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CASE STUDY

Rio Grande Valley Accountable Care Organization point-of-care case study

INTRODUCTION

Diabetes Mellitus is a life-threatening disease with 415 million patients across the globe.[1] The economic burden of diagnosed diabetes in the US is currently at an estimated $245 billion annually ($176 billion in direct medical costs and $69 billion in reduced productivity).[2] With its increasing incidence and high cost of treatment due to complications and non-compliance, diabetes places an enormous burden on the economic resources of the U.S. healthcare system.[3,4]

In order to manage this condition, the American Diabetes Association (ADA) recommends testing HbA1c as a measure of glycemic control. Less than 7% of type 2 diabetes patients, the most common type of diabetes, are tested for HbA1c at the frequency that the guidelines recommend.[5] Patient's fear of needles, time constraints and lack of understanding the importance of laboratory testing are some of the reasons for missed appointments that result in diminished therapeutic outcomes. Point-of-care fingerstick testing has been shown to help to increase guideline compliant HbA1c testing frequency and glycemic control while reducing operational inefficiencies and spending.[5-7]

The Rio Grande Valley (RGV) Accountable Care Organization (ACO) has developed and implemented solid strategies to improve their type 2 diabetes patients' glycemic control and quality of life and is having some great success. RGV ACO utilizes 33 quality measures established by the Centers for Medicare and Medicaid Services (CMS).[8] Their primary focus is on those type 2 diabetes patients with an HbA1c value greater than 8%—they are currently reaching 80% of this patient-type with 70% of those patients participating in at least one of the RGV ACO diabetes strategies. They have achieved significant cost savings (e.g., $20.2 million in reduced healthcare expenditures in the Medicare Shared Savings Program Performance Year 1) for type 2 diabetes prevention and intervention through utilization of point-of-care testing for HbA1c and lipids, comprehensive education and consistent follow-up and care plan implementation with these patients.

"If I could sum up why we use point-of-care testing into one word it would be efficiency."

DR. PEDRO PENALO, VP OF QUALITY AT RGV ACO

"It can often change the clinical picture completely."

DR. JOSE PENA, CEO AT RGV ACO

One example that Dr. Pena shared was a patient with type 2 diabetes that presented with a chief complaint of a bad headache. His clinical plan was revised entirely once he had point-of-care results indicating that the patient had an HbA1c of 10%. "This patient will not leave the room without a full education plan, medication adjustment and frequent phone calls. Previous practice to focus only on the main complaint is unacceptable" Dr. Pena adds.

ABOUT RGV ACO

The RGV ACO provides health care services to small towns across Texas. For example, the clinic in Donna, Texas, has four providers for a town of 25,000 people. This is a primary care clinic with a special focus on type 2 diabetes management. Overall, the RGV ACO has a patient population of approximately 8,500; 45% have type 2 diabetes. With a high-density mix of type 2 diabetes patients, the RGV ACO saw a need for a specialty diabetes management program.

RGV ACO's type 2 diabetes patients are primarily elderly, Hispanic, and speak Spanish. Most of the RGV ACO staff speaks Spanish so there is a minimal language barrier. The more challenging issues with this patient population are education and economics. Many of the patients lack health literacy and educating them on maintaining a healthy diet and lifestyle is difficult. Many also do not have the money for their type 2 diabetes medication copayments, nor can they afford to go to the gym or buy nutrient dense foods to support healthful eating patterns. Fast food is inexpensive and a ready alternative.

Uncontrolled patients with type 2 diabetes are flagged by the RGV ACO care coordinator or care coach via utilization of the electronic medical record (EMR). The EMR alerts the staff and they follow-up by calling patients to monitor blood glucose more regularly or make medication adjustments. Care coordinators are instrumental in assisting the uncontrolled patients (those patients who do not maintain the set goal for glycemic control). These patients are then enrolled into the Chronic Case Management Program (CCMP). Once enrolled in the CCMP, communication between the nutritionist and certified diabetes educator is key to the patients' success. In addition to patients being flagged via the EMR, RGV ACO has community partners that also refer patients to the RGV ACO. Many of these referred patients are uncontrolled and become enrolled in the CCMP. In these patients a point-of-care HbA1c test will be performed regularly until the blood glucose is brought under control.

CLINICAL AND OPERATIONAL EFFICIENCY

RGV ACO uses the Afinion™ AS100 (for HbA1c) and Alere Cholestech LDX® (for lipids) point-of-care devices because they allow clinicians to take immediate action on the results. Getting the HbA1c and lipid result during the visit means that they make the most of each visit with no need to pull charts for review later and follow-up with patients after lab results are returned in the following days. Less time is spent chasing results and patients with phone calls and letters. In addition to testing efficiency, the benefits of point-of-care testing for HbA1c and lipids include better delivery of care, education, and training; prevention of additional visits for laboratory tests and follow-up; and additional patient compliance due to improved understanding.

