

# Diabetes Education in Our Clinic: Does it Stick?

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## Introduction

Using effective teaching strategies can increase patient understanding and compliance. A systematic review by Friedman and colleagues compared showed that verbal teaching and discussions were found to be the least effective method for patient education. Written materials, lectures, audiotapes, computer technology and patient-specific information were found to positively affect patient knowledge, satisfaction and level of anxiety. Patients who received education through more than one modality had better outcomes when compared to those who only received verbal teaching.

Successful provider communication is essential for patient self-management. A study by Kruse and colleagues showed that patients find it difficult to relate quantitative measures, such as blood pressure or hemoglobin A1C (HA1C), to their symptoms; and emphasized the influence of social context on patient management. Physicians must link clinical measurements to symptoms and incorporate social context into the personalized approach towards diabetes self-management.

Our study aimed to increase attendance to the free Diabetes 101 educational class offered to patients of the Abram's Family Medicine Clinic. Our study was designed to create a personalized referral method; identify barriers to attendance; and detect a preferred learning method specific to our patient population. By using a one-on-one patient-physician referral and a tailored "diabetes passport," we anticipated an increased level of attendance and greater understanding of their medical condition.

## Methods

We constructed a diabetes passport based on ADA guidelines and recommendations for diabetes healthcare maintenance. We educated South Campus Family Medicine residents and staff on the content of this passport, structure of the diabetes 101 class, and referral process to the diabetes 101 class. From January to November 2015, the check-out staff kept record of patients referrals. A post-referral survey was created and administered over the phone by the researchers. For those individuals that were reached and completed the survey, the latest HA1C within the past year was recorded. Participants were excluded based on the following criteria: < 20 or > 70 years old, no diagnosis of diabetes, not a continuity patient of The Abram's Family Medicine Clinic. Individuals who were greater than 70 years old were excluded due to varying ADA goal guidelines for HA1C. Descriptive analyses was performed.

## Results

Out of the 40 patients referred to the diabetes 101 class and given a diabetes passport, 28 (70%) participants completed the follow-up survey, and 2 (5%) patients attended the class. Four of the 28 (14%) reported not getting a diabetes 101 passport, and 9 (32%) did not remember whether they received it. Fifteen (54%) patients reported finding the diabetes passport useful in giving them a better understanding of their disease and disease management. Of the 26 people that did not attend the class, 50% (n=13) reported it was due to "other" reasons, 27% (n=7) because they were too busy, 8% (n=2) because they felt the class was not needed or they did not need education in diabetes, 15% (n=4) of patients did not register for the class. (Figure 2.) "Other" reasons included: "no upcoming available Spanish class", no available transportation, confusion about the referral process, registered but did not show up, were sick, and had too many appointments to attend.

