

# Blue Shield of California poster presentation at AMCP 2024 shows improved medication adherence and clinical outcomes with Sempre Health

Blue Shield of California (BSC) presented research at the Academy of Managed Care Pharmacy national meeting in April 2024 which demonstrates that Sempre Health's program improves patients' medication adherence and clinical outcomes.

In BSC's study of more than 31,000 patients with diabetes and cardiovascular disease, those enrolled in the Sempre Health program had a higher proportion of days covered (PDC) for their medications compared to those who were not enrolled. Specifically, Sempre patients had an average PDC of 0.77 for diabetes medications compared to 0.53 for non-Sempre patients, and an average PDC of 0.77 for cardiovascular medications compared to 0.56 for non-Sempre patients.

Patients enrolled in Sempre's program also demonstrated improved health outcomes: the percentage of diabetes patients with abnormal hemoglobin A1c lab readings decreased from 56% pre-program to 40% post-program. Similarly, cardiovascular disease patients with related hospitalizations showed a reduction from 83% pre-program to 39% post-program.

Sempre Health and Blue Shield of California are working together to provide financial discounts and refill reminders for patients with chronic diseases. Medication adherence is vital for managing conditions like diabetes and cardiovascular disease, but high costs often prevent patients from following their prescribed treatments, leading to worse health outcomes. The Sempre Health prescription savings program addresses these issues by reducing out-of-pocket expenses for eligible patients, helping them stay on track with their treatments, and demonstrating proven improvements in adherence and health outcomes.

## BACKGROUND

- Medication adherence is important for pharmacological treatment to be effective in patients with chronic conditions, such as diabetes and cardiovascular disease. Adherence is associated with lower risk for hospitalizations, lower healthcare costs, and lower mortality.
- Rising drug costs may be a barrier to medication adherence. Evidence has shown that there is a negative correlation between increased patient cost sharing and adherence.<sup>1</sup>
- A prescription savings program was offered by a health plan to its Commercial members to help improve medication affordability, adherence, and downstream health outcomes. The program allows members who opt-in to receive refill reminders and reduce their out-of-pocket costs when eligible program medications are filled on-time from a retail pharmacy.

## OBJECTIVES

- The purpose of this study is to assess the impact of a prescription savings program on adherence and health outcomes.

## METHODS

- This is a retrospective descriptive analysis of a prescription savings program that was introduced February 2023. The study period was from January 2022 to December 2023 and included program eligible members. Members are eligible for the program if they are ≥18 years old and have at least one paid or reversed claim of a program-eligible medication in the last 12 months at a retail pharmacy.
- The population was stratified into those who enrolled in the program and received reductions in their out-of-pocket costs (Enrolled) and those who were eligible to enroll but did not enroll (Non-Enrolled). The enrollment date was used as the index date for the Enrolled population and the contacted date was used for the Non-Enrolled population.
- Adherence was measured by proportion of days covered (PDC) using pharmacy claims data for each member in their respective populations. Changes in adherence were evaluated pre- and post-index date period. Members who did not have 180 days of pharmacy data before and after the index date were excluded. Members were further separated into diabetes (DM) and cardiovascular disease (CVD) groups based on the program-eligible drug.
- Health outcomes were assessed using medical claims data and evaluated impact pre- and post-index date period. Members were separated into DM and CVD groups by identifying the program eligible drug and relevant ICD-10 diagnosis codes (DM: E08, E11, E10; CVD: I00-99). For the DM group, the percentage of members with CPT codes (3046F, 3051F, 3052F) for abnormal hemoglobin A1c lab readings (A1c ≥ 7%) were compared for the Enrolled and Non-Enrolled populations. For the CVD group, the percentage of members with hospitalizations related to cardiovascular events was identified through CPT codes and compared for the Enrolled and Non-Enrolled populations.

