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Final Paper – Diabetes Coordination Passbook

### **Abstract**

Adherence to Diabetic treatment and maintenance guidelines is often poor in the underserved, uninsured poor minority population. There seems to be a constant disconnect between the communication and coordination of diabetic care between the variety of providers and their patients. It isn't consistently clear to the patient what their diabetic values mean and if their numbers are heading in the right direction. The patient passbook identifies newly diagnosed Diabetic patients at a clinic in Houston, Texas – El Centro de Corazon and follows them through their care with the Physician, Diabetic Counselor and Diabetic Educator to determine whether a personal passbook given to them has an effect on patient awareness and outcome. The main goal is to suggest an affordable improvement in the coordination of patient's own self-care in conjunction with their care team.

## **Introduction**

71,7% of the El Centro de Corazon community identify as diabetic or has a diabetic family member with majority of these patients (93.5%) having no medical insurance, leaving El Centro de Corazon as one of their only options. One of El Centro de Corazon's main goals is to increase the number of patients with Well-Managed and controlled Diabetes Mellitus. The target population of El Centro de Corazon in the city of Houston present with a diabetes rate of 8.3%, which can be compared to 7.0% in the state of Texas. (7)

The actual needs of diabetic patients aren't only limited to effective glycemic control but also correspond to preventing complications and disabilities. A healthy diet, physical activity, medication compliance, monitoring blood sugar and monitoring lipid levels have been found to positively correlate with good diabetic management and a reduction in complications. Patients with Type 2 Diabetes Mellitus have been shown to have a dramatic impact in the progression of their disease by participating in their own care. While there are multiple factors that can be considered positive enforcers in facilitating self-management, the role of the Physician is key. One of the biggest challenges that I have witnessed in the El Centro de Corazon Eastwood clinic is the hardship of connecting the dots between the patients own self-care and coordinating with the Physician and other key players in the healthcare setting in regards to the process of healthcare management, which is where I believe the Diabetes Coordination passbook can come into play. (7,9)

## **Background**

Type 2 Diabetes is one of the most prevalent chronic diseases in the United States. Anyone can get Diabetes, but those at the highest risk for Diabetes are those who: Are over the age of 45, are overweight or obese, have a family member that presents with the disease, someone that does not participate in physical activity (ie exercise), has had gestational diabetes, those with low HDL (good cholesterol) and high Triglyceride (bad cholesterol) levels, high blood pressure and are of a certain racial or ethnic group. The burden of this epidemic falls disproportionately on minorities and persons of low socioeconomic status. (10)

The prevalence of Type 2 Diabetes Mellitus in adults in Texas are higher than the national average and are much higher in the Hispanic population (12.3%) than in white non-Hispanics (8.5%). Despite major advances in medical care, technology, and services, Hispanics with diabetes continue to experience a 50% to 100% higher burden of diabetes-related illness and mortality than non-Hispanics. Common comorbidities include diabetic retinopathy, lower extremity amputation, and early-stage kidney disease. These complications generally can be avoided with proper management of diabetes. However, individuals of Hispanic descent are less likely to receive recommended processes of care for patients with diabetes. Hispanics are also less likely to accomplish treatment goals such as glycemic control and lowering of cholesterol levels and blood pressure. (1, 2 and 3)

Diabetes Mellitus is a chronic condition that calls for continual medical care and ongoing patient self-management education and support that will prevent acute

complications and reduce the risk of long-term complications. Diabetes care is multifaceted and requires numerous strategies that go beyond glycemic control. Care for Diabetes can prove to be challenging and frustrating, especially when dealing with the underserved and uninsured minority populations that have extreme social and economic needs. In addition to the individual financial burdens involved, Diabetes and the common issues that can present along with the disease work out to being very costly to the government; it is estimated that the US spends about \$307 billion annually on diabetes care as a whole.

El Centro de Corazon is a community-based Federally Qualified Health Center (FQHC) providing primary care to the majority Hispanic east end community of Houston, Texas. Federally funded Community Health Centers in underserved areas of the country provide care to patients regardless of their insurance status. El Centro de Corazon has a main goal of making the East End a healthy community, through quality care that reaches the entire family, treating the whole person through prenatal, adult and pediatric primary care, dental, and mental health services. The adult primary care services provided at the East end clinic tends to absorb most of El Centro de Corazon's finances due to the fact that many of the adults simply cannot afford the services that they need. In most cases this tends to be related to diabetic care. To make matters even more difficult, majority of the patients seen in the East End clinic of El Centro de Corazon simply do not qualify for Medicaid coverage through the state. (7)

Although it is not universally accepted that uninsured diabetics are high-risk, there are multiple studies that have found poor compliance with Diabetes care guidelines and worse clinical outcomes in diabetic patients who lack insurance compared to insured

patients. This includes evidence that they are less likely to receive recommended care and are more likely to have poor glycemic control than insured patients. (4-6)

Self-management is a crucial component in diabetes care. Effective self-care can delay many of the detrimental side effects that come alongside this chronic condition, such as eye, foot and dental issues. Strategies to ensure diabetes treatment include proper diet, proper nutrition, physical activity, pharmaceutical drug adherence and annual check ups. (5)

Many programs dedicated to attempt to effectively combat diabetes in underserved communities face challenges when seeking to replicate self-management programs such as those found in clinical trials. These types of interventions are resource intensive and not generally designed to meet the needs of patients from underserved populations. Common issues such as low literacy, limited English proficiency, poverty, and cultural differences present additional barriers to promoting diabetes self-management. (8-9)

