (QDR) focused on giving priority to analyzing quality and disparities conjointly to acquire greater insight on the effects of health care. The percentage of adult patients aged 40 years and older who were diagnosed with diabetes and obtained at least two A1C levels within a year's time frame worsened (AHRQ, 2019). A decrease in quality was also noted in diabetic patients 40 years of age and older for foot exams; assessing for numbness, tingling, reduction in sensation, pain, and sores (AHRQ, 2019). The National Quality Strategy (NQT), commissioned by the Affordable Care Act, was created through joint efforts from various stakeholders to develop objectives to achieve improvements in care, decrease cost, and advancements in health through quality healthcare. These objectives will be accomplished via incentives, instruction, and changes in the method that care is provided (AHRQ, 2019).

In new onset patients with diabetes, providers are expected to offer treatment at initial diagnosis whether the patient has traditional Medicare or managed care (American Diabetes Association, 2023). Hemoglobin A1C testing is ordered every 3 to 6 months by the provider to determine if measures for controlling blood sugar levels are successful. The protocols are inclusive of clinical practice guidelines established by diabetes

management procedures set by the American Diabetes Association (American Diabetes Association, 2023).

Implications for Social Change in Practice

Spath (2021) acknowledged that to see social change, variations must first occur at the provider and system level. Implications for social change in practice encompass enhancing patient quality and safety. Systematic changes include modifying patient-provider interactions, operating at the microlevel by delivering care via smaller component groups, and revamping organizational practices (Spath, 2021). Gunter et al. (2021) assessed the complexities of implementing change processes to improve diabetic care management while tending to social care needs of the patient. This assessment included visiting various models at the organization level while addressing payment to grantees to maintain. Gunter et al. (2021) found whether at the state, federal, or local level, recipients were executing social change by augmenting different models in support of the critical needs of diabetic patients by enhancing computer technology for diabetic referrals and revisiting system-wide protocols to minimize gaps in care. Approaches that speak to diabetic population's health and social needs will require cooperation from health care organizations, partnerships within the community, and market influences. Supporting and incentivizing these tactics are essential for sustainability (Gunter et al., 2021). These changes will foster a decrease in health disparities such as chronic diabetic disease that will ultimately affect patient care outcomes, health care costs, and untimely death (Kaiser Family Foundation, 2018).

For this project, I defined the necessity for providers to consistently order A1C levels for diabetic patients. Such practice will establish a numeric baseline and then will allow providers to monitor A1C readings to determine if blood glucose levels are being properly managed and maintained in Medicare and Managed care patients. Hemoglobin A1C testing is reflective of the patient's blood glucose levels for up to three months (Mayo Clinic, 2022).

Patient/provider partnerships and collaborations are important for maintenance to be successful. Collaborative efforts and effective working relationships between providers and patients are essential to develop social change by creating trusting patient/provider relationships. In establishing trustworthy relationships, the patient has the potential to experience a decrease in cost, and enhanced knowledge which lessens the patient's decision to change providers. These positive partnerships evoke conversation and effective listening on behalf of the provider and the patient. The motto of the team is developed through trust over time. The collaboration is considered more of a team effort rather than an authoritative approach on behalf of the provider to the patient (Jean-Louis & Bullard, 2023). Measures to effective relationships include using evidence-based administrative and leadership strategies to engage patients in the educational components of the ongoing learning process that includes preventive health, health maintenance, improving patient outcomes, and promoting patient centered interdisciplinary teamwork (Jean-Louis & Bullard, 2023). It is vitally important for providers to be culturally sensitive to the care needs of the patient. Organizational sensitivity to cultural competence and cultural humility reinforces the value of patient care needs, patient

satisfaction, patient safety, and desired outcomes (Jean-Louis & Bullard, 2023). Standards of care are developed to assist providers and care team members with mechanisms to manage diabetes care and analyze quality of care health care providers globally (American Diabetes Association, 2022).

