

The Impact of Specialized Diabetes Care Provided by Pharmacy Students at the UC San Diego Student-Run Free Clinic

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OBJECTIVES

- Assess the impact that pharmacy students have on patients with diabetes to improve the standard of care
- Quantify the number of patients, shoes distributed, foot problems identified, and hours that DCC student pharmacist volunteers have served since 2010.

BACKGROUND

- Diabetes is an important health concern. It affects a significant proportion of our country's population.
- With these growing concerns, student pharmacists at the University of California, San Diego established the Diabetes Care Clinic or DCC in 2010 in conjunction with the UCSD Student-Run Free Clinic Project or SRFC.
- The SRFC operates at 3 sites in San Diego County and allows many health professional students to collaborate with one another while serving the underserved population.

BACKGROUND (Cont.)

- With the DCC, student pharmacist volunteers manage the patients' diabetes by assessing multiple factors such as diet, physical activity, and foot health via comprehensive diabetic foot exams.
- If a patient needs a better pair of shoes to minimize foot damage, then the DCC Shoe Program can help.

BACKGROUND (Cont.)

- This Free Diabetes Shoe Program was created in 2016 with the goal of providing free diabetic shoes to high-risk patients with diabetes.
- To be eligible to receive these shoes, patients must meet at least 2 of the 4 criteria:
 - An A1C > 10%
 - A history of foot ulcers
 - Peripheral neuropathy present and/or
 - Does not have proper footwear



METHODS

- This was a retrospective study using data collected from different clinics sites from 2010 to 2019.
- The data were collected from patient assessment sheets completed by student volunteers during each patient encounter
- The collected data was compiled and sorted into variables that include the total hours served by pharmacy students, number of patients served, average number of visits per patient, number of diabetic shoes distributed, and diabetic foot related problems.
- Descriptive statistics were performed using Microsoft Excel.

RESULTS

Number of Patients Served & Clinic Visits per Patient in 2010-2019		
SRFC (sites)	Total Number of Patients Seen	Number of Clinic Visits Per Patient (Mean \pm SD)
Downtown Clinic	169	2.85 \pm 2.2
Pacific Beach Clinic	89	2.09 \pm 1.67
Total	258	2.59 \pm 2.06

Table 1. DCC served 258 patients (169 in Downtown and 89 in Pacific Beach) over the past 10 years. The lower number of patients served in Pacific Beach reflects our later expansion into the second UCSD SRFC and generally smaller patient population of patients with diabetes in this region. Each patient averaged 2.85 visits in Downtown and 2.09 visits in Pacific Beach.

Clinic Hours Served by Pharmacy Students in 2010-2019			
SRFC (sites)	Total Number of Volunteers	Total Clinic Hours Served	Average Number of Clinic Hours per Year
Downtown Clinic	582	776	77.6 \pm 18.5
Pacific Beach Clinic	216	432	54 \pm 16.7
Total	798	1,208	67.1 \pm 21

Table 2. Student pharmacists served a total of 1,208 hours at both clinics. Fewer hours of service in Pacific Beach, once again, can be attributed to the smaller population of patients with diabetes in this region and relatively less of a need for the services provided by DCC.