## RESULTS

Table 1: Program-Eligible Member Demographics

Characteristics		
Total Population, n		31,304
Gender, n (%)		
	Males	17,761 (57%)
	Females	10,933 (35%)
	Unknown	2,610 (8%)
Age, mean years [SD]		56.8 [11.7]
Diagnosis, n		
	Diabetes (DM)	12,262
	Cardiovascular disease (CVD)	2,025

Table 2: Program-Eligible Medications

DM Medications	CVD Medications
Basal insulins	Direct oral anticoagulants
SGLT-2 inhibitors	Oral antiplatelets
Combination SGLT-2 inhibitor + DPP-4 inhibitors	
Combination SGLT-2 inhibitor + biguanides	

Figure 4: Study Population for Health Outcomes

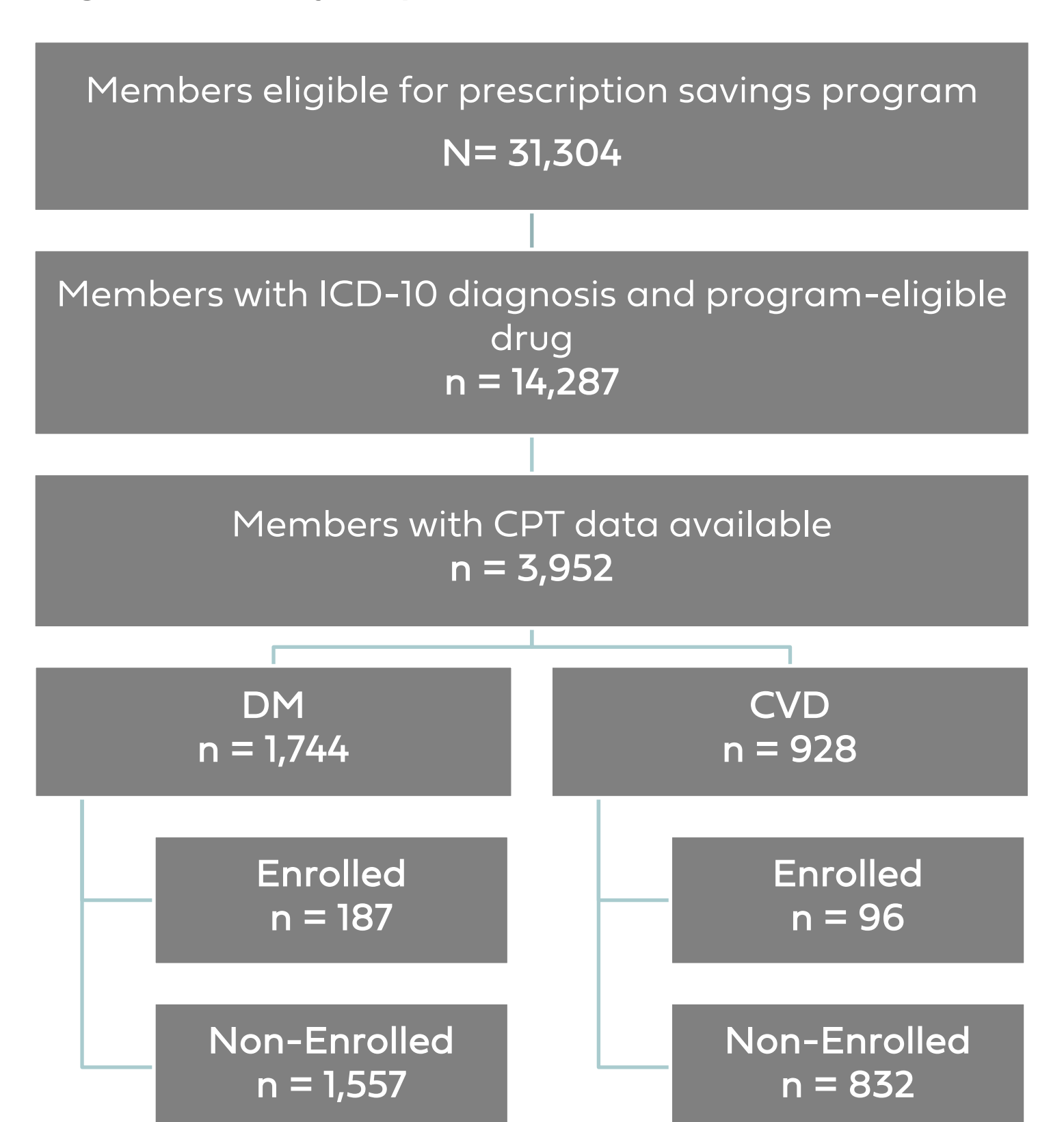


Figure 1: Study Population for Medication Adherence

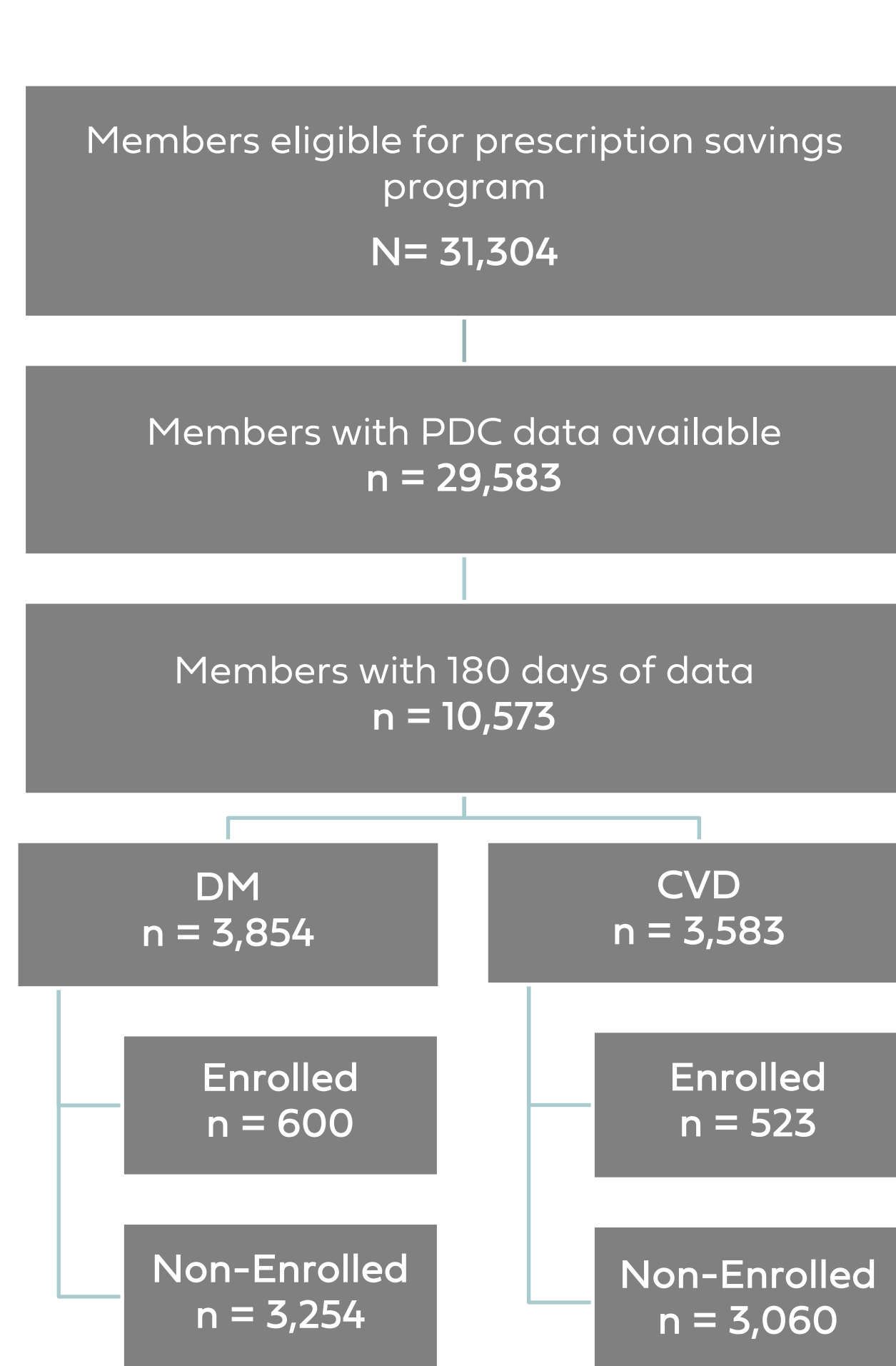


Figure 5: Percentage of Members with CPT Codes for Abnormal A1c Readings (DM) and Cardiovascular-Related Hospitalizations (CVD) in Enrolled vs. Non-Enrolled Members Pre-Index Period

