Reducing Total Medical Expense and A1C Levels Through Pharmacist-Driven Coaching

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BACKGROUND

- Of the 30 million people in the United States that live with diabetes, 18% have an HbA1c value of > 9%. These patients are more likely to be hospitalized, have longer length of stay, and incur higher medical expenses on average, which is attributable to uncontrolled diabetes.[1]
- Reducing proportion of adults with diabetes with HbA1c values higher than 9% is a goal of the Healthy People 2030 campaign by the HHS with the latest result showing little to no detectable changes.[1]
- Specific patient struggles can include medication non-adherence, limited health literacy and unaddressed social determinants of health (SDOH) needs.
- The UMass Diabetes Center of Excellence (DCOE) in Worcester, Massachusetts provides comprehensive diabetes care to approximately 10,000 patients annually, offering both endocrinology care and diabetes education.

Diabetes Care Coach Program

- ✓ The Diabetes Care Coach Program is a multidisciplinary intervention, designed to utilize pharmacists to drive engagement, improve medication adherence and outcomes, as well as address patients' personal needs via SDOH resources.
- ✓ Coaches drive engagement, improve medication adherence and affordability, educate, provide nutrition and lifestyle counseling, and connect patients to individualized SDOH resources.

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

- Care Coaches are PharmD-CDCES' who are embedded in the DCOE and collaborate directly with endocrinologists, nurse practitioners, diabetes educators and other clinicians to ensure aligned, real-time care planning.
- We conducted a retrospective cohort study comparing patients of the UMass DCOE enrolled in the Care Coach program (intervention) to those that met the referral criteria but were not enrolled from January 2020 – May 2024.
- We calculated propensity to enroll in the program using patient characteristics (age, BMI, race, sex, and Charlson Comorbidity Index (CCI)) and pre-enrollment trends for HbA1c, healthcare utilization, and total medical expenditure and developed a weighted control group.
- Outcomes analyzed were average HbA1c and annualized total medical expenditure (TME) one-year prior to enrollment and one-year post enrollment. Control "index" time was set for the date of the first patient enrolled in the program as a conservative approach to estimate treatment effect given average trends of A1C and TME.

RESULTS

Figure 1. Illustration of program's annual TME savings for UMass Memorial Medicare ACO patients, with an average savings figure of $2,649.
Figure 2. Clinical outcomes for patient population A1C≥9 .

Figure 1.

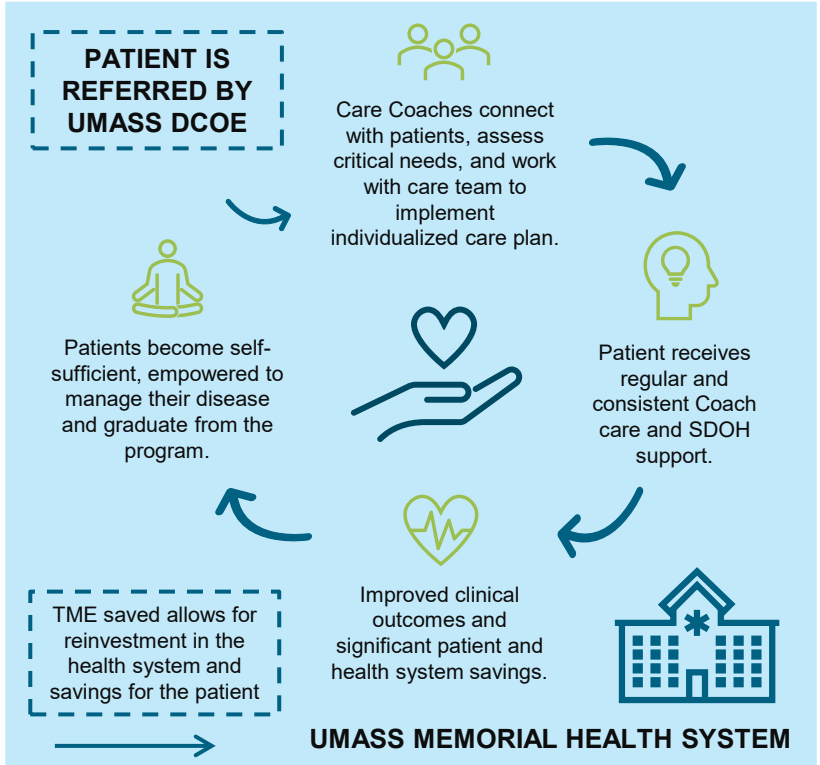
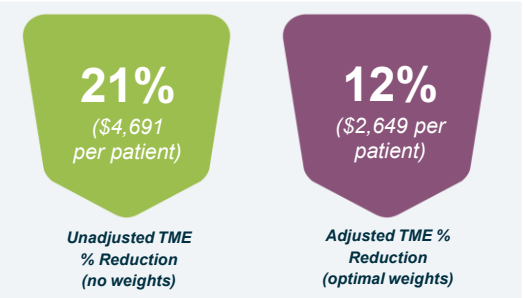


Figure 2.



Variable	DCC Treated (n=239)	Weighted Controls (n=815)
Age (mean)	57	57
Women	52	50
Weighted CCI (mean)	5.0	5.1
Baseline A1C (mean)	10.2	10.2
Post-Intervention A1C (mean)	8.8	9.7

CONCLUSIONS

- The Diabetes Care Coach Program was associated with significant reductions in total medical expense (TME) and improvements in glycemic control in high-risk diabetes patients.
- Among Medicare ACO patients, the program achieved an average annual adjusted savings of $2,649 per patient ($4,691 unadjusted savings), highlighting the potential for pharmacist-driven coaching models to meaningfully reduce healthcare costs. [2]
- For every 100 patients within the study cohort, there was an average of 15 fewer ER visits shown, 22 fewer inpatient visits, and 3.7 fewer length-of day stays compared to patients not receiving coaching. [2]
- These savings were achieved through better disease control, improved medication adherence, and proactive care coordination – in turn reducing the need for acute and costly medical interventions.
- More importantly, the financial return helped in supporting the program's economic sustainability, with additional revenue generated through improved pharmacy support, engagement and adherence.

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
1. Healthy People 2030. (n.d.). *Reduce the proportion of adults with diabetes who have an A1C value above 9 percent - D-03.* Reduce the proportion of adults with diabetes who have an A1c value above 9 percent — D-03. https://odphp.health.gov/healthypeople/objectives-and-data/browse-objectives/diabetes/reduce-proportion-adults-diabetes-who-have-a1c-value-above-9-percent-d-03.
2. PLOS One 2026 (n.d). *Effectiveness of a pharmacist diabetes coaching program: A propensity-matched retrospective analysis* --- https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0345534