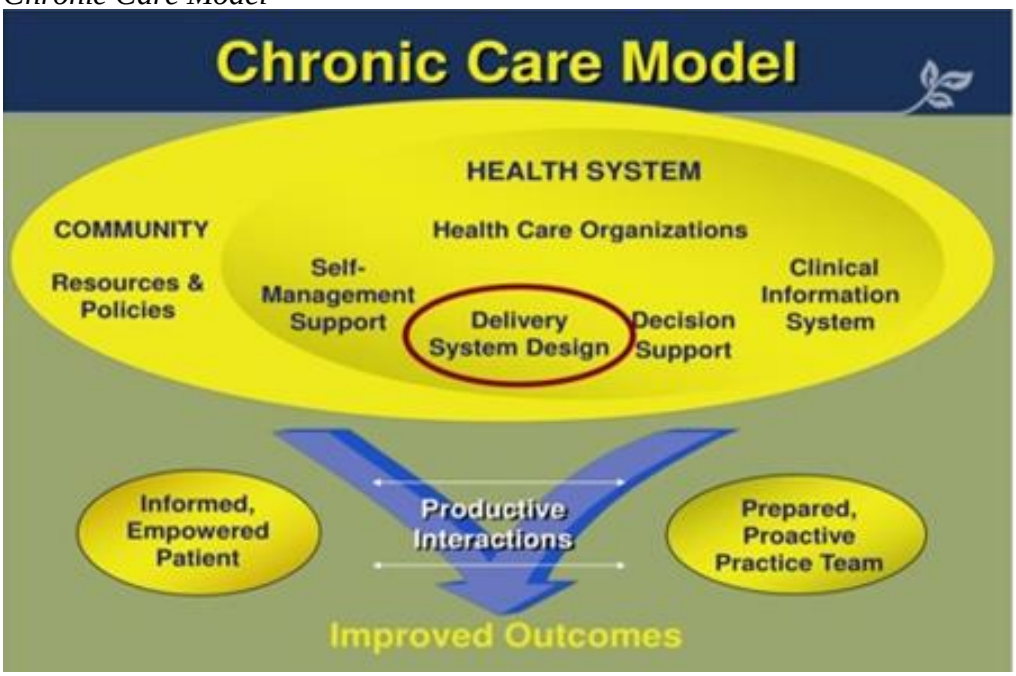
Eliminating cultural resistance and complacency by improving communication requires accountability from members and stakeholders. Stakeholders include providers, the patient population, health care and community organizations, and investors (Jean-Louis & Bullard, 2023). To see social variations within the Medicare and managed care population, reform must occur on the provider, organizational, and stakeholder platform.

Conceptual Model/Theoretical Framework

I used the chronic care model (Figure 1) in this project for a greater understanding of the use of evidence-based practice to improve outcomes in diabetic patients with Medicare and managed care (Group Health Research Institute, 2006-2019). The chronic care model classifies components within the healthcare system to promote preeminence and distinction in care management of patients with chronic diseases.

Figure 1

Chronic Care Model



Note. Group Health Research Institute, 2006-2019

Established in 1997, the chronic care model was developed and later supported by the Robert Wood Johnson Foundation (Group Health Research Institute, 2006-2019). The model has been reviewed and approved by a panel of experts.

The model consists of six components: (a) health system and organizational support, (b) clinical information system, (c) delivery system design, (d) decision support, (e) self-management support, and (f) community resources. Health system and organizational support advocates for safe, high-quality care that includes strategies towards systematic changes as a result of discrepancies found in patient care (Group Health Research Institute, 2006-2019). Clinical information systems include timely plans to arrive at effective, coordinated delivery of patient care and monitoring adherence

to practice standards and guidelines. Delivery system design encompasses multidisciplinary team driven management of care through evidence-based practice that supports cultural needs. Decision support incorporates evidence base knowledge into clinical practice and encourages active patient participation from a collaborative perspective. Self-management support is used to educate and encourage patients to assess and manage chronic diseases through the use of primary care provider (PCP) and community resources (Group Health Research Institute, 2006-2019). I used this model to identify key processes in the delivery of healthcare that can impact outcomes, particularly the integration of health systems resources to provide a prepared and proactive healthcare team ready to order appropriate lab studies for patients, in this case A1C.

