Patient Preferences for Engagement in a Community Pharmacy-Based Diabetes Self-Management Education Program

by

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Abstract

The primary objective of this study was identify how patients with diabetes prefer to be engaged in a community pharmacy-based diabetes self-management education program. A 17 question paper survey was disseminated at prescription pick up to patients at three locations in Western Pennsylvania of a national chain community pharmacy. Each pharmacy provides AADE accredited diabetes education programs. Survey questions were informed from three domains (informing patients, involving patients, and partnering with patients) adapted from the Healthcare Information and Management Systems Society. Patients were eligible to participate if they were at least 18 years old and filled a diabetes medication at one of these locations during the collection period of January 2017 to April 2017.

92 patients completed the survey. Fifty-eight percent were male and the mean age was 57. The majority of patients indicated that they prefer a face-to-face conversation or e-mail for initial engagement (40% and 40% respectively). Patients prefer to receive information in the form of paper materials when receiving more information about the program and when receiving materials and updates after being enrolled in the program (50% and 61%). Nutrition was the most common educational topic of interest: 65% wanted to see diabetes cooking classes integrated into these education programs; 54% were interested in learning how to locate diabetes friendly foods in the store; and 52% listed healthy eating as their topic of most interest. Surveyed patients believe that

pharmacists can help manage their diabetes and refer them to other healthcare professionals as needed (86% and 65%).

Results of this study can provide a guide for community pharmacists to further engage patients in diabetes education programs. This guide can be utilized to train pharmacists and technicians, help design programs and their implementation, and support to design interactive patient education. This has a great public health significance because diabetes is one of the most prevalent and costly health conditions in the United States and learning how to control diabetes can be challenging for many patients.

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1.0 Background

Diabetes education in the community pharmacy setting has been proven effective at decreasing A1C, decreasing mean LDL cholesterol, and decreasing mean systolic blood pressure, as well as increasing rates of influenza vaccinations, eye examinations, and foot examinations.[1] In the Asheville Project, patients who received diabetes education by pharmacists maintained improvement in A1C over time and their employers experienced a decline in mean total direct medical costs.[2] Diabetes self-management education and support (DSME/S) provides a foundation to help people with diabetes to navigate daily self-management decisions and perform complex care activities.

The American Association of Diabetes Educators (AADE) is a multi-disciplinary professional membership organization dedicated to improving diabetes care through innovative education, management and support. The AADE offers program accreditation to provide DSME/S called the AADE Diabetes Education Accreditation Program (DEAP). A DEAP must show integration of the AADE7 Self-Care Behaviors, which are healthy eating, being active, monitoring, taking medication, problem solving, reducing risks, and healthy coping.[3] It is up to the discretion of the AADE community sites the format of the educational sessions and the number of sessions.

In order for a DSME/S program to be successful, it is imperative to engage patients in their diabetes management. Patient engagement is shaped by the relationship between the patient, provider, and the environment in which healthcare delivery takes place. Effectively engaging patients is vital to improving their quality of care and ensuring patient safety.[4] Patients who are active in their care have been shown to achieve more positive clinical outcomes than those who are passive and disengaged.[5] Research has also shown that patient-centered interactions promote

adherence and lead to improved clinical outcomes. Best practices for patient-centered interactions are related to shared decision making, patient education, and communication.[6] Effectively engaging patients is vital to any patient care program's success including those in the community pharmacy setting.[2]

Pharmacists are in a unique position to create meaningful change and help educate patients, especially those with diabetes. To our knowledge, there are no current published studies evaluating how patients would like to be engaged in a community pharmacy-based DSME program. The objective of this study was to identify how patients with diabetes prefer to be engaged in a community pharmacy-based DSME/S program.

2.0 Methods

Survey Participants

Three unique Rite Aid pharmacies in the Pittsburgh area participated in this study. Each of these locations offers a DSME/S program at their location. Subjects were eligible to participate in the survey if they were over the age of 18 years and presented to the pharmacy to fill at least one diabetes medication at one of these three community pharmacies. Subjects did not need to have participated in a DSME/S program in the past to participate in the survey.

Survey Development and Implementation

Survey questions were constructed using the following domains of the Healthcare Information and Management Systems Society (HIMSS) framework: informing patients, involving patients, and partnering with patients.[7] This framework was selected because it provides a guide to healthcare organizations on patient engagement strategies. The final survey included twelve questions assessing patient engagement preferences and an additional five demographic questions.

