



Type II Diabetes Mellitus: A Feasibility Study of Virtual Group Counseling and Accountability

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BACKGROUND

The prevalence of diagnosed Diabetes Mellitus Type II (DMII) in the United States was approximately 10.5% (34.2 million adults) in 2018 per the CDC. This count is limited by self reporting, so the actual number is likely much higher. Complications from DMII include retinopathy, nephropathy, neuropathy, peripheral vascular insufficiency, myocardial ischemia and cerebrovascular ischemia. Individual DMII education to improve outcomes is discussed with patients at every 3 to 6-month visit, ideally. As the COVID pandemic has progressed, patients have continued to struggle with navigating the need for frequent follow ups with entering the office. There have been prospective studies showing that group counseling is more or equally as effective at improving education and improving glycemic control in patients with DMII. Utilizing virtual group counseling for this education could prove to be superior to individual counseling for the added support and accountability of peers in combination with the decreased public exposure. It also allows providers to see patients with DMII more often and for prolonged periods of time, which improves efficiency and effectiveness.

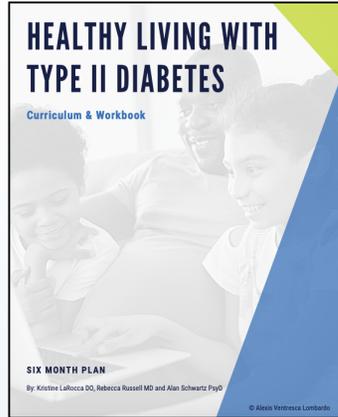
Objective: To determine the feasibility of a randomized clinical trial comparing glycemic control between patients in virtual group counseling focusing on lifestyle management and patients receiving the standard of care. Our ultimate goal is to achieve glycemic control with a HgbA1C goal of <7% for patients <65 years old and 8% for those >65 years old.

METHODS

Our study population included patients with uncontrolled DMII (HgbA1c > 8%) from the ChristianaCare Family Medicine Residency practice. We enrolled 6 adult patients. The interventions included a once monthly virtual peer group, an interactive workbook, and ongoing peer support over 6 months (September 2020 – February 2021). This was done through Zoom and Zoom Channels. Process measures include participation in enrollment, number of participants in monthly meetings, worksheets completed, and the number of virtual peer support posts created. Outcome measures include changes in HgbA1C, weight, BMI, and the Diabetes Distress Scale survey over 6 months.

The group sessions focused on different aspects of lifestyle as related to diabetes management and behavioral health was involved throughout. The patients were asked to follow up in the office for routine diabetic care and glycemic control was measured throughout the intervention.

Orientation: Overview and counseling on hypoglycemia
 Month 1: DMII education, nutrition, and goal setting
 Month 2: Meal planning
 Month 3: Time management and the role of exercise
 Month 4: Emotional eating and deliberate thinking
 Month 5: Sleep hygiene
 Month 6: Long term accountability and future goal setting



	Orientation	Month 1	Month 2	Month 2	Month 4	Month 5	Month 6
Participants	4	3	1	1	1	2	
Worksheets submitted	n/a	0	6	0	1		
Peer support posts	2	2	9	1	7		

	A1c		
	Initial	Midway	Change
Participant 1	9.6	6.4	-3.2
Participant 2	8.4	7.9	-0.5

Participant	Weight (kg)		
	Initial	Midway	Change
Participant 1	143.8	139.7	-4.1
Participant 2	93.2	92.5	-0.7

	Diabetic Distress Scale	Attendance
Participant 1	31	5/7
Participant 2	23	5/7

Table 2. 17-Item Diabetes Distress Scale
 Listed below are potential problem areas that people with diabetes may experience. Consider the degree to which each of the items may have bothered or bothered you during the past month and circle the appropriate number.

	Not at All Bothered	Slight Bothered	Moderate Bothered	Considerable Bothered	Severe Bothered	Very Severe Bothered
1. Feeling that diabetes is taking up too much of my mental and physical energy each day.	1	2	3	4	5	6
2. Feeling that my doctor doesn't know enough about diabetes and diabetes care.	1	2	3	4	5	6
3. Feeling angry, sad, or depressed when I think about living with diabetes.	1	2	3	4	5	6
4. Feeling that my doctor doesn't give me clear enough directions on how to manage my diabetes.	1	2	3	4	5	6
5. Feeling that I am not taking my blood sugar frequently enough.	1	2	3	4	5	6
6. Feeling that I am often living with my diabetes diabetes.	1	2	3	4	5	6
7. Feeling that friends or family are not supportive enough or will not understand my planning activities that conflict with my schedule, encouraging me to be the "hang" friend.	1	2	3	4	5	6
8. Feeling that diabetes controls my life.	1	2	3	4	5	6
9. Feeling that my doctor doesn't take my concerns seriously enough.	1	2	3	4	5	6
10. Not being confident in my own ability to manage diabetes.	1	2	3	4	5	6
11. Feeling that I am not taking clearly enough to get my feet good.	1	2	3	4	5	6
12. Feeling that friends or family don't express any how difficult living with diabetes can be.	1	2	3	4	5	6
13. Feeling overwhelmed by the demands of living with diabetes.	1	2	3	4	5	6
14. Feeling that I don't have a doctor who I can see regularly enough about my diabetes.	1	2	3	4	5	6
15. Not being motivated to keep up my diabetes self-management.	1	2	3	4	5	6
16. Feeling that friends or family don't give me the emotional support that I need.	1	2	3	4	5	6

RESULTS

Six participants were enrolled into the study. Four participants were present for orientation and three for the first month. Only one participant was present at a time during months two through four. Throughout the study thus far we have had two actively engaged patients. When they are not able to make the meetings they are contacted to be brought up to speed on the content. These two engaged participants voluntarily uploaded their completed worksheets to the Zoom Channel. There was some, but limited interaction with this channel between months.

The patients that enrolled but did not participate were engaged to inquire about the deterrents or obstacles to attending, but did not provide a response.

Feedback from participants:

- "It stimulated me to think about the issues I need to address to lose weight and control my blood sugar."
- "It was one-on-one so we went over the workbook in detail and any questions I had were answered, giving helpful tips and insight."

In progress: analysis of changes in HbA1c, weight, and BMI.

CONCLUSIONS

Utilizing group counseling could prove to be superior to individual counseling for the added support and accountability of peers. Additional benefits include time and cost savings for the provider.

As the pandemic continues, accessing frequent individualized care has become more challenging for patients. Our feasibility study shows that for some patients, a group virtual session discussing their care could be optimal. We also show that focusing on lifestyle modifications and engaging patients in their care can improve glycemic control. However, more studies need to be performed on the long-term feasibility of these meetings and eliminating the barriers that patient's face on virtual platforms.

ACKNOWLEDGEMENTS

Dr. Schwartz, Dr. Rapaccioulo, Dr. Patel, and Dr. Jurkovitz for continued participation and support. There were no sponsors or grants for this study. Approval was achieved by the ChristianaCare Institutional Review Board (CCC# 40127).