Summary

In this section, I provided a summary of the literature related to the importance of A1C screening to support improved patient outcomes. I also provided an overview of the issues with inconsistencies in ordering this important test based on the patients demographic group. I also discussed social change issues that supported the importance of this project. The section concluded with discussion of the chronic care model and the relationship with the project. Section 3 will include an overview of the nature of the project.

Section 3: Methodology

Project Design/Method

The purpose of the retrospective project design was to identify differences in diabetic populations concerning A1C testing in people age 65 or older whose care is paid for by Medicare and managed care plans in a community or private setting. CMS guidelines state that all treatments must be rendered to persons with diabetes in a timely manner as specified by (CMS, 2022). My goal was to evaluate one of seven mandated CMS diabetic treatment services, regular review of A1C, used by providers in community and private health settings and disseminate findings to appropriate management members to be used for designing a framework for interventions. I used a retrospective chart review of diabetic patients treated in a community and private setting specifically to understand any differences in A1C values.

I used the quantitative method to review data with the benefit of focusing on the project from the perspective of statistical implications. I preferred this method based on the commonality of diabetes and Medicare or managed care.

A major advantage to retrospective chart review is the ability to measure quality care for the improvement of health outcomes that has already occurred. Additionally, I was positioned to assess the analytical cause of the practice issue and consequential outcomes. Other advantages to retrospective chart reviews are the absence of patient consent, patient participation, and cost effectiveness (Talari & Goyal, 2020). The retrospective chart audit yielded evidence-based data that was used to compare one treatment performance measure, A1C, for persons with diabetes.

Population and Sampling

The retrospective data analysis population was persons with diabetes aged 65 or above with traditional Medicare and managed care insurance seen in a private practice and community care clinic between months from January 2023 through April 2023. The information collected was deidentified data. Five members of the population each month were selected from the traditional Medicare and the managed care groups, a total of 40 individuals (20 in each group) were collected.

Data Collection

The community clinic and private practice clinic generated a list of established diabetic patients for me covered by Medicare or managed care. I conducted retrospective chart review with assured patient confidentiality. The identifying data included a unique numeric code representing unique individual patients. To ensure privacy, the facilitator at Primary Care Link was able to locate and pull patient data based on an assigned number using a deidentifying method with an encrypted password through Microsoft to store the information. Patient date of birth and social security number were not used. I conducted data collection according to HIPPA laws to ensure confidentiality of patient information per the facilitator at Primary Care Link. Forty total A1C values were collected, with 20 representing individuals with Medicare and 20 representing individuals with managed care (Appendix A).

Ethics

I completed an application for approval from Walden University Institutional Review Board. The Institutional Review Board (IRB) at Walden University is

responsible for approvals of the DNP project. The project complies with ethical standards established by the university (Walden University, 2015). The IRB approval number for this project was 09-21-18-0381336.

Project Evaluation Plan

I employed a quantitative methodology using retrospective data. After receipt of the quantitative data, the data were analyzed using descriptive and inferential statistics, in Excel. The descriptive statistics comprised of mean, median, mode and variance. I used the inferential statistic *t* test because the groups were independent, normally distributed and sampled from two independent groups. I used the *t* test to determine a level of significance between the means of the two groups which helped to describe how they are related (see Kim, 2015).

Summary

The retrospective project design was completed to investigate disparities in A1C values for diabetic populations aged 65 or older, whose were covered by traditional Medicare and managed care plans in community or private settings. I evaluated the CMS-mandated service of regular A1C reviews in Medicare and managed care settings. Employing a quantitative methodology through retrospective chart reviews, I received deidentified data from diabetic patients treated between January and April 2023. The project involved 40 individuals (20 in each group) from Medicare and managed care. Ethical considerations included approval from Walden University's IRB. I used descriptive and inferential statistics, such as mean, median, mode, variance, and *t* test to analyze the quantitative data and identify the significance between the two groups,

providing increased understanding into the effectiveness of A1C monitoring in diabetic care.

