

Community Matters: Diabetic Program Evaluation and Survey through Community Outreach via

Telenursing

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## **Introduction**

A fairly new field of nursing, telenursing offers a way for nurses to check in on patients and reach those who lack easy access to healthcare. According to Hagan, Morin, and Lépine, patients felt high satisfaction through telenursing, followed the recommended advice, and would use telenursing for future problems. One aspect of telenursing is the practice of making follow-up telephone calls. Studies show that follow-up calls are effective and efficient, as well as cost-effective (Hagan, Morin, & Lépine, 2000). In a study by Zolfaghari, Mousavifar, Pedram, and Haghani, follow-up phone calls as an intervention can increase adherence to diabetes management plans and decrease A1C level over a three month period (2012).

## **Background**

The Dial Down Diabetes program at the Matthew Walker Comprehensive Health Center is designed to help those with pre-diabetes and diabetes understand and control their disease. The program exists through grant money and targets African American and Latino women specifically. Educational workshops are offered twice a month at the Nashville, Tennessee and Clarksville, Tennessee locations. These workshops include educational material about cooking healthier, exercising, and medication adherence. Pharmacists will often give lectures and answer questions on medications. Chefs give presentations on cooking, and occasionally free exercise classes are held. The workshops also serve as a support system for people suffering from diabetes, and it is a non-threatening environment to ask questions and seek clarification. The program also offers a free diabetic clinic that consists of a number of specialist including a podiatrist and nutritionist. Though the clinic is free to be seen, the patients do have to cover the costs of any extra tests performed. There has been a decrease in attendance though, so this

project was created to survey the diabetes community via follow-up telephone calls to assess the program and lack of attendance.

## **Methodology**

The methods used for this project consisted of making 227 follow-up telephone calls over a seven week period to the diabetic population of the Matthew Walker Clinic in Nashville, Tennessee. A list of patients with a diagnosis of diabetes that attended at least some part of the Dial Down Diabetes Program between May of 2012 to May of 2013 was obtained, and each patient on the list was called. Each person was told what the telephone call pertained to, and asked if they would answer a series of questions related to diabetes. The questions addressed the focused areas of overall demographics, physical fitness, nutrition, medication, motivation and support, and program participation. These telephone calls were only made to patients that participated in the Dial Down Diabetes program within the past year, and their activity with the program ranged from a regular participant to not active at all. A survey with a total of twenty eight questions was created using the tool surveymonkey. Each question was designed to inquire about one of the six focused areas of assessment. The answers of the survey from each patient were recorded in surveymonkey. Forty four patients of the 227 patients called answered the survey which is a return rate of almost twenty percent. Voicemail messages were left with phone numbers for patients that did not answer their phone. Many of the phone numbers were either no longer in service, temporarily disconnected, or an incorrect number.

The goals of these follow-up questions were to encourage patients to continue with the Dial Down Diabetes program, to find the area that needs the most attention, and to identify areas

of needed program improvements. The recorded surveys were then analyzed mathematically into percentages and answers were graphed accordingly. The survey questions are listed below.

#### Demographics

1. Name
2. Age
3. Gender
4. What is the highest grade or level of school that you have completed?
5. Race
6. A1C Level

#### Physical Fitness

7. Do you exercise until you sweat?
8. How many times do you exercise until you sweat each week?
9. Have you exercised more, less or about the same since joining Dial Down Diabetes Program?

#### Nutrition

10. How many times a week do you eat fried or greasy food, sweets or sugary foods, fatty foods or foods considered unhealthy?
11. Do you have a Dial Down Diabetes food tracker?

12. Do you use your Dial Down Diabetes food tracker
13. Since joining Dial Down Diabetes, have you started eating healthier more, less or about the same?

#### Medication

14. What medication, if any, do you take to manage your diabetes?
15. Are you taking your medication as prescribed by your doctor?
16. If not, why?
17. Since joining Dial Down Diabetes, have you started taking your medication as prescribed more, less or about the same?

