

**Exploring the Provisions in Medical Social Work Settings for Those Living with Diabetes:
A Systematic Review**

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Abstract

Diabetes is a public health issue that constantly prompts social work practitioners to examine how to best serve those diagnosed. Social workers and other practitioners unfamiliar with the disease may think of a disease that is easily managed by checking one's blood sugar and taking medications. Not many people imagine a disease that has the power to inflict extreme damage internally before manifesting in external signs and symptoms. Anyone is susceptible to this disease. Without the knowledge of proper treatment and access to resources on the part of practitioners, devastating consequences can arise for those with diabetes. Nowhere is this issue more prevalent than in communities of color and the underprivileged. Medicaid-eligible patients are particularly at-risk for higher rates of chronic diseases, while communities of color disproportionately suffer from higher rates of poorly controlled diabetes and remain at heightened risk for negative health outcomes. The following systematic review will include a detailed explanation of the disease process along with the devastating effects of untreated diabetes. Care coordination services will be evaluated to determine whether the implementation of those services decrease adverse health outcomes in diabetic patients. By systematically reviewing the literature, this study highlights the crucial need for interventions targeting social determinants of health factors that often affect communities of color and the underprivileged. Without those interventions to address those barriers, the benefits of care coordination services are minimal. are cancelled out. By considering the ways in which the disease has primarily been managed by medical professionals in the past, this will allow for an alternative view of managing the disease in the future.

Keywords: diabetes, care coordination, social determinants of health, communities of color, underprivileged

Acknowledgement

First and foremost, I give all glory to God, and I am so grateful for his love and intentionality regarding my life's journey.

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To my amazing family and friends: Without your support, I would not be where I am in life.

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To my Auntie, Ms. Joshlin Brunson: You always exemplified beauty, elegance, and grace. From an early age, you taught me the importance of education and instilled in me a life-long desire to learn. Thank you for teaching me to dream and how to dream big. I love you, I miss you, and I hope I have made you proud.

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List of Figures

Figure 1. Diabetes Rates of Prevalence.....	2
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Table of Contents

Abstract	iii
List of Figures	v
Introduction.....	1
The Prevalence and Definition of Diabetes.....	1
<i>Figure 1</i>	2
The Lived Experience	3
Societal and Economic Impacts	4
Explorations to Improve the Experience.....	4
Scope of the Review	5
Review of Literature.....	6
<i>Racial/Ethnic Disparities in Health Insurance and Differences in Visit Type for a Population of Patients with Diabetes after Medicaid Expansion.....</i>	6
<i>Does an All-Condition Case Management Program for High-Risk Patients Reduce Health Care Utilization in Medicaid and Medicare Beneficiaries with Diabetes?</i>	7
<i>Advancing Diabetes-Related Equity through Diabetes Self-Management Education and Training: Existing Coverage Requirements and Considerations for Increased Participation </i>	8
<i>Chronic Care Management Services for Complex Diabetes Management: A Practical Overview</i>	9
<i>Population Health Management: A Community Imperative</i>	11

<i>Digital Health Interventions for Diabetes: Everything to Gain and Nothing to Lose</i>	11
<i>Access to Transportation and Health Care Visits for Medicaid Enrollees with Diabetes</i>	12
<i>Evaluation of a National Care Coordination Program to Reduce Utilization among High-Cost, High-Need Medicaid Beneficiaries with Diabetes</i>	13
<i>Trends in Costs of Care and Utilization for Medicaid Patients with Diabetes in Accountable Care Communities</i>	14
Summary of Findings.....	15
Strengths.....	16
Limitations	16
Gaps in Literature.....	16
Implications	17
Treatment Recommendations.....	18
Conclusion	18
References.....	20

Introduction

Being diagnosed with diabetes can truly change the course of one's life. Issues related to affordability of medications and food, transportation barriers, and access to proper care are all legitimate questions that may cross the minds of patients. In times past, many patients were treated utilizing a medical model of care which focused solely on the treatment of a patient's medical needs. But as time and patient care have progressed and advanced, the importance of providing holistic care tailored to also include the treatment of patients' psychosocial needs has moved to the forefront of the medical community (Gehlert & Browne, 2011). By utilizing a biopsychosocial approach to provide care, patients are viewed as a whole person and medical social workers are able to walk alongside patients and families to provide the support needed to monitor and manage their diabetes diagnosis.

