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## ADVANCES IN PHARMACY PRACTICE

## EXPANSION of diabetes education in a United States–Mexico border community (Expanding Services for Patients to Acquire New Skills, Set Goals, and Improve Overall Knowledge)

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## ABSTRACT

**Objectives:** To describe the process used by a pharmacy team at a community health center to coordinate and expand diabetes education services (English and Spanish) for a predominantly Hispanic, Spanish-speaking population.

**Setting:** The project was implemented at 2 clinics in a federally qualified community health center system based in a low-income southwest U.S.–Mexico border community.

**Practice innovation:** This project enhanced accessibility to diabetes education to improve knowledge, skills, and goal setting through existing pharmacy services at the primary clinic and 1 rural satellite clinic.

**Evaluation:** The success of the project was evaluated quantitatively. Metrics used to evaluate enhancement of existing practices included enrollment and completion rates, number of sessions, and diabetes leadership meetings.

**Results:** Over the 5-month project period assessed, 7 interdisciplinary professionals were certified as Diabetes Empowerment Education Program educators. Four sessions were conducted at both clinics. A total of 31 participants completed the diabetes classes. An educational attainment of 8th grade or less was reported in 91% of the rural participants compared with 50% of the urban participants. Ten interdisciplinary leadership meetings centered on recruitment, progress toward goals, and action items to ensure quality of classes. A nurse practitioner and pharmacist piloted a shared-visit model with 5 patients during a 45-minute time period.

**Conclusion:** Successful diabetes education services occurred by implementing an evidence-based curriculum, identifying provider champions, increasing patient enrollment through provider referrals, and generating reports. Patient accountability was facilitated by setting patient-centered goals for knowledge and skills. Last, support groups provided ongoing support once patients graduated from a structured diabetes program.

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An estimated 9.3% of the U.S. population have diabetes, and 86 million Americans aged 20 years or older have been diagnosed with prediabetes.<sup>2</sup> Minority populations, including Hispanics and African Americans, are disproportionately affected by diabetes.<sup>3</sup> Healthy People 2020 (the nation's health agenda) aims to increase the proportion of persons with diagnosed diabetes who receive formal diabetes education by 10%.<sup>4</sup> In El Paso, TX, diabetes-related complications account for 50% of local hospital admissions.<sup>5</sup> Furthermore, 75% of these hospitalizations may be reduced by awareness, access, and education.<sup>5</sup>

According to the American Diabetes Association (ADA) and the American Association of Diabetes Educators (AADE), diabetes self-management is crucial to effective diabetes care.<sup>1</sup> Diabetes self-management education (DSME) is defined as the ongoing process of facilitating the knowledge, skills, and ability necessary for diabetes self-care. DSME with

**Key Points****Background:**

- Diabetes self-management education (DSME) with action-oriented behavioral goals has been shown to improve goal commitment, glycemic control, and other patient-centered outcomes.<sup>1</sup> Previous studies have demonstrated that community-based diabetes education improves both health status and self-management behaviors.
- Conducting evidenced-based bilingual (English and Spanish) diabetes education classes that reach patients with diabetes who have lower educational attainment and income are needed in this U.S.–Mexico border community.
- Ongoing support through peer support groups promotes access to care, encourages patients to take a more active role in their health, and provides culturally sensitive outreach.

**Findings:**

- A process for implementing an evidence-based diabetes curriculum in Spanish and English was developed. The team determined that 13 preregistrants was an ideal recruitment size for each new cohort to optimize interactive group activities and to offset any loss to follow-up. Telephone preregistration that occurred 1 day before the first class helped to improve first-day attendance.
- Facilitators assisted each patient in setting an individualized, specific goal. Goals were posted in the classroom to reinforce accountability and updated at each class.
- Patients in the rural community reported lower educational attainment and had not previously received DSME. Accessibility to diabetes education was lacking in this rural community.

action-oriented behavioral goals has been shown to improve goal commitment, glycemic control, and other patient-centered outcomes.<sup>1</sup> Self-management behaviors help patients with diabetes adhere to medication, self-monitor, and cope emotionally with the difficulties of living with diabetes.<sup>1,6,7</sup> A study of 256 individuals with type 2 diabetes along the Texas–Mexico border demonstrated a mean glycosylated hemoglobin (A1C) reduction of 1.4% after 3 months of weekly sessions of culturally competent self-management education.<sup>8</sup> An interdisciplinary team covered aspects of nutrition, self-monitoring of blood glucose, exercise, and other self-care topics that reflected the cultural preferences of the population. Classes were held in community-based sites within *colonias* (neighborhoods along the U.S.–Mexico border, that need increased infrastructure for basic services such as water, housing, paved roads, education, and health care).<sup>8</sup>

Ongoing support through peer support groups promotes access to care, encourages patients to take a more active role in

their health, and provides culturally sensitive outreach. Peer supporters are community members who work with community-based organizations, either for pay or as volunteers. They often share ethnicity, language, and socioeconomic status with participants. Studies incorporating peer-led DSME have shown significant improvements in hypoglycemia symptoms, healthy eating, and depression ( $P < 0.01$ ).<sup>9</sup>

**Objectives**

The purpose of this project was to describe the process used by a pharmacy team at a community health center to coordinate and expand diabetes education services in English and Spanish for a predominantly Hispanic, Spanish-speaking population.

**Setting**

The project was implemented in a federally qualified community health center (FQHC) that provides comprehensive health services for a predominantly Hispanic community that is primarily Spanish-speaking (>80% Hispanic; >65% adults speak Spanish in the home)<sup>10</sup> in a lower-income southwest U.S.–Mexico border community stretching 40 miles across the county. Six satellite clinics and the central clinic currently serve the region. The pharmacy department consists of a community pharmacy, a clinical pharmacy program, and health education services.

In this community health center (CHC), the pharmacy is an integral part of the clinic's health care team and consists of the central pharmacy (class A: community pharmacy classification) and 5 satellite pharmacies (class D: clinic pharmacy classification, formulary-approved unit-of-use packages supplied by nonpharmacist personnel). Approximately 700 prescriptions are filled per day for the network of 10 clinics. The pharmacy department also uniquely oversees the clinical pharmacy program and the clinic's health education services.

The pharmacy team includes staff pharmacists who perform duties in the class A and D pharmacies, clinic-based pharmacists whose duties are located in clinic rooms that provide direct patient care services, and health educators who provide patient education in educational rooms and clinic rooms. Staff pharmacists provide patient counseling on medication administration and proper use of diabetes medical supplies. However, owing to time constraints, the clinic and pharmacy teams rely on health education classes to further empower patients with knowledge of self-care and awareness of disease progression. The pharmacy staff team strongly advocates that all patients with diabetes participate in diabetes classes to acquire self-care knowledge and skills.

**Practice description**

Over the past 5 years, the pharmacy and clinic have worked closely with faculty from a regional academic pharmacy program. Through previous funding by the American Pharmacists Association (APhA) Foundation's Project IMPACT: Diabetes, this CHC and academic pharmacy partnership have been able to develop diabetes services through interdepartmental collaboration.<sup>11</sup> Staff pharmacists' contributions have included

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