

A Self-Report Survey of the Diabetes Education Experience

Michelle Magee, MD^{1,2}; Carine Nassar, MS, RD, CDCES¹; Neelam Baral, MD³; Kelley Baker, MA⁴

1- MedStar Health Research and Diabetes Institutes; 2- Georgetown University School of Medicine; 3- MedStar Washington Hospital Center; 4- MedStar Health Institute for Quality and Safety

Research Objective

The objective of this study was to better understand what it means when a person with diabetes (PWD) says they have “had diabetes education.” This baseline information is needed to inform implementation of diabetes education services at the patient, provider, and health system levels.

Background

Despite the evidence for the effectiveness of diabetes self-management education and support (DSMES) and recommendations for its utilization in the ADA’s Standards of Medical Care in Diabetes, DSMES remains grossly underutilized in the US. National Behavioral Risk Factor Surveillance System data (2018) reveal that 52% of respondents report having “ever having taken a diabetes self-management class,” but this survey does not delineate the education content or dose nor who provided the service, leaving questions as to the quantity and quality of the education. In a regional US health system, gaps in self-care knowledge and skills have been observed among PWD, including those who report having had diabetes education.

Methods

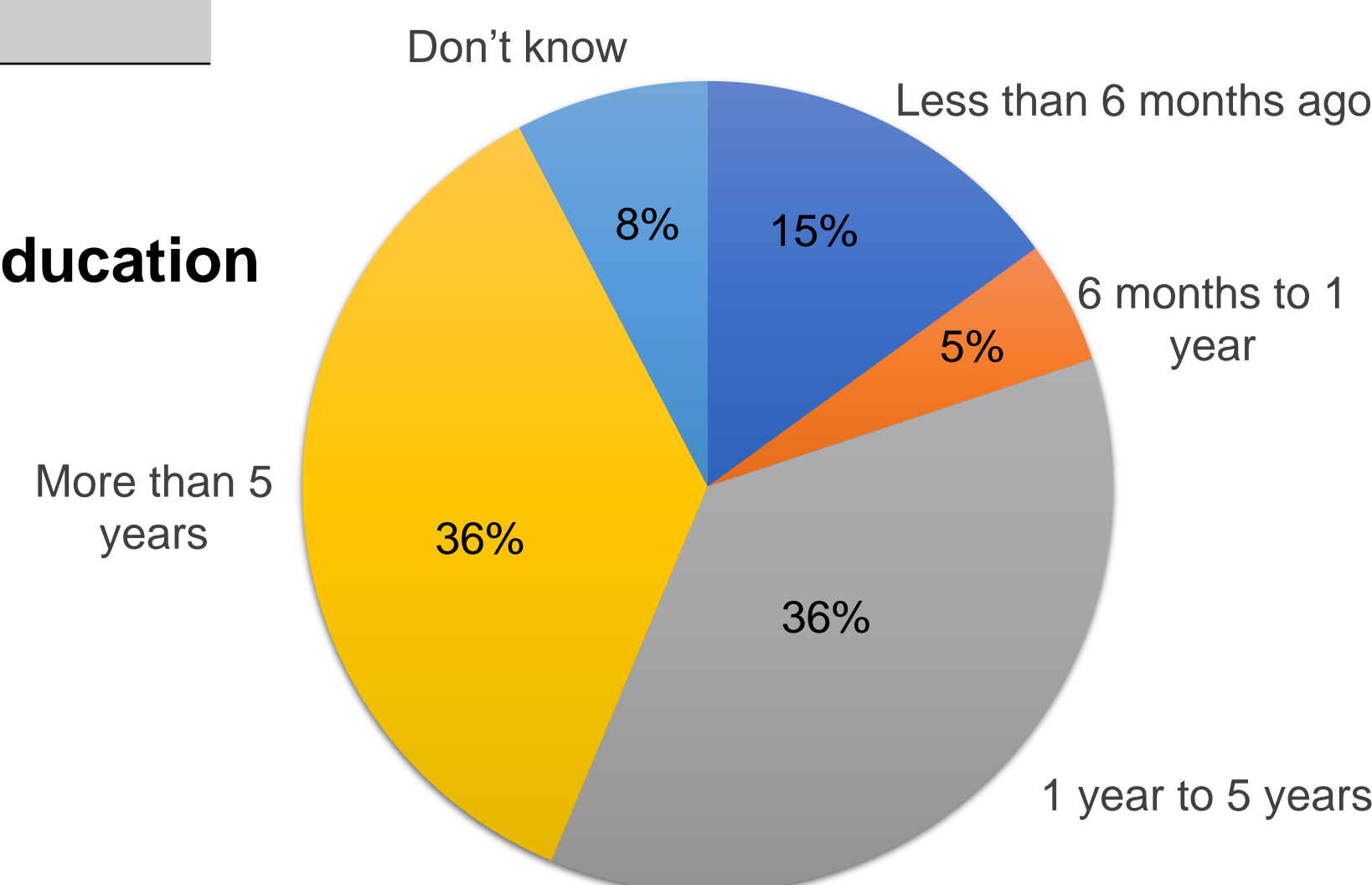
A cross sectional survey was conducted among adults with type 2 diabetes (T2DM) within a regional US health system from January 1 to December 31, 2020. The 18-item survey contained questions on diabetes-specific items including time since diagnosis and most recent A1C value; prior experience with diabetes education; and social health determinants (access to food and T2DM medications). The survey content was developed by an interdisciplinary team, including PWD, and reviewed by a health literacy and equity scientist.