New and returning patients at Dr. Pena and Penalo's clinics have finger stick tests performed for HbA1c and lipids using point-of-care devices. Dr. Jose Pena and his team have worked with even more aggressive focus on patients that have HbA1c values > 9%. These patients are seen and tested at the highest frequency at RGV ACO. The point-of-care test results provide an accurate picture in real time regarding whether or not the patients are responding to treatment and then how to make adjustments to the therapeutic plan for better outcomes and more controlled blood glucose. The percentage of patients in the ACO with comprehensive control of their type 2 diabetes, lipids and blood pressure has increased from 23% in 2012 to 49% in 2014, which is well above the 90th percentile achieved nationally.[9] Over 75% of their patients now have HbA1c values less than 8% and only 14% remain uncontrolled above 9% HbA1c. This well exceeds the average quality scores for other ACOs nationally. The top performing practices in the RGV ACO are currently reaching 70% in the type 2 diabetes composite quality score whereas that figure is 37% nationally and 86% of patients now have an HbA1c below 9%.[9]

Point-of-care testing for HbA1c and lipids has brought a new perspective in regards to education and discussion of type 2 diabetes to the RGV ACO patients. Clinicians are able to work with patients in real time in the clinic on a more comprehensive

approach to care. Prior to point-of-care testing, patients were instructed to get lab work completed before arriving at their appointment, yet this rarely occurred. Even post-appointment laboratory testing was difficult to maintain. With point-of-care testing, there is no ambiguity on test results and no more waiting for the next patient visit or for laboratory results to be returned in 1-2 days. Accurate results, quick turnaround and face-to-face education contribute to RGV ACO's success with type 2 diabetes patients. "If I could sum up why we use point-of-care testing into one word it would be efficiency," says Dr. Pedro Penalo who has used point-of-care testing for 5 years, "as it has allowed efficiency in many aspects of the care of our patients."

ECONOMIC BENEFITS FROM BETTER DIABETES CONTROL

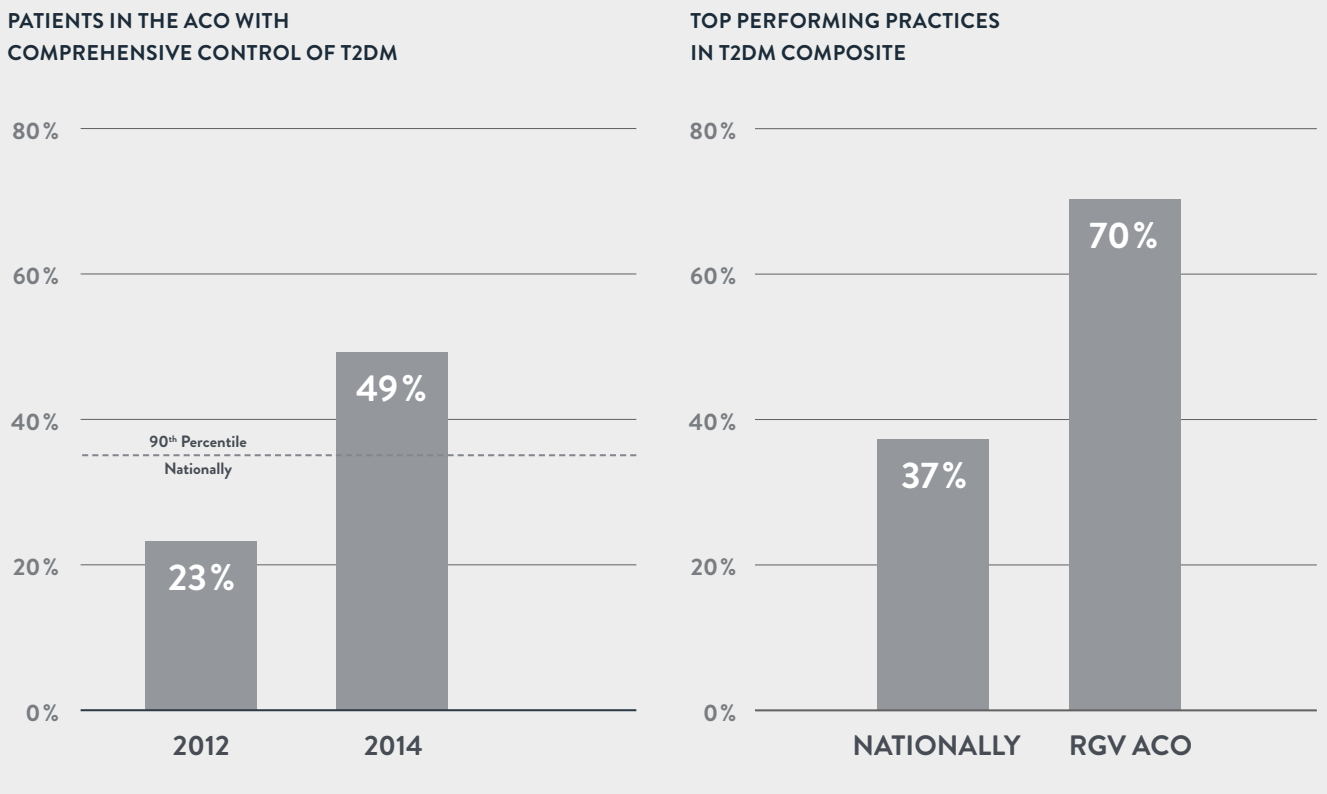
The RGV ACO also decreased its Medicare patients' per capita costs by 14%. These cost reductions came via decreased hospital admission, readmissions and implementation of home health care services based on the clinical and operational efficiencies already described. RGV ACO's reduced healthcare expenditures, based on data from CMS, was $20.2 million for 2014[10] while scoring above average at 60 quality points (average is 49 quality points).[11] Better care did not come at an increased cost, rather, it reduced spending on costly hospital admissions.

CONCLUSION

RGV ACO's goal in utilizing point-of-care testing for patients is to provide better quality of care in a more efficient manner and to ensure that their patients have their blood glucose and lipids under consistent control. Prior studies have shown that point-of-care testing may allow the opportunity for these sorts of outcomes.[7,12]

In an environment where type 2 diabetes is growing more costly and complicated, the RGV ACO's implementation of a comprehensive diabetes management program that includes point-of-care testing has resulted in better patient outcomes while reducing expenditures and enhancing operational efficiency for their type 2 diabetes patient population.

RGV ACO OUTCOMES COMPARED TO THE NATIONAL AVERAGE



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