#### Motivation and Support

18. Did the Dial Down Diabetes program motivate you to make changes in your eating, exercise or taking medication?
19. If yes, which ones - eating, exercise or taking medication?
20. Do you have the skills necessary to manage your diabetes?
21. If no, which skills do you feel you are lacking? Disease knowledge, treatment knowledge, physical challenges (unable to take care of self), or other?
22. What challenges are keeping you from following the Dial Down Diabetes program?
23. Do you have someone who gives you emotional support? (i.e. friends, family, pastor, etc)

## Program Participation

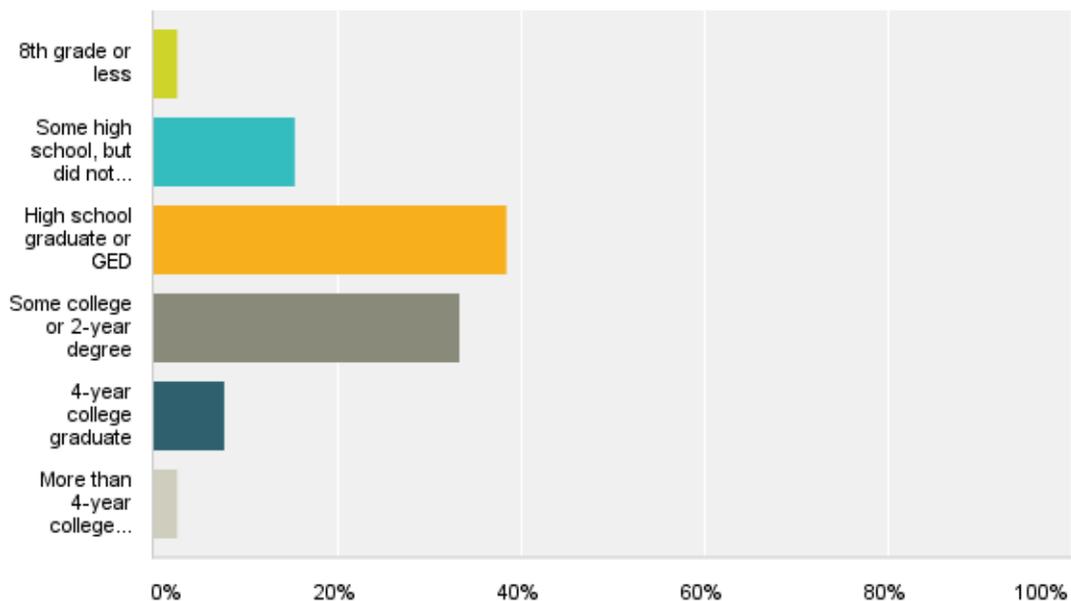
24. Have you attended any of the Mathew Walker diabetes workshops?
25. If yes, when did you attend?
26. Would you like to go to the next Diabetes Education workshop?
27. Have you already scheduled your next visit to the Matthew Walker Clinic?
28. If no, would you like our scheduler to call you today?

## Results

Of the 44 participants, the majority were African American females between the ages 41-50 with a very high A1C of 9.0 or greater. The highest level of education completed for the majority of participants is a high school diploma or GED.

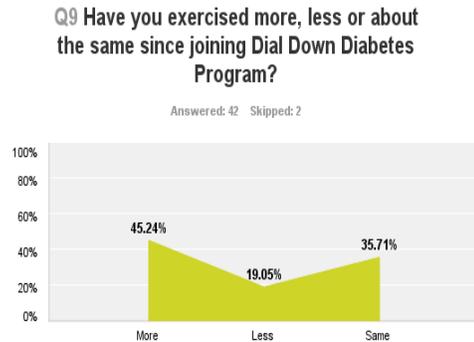
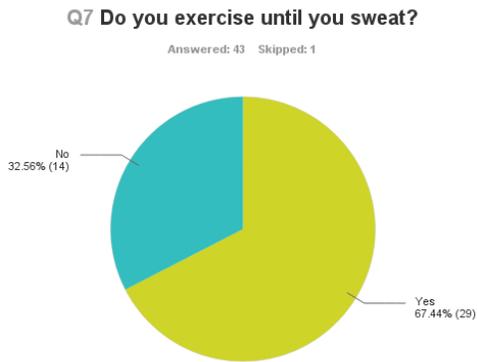
### Q4 What is the highest grade or level of school that you have completed?