Diabetes is a public health epidemic that impacts a person in several ways. Throughout this section, the reader will be introduced to the prevalence of diabetes, the way in which diabetes is defined, and the way in which it impacts the body. Given that the disease has various impacts on a person and their lived experiences, the societal and economic impacts that arise from a diagnosis will also be explored. While this section orients the reader to those experiences, the section will end with a relevant question to better guide the rest of the manuscript and shift attention to the ways in which relevant stakeholders, like medical social workers, can better work with the population.

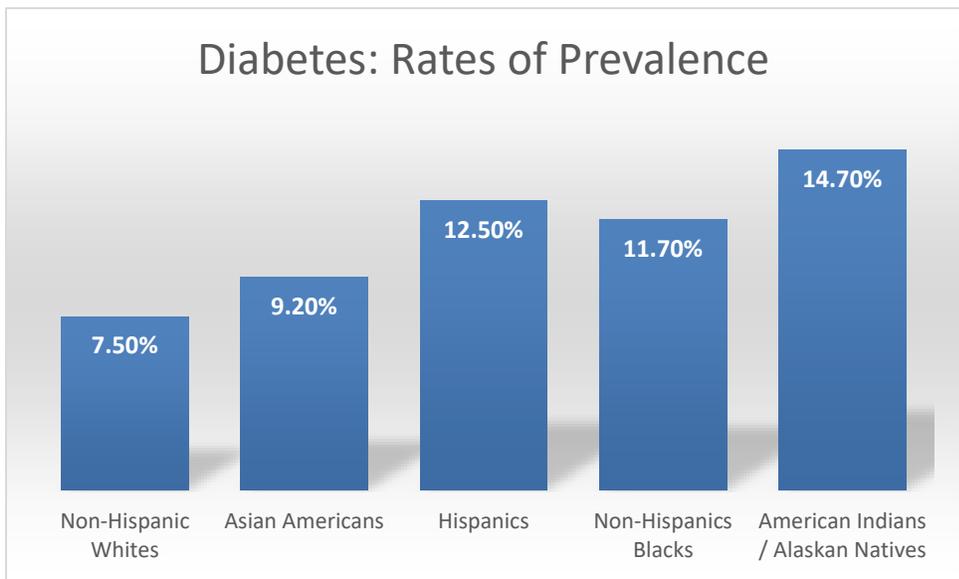
The Prevalence and Definition of Diabetes

As of 2017, diabetes is the 7th leading cause of death in the United States (Kochanek et al., 2019). As of 2018, 34.2 million Americans, or 10.5% of the population, has been diagnosed with diabetes (American Diabetes Association, 2018). It is estimated that 1.5 million Americans

will be diagnosed with diabetes every year (American Diabetes Association, 2018). It has also been projected that by the year 2050, 48 million people will be diagnosed with diabetes (American Diabetes Association, 2018). A visualization of diabetes prevalence data compiled by Angier et al. (2019) is listed below:

Figure 1

Illustration displaying Diabetes Rates of Prevalence



When one delves deeper into context, those estimations are coupled with the reality that people of color are more prone to be diagnosed with diabetes while also being less likely to have positive control indicators (Angier et al., 2019).