Technicians and pharmacists at participating pharmacies were trained by the primary investigator on survey implementation. The primary investigator provided 100 paper copies of the survey to be equally distributed among the three sites. Pharmacists identified eligible patients during the final prescription verification step of workflow by flagging orders containing any diabetes medications including both oral or injectable medications. At prescription pick up, pharmacy technicians offered the paper survey to eligible patients. All surveys were anonymous as no identifiable patient information was collected. A diabetes care package that contained a glucose log book and glucose tablets served as an incentive for survey completion. Completed

surveys were collected by the technician and placed in a secure location in the pharmacy until collection by the primary investigator. Surveys were collected for a four-month period from January to April 2017 and ended once all 100 surveys were distributed. Descriptive statistics were utilized to characterize the study sample and summarize the survey results. This study was approved by the University of Pittsburgh Institutional Review Board.

3.0 Results

A total of 92 surveys were returned for analysis. Table 1 provides the demographics of survey respondents. Of those completing the survey, 58% were male and the mean age was 57 years (range, 19-80 years). The majority of patients were white (95%) and had type 2 diabetes (58%). Seventy-eight percent of patients self-reported using an oral diabetes medication.

Engagement Strategies

Patients preferred to learn about DSME/S opportunities through face-to-face conversations with a pharmacy team member and via email. Forty percent of responding patients preferred these methods for initial outreach (Figure 1). In order to learn more about DSME/S programs, 50% of patients preferred to get more detailed information through brochures or flyers (Figure 2).

Sixty-one percent of patients had interest in receiving DSME/S information and diabetes care from a pharmacist as part of a group session. Preferences on the frequency of educational sessions were: once a month (60%); twice a month (25%); and once a week (11%).

Topics of Interest

Of the AADE7 Self-Care Behavior Topics required of the DSME programs, patients overwhelmingly ranked healthy eating as the topic they're most interested in learning about, with 52% of respondents ranking that topic as their first choice (Figure 3). Corresponding to this finding, patients reported that they were most interested in learning about nutrition: 65% wanted to see diabetes cooking classes integrated into these education programs; 54% were interested in learning how to locate diabetes friendly foods in the store; and 52% listed healthy eating as their topic of most interest (Figure 4). Surveyed patients reported that pharmacists can help manage their diabetes (86%) and refer them to other healthcare professionals as needed (65%).

4.0 Discussion

While many patient care programs are initiated specifically for patients, they do not always take into account patient preferences and their viewpoints. This in turn can lead to a lack of patient engagement as well as poor patient turnout. Our study gave us the opportunity to ask patients about their preferences, get their opinions, and learn from patients. We learned how they like to hear about these programs, what would get them involved, and what would ultimately improve the program. This study has the potential to impact other community-based patient education programs because other programs could use the information we gathered to influence how they set up their programs for maximum patient engagement which would then contribute to the success of these programs.

One important finding of this work is that the majority of our patients preferred to first hear about community pharmacy-based diabetes education programs through either a face-to-face conversation with a pharmacy team member and through email.

It's not entirely surprising that nutrition is an area of high interest with patients. Food is a very integral part of our society and culture and the fact that patients are so eager to discuss it is an area of opportunity for pharmacists. While pharmacists are the medication experts, that may not be the case with food and nutrition. In a national survey of pharmacist certified diabetes educators, pharmacists reported nutrition assessments and nutrition counseling being their least performed activities.[8] Therefore, pharmacists may need to be trained on aspects of nutrition that relate to diabetes in order to answer any questions that arise. Another option is to part with a local dietitian who can provide more intensive nutrition education if necessary, which was done in the Diabetes Ten City Challenge.[1]

This study has limited generalizability because it was conducted at three locations in Western Pennsylvania in one community pharmacy chain. Also, the demographics of the participants do not match the demographics of the majority of diabetes patients in the United States. Because of the mismatch in demographics, this study may not have captured preferences of minority groups with diabetes. 95% of patients surveyed identified themselves as being white while the majority of patients with diabetes belong to a different ethnic group. 15.9% of patients 20 years of age or older in the United States with diagnosed diabetes are American Indians or Alaskan Natives followed by Non-Hispanic Blacks at 13.2%, Hispanics at 12.8%, Asian Americans at 9%, and Non-Hispanic Whites at 7.6%.[9]

5.0 Conclusion

Results of this study can provide a guide for community pharmacists to further engage patients in diabetes education programs. This guide can be utilized to train pharmacists and technicians, help design programs and their implementation, and support to design interactive patient education. This is of public health significance due to the fact that diabetes is a prevalent medical condition that is a major public health problem. Further studies are needed to further understand engagement preferences of patients in community pharmacy-based diabetes self-management education programs in a more generalizable fashion.

