



Promoting Empathy with Glucometer Use in a Diabetes Laboratory

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INTRODUCTION

- The American Diabetes Association recommends the self-monitoring of blood glucose as an important component to diabetes management as it is a useful tool for guiding medical nutrition therapy and physical activity, preventing hypoglycemia, and adjusting medications.¹
- One study of 663 participants reported that 41% of participants stated that they had never been taught how to use a glucometer and had to learn on their own, while only 5% were taught how to use a glucometer by their doctors or endocrinologists.²
- A Diabetes Education lab was taught in a Foundational Pharmacy Skills Course to first year professional students at the West Virginia University School of Pharmacy.
- One week prior to the diabetes education lab, students were given a new glucometer, glucometer manual, glucose log sheet and 14 tests strips and 14 lancets. Students were instructed to test their blood sugar twice daily and to bring their results with them to class the following week, and were given no additional instructions on how to use the blood glucose meter or lancets.
- The goal of the pre-laboratory glucometer activity was to demonstrate to students how patients might feel about checking their blood sugar with little instruction and to demonstrate the importance of educating patients on using their glucometer and interpreting blood sugar results.
- When students came to the diabetes lab, they were educated on how to properly use their glucometers and how to interpret blood glucose values.

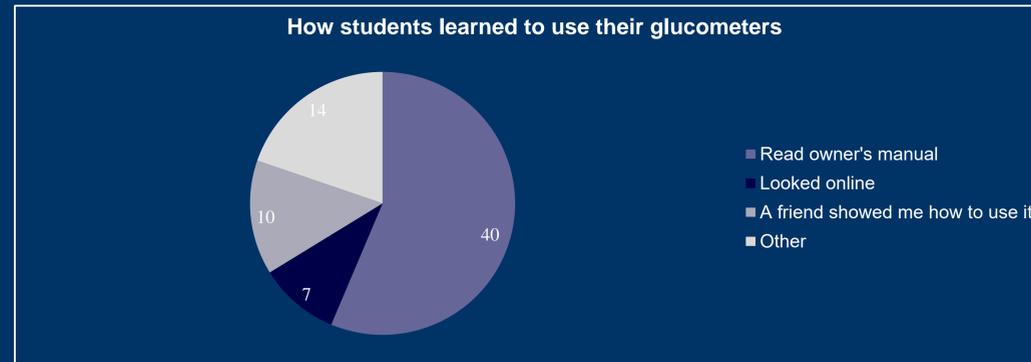
OBJECTIVE

- To assess students' learning and perceptions of a glucometer exercise and laboratory.

METHODS

- This study was approved by the West Virginia IRB.
- After learning how to properly use a glucometer, students were given an anonymous survey to assess their glucometer usage and their perceptions of the activity.
- Students were also asked about their previous exposure to a glucometer and what resources they use to learn how to use their glucometer.

RESULTS



- A total of 68 students (95.8% of class) completed the survey
- Prior to this experience, 44 students (64.7%) had never used a glucometer, and all but four students learned how to properly use the glucometer on their own prior to being taught in class.
- Sixty-six students (97.1%) either agreed or strongly agreed that this was a valuable learning experience.
- Sixty-seven students (98.5%) either agreed or strongly agreed that this experience made them feel more compassionate towards individuals that need to test their blood glucose daily.
- Based on self-reported answers, students wasted an average of 0.93 test strips per person and forgot to test an average of 1.6 times.



RESULTS

Student Comments from Survey:

- *"I really enjoyed the experience because I learned first hand how to use the glucometer and what patients with diabetes goes through in the beginning"*
- *"I thought that the activity was a great experience to relate to patients who test"*
- *"It was difficult without instructions on how to correctly do it and when to test, it makes me appreciate the important of counseling patients"*
- *"I found this to be an interesting experience to gain an understanding of what a person with diabetes has to deal with. I also found it interesting to see what my blood glucose is like on a consistent basis"*
- *"Very eye opening experience"*

IMPLICATIONS

- This laboratory activity was a valuable learning experience for students.
- Having students test their blood sugar at home helps them to understand more about how a patient with diabetes might feel about checking his/her blood sugar. This will likely make students more empathetic towards their patients, especially when making recommendations to test multiple times daily.
- This experience will hopefully reinforce the importance of counseling a patient on a new glucometer.

REFERENCES

- 1) "Standards of Medical Care in Diabetes-2018." Diabetes.org American Diabetes Association. Web. Accessed-June 11, 2018.
- 2) Tenderich A. Use of Blood Glucose Meters Among People With Type 2 Diabetes: Patient Perspectives. Diabetes Spectrum. 2013; 26(2): 67-70.