Diabetes is a disease that occurs when the body is unable to properly process glucose, or sugar, that is found within the blood. There are multiple types of diabetes (type 1, type 2, gestational), and each type presents its own challenges. Type 1 diabetes is classified as an autoimmune disease where the pancreas malfunctions and does not produce enough insulin. Although there is no cure for Type 1 diabetes, patients can still live whole and productive lives by taking insulin (Costabile et al., 2020). Type 2 diabetes is the most common form that occurs

when a patient's blood sugar levels are too high. Type 2 diabetes can be reversed with positive lifestyle changes. Medications can also help manage a patient's blood sugar levels and allow them to live healthy lives (Costabile et al., 2020). Gestational diabetes affects pregnant mothers when their bodies are unable to produce the insulin needed during the pregnancy. When the baby is born, the child may have difficulty breathing as well as problems regulating their blood sugar levels. As the child grows, they are at higher risk of becoming obese and developing type 2 diabetes (Venkatesh & Landon, 2021).

It should be assumed that people who are diagnosed with diabetes walk a constant tight rope every day of their lives to ensure that their blood sugar levels remain consistently within normal recommended ranges. When blood sugar levels become too low or too high, the body attempts to compensate for the low or high blood sugar ranges. Severe complications leading up to death can occur when blood sugar levels are not controlled.

Diabetes can afflict any individual regardless of age, gender, ethnicity, or socioeconomic class. Chronic health conditions plague diabetic patients, with over 80% being diagnosed with multiple comorbidities (Magnan et al., 2018). Hypertension, renal failure, and chronic eye conditions are a few of the comorbidities that are most prevalent among those diagnosed with diabetes.(Magnan et al., 2018). In adults aged 20 – 64 years of age, diabetes is the leading cause of blindness and is also the primary cause for limb amputations within the United States (Gerdes, 2003). For those patients who are unable to effectively control their diabetes diagnosis, it has been reported that life expectancy can be lowered by 19 years (Angier et al., 2019).

The Lived Experience

For so many, diabetes is a lifelong disease which forces individuals to rearrange their lives and livelihoods just to survive. Because of the complex care and attention needed to

effectively manage this disease, many individuals are lost to the maze of follow-up care and referrals. As a result, their diabetes is not well controlled, and the longer the disease is not controlled, the risk of severe internal damage increases. Patients whose diabetes is uncontrolled experience a revolving cycle of doctor appointments, emergency room visits and hospitalizations, while risking severe or oftentimes permanent injuries and disabilities (Peek et al., 2007).

Societal and Economic Impacts

Diabetes also has a profound impact on the economy. As of 2012, costs are estimated at \$327 billion, which includes approximately 25% of those estimates due to disability and early deaths related to a loss of productivity associated with the disease. (Del Valle & McDonnell, 2018a).

For those diagnosed with diabetes, health insurance is vital because it provides the needed access to healthcare (Angier et al., 2019). Medicaid is the United States' main health coverage program for the low income population (Moin et al., 2020). High rates of health care utilization have been noted among Medicaid patients because of the complexities of their medical needs (Moin et al., 2020). This population is particularly at-risk for higher rates of chronic diseases (Chapel et al., 2017). Because Medicaid finances diabetes care for eligible individuals, health care expenditures have been quoted as being 3 times higher than expenditures of non-diabetic patients (Moin et al., 2020). For this reason, Medicaid is vital to the health, well-being, and treatment for diabetic patients.

Explorations to Improve the Experience

In light of these considerations, it is imperative to review the literature in the knowledgebase to better understand the ways in which the population may be supported. The

following review will seek to answer the proposed question: *If Medicaid-eligible diabetic patients are provided with intense case management services, will it result in a decrease of emergency room utilizations, hospitalizations, and adverse health outcomes associated with managing the disease process?*

Scope of the Review

When programs are initiated, it is of the utmost importance to have those programs grounded in scientific evidence. This is especially important when providing services for vulnerable populations. A systematic review was conducted to provide an opportunity to review the existing literature regarding care coordination services and whether these services improve health outcomes for diabetic patients.

In order to answer the research question, electronic searches were conducted between October 28 and November 8, 2020. From the University of Alabama's Library webpage, *Scout* and *EBSCOhost Web* were chosen. The following keywords were searched: diabetes, diabetes and Medicaid, diabetes and Medicaid and care management or case management or care coordinator, diabetes and population health. While reviewing the reference portion of multiple articles, any references that were noted that could assist in answering the research question were directly searched using the reference title.