Answered: 39 Skipped: 5



Sixty-seven percent of participants admit to exercising and 34% exercise 3 times a week.

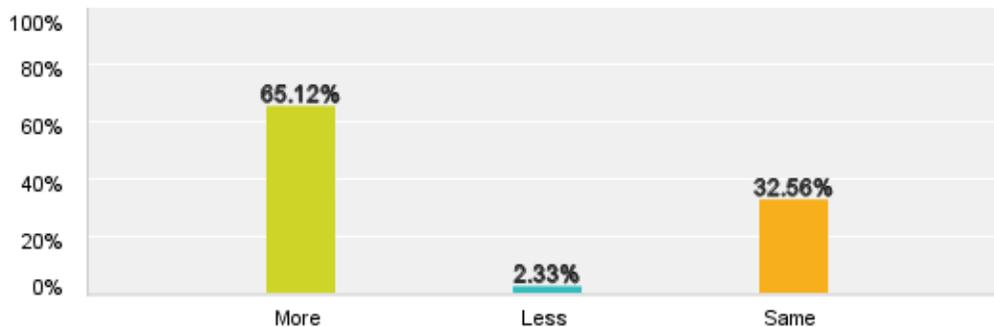
Overall, 45% of people feel they exercise more since joining the dial down diabetes program.



About 48% of people admit to eating unhealthy 1-3 times a week. The majority (59%) has a Dial Down Diabetes food tracker but 88% of people admit they do not use it. Overall, however, 65% of people claim to eat healthier since joining the program.

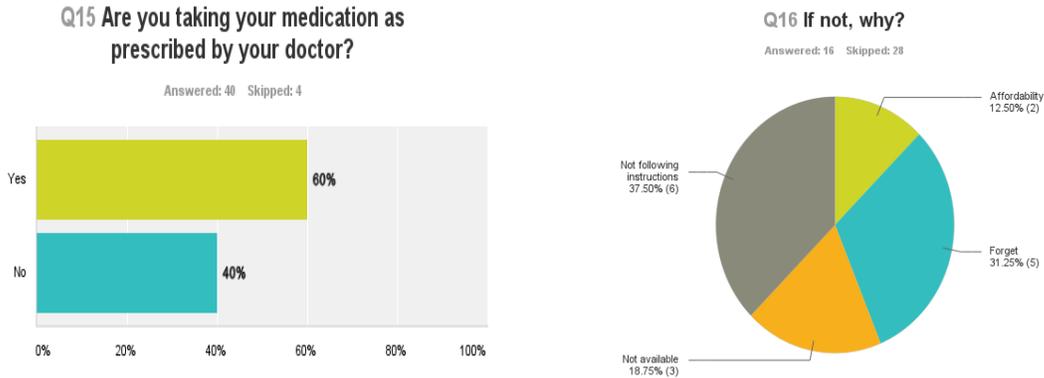
**Q13 Since joining Dial Down Diabetes, have you started eating healthier more, less or about the same?**