Participant inclusion criteria were T2DM diagnosis; age ≥18 years; an upcoming ambulatory or telehealth visit with an internal medicine provider or a CDCES; and English speaker.

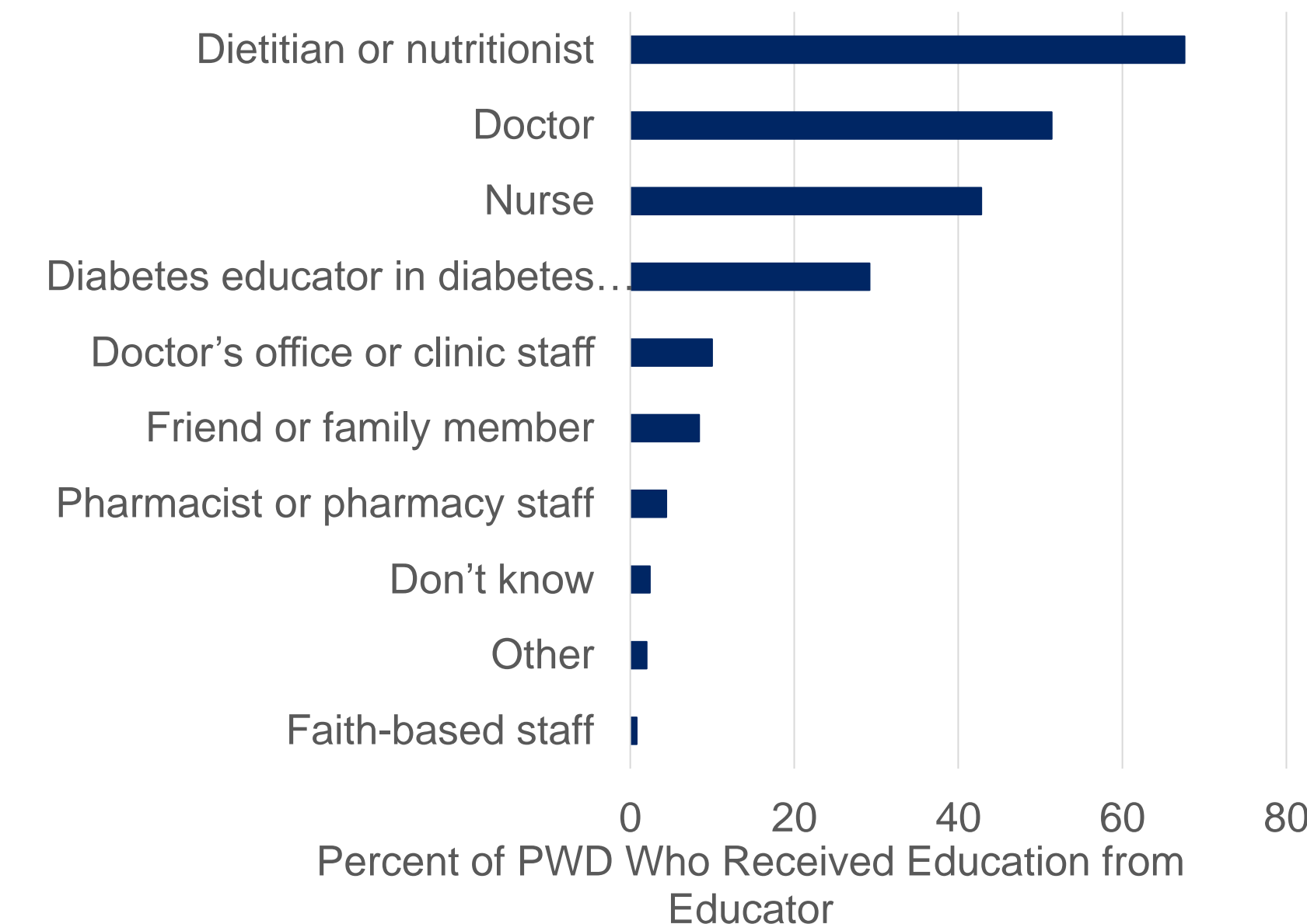
Data were summarized using simple descriptive statistics, bivariate analyses, and logistic and linear regression. Analyses were conducted using Stata 16 and an alpha of 0.05 was considered significant.