A wide range of tools, modes and expanders were used to assist with limiting results. Various parameters were used to provide search results tailored to assist in answering the proposed research question. The publication date range was changed to display results from 2015 – 2020. The search results were further refined to only include results within the United States and the search results were sorted by relevance. The searches were also limited to academic journals, journals and reports.

The strategy in filtering and determining which sources to save for further review primarily consisted of reviewing titles and reading abstracts and/or backgrounds, in an attempt to determine which results to keep and ones to disregard. Ultimately 9 journal articles were chosen to be reviewed in an attempt to answer the proposed research question.

Review of Literature

Racial/Ethnic Disparities in Health Insurance and Differences in Visit Type for a Population of Patients with Diabetes after Medicaid Expansion

The study reviewed differences in care before and after the Affordable Care Act Medicaid expansion as of September 2018. The aim of the Affordable Care Act was to improve patient's health, provide greater access to health care resources, and lessen health care disparities (Angier et al., 2019). The study noted that minorities disproportionately suffer from higher rates of poorly-controlled diabetes and are at heightened risk of negative health outcomes (Angier et al., 2019).

The study sought to investigate racial/ethnic disparities related to preventive services and patient care visits, and whether an increase was noted after the passage of the Affordable Care Act (Angier et al., 2019). The 3-year study reviewed electronic health records from the Accelerating Data Value across a National Community Health Care Network. Researchers within this network study reviewed informational data across multiple health networks and combined the information utilizing the PCORnet common data structure, to compile the information into one database (Angier et al., 2019). Over 1 million visits were analyzed throughout the duration of the study period. The results showed that although racial/ethnic disparities improved, some disparities remained, despite the increase of Medicaid health insurance coverage resulting from the expansion of the Affordable Care Act (Angier et al., 2019).

Does an All-Condition Case Management Program for High-Risk Patients Reduce Health Care Utilization in Medicaid and Medicare Beneficiaries with Diabetes?

The study recognized the complexities of diabetes management and care while also voicing the need for a myriad of programs that are specifically crafted to reach beyond the boundaries of typical medical care, by implementing a multi-layered treatment approach (Bui et al., 2019). Many patients who are overwhelmed by a diabetes diagnosis and the challenges that relate to the disease benefit from having a case manager, community health worker, or lay health worker assist with coordinating their care. These individuals provide education and information regarding diabetes and serves as a navigator between the patient and other health care providers.

Individualized care has proven to have many benefits; some of which include improving blood sugar numbers, as well as promoting helpful changes that are needed to transform patient's lives for the better (Bui et al., 2019). Despite the crucial need, minimal studies have been conducted that include both care managers and community health workers who utilize a patient-centered-team-based approach to care (Bui et al., 2019). This specific study reviewed data to assess whether a correlation existed between healthcare utilization outcomes and the intensity of specified interventions. In relation to healthcare utilization outcomes, the study reviewed rates of hospitalizations, 30-day readmissions, and emergency room visits (Bui et al., 2019).

While utilizing primary care services, the study noted that an increased level of contact frequency with patients did not result in a substantial decrease of health care utilization. It is important to note that with the findings of this study, that healthcare utilization was significantly increased. Researchers noted this increase may have been connected to more frequent contacts and higher-level interventions provided to patients (Bui et al., 2019). A possible cause for the increase health care utilization may have been due to reverse causality. This reverse causality

may be due to patients needing additional assistance based on them being within a higher risk category (Bui et al., 2019). For some participants, their health status improved, but that improvement may not be enough to decrease the utilization of healthcare levels.

One noted strength of the study is that it was conducted in Baltimore City which was considered a high-risk setting due to the higher levels of mortality than in other locations within Maryland. An additional strength that was noted was that the program was being monitored in real-time instead of a controlled setting such as previous research studies. One main limitation that was noted was that although the study captured the number of patient contacts, it was unable to capture the quality of the patient contacts.