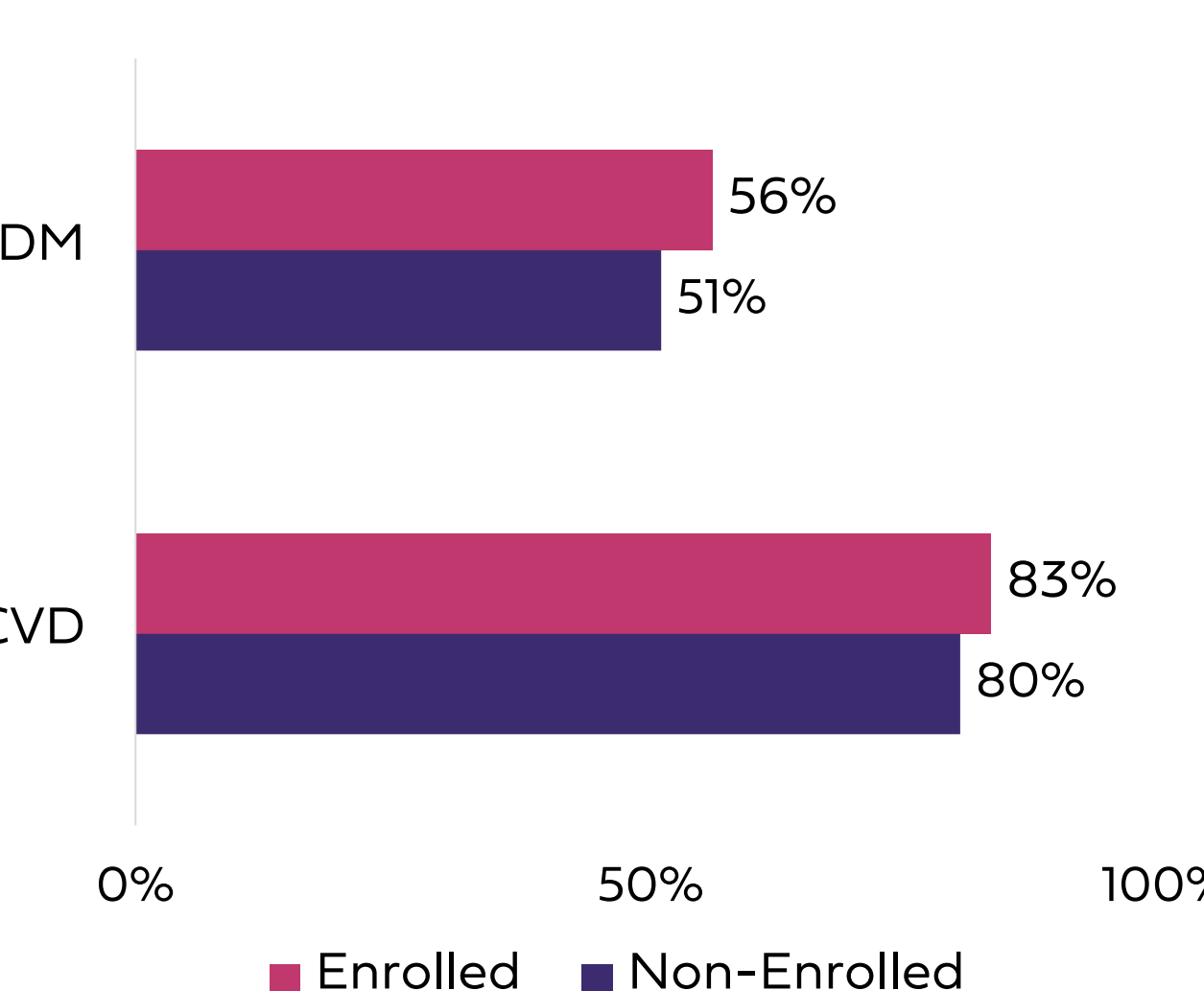


Figure 2: Medication Adherence for Enrolled vs. Non-Enrolled Members Pre-Index Period

