**Colorado Addresses Diabetes Disparities Through Partnerships and a New Reimbursement Program**

*Colorado addressed low socioeconomic and racial and ethnic disparities in diabetes outcomes by partnering with the American Association of Diabetes Educators and University of Colorado at Denver School of Pharmacy, by initiating a new diabetes self-management education (DSME) reimbursement demonstration program.*

A review of diabetes outcomes revealed startling disparities among Coloradans with low socioeconomic status compared to those with higher incomes. The Colorado Department of Public Health and Environment (CDPHE) found higher prevalence of diabetes and worse outcomes, such as renal failure and amputations, among low socioeconomic status communities. Diabetes prevalence for people with incomes less than $15,000 is 10.6 percent versus 4.9 percent for people with incomes that are more than $50,000, which is a statistically significant difference. Additionally in Colorado, Hispanics (6.9%) and Black non-Hispanics (10.2%) had a significantly higher prevalence of diabetes compared with White non-Hispanics (4.7%), with the death rate for diabetes among Hispanics (124 per 100,000) was more than double that of White non-Hispanics (56 per 100,000).

The Colorado Department of Public Health and Environment completed a DSME resource assessment in 2008 which identified six regions in the state that lacked adequate resources for conducting DSME. To address these disparities, CDPHE created a demonstration program to affect diabetes outcomes among rural and federally qualified health center (FQHC) populations and areas with less access to resources to increase their capacity for diabetes self-management education. To start, the department focused its CDC funding on rural counties that had the least capacity to provide DSME and poorer health outcomes. It also forged important partnerships to facilitate a DSME reimbursement program.

**Steps Taken:**

- From previous data collection efforts, CDPHE found that Hispanics with diabetes were less likely to have taken a diabetes self-management class (54.2%) compared with white non-Hispanics (63.9%) and Black non-Hispanics (71.5%). They saw that death rates for Hispanics were much higher than those of white non-Hispanics, so they knew that addressing this disparity had to include addressing access to DSME, in addition to the work they were already doing with diabetes prevention.

- Due to the community connection and ongoing patient interaction pharmacists have with patients, CDPHE initiated conversations with the University of Colorado Skaggs School of Pharmacy and found out that pharmacists are trusted, community-based service providers located in the geographic areas of high need.

- CDPHE partnered with the American Association of Diabetes Educators and the University of Colorado Skaggs School of Pharmacy to develop a reimbursement model that would allow pharmacists to provide diabetes self-management education in under-resourced areas. The Skaggs School of Pharmacy had existing relationships with independent pharmacists and was
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the logical partner for this work. As a result of this project, it became the first school in the country to become a certified diabetes self-management education center.

- CDPHE provided and assessed the state health data to determine where resources for DSME were needed. This data allowed partners to determine key locations for interventions and pilots. The Department granted funding to assist in developing infrastructure for this program through federal funds from the Centers for Disease Control and Prevention diabetes program grant and provided subject matter expertise in the development of project goals and evaluation.

- Prior to the pilots’ beginning, the University conducted focus groups with pharmacists and clients with diabetes to determine their readiness to embrace the project and to identify any barriers to success. The University set up a community advisory board, a requirement for DSME accreditation, and applied for accreditation through the American Association of Diabetes Educators. The University dedicated staff time to the project, including time from two doctors of pharmacy, other staff, and work study students. This team designed the program, set up continuing education for local pharmacists, provided resources, and tracked data.

- Diabetes Self-Management Education in community gatherings is recommended as an evidence-based intervention by the Community Preventive Services Task Force. The workshops were offered two and a half hours once a week for six weeks, in community settings such as churches, community centers, libraries and hospitals. People with type 2 diabetes attended the workshop.

- Classes were highly participative, where mutual support and success built the participants’ confidence in their ability to manage their health and maintain active and fulfilling lives.

- Subjects covered include:
  - techniques to deal with the symptoms of diabetes, fatigue, pain, hyper/hypoglycemia, stress, and emotional problems such as depression, anger, fear and frustration
  - appropriate exercise for maintaining and improving strength and endurance
  - healthy eating
  - appropriate use of medication and working more effectively with health care providers

- Participants made weekly action plans, shared experiences, and helped each other solve problems they encountered in creating and carrying out their self-management program.

- CDPHE selected its target areas by choosing the counties that had the least capacity to provide DSME. Clients were members of the communities in which the pilots took place. Pharmacists recruited participants from their own client population based on knowledge of client conditions and medications dispensed.

- Initially, a billing mechanism was set-up with the university, which would have allowed satellite pharmacy offices around the state to receive reimbursement for DSME without being individually accredited. However, due to shifting priorities at the national accreditation entity, satellite offices were required to be individually accredited to provide and receive reimbursement for DSME.

Results:

- The partnership connected with four pharmacies and reached 42 patients with the DSME training. The pilots measured their success as the number of individuals completing four or more of the six classes.

- Overall, 12 of the 13 patients who submitted a survey reported being somewhat or highly satisfied with the program. All 13 patients who submitted a survey reported that the program
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provided them with resources and tools that will make managing their diabetes easier on a daily basis. All 13 subjects said they would recommend the program to a friend with diabetes.

- Fifty percent of patients (9/18) who participated in a follow-up evaluation after the DSME program had their clinical values improved, including their A1c level, weight, and blood pressure.
- As a result of the successful outcomes from the DSME demonstration project, partners built upon the lessons they learned and are now working with pharmacists to help clients prevent and manage other chronic diseases including hypertension and cholesterol. The new work around hypertension is funded in part with a new CDC Chronic Disease and School Health Grant and partly with local private foundation dollars. Pharmacists are not being reimbursed, instead, the services will be provided by fourth-year pharmacy students doing their experiential training. Tracking outcomes to better demonstrate the return on investment from integrating pharmacists into the care team is the focus of this project.
- Through this diabetes project, the university provided a training infrastructure to rural pharmacists and pharmacists from metropolitan FQHC and the university built its capacity for diabetes self-management training.

Lessons Learned:

- When targeting a rural or low socioeconomic area with a higher disease burden and lower population density where resources are sparse, it is more difficult for pharmacists to dedicate staff or time to attend professional trainings or provide DSME on an ongoing basis. Effective outreach and greater one-on-one support is key to maintaining long-term partnerships.
- Appropriate staff support is crucial to providing the amount of technical assistance that rural and high-burden area pharmacies require. Finding training time that worked for the pharmacists and the university was often challenging. Communicating the value of the program helped in addressing this challenge.
- Independent pharmacists have not historically been considered part of the care team involved in preventing and managing chronic diseases. As such, they are not often linked in with practices or systems in a way that allows them to share data, provide patient consultation, or get appropriately reimbursed for this work. Finding solutions to these barriers will make it easier for chronic disease programs to utilize pharmacists in the future.

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