The study concluded with the findings that rates of healthcare utilization did not decrease when diabetic patients were contacted more frequently by care managers and community health workers. However, to better serve populations at higher risk for adverse health outcomes, the study recommended that case managers implement diabetes-specific goals and interventions which could better help meet patient's needs (Bui et al., 2019).

Advancing Diabetes-Related Equity through Diabetes Self-Management Education and Training: Existing Coverage Requirements and Considerations for Increased Participation

When patients are provided with the education, knowledge, and skills to take control of their diagnosis, it allows them to take charge of their own healthcare needs. One program that can provide assistance with this goal is through diabetes self-management education and training. The question posed by the study was whether the diabetes self-management education and training program would assist with supporting patients diagnosed with diabetes, decrease adverse health outcomes and also lower health care expenditures. The study also acknowledged low participation within the program and sought to investigate insurance provider's coverage of

the diabetes self-management education and training program.

The study noted that diabetes self-management education and training program has been shown to provide assistance with diabetic patients learning how to effectively care for themselves to improve their health and manage their chronic illness (Carr et al., 2020). Although the diabetes self-management education and training program provides patients with the support needed to effectively manage their disease, unfortunately, program participation rates remain low. The study identified a number of barriers that hinder program participation rates and decrease the health and well beings of the patients. One noted barrier involved transportation and ensuring that patients have reliable transportation, so they are able to attend their medical appointments. One recommendation was to increase telehealth providers which would assist with expanding the program, particularly for patients who may have difficulty with transportation. The telehealth option would ensure patients were still able to be seen by the Physician. Ensuring that patients have healthy food options, safe and stable housing, and additional exercise options were also noted as recommendations from the study.

Chronic Care Management Services for Complex Diabetes Management: A Practical Overview

As the healthcare landscape is shifting, healthcare has shifted its focus from treating patients at an acute level only, to also treating patients with chronic health conditions. With this shift in perspective, health care prevention is also moving to the forefront of the healthcare delivery system. With this study, an interdisciplinary approach to care in addition to individualized treatment plans were provided for each patient. Patients were scheduled to be contacted weekly or bi-weekly via various means of communications, such as phone, secure messaging, and videoconferencing. The primary goal of the study was to review specialty care diabetes programs while providing knowledge and information from those who were connected

with the program from its inception (Del Valle & McDonnell, 2018).

A primary barrier of the study detailed that the costs of healthcare present problems within every step of healthcare delivery. Included within this study was a careful examination of the administrative work time that was spent outside of in-person clinical visits. An example was provided where it was noted that non-billable care accounted for approximately 28 hours of work per week (Del Valle & McDonnell, 2018). Based on this estimate, it is projected that it would cost an estimated \$100,000 per year to provide administrative staffing needed to support the Physician.

Provider and patient burnout were also identified barriers. The study noted that burnout manifests itself in different ways between patients and providers. Patients who display signs of burnout have been noted to have severe negative health outcomes. While providers' burnout may be caused by the increased role providers have to play in administrative duties to ensure proper reimbursement of funds. Additionally, providers can also experience burnout due to the weight of patient's severe medical diagnoses. When providers experience burnout, the interdisciplinary team has to take on the additional weight for the office to continue its normal duties.

One noted recommendation was to expand the reach, while decreasing the costs of using continuous glucose monitoring devices. This would enable practitioners to receive real-time data, from patients and that information can be transmitted to the patient's electronic medical record. Another recommendation was to ensure that practitioners are trained in diabetes so as to provide patients with needed and specialized care. It was noted that when care is provided utilizing an integrated care approach, medical costs can be reduced through the use of telehealth and other related care methods (Del Valle & McDonnell, 2018).

Population Health Management: A Community Imperative

The report primarily provided recommendations from a pharmacological perspective, regarding patient care. Population health takes a comprehensive approach to focusing on medical care along with health determinants that fall outside the scope of medical care (Devereaux et al., 2018). By seeking to improve patient health outcomes, population health encourages the integration of pharmacy programs and medication management, as a recommendation to this study (Devereaux et al., 2018). Training and education were also emphasized so that Pharmacists can provide assistance and pharmacological support at all levels to also assist with improving patient health outcomes.