Characteristic	Participants (N=498)
	Mean (SD)
Age, mean (SD)	55.5 (13.6)
A1C	9.4 (2.3)
	n (%)
Sex, Female	295 (60.5)
Race	
African American	284 (58.7)
Caucasian	148 (30.6)
Ethnicity, Not Latino(a)	439 (96.3)
Insurance	
Medicaid	121 (25.0)
Medicare	149 (30.7)
Medicaid and Medicare	22 (4.5)
Commercial	191 (39.4)
Diabetes diagnosis	
Less than 1 year	133 (27.4)
1 to 5 years	119 (24.5)
More than 5 years	234 (48.2)
Had diabetes education	250 (50.2)
Number of education sessions	
One	106 (44.4)
Two to five	108 (45.2)
Six or more	25 (10.5)

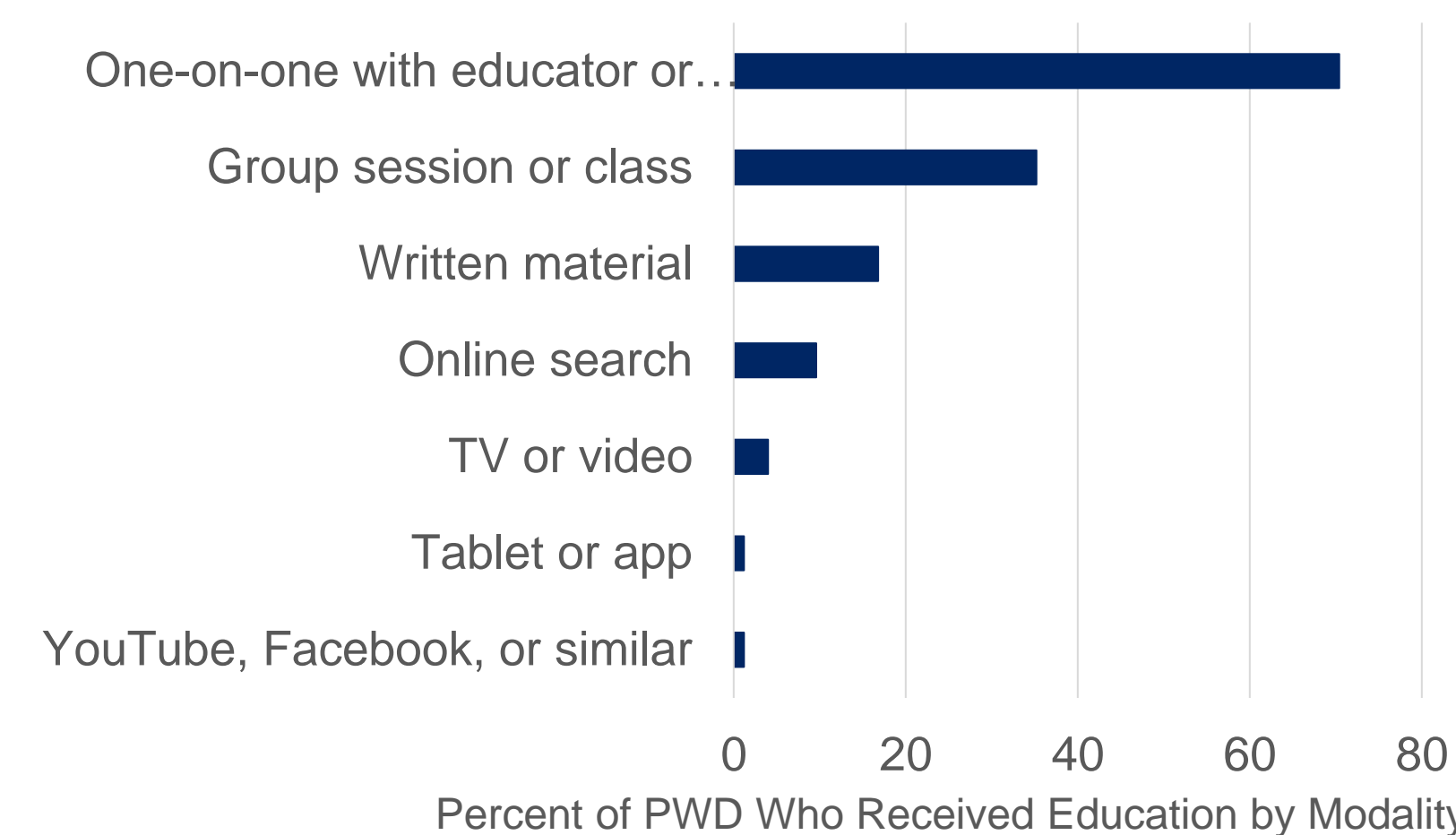
Time Since Last Diabetes Education



Educator



Education Modalities



Results

- Half of participants self-reported having “had diabetes education.”
- Of participants who reported education, 44% had one session, and the majority (89.6%) had fewer than six sessions.
- 72% had not had education in over one year.
- Education was most often provided in clinical settings by a dietitian (68%), doctor (51%), or nurse (43%), in one-on-one (70%) or group (35%) sessions.
- While most participants reported receiving education content on core diabetes knowledge, fewer reported receiving education on topics that are not needed daily, including sick day rules and when to call the doctor or go to the emergency room.
- The only significant predictor of receiving diabetes education was time since diabetes diagnosis. Compared to PWD diagnosed within the last year, those diagnosed 1-5 years and more than 5 years ago, respectively, were 10 times and 20 times more likely to have received diabetes education.

Limitations

- All data was self-reported by participants and required participants to recall events from years past, resulting in some missing data and potentially introducing recall bias.
- Participants represented a convenience sample, which may limit generalizability.

Conclusions

- **Consistent with prior national data, just 49.8% of adults with T2DM self-reported having had any diabetes education.**
- **Among those self-reporting having “had diabetes education,” the experience was varied in education content, modality, setting, and education provider, and the dose was low.**
- **Providers should know that PWD who say they have “had diabetes education” may not have received an adequate dose and/or adequate content to safely self-manage their T2DM.**
- **PWD experience of diabetes education may fall short of the comprehensive National Standards-recommended DSMES process, and innovative strategies are needed to address these gaps.**