RESULTS

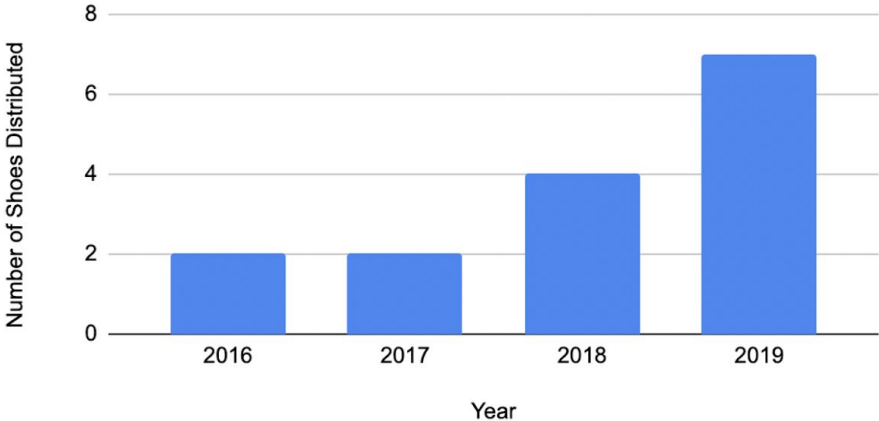


Figure 2. Foot-related problems were defined as the presence of foot deformities, lack of sensation on at least one location, deformed or ingrown nails, and evidence of infection such as ulcerations. Non-foot-related problems consisted of other issues in diabetes management that required patient education (e.g. proper insulin administration, glucose monitoring, nutrition counseling, physical exercise counseling).

RESULTS

Diabetes Shoes Distribution in 2016-2019

DOWNTOWN CLINIC



Diabetes Shoes Distribution in 2016-2019

PACIFIC BEACH CLINIC

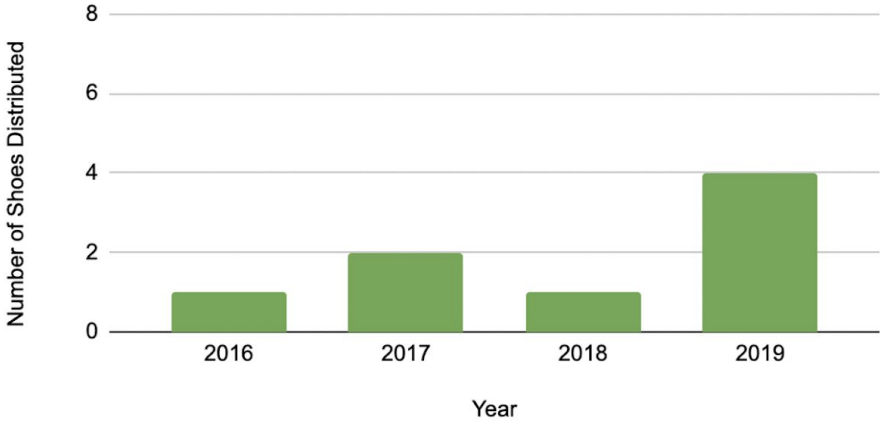


Figure 3. The Diabetes Shoe Program has grown over the past 4 years. A total of 23 shoes were distributed (15 in Downtown and 8 in Pacific Beach)

LIMITATIONS

- **Retrospective**

- Recording of patient encounters were made by numerous pharmacy students during the study period. Therefore, the presence of diabetic foot disorder may not have been recorded.

- **The low average number of follow-up visits**

- Patients not showing up to scheduled appointments
- Patients only seen by DCC if they are referred by medical providers
- Patients with diabetes are also referred to the Tobacco Cessation and Medication Management Clinic (TCMMC), another pharmacy specialty clinic

NOW AND IN THE FUTURE

Over the course of a decade, the DCC has undergone considerable growth and increased clinical services. Continual monitoring and measurement of the impact of these services will help us to provide better patient care for our patients.

- Free Diabetes Shoe Program
- Bilingual pamphlets that highlight important diabetes lifestyle modifications
- Free diabetic supplies
- Insulin administration education
- Diabetic self-care education
- Glucose monitoring education

NOW AND IN THE FUTURE

In the coming years, we look to:

- Expand DCC to another clinic site (Normal Heights)
- Schedule more clinic dates and follow up appointments
- Increase awareness about DCC among both medical and pharmacy students because a significant proportion of patient referrals are made by medical and non-DCC pharmacy students
- Address the limitations of our data collection by implementing a new method of patient data collection and recording that is being developed.
- Promote our Free Diabetes Shoe Program and emphasize and educate on the importance of proper diabetes foot care with patients.