Digital Health Interventions for Diabetes: Everything to Gain and Nothing to Lose

Digital health aids assist with diagnosis, monitoring, treatment, and prevention of diabetes complications. For patients, these digital health aids provide additional support as well as an increase in knowledge that enables patients to make better decisions related to their diabetes diagnosis. The digital aids also help to reduce the time patients must spend in managing their diabetes diagnosis on a daily basis.

Continuous glucose monitoring systems allows for telehealth options and real time changes or adjustments that may be needed to help patients better control their diabetes. In addition to continuous glucose monitoring systems, mobile applications and smart sensors assist with placing the control of healthcare, back into the hands of the patient. By expanding the use of digital health aids, the information gained from the sensors allows medical providers to monitor patient's medical status in real-time, and allows the providers to make swift decisions in the moment, instead of waiting for a patient to have a scheduled appointment (Kerr et al., 2019).

Until evidence can be compiled that shows the true benefits of utilizing digital health

aids, many medical providers remain hesitant to utilize existing technology. Outside of costs, there is not much to lose, which makes it unfortunate that some medical providers remain hesitant to harness technology in mutual beneficial ways (Kerr et al., 2019). Unfortunately, only five apps resulted in at least a 0.5 percentage point reduction within A1C numbers when placed in view of more traditional care (Kerr et al., 2019). Although the study detailed that only five apps were helpful, the study concluded that with the advancement of technology, there is nothing to be lost and much more to be gained when utilizing digital health aids for the future practice and treatment of diabetes.

Access to Transportation and Health Care Visits for Medicaid Enrollees with Diabetes

An important component of a patient being able to manage their diabetes diagnosis effectively and safely is to have access to their Provider; examples of which include Nurse Practitioners, Primary Care Physicians, or Endocrinologists. The study noted that patients were able to better monitor their blood sugar as well as receive preventive care within a timely manner, when having more frequent visits to their medical providers (Thomas et al., 2018). But for many patients, lack of transportation is a huge barrier to access of care. When diabetes care is delayed or missed entirely, devastating consequences can occur, which include expensive treatments, productivity loss, as well as a diminished quality of life (Thomas et al., 2018). When patients are unable to attend their appointments, it literally places their lives in danger because their diabetes is not able to be managed and overseen by their provider.

The current study assesses the correlation between diabetes related care visits and nonemergency Medicaid transportation (Thomas et al., 2018). The study reported that when transportation was provided to diabetic patients in a non-emergent situation, the study concluded that money was saved (Thomas et al., 2018). However, the study cited numerous limitations.

One noted limitation involved the study not having sufficient data, therefore, it was not possible to determine whether the increased frequency of patient visits would result in improved health outcomes for patients (Thomas et al., 2018).

Another limitation of the study related to the study lasting for one year and only involving one state. It was recommended that for future studies, that the length of time be extended, and additional states added to provide an increase in data to be reviewed. A further recommendation was that for future studies, it was suggested that the visit types be classified (i.e., prevention vs. treatment for a diabetes complication).

A major noted limitation referenced that the sample consisted of low-income patients who qualified for Medicaid, and that it was not possible to determine how the weight of poverty affects the management of diabetes in patient's lives (Thomas et al., 2018). This limitation is certainly prevalent when working with the Medicaid-eligible and vulnerable populations.

Evaluation of a National Care Coordination Program to Reduce Utilization among High-Cost, High-Need Medicaid Beneficiaries with Diabetes

The study sought to answer whether differences were noted in rates of hospitalizations or emergency room visits when patients were provided with care coordination services.