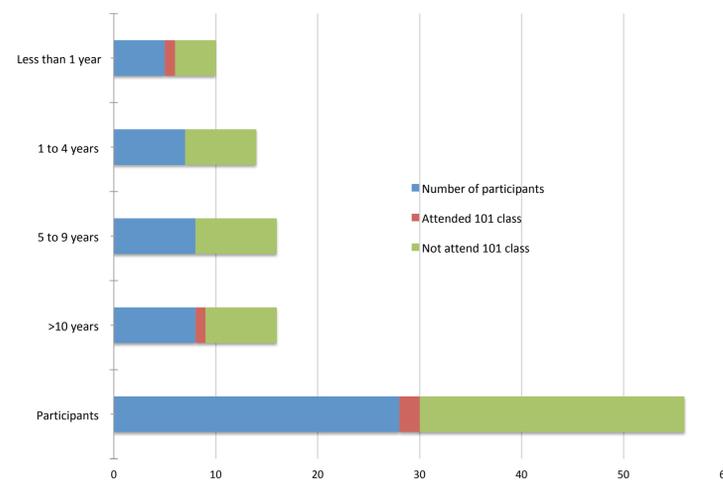


Figure 1. Attendance to the Diabetes 101 class and diabetes chronicity

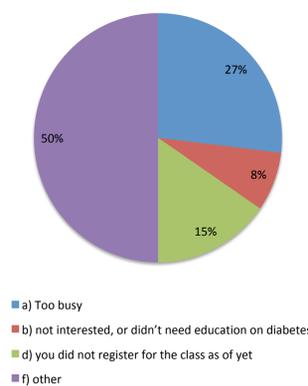


Figure 2. Reasons for non-attendance

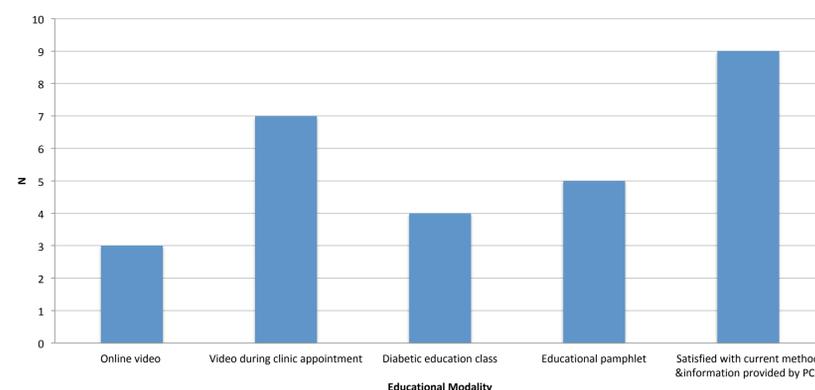


Figure 3. Participants preferred educational modality

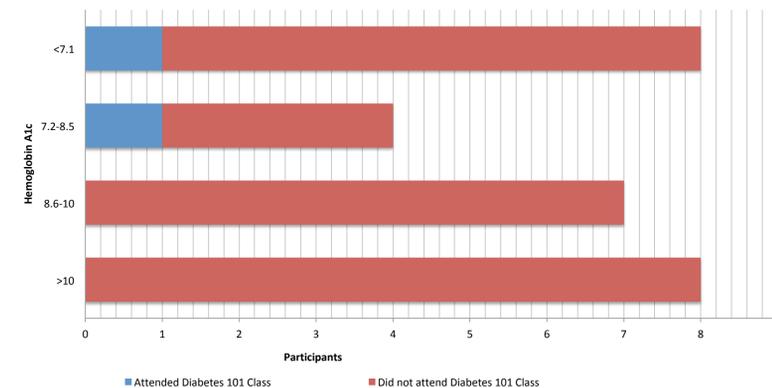


Figure 4. Hemoglobin A1c related to attendance

## Conclusions

A majority of those patients who received a passport and completed the survey, found that the diabetes passport helped them to understand their disease better. A majority of individuals referred to the diabetes 101 class did not attend. There did not appear to be a relationship between the chronicity of diabetes and attendance of class; however, both of the patients that attended the class were individuals with well-controlled diabetes (Figures 1 & 4).

While our patient population found a diabetes-passport useful in the understanding of their disease management, the majority of individuals indicated that the most effective way to learn about their disease was by education provided by their primary care physician. However, if additional educational tools were to be used, they would prefer a video during a scheduled clinic appointment (Figure 3). These results reflect findings from studies done by both Friedman et al and Kruse et al.; as they incorporated successful patient-physician communication and patient-specific education.

Our findings indicate that further research is needed to show the effectiveness of pairing primary physician education with educational tools such as in-clinic educational videos or chronic disease management passports, for not only diabetes but other chronic conditions. If primary care physicians increase their use of educational tools while the patient is in the clinic, it may decrease the transportation barrier. More research is need to determine how best to overcome barriers related to language and scheduling of health education classes.

## References

- Friedman, A. J. et al. Effective Teaching Strategies and Methods of Delivery for Patient Education: A Systematic Review and Practice Guideline Recommendations. 26:12-21 (2011)
- Kruse, Robin, PhD et al. Communication During Patient-Provider Encounters Regarding Diabetes Self-Management. Vol. 45, No 7, 475-483 (2013)

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