Answered: 43 Skipped: 1



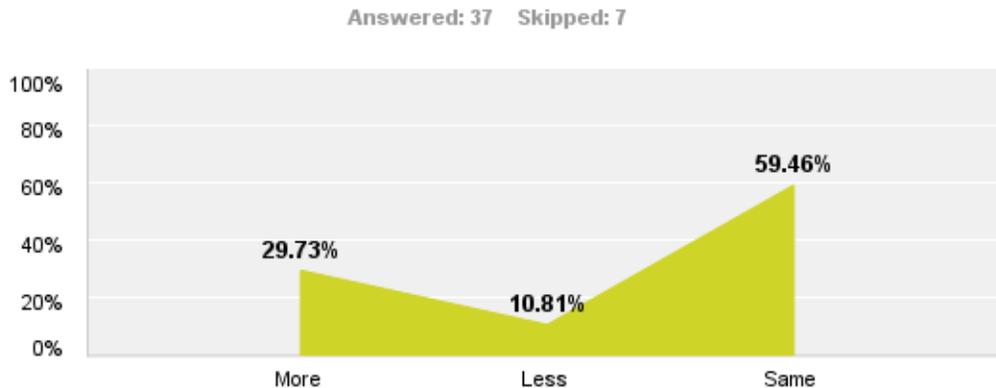
Almost 73% of participants are taking the medication Metformin. Shockingly, though, 40% of

participants admit to not taking their medication as prescribed by their doctor.



The most common reason (37.5%) for this is not following medication instructions, followed by (31.25%) people just forgetting to take the medication. Although about 30% of participants feel they take their medication as prescribed more, about 60% feel they have had no change in how they take their medication.

### Q17 Since joining Dial Down Diabetes, have you started taking your medication as prescribed more, less or about the same?

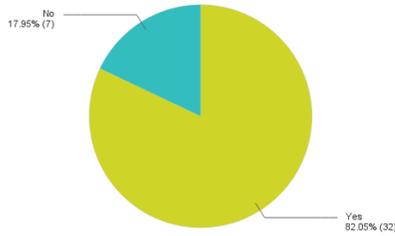


Overall though, 82% of people feel this program motivates them to make lifestyle changes

whether in eating, exercising, or proper medication usage.

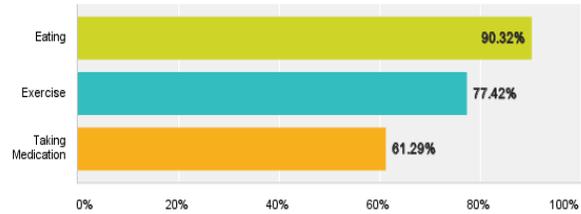
**Q18 Did the Dial Down Diabetes program motivate you to make changes in your eating, exercise or taking medication?**

Answered: 39 Skipped: 5



**Q19 If yes, which ones - eating, exercise or taking medication?**

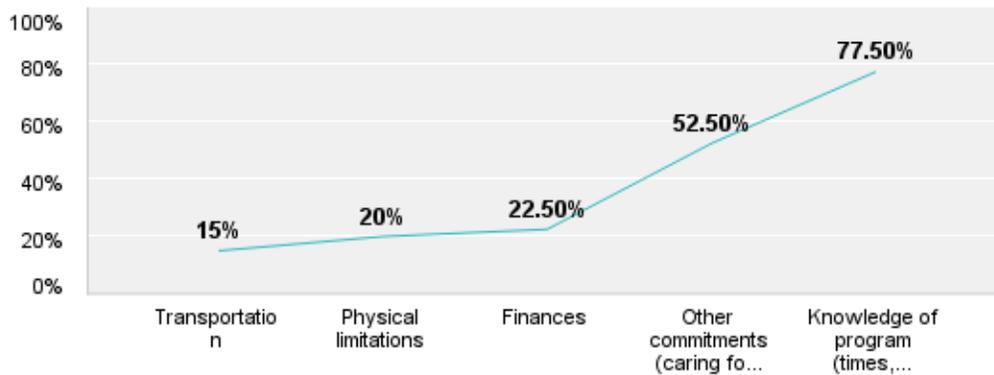
Answered: 31 Skipped: 13



Most people (83.72%) feel they have the skills necessary to manage their diabetes, but for the people who feel they do not have the skills needed, disease knowledge was the main reason as to why they feel they are lacking. The greatest challenge participants face that prevent them from following the program turned out to be program knowledge (77.5%), such as times and dates of events.