Furthermore, the study researched whether differences were noted in Medicaid eligible patients who were provided with care coordination services that were tailored to address social determinants of health, and Medicaid eligible patients who were not provided with care coordination services (Duru et al., 2020). The study placed major emphasis on providing comprehensive care, ensuring that patients are connected with resources that are needed to support them in all areas of their lives, and to assist with addressing social determinants of health barriers patients encounter on an everyday basis (Duru et al., 2020).

After an evaluation of United Healthcare nationwide care coordination programs, data from diabetic Medicaid beneficiaries were reviewed and although it found decreases in hospitalizations for a few programs, in others, no decreases were noted (Duru et al., 2020). One major strength of the study was that it was comprised of data from multiple states which were used to measure the outcome's utilization rates (Duru et al., 2020). One limitation of the study noted that categories were needed to classify patient's various unmet social needs. For many patients, their unmet social needs did not happen overnight, and as such, will not be resolved, overnight. It is imperative that programs are identified that are effective in addressing patient's social determinants of health barriers, particularly for medically complex patients and those patients who are high utilizers of medical care (Duru et al., 2020).

Trends in Costs of Care and Utilization for Medicaid Patients with Diabetes in Accountable Care Communities

The passage of the Affordable Care Act opened the door for Medicaid to become the primary insurance coverage for many individuals diagnosed with diabetes. Due to these increased numbers, health insurance companies have to look for new and innovative ways to provide care for this chronic health condition. Because of the barriers that many Medicaid patients encounter on a daily basis, Medicaid health plans are shifting in a new direction to provide primary care practices with the support needed to manage patient's complex care needs (Moin et al., 2020). The study theorized that United Health Care diabetic patients would have decreased hospitalizations and lowered health care costs when connected with Accountable Care Community practices as opposed to diabetic patients who were assigned to traditional practices (Moin et al., 2020).

Unfortunately, despite reviewing data up to 46 months post implementation, the study's

findings indicated that no significant variances were found between plans that utilized Accountable Care Communities plans and plans that did not (Moin et al., 2020). One limitation of the study is that care varies widely among providers who are treating their patients. Another noted limitation of the study was that many times in clinics that treat Medicaid eligible patients, clinicians are often overworked and overwhelmed, while the medical practice may lack funding needed to provide care for its most vulnerable patients (Moin et al., 2020). The study noted a major recommendation in that additional practice-level, longer term studies are needed that investigate interventions from individual as well as community levels (Moin et al., 2020).

Summary of Findings

The purpose of this review was to examine research information to answer the following question: If Medicaid-eligible diabetic patients are provided with intense case management services, will it result in a decrease of emergency room utilizations, hospitalizations, and adverse outcomes associated with managing the disease process? Although in a few studies, improvements were noted, overall, the studies were unable to show significant reductions in emergency room utilizations, hospitalizations, and adverse health outcomes associated with diabetes.

All of the research studies acknowledged the complexities involved in providing treatment for diabetic patients. Improvement was noted within racial/ethnic disparities in the study conducted by Angier et al. (2019). In the study conducted by Thomas et al (2018), providing non-emergency transport led to net cost savings. Duru (2020) noted a decrease in ED utilization and hospitalization for some Medicaid programs but not for others.

In the study conducted by Moin et al (2020), it noted that there were no significant differences in patient utilization or in plan costs. Additionally, in the study by Bui et al (2019), it

was unable to note a reduction in healthcare utilization among participants.

Strengths

In the study conducted by Bui et al (2019), one noted strength was that the program was being monitored in real-time. Angier et al. (2019) conducted a 3-year study and analyzed over 1 million visits throughout the study's duration. Within the study by Carr et al. (2020), it was noted that the diabetes self-management education and training program provided valuable knowledge to participants. A major strength of the study conducted by Del Valle & McDonnell (2018) was that an interdisciplinary team was comprised to provide treatment for program participants. In the study conducted by Kerr et al. (2019), it was noted how digital health aids provide needed assistance for patients as well as Providers in monitoring, treating, and diagnosing diabetes.

