

Pharmacist Based Coaching Within a Specialty Diabetes Center Improved Outcomes for Uncontrolled Diabetes

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Background

- Coaching programs have been shown to improve diabetes outcomes.¹ We investigate a novel approach where clinical pharmacists, trained in diabetes care, provide coaching for patients of the UMass Memorial Diabetes Center of Excellence (DCOE) who are in poor control. Coaches addressed all aspects of diabetes care, yet the program was cost-neutral to clinical operations.
- Patients with diabetes face numerous challenges, including medication affordability, barriers to adherence, and the complexity of self-managing their condition.

What is the Care Coach Program?

The Shields-UMass Diabetes Care Coach program provides highly individualized care to the clinic's most at-risk patients living with diabetes. Coach services are provided at no cost to the patient and include:

- Medication therapy management (MTM)
- Blood sugar monitoring
- Medication refill & delivery coordination
- Nutrition & lifestyle counseling
- DME education
- SDOH screening & referrals
- Mental health referrals

Program Referral Criteria

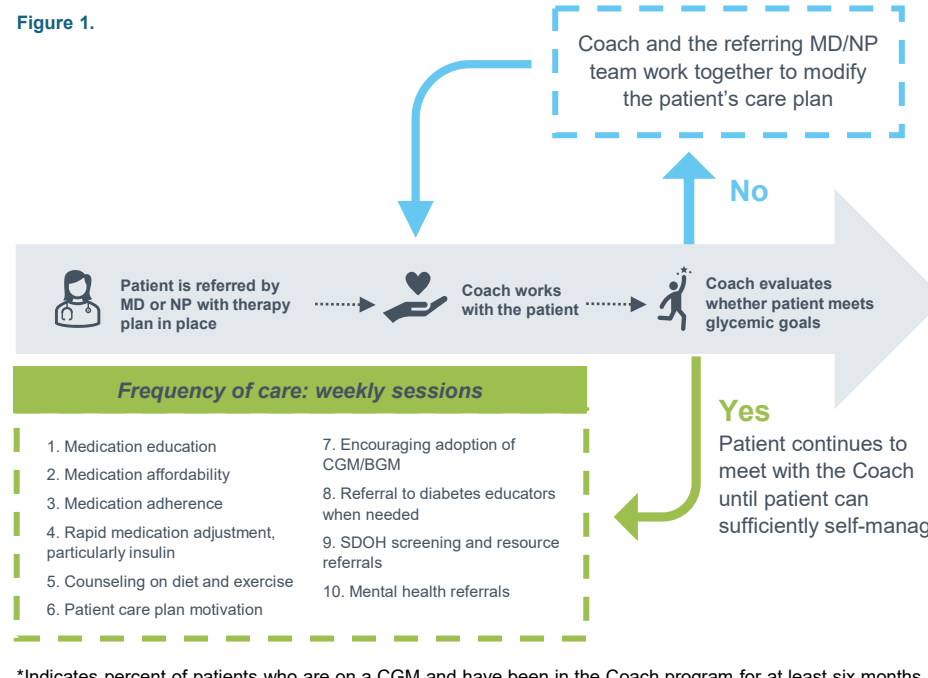
- Must be patient receiving diabetes care in the DCOE for whom standard care is not helping to improve glycemic goals
- Patients have been seen by education within the past 18 months (or clinician deems patient sufficiently educated)
- Two most recent A1Cs at point of referral must be ≥ 9 (after at least 3 months as a patient of the DCOE)

Methodology

- DCOE clinicians refer patients who, despite receiving care within a specialized diabetes clinic, remain unable to meet A1C goals
- Patients sign non-binding program compact
- Coach and patient meet weekly to start (initial visit in-person, subsequent visits by phone)
- Coaches collaborate with patients to establish individualized, incrementally achievable goals which are monitored at follow-up visits using clinical endpoints (BCG/CGM data, A1C)
- Patients are presented with the option to fill with the UMass Specialty Pharmacy (UMSP)
- Coaches are highly integrated with the patient's diabetes care team (Endocrinologists, NPs, CDCESs, etc.) and follow education treatment guidelines

Results

Figure 1. Illustration of high-level program workflow and list of services provided. **Figure 2.** Outcomes associated with services provided through the Care Coach program; n=156 patients enrolled with A1C ≥ 9 (n=156); Type 1 patients (n=39); Type 2 patients (n=113); Other patients (n=4); active patients (n=108); active patients are those who are currently engaged and receiving services from a Coach



*Indicates percent of patients who are on a CGM and have been in the Coach program for at least six months

***"Before" and "Follow Up" values reflect equivalent pre and post enrollment timeframes for patients in the Coach program for at least six months (180 days)

Conclusions

- Delivery of frequent, individualized and highly-integrated diabetes medication and lifestyle management to the highest-risk patients living with diabetes drove an A1C reduction of greater than 2.0 points for patients who were on service for at least six months.
- This reduction in A1C has been sustained over the course of the time that patients are participating in the program.
- The use of frequent touch points by a pharmacy-based coach for treatment adjustments based on BGM and CGM data is more effective than treatment adjustments based on A1c every three months in poorly controlled patients.
- There is a positive association between Coach program participation and reduction in diabetes-related hospitalizations and ER visits – through this program the Coaches can deliver proactive care to not only improve patients' clinical outcomes but also prevent future high-cost events.
- The program is financially self-sustaining through revenues generated by patients filling with UMSP.

DISCLOSURES

The authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

REFERENCES

- Bollyky, J.B., Bravata, D., Yang, J., Williamson, M., Schneider, J. (2018). Remote Lifestyle Coaching Plus a Connected Glucose Meter with Certified Diabetes Educator Support Improves Glucose and Weight Loss for People with Type 2 Diabetes, *Journal of Diabetes Research*, 2018(Article ID 3961730), 7 pages. <https://doi.org/10.1155/2018/3961730>

Figure 2.	Before Enrollment	Follow up (Change)
Hemoglobin A1C 6 month follow up (n=74; non-white=33)	10.8%	8.9% (-1.9%)
9 month follow up (n=62; non-white=28)	11.0%	8.7% (-2.3%)
12 month follow up (n=53; non-white=28)	10.7%	8.7% (-2.0%)
15 month follow up (n=37; non-white=17)	10.6%	8.4% (-2.2%)
PAID Score for Diabetes Distress (n=65)	37.6	19.5 (-18.1, after at least six months)
Continuous Glucose Monitor (CGM) Use*	49%	63% (+14%)
Average Weight (n=76, Type 2 patients)	203.2 lbs	206.4 lbs (+3.2 lbs)
Hospitalizations (Total)**	40	38
Hospitalizations (Diabetes Related)**	13	6
ER Visits (Total)**	95	79
ER Visits (Diabetes Related)**	23	11
Average per fill drug cost after enrollment \$5.52		