Section 4: Findings, Discussion, and Implications

Introduction

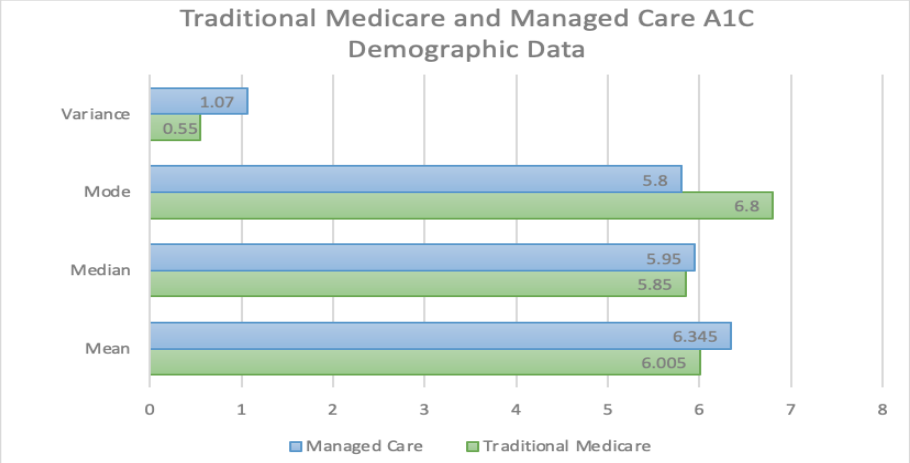
I used a retrospective chart audit and statistics for data collection procedures and analysis in the project. I collected and analyzed data to identify health disparities among the stated variables: A1C lab data was collected for 4 months in 2023. Twenty unique data points were collected for each group. All patients were age 65 or above.

Findings

Descriptive statistics are described in Figure 2. Descriptive findings reveal a similar mean and median but a dissimilar mode and variance. This is most likely due to a wider spread of A1C values in the traditional Medicare group or a larger variance from the mean in this group. It is also interesting that the mode or most often recurring value is near standard therapeutic levels for the managed care group but not in the traditional Medicare group.

Figure 2

Demographic Data: Hemoglobin A1C Levels by Group



I conducted a *t* test for analysis of the two group means. For the data presented the *p* value was 0.119, not a clinically significant finding; however, several reasons likely contributed to this finding. There was a higher variance than what might have been expected and secondly the sample size was small.

Recommendations

Implications for evidence-based practice are the differences revealed in protocol compliance for persons with diabetes in each setting which offers each site an opportunity to make changes that will influence health outcomes and disparities for their patients. Implications of the project include education to support consistent provider assessments based on CDC guidelines of timely assessments of A1C levels in persons with diabetes, especially in the traditional Medicare group.

Limitations

The findings and recommendations for this project have several limitations. The project was based on a retrospective chart audit of deidentified data which means that the data collection relied on an organization representative to collect the data. There may have been inaccuracies in data collection that I could not verify. The use of the A1C lab data for a specific period (4 months in 2023) may not capture the long-term trends and fluctuations in health disparities. The selected time frame might not be representative of the overall health status of the population, making it difficult to generalize the findings beyond the organization. The project included a sample size of twenty unique data points for each group. The small sample size may limit the statistical power of analyses. The *p* value of 0.119 suggests that the difference observed in the means is not statistically

significant. However, the discussion acknowledges potential reasons for this, such as a higher variance and the small sample size. It's important to recognize that a non-significant *p* value does not necessarily indicate the absence of a real effect. It is important for readers to consider these limitations when reading the project.

Implications for Practice

The implications for this project were related to improving provider compliance in ordering A1C exams for all persons with diabetes that are consistent with established guidelines. Through this project, I educated providers on inconsistencies that could cause disparities in diabetic patients and how making changes could assist in improving patient outcomes. I revealed some interesting findings from the descriptive statistics even though the project has a limited sample size of 40 total and generalizability.

Social Change

By incorporating the use of research and the reliance of evidence-based practice into the community and managed care setting, changes can be witnessed and documented showing an increase in cases where A1C levels are consistently ordered and applied to diabetic patient care therefore decreasing disparities in this population. The use of research and evidence-based practice can encourage provider compliance and can show how such use in practice can create positive health outcomes in diabetic patients. Provider-patient collaboration along with patient education as a valid part of the patient's health care regime. Educating diabetic patients on practice guidelines and protocols may also create improvements in health outcomes because patients will be knowledgeable about the expectations of care and required provider compliance.