## **Methodology**

The patient passbook will be implemented in the Eastwood clinic of El Centro de Corazon, which houses adult medicine. The faculty involved will include the Diabetic Counselor, Physician, Diabetic educator and most importantly the Patient. Each faculty member will be trained on what the Patient Coordination Passbook entails and their role in its implementation. The Patient Coordination Passbook is given to patients after being diagnosed with Type 2 Diabetes Mellitus by their Primary care Physician. From there, all

El Centro de Corazon patients are referred to the Diabetic counselor who will explain the values listed on their Patient Coordination Passbook and what their numbers mean, compared to where they should be. The diabetic counselor will also talk to the patients about the importance of their annual visits to the foot doctor, dentist and eye doctor and finally, counsel the patients on what they should be eating and how to incorporate exercise into their daily routine. Diabetic patients at El Centro de Corazon are also recommended to attend weekly Diabetic education classes where the Diabetic educator will be trained to reinforce things that the diabetic counselor has already touched on regarding the Patient Coordination Passbook through online videos and interactive class discussions.

The Patient Coordination Passbook will allow patients to record a number of things, including: Blood sugar (glucose) levels, A1C levels, Blood pressure, Weight/BMI, Lipid levels, Cholesterol levels, Lists of the patients current medications, A record of their annual visits and their diet and exercise goals set with a provider for easy reference.

Improvement to Diabetes self-management will be measured in a few different ways. Initially, by how many patients actually bring their Patient Coordination Passbooks with them for each encounter and by documenting whether each patient has their laboratory results communicated and written in their passbooks regularly. The Diabetic educator shall determine whether or not patients actually have an understanding of what their laboratory values mean and whether they grasp the importance of the recommended annual visits. Finally, whether the patients at El Centro de Corazon are actually seeing

improvements in their overall health, via their laboratory results, over a certain period of time will also be measured.

One of the major goals of the Patient Coordination Passbook at El Centro de Corazon is to have the patients be their own number one advocator, the patients in the process should become more comfortable in effectively tracking their own Diabetic changes utilizing the Patient Coordination Passbook and ideally become more motivated to take control of their own healthcare and work to change their laboratory values. Taking a step into the future, with talking to the administration at El Centro de Corazon, the clinic will look into providing incentives to those patients who actually bring their passbooks on a consistent basis to each of their visits and keep up with recording their own values.

## **Results**

The results of the Patient Coordination Passbook this early in implementation will be hard to measure. There was an initial distribution to the patients of El Centro de Corazon but I have heard from my advisor that they are working to print out some new hard copies of the passbook to distribute. The follow up appointments should be happening in the upcoming weeks, and at that point it can more confidently be assessed whether or not patients are actually remembering to bring their Patient Coordination Passbooks to their visits.

I foresee that patients will at least make an effort to keep up with their Patient Coordination Passbooks based on the excitement and enthusiasm that the patients at El

Centro de Corazon seem to have. I will continue to follow up weekly with Dr. Young to access the progress of the Patient Coordination Passbook and will continue to work with El Centro de Corazon to help with the success of the Patient Passbook in their Diabetic patient population.

### **Discussion**

Treating Diabetic patients in underserved communities can be a difficult process that can prove to be frustrating at times. Patients who lack the necessary resources find it difficult to keep appointments, be on top of their medications and follow through with the recommended diet and exercise. Having a self-care approach should help these patients over time keep better track of the steps they should be taking to ensure their diabetic goals are met. In the short amount of time that we were able to put the Patient Coordination Passbook into play at El Centro de Corazon, it has already shown promise as a tool that can be used in the fight against diabetes.

Another aspect in healthcare that the Patient Coordination Passbook has the opportunity to accomplish is to ensure that the different levels of faculty at El Centro de Corazon will have better communication amongst each other, as well as with the patient. Communication is key in Medicine and when it is put at the forefront of patient care it leaves less room for misinterpretation and prevents patients from falling through the cracks of the healthcare system.

## **Recommendations**

This study does have several limitations. First, it is an observational study and there is no control group. Secondly, the majority of the Patient Coordination Passbook implementation was set up to be done after my six weeks at El Centro de Corazon, which may not allow for direct and consistent documentation. Another limitation is that the perceived level of patient understanding and compliance can be subjective depending on the provider.

The true impact of the Patient Coordination Passbook on improving patient self-care and health outcomes will not be evident until we collect data from additional patients over time and analyze whether our diagnosed patients are actually keeping up with their passbooks. However, the lessons learned to date from implementation of this program are important for further growth in how we manage diabetic patients and get them excited about their own progress and understanding their values.

## **Conclusion**

The Patient Passbook is a low-cost, high-quality model for the implementation of self-care for underserved populations that blends care coordination services and diabetes specific patient education for patients. The model was constructed based off of a similar program at Baylor University that has proven to be successful with a similar patient population as El Centro de Corazon's.

Patients at El Centro de Corazon with Type 2 Diabetes Mellitus becoming more involved in their own health outcomes and taking ownership of their role in their own health can delay or completely avoid the many negative side effects and conditions that can be a result of diabetic negligence. The more apparent coordinated care will allow the patient to realize that they aren't alone in the fight against Diabetes and the complications that it presents. It is essential that patients understand, especially in this tight nit community, that El Centro de Corazon is doing all that they feasibly can to help their patients.

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