Limitations

Healthcare is expensive and healthcare costs, whether from the patient or from administrative roles, consumes a vast amount of funds, as noted within the study by Del Valle & McDonnell (2018). In the study conducted by Bui et al. (2019), the quality of patient contacts and interventions were unable to be captured by care managers. Within the study conducted by Carr et al. (2020), it was noted that participation was low for the diabetes self-management education and training program. A common theme found within the studies conducted by Duru et al. (2020) and Thomas et al. (2018) concerned patient's economic situations and how that directly plays a role within their healthcare; whether through unmet social needs, as expressed by Duru et al. (2020) or through the effects of poverty as noted by Thomas et al. (2018).

Gaps in Literature

Problems and limitations were noted throughout all studies reviewed. But although continuous studies were recommended, it was difficult to obtain tangible information that will

assist in bridging the gap for Medicaid eligible diabetic patients to achieve better health outcomes.

Implications

It was interesting to note that in the study by Bui et al. (2019), some patients who were contacted more frequently with interventions, were also found to have used more health resources. Additionally, in the studies conducted by Del Valle & McDonnell (2018) and Moin et al. (2020), provider burnout was mentioned alongside patient burnout. The studies also noted how provider burnout directly impacts not only the patient, but also the patient's care team.

A paradigm shift has to occur wherein providers move away from solely viewing patients from an acute treatment perspective and shift to treating patients from a chronic health perspective. The reason for the shift in perspective is because chronic diseases can be life-long. In those instances, providers are not only responsible for treating the diabetes diagnosis, but they also must consider a patient's care throughout the duration of their lives. Also of the utmost importance is that providers need to recognize that many barriers patient's face, have a direct impact on their health.

As noted within the study by Carr et al. (2020) and Thomas et al. (2018), ensuring patients have reliable transportation, access to telehealth providers, healthy food options, safe and stable housing, and additional exercise options, would help to provide an equal footing on which a care management foundation can be built. Without these barriers being resolved, it makes for an uphill battle for patients to effectively manage their diabetes diagnosis.

The study by Duru et al (2020), found that if there were any weak links in programs not operating at their full potential in providing patients with the resources needed most, it may result in patients reverting back to prior ways of utilizing healthcare resources. This alone places

the responsibility within the hands of the community. No matter how much we may hope for a decrease in hospitalizations and better health outcomes for patients, if support systems are not put in place, patients will have no choice other than to revert to their prior ways of managing their health care needs.

Treatment Recommendations

In order for change to occur, it first has to prove itself to be cost-effective. Until that is substantially proven, things may continue to remain the same. But as healthcare moves towards the future, telehealth and case management services are well poised to provide support to Medicaid-eligible diabetic patients and their Providers.

However, additional time and research are needed to further prove there is no substantial change, or to disprove that fact and show that there can be a substantial change when utilizing case management services to assist with decreasing health care utilizations and improving patient outcomes. This can be done with the help of digital aids that provide real time data for Providers to better treat their patients. And with the advancement of technology, there is nothing to be lost and much more to be gained in using digital health aids for future practice and treatment of diabetes (Kerr et al., 2019).

Conclusion

A shift towards diabetes prevention is vital for the well beings of patients. Healthcare has to focus more on patient's receiving quality individualized patient care. With intensive case management services alongside proper instruction, care, guidance, insight, and empathy, Practitioners are able to partner alongside their patients, which in turn, may result in better health and social outcomes for the patient and their family.

It is vital that healthcare payers create programs and utilize technology in the delivery of

healthcare resources to diabetic patients. However, these programs and resources must also be cost effective to ensure room for continued growth, development, and expansion (Del Valle & McDonnell, 2018). For programs to be sustainable over time, the programs must be cost effective. This can be achieved by utilizing a myriad of technologies, to include risk stratification, restructuring of patient's treatment teams, and education (Del Valle & McDonnell, 2018).

Change takes time, but for many who suffer from diabetes and co-morbidities associated with diabetes, time is running out. Lives are at risk. Future generations are at risk. And if change does not happen soon, many more people will suffer adverse health outcomes, and some may even die.

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