Summary

I used a retrospective chart audit and statistical analysis to investigate health disparities among individuals aged 65 and above with diabetes. A1C lab data spanning 4 months in 2023 was collected, with 20 data points for each group, comparing traditional Medicare and managed care patients.

There were similarities in mean and median but differences in mode and variance. The traditional Medicare group exhibited a wider A1C value spread, with the mode in the managed care group aligning with standard therapeutic levels. The *t* test resulted in a non-significant *p* value of 0.119, attributed to higher variance and a small sample size.

The project suggests the need for evidence-based practice changes, emphasizing protocol compliance for diabetes management in each setting, but especially in the traditional Medicare group. Consistent provider assessments, following CDC guidelines for timely A1C assessments, were recommended to improve health outcomes and address potential disparities.

Section 5: Scholarly Product

Analysis of Self

This project pushed me in ways beyond explanation. I developed as a scholar, educator, and practitioner while affording me opportunities to grow and collaborate with others on future projects. The experience steered me inside of myself to seek answers and guidance from my internal source which yielded external results. The project required me to assess and enhance my weaknesses in the areas of development, solidified my strengths, and caused me to consider ways of bringing awareness to disparities within the diabetic population. Though trying, the experience has pushed me to reach deeper to examine disparities associated with diabetic patients and provider treatment regimens to offer solutions and promote change while improving health outcomes, quality of provider service, and patient centered collaborations to meet patient care needs.

Evaluation of Scholarly Growth

The project made me realize the importance of thoroughly assessing and servicing the care needs of patients from a wholistic standpoint and using evidence-based practices and guidelines outlined by CMS to support patient care initiatives. My scholarly growth included the use of research and evaluation of consistent provider regimens to determine whether treatments for diabetic patients in community and private sector settings were equitable. From a political perspective, the project reiterated the importance of knowing the laws that support patient treatment such as the ACA that was established to ensure health care to all Americans. As a scholar, I grasped the importance of why patients must

understand the treatment regimens in relation to the law and that they are accountable members of the care team who have rights and responsibilities along with care providers.

Evaluation as Project Developer

As the project developer, taking on the full responsibility of shaping the entire project was challenging and time consuming. Having a clear vision of how to approach every aspect of the development did not come until later but guidance from the Chair and my preceptor helped me tremendously to steer me in the right direction. After assessing the need then building the project around that need, I feel joyous to be a part of bringing forth change where it is needed to diabetic patients within the community and improving provider practices.

Future Professional Development Related to Project

In respect to professional development, it is my intention to continue to delve into research projects in the job market as opportunities present themselves. I am interested in specifically a forum to provide education and to become a change agent in the community to assist diabetic patients in ways to understand the disease process, educate on specific lab work and diagnostic testing, and to teach on what to expect from the provider to ensure continuity of care and to build great collaborative relationships with the provider and the patient. I also desire to continue to educate myself in the political arena on laws and policies to improve the standard of care for this population.

Summary

This project has been an unparalleled journey that pushed me to new heights as a scholar and practitioner. It not only fostered my personal and professional growth but

also provided opportunities for collaboration on future endeavors. The project helped me to assess and address disparities within the diabetic population. Despite its challenges, the experience motivated me to look deeper into examining the disparities associated with diabetic patients and provider treatment regimens. The evaluation of my scholarly growth highlighted the importance of a holistic approach to patient care and adherence to evidence-based practices.

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Appendix A: Data for A1C

Unique Patient Code	Traditional Medicare A1C Levels	Unique Patient Code	Managed Care A1C Levels
001	5.2	021	7.2
002	6.8	022	5.8
003	7.0	023	6.0
004	5.3	024	5.1
005	6.2	025	6.9
006	8.0	026	5.9
007	5.4	027	6.5
008	5.8	028	5.2
009	6.3	029	6.7
010	6.5	030	5.5
011	5.3	031	8.4
012	5.9	032	7.5
013	6.2	033	5.2
014	5.5	034	8.3
015	6.8	035	5.7
016	5.0	036	5.5
017	5.6	037	5.8
018	6.1	038	6.9
019	5.5	039	7.5
020	5.7	040	5.3