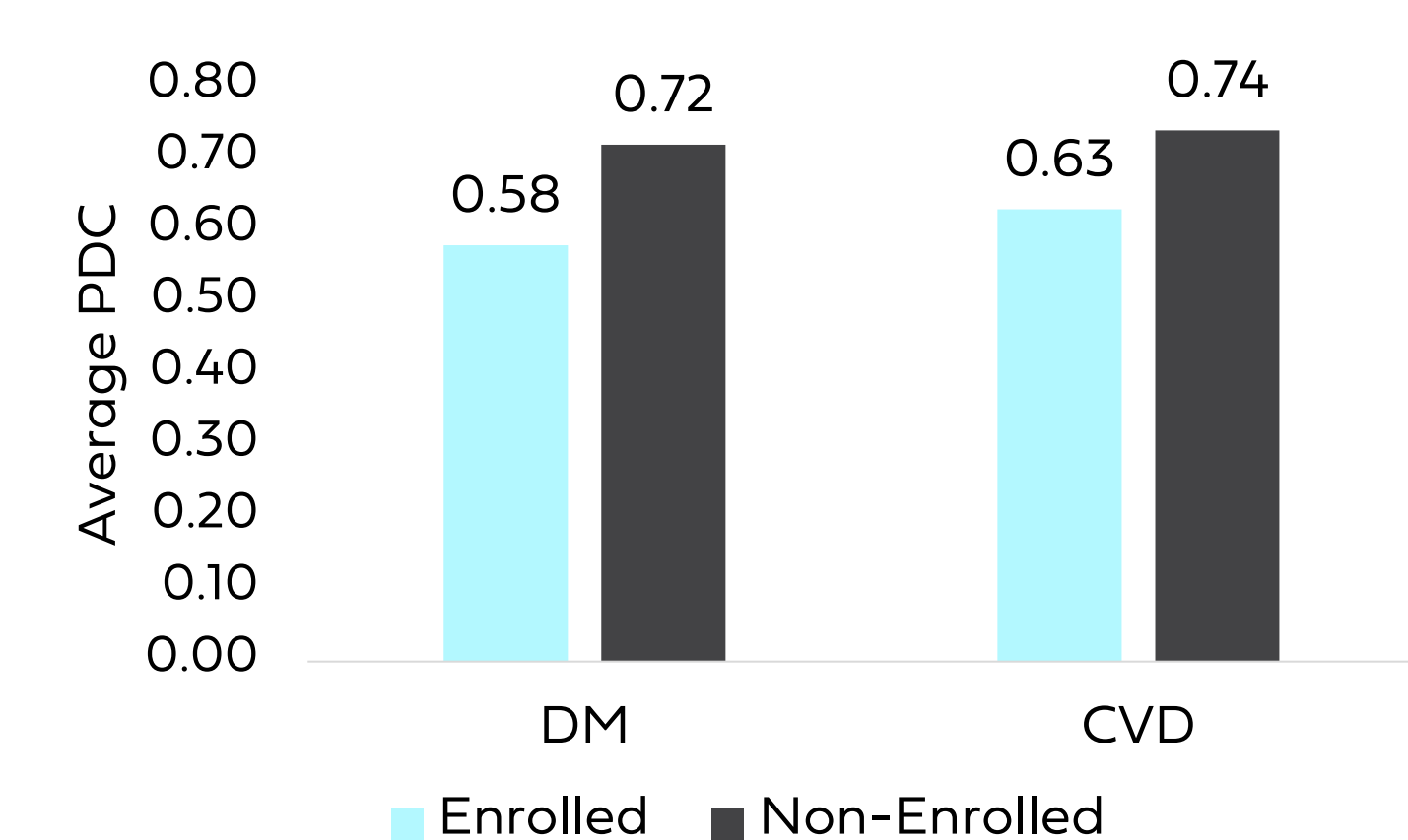


Figure 3: Medication Adherence for Enrolled vs. Non-Enrolled Members Post-Index Period