6.0 Figures

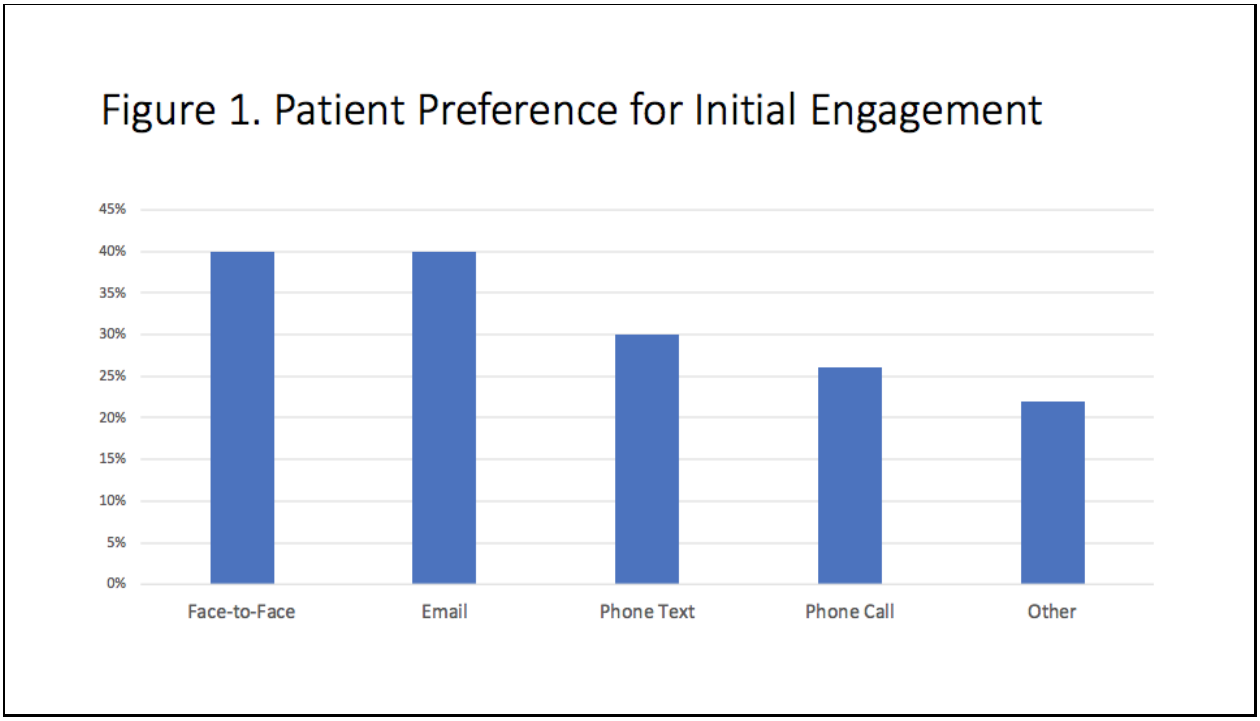

Figure 1 Patience Preference for Inital Engagement

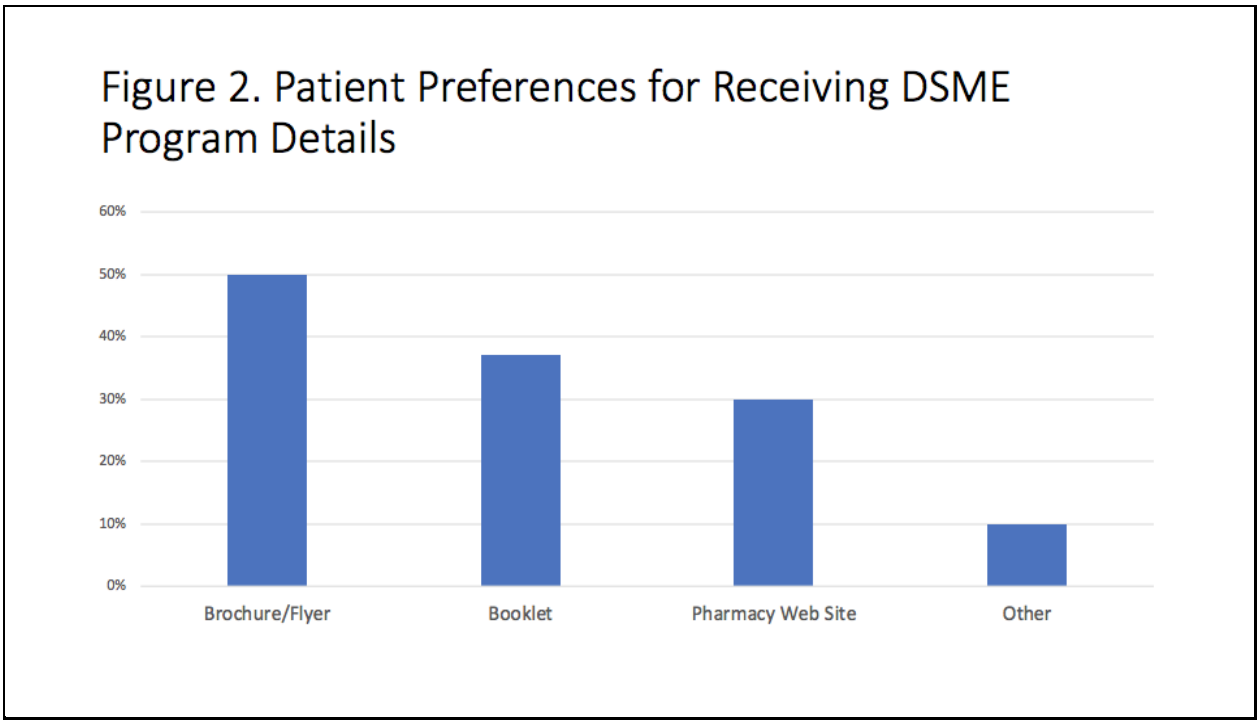

Figure 2 Patience Preferences for Receiving DSME Program Details

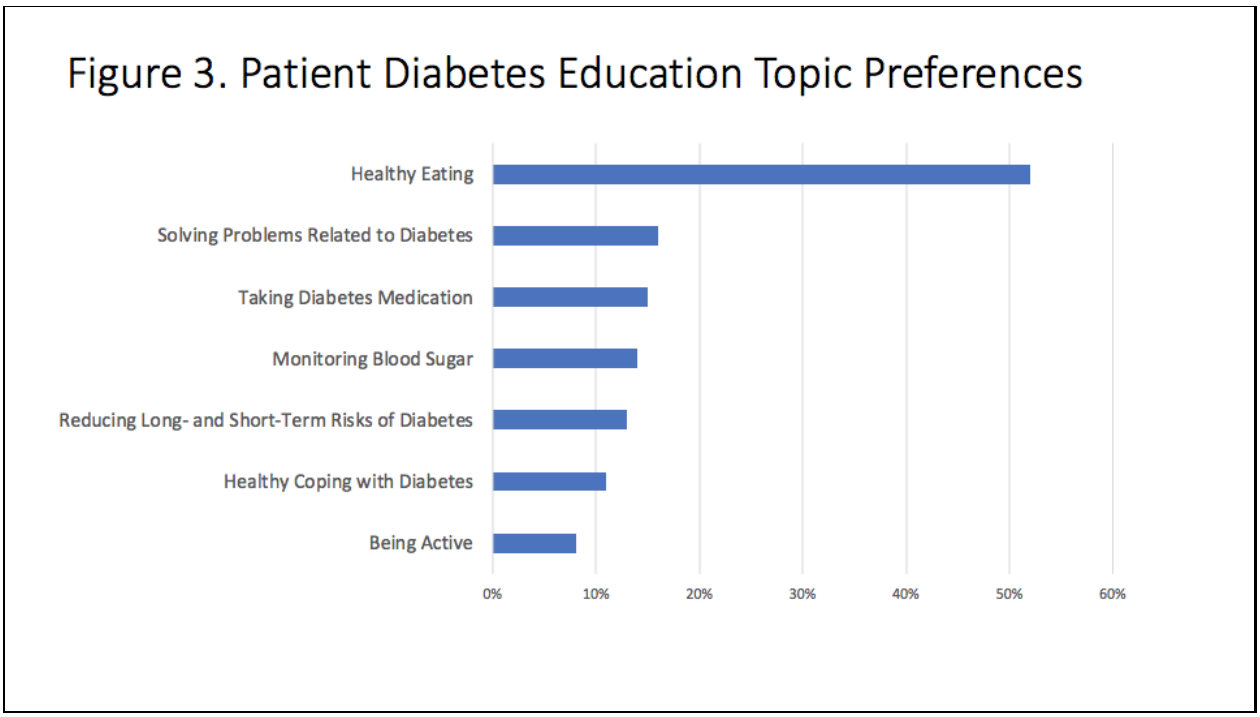

Figure 3 Patient Diabetes Education Topic Preferences

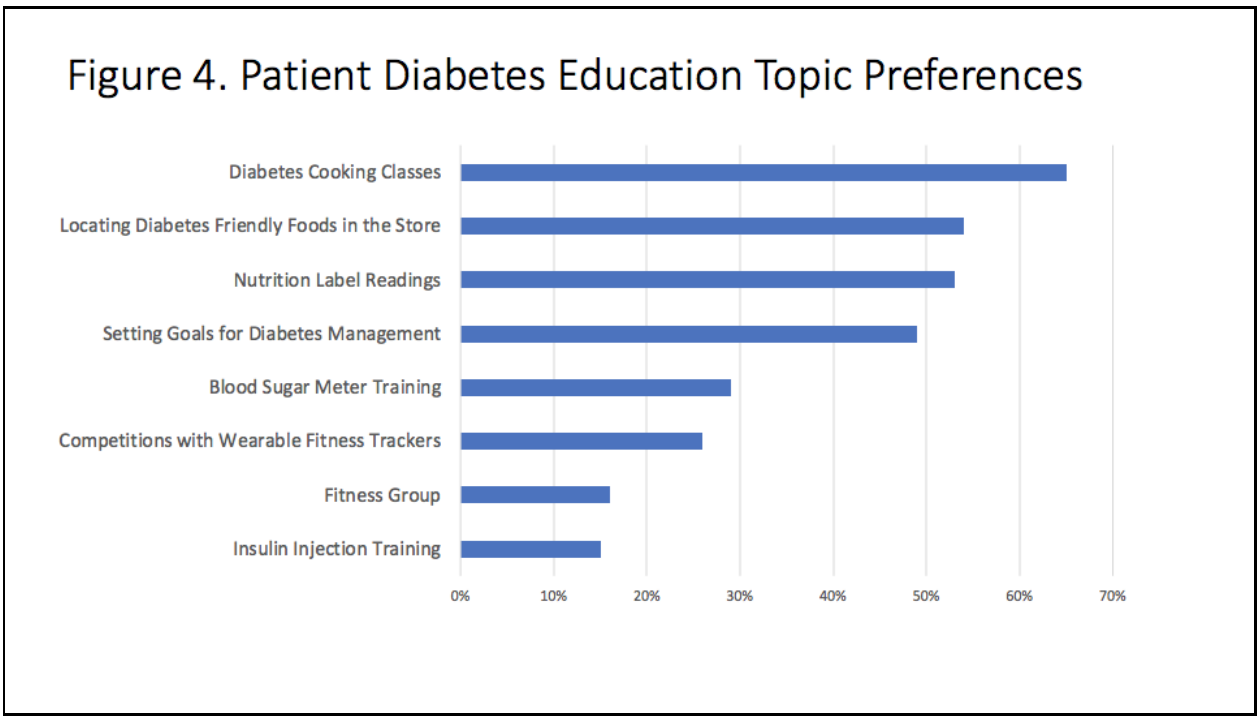

Figure 4 Patient Diabetes Education Topic Preferences

6.1 Tables

Table 1 Patient Demographics

Patient Characteristics (n=92)	
Mean Age	57.2 (range, 19-80)
Sex	
Male	53 (58%)
Female	39 (42%)
Race*	
White	87 (95%)
American or Alaska Native	3 (3%)
Black or African American	2 (2%)
Hispanic or Latino	1 (1%)
Asian	0 (0%)
Native Hawaiian or Other Pacific Islander	0 (0%)
Diabetes Type	
Pre-diabetes	11 (12%)
Diabetes Type 1	24 (26%)
Diabetes Type 2	53 (58%)
Not sure	4 (4%)
Diabetes Medication Use*	
Oral diabetes medications	72 (78%)
Injectable non-insulin	18 (20%)
Insulin	26 (28%)

*Categories may add up to greater than 100% if patients checked more than one option.

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