**Q22 What challenges are keeping you from following the Dial Down Diabetes program?**

Answered: 40 Skipped: 4



Almost 77% of people do have some type of emotional support system in place. Of the

participants surveyed, 62.79% had not been to a dial down diabetes educational workshop, and 62.79% answered that they would like to attend one in the future. Almost 62% of participants did not have a future appointment scheduled with Matthew Walker, and 52% did wish to be called to set up an appointment. Those participants were called and appointments were made for them.

## **Discussion**

Based on this survey, the Dial Down Diabetes program has positively impacted those who have joined it. There were improvements in all areas of the program; however, the area of least improvement is medication usage. It is a shocking statistic that 40% of people are not taking their medication as prescribed by their doctors, and this can have serious harmful side effects. What is more surprising is that participants admitted the main reason for not taking their medication as prescribed is simply not following instructions. Participants claimed to cut pills in half, skip pills if their blood sugar was in a normal range, and chose not to take the medication because it upset their stomach. When looking at this problem, it is important to look at the patient population as well. Of the patients at Matthew Walker CHC, 72% are currently uninsured. Although Matthew Walker CHC offers medications at a low cost, it is still an added expense to an already hard to meet cost of living. It is an assumption, but perhaps the reason that people are splitting pills in half and skipping pills when their blood sugar is normal is to make the medication last longer. Perhaps due to financial strain, people cannot afford to take their medication as prescribed, and must do the best they can with what they can afford. More in depth research needs to be done specifically on medication usage to best be able to serve this community in the future.

This research also shows the benefits of telenursing, because of those that responded to the survey, 52% wanted to make an appointment with Matthew Walker CHC but had not yet done so. Those people were called, and they had appointments made, which increases the amount to primary care they are receiving. These patients for reasons unknown had not called to make appointments themselves, but now because of telenursing, were brought back into the clinic.

### **Recommendations**

Recommendations for the future based on the information gained through this survey are to better educate patients on the side effects of medications, and why medication adherence is important to maintain the positive effects of the medication and ultimately good health. Because so many patients are prescribed Metformin (72.73%), a simple handout about the medication may be helpful. The handout should include common and serious side effects, proper usage, importance of adherence, and what to do if further information is needed. Also, because of the high rate of participants (77.5%) that did not know about all the Dial Down Diabetes program offers, better marketing is a necessity. Every time a diabetic patient comes to the clinic, they need to be given a list of dates for the educational sessions for the year, and a list of the services provided at the diabetic clinic. Ownership of the responsibility of communicating this knowledge to the patients should be displayed by every member of the healthcare team. The doctors, nurses, medical assistants, pharmacists, and receptionists should all be promoting the Dial Down Diabetes program and answering any questions the patient may have, instead of referring them to someone else. For this to be a reality, everyone working in the clinic needs to be educated on the program and up-to-date on program events.

Follow-up calls are also necessary for diabetic patients to ensure they come back for regular check-ups. People can get busy with other obligations, or simply forget about follow-up appointments, so having someone call to remind them is of utmost importance.

## **Conclusion**

In conclusion, the Dial Down Diabetes program is overall a successful initiative at the Matthew Walker Comprehensive Health Center in Nashville and Clarksville, Tennessee. Patients are highly satisfied with the program, and it has motivated those with diabetes to make vital lifestyle changes. However, this program could have an even greater impact on this community if more people knew all it had to offer. Better marketing is absolutely vital to reach more people, and currently, the responsibility of the program lies to one case manager. It needs to be everyone's responsibility to educate and inform the patients of the many services freely available to them that will ultimately help improve their health. More research is also needed to discover why there is such a huge amount of patients not correctly taking their diabetes medication. This is a step in the right direction, though, to be made aware of and have quantitative evidence that this problem does exist. Due to the high rate of positive feedback from the participants, this program has the opportunity to continue to positively affect those in the Middle Tennessee area suffering from diabetes. Finally, due to community outreach via telenursing, almost 54% of patients were brought back into the clinic that may otherwise have been missed.

## References

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