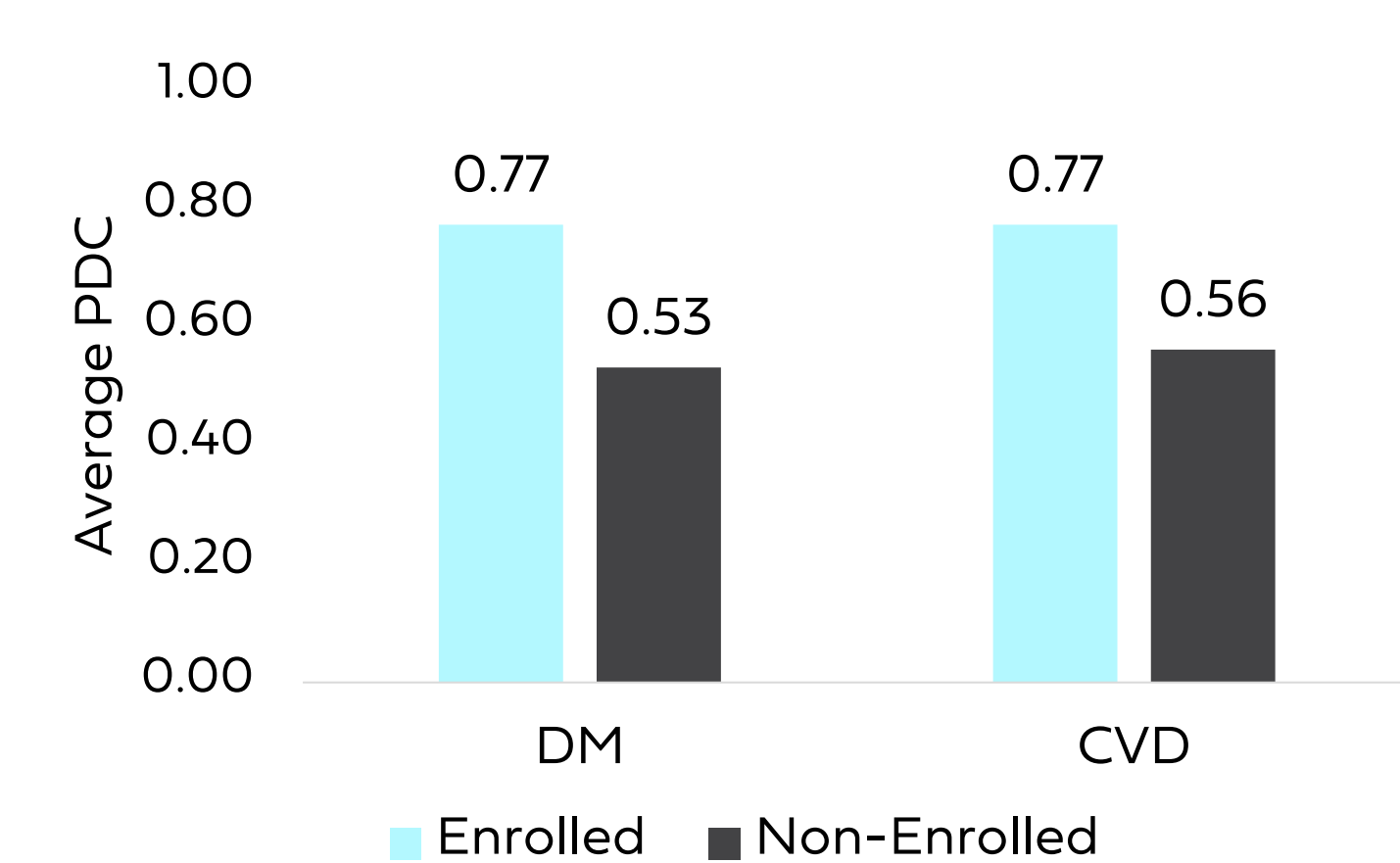
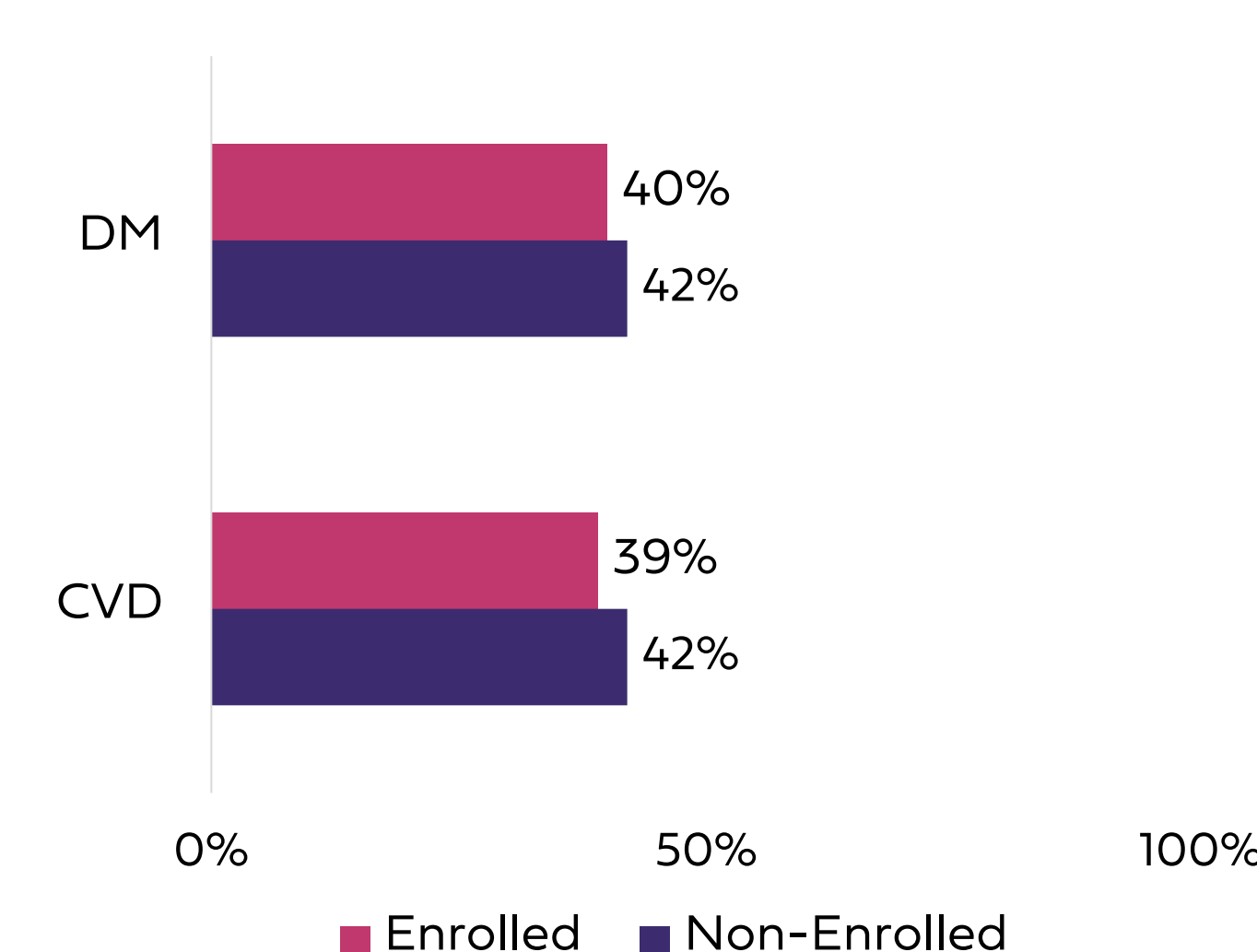


Figure 6: Percentage of Members with CPT Codes for Abnormal A1c Readings (DM) and Cardiovascular-Related Hospitalizations (CVD) in Enrolled vs. Non-Enrolled Members Post-Index Period



## DISCUSSION

- The Non-Enrolled population had a higher average PDC pre-index period compared to the Enrolled population. However, post-index period, the Enrolled population had a higher average PDC. Enrolled members had an improvement in average PDC post-index period while the Non-Enrolled members had a decrease in average PDC.
- The Enrolled population had a higher percentage of members with CPT codes for abnormal hemoglobin A1c lab readings and CVD-related hospitalizations pre-index period. Both Enrolled and Non-Enrolled members had fewer members with abnormal hemoglobin A1c lab readings and cardiovascular-related hospitalizations during the post-index period. However, relative to the Non-Enrolled population, the Enrolled members had a greater magnitude of reduction.
- Limitations of the study include a short study follow-up period and small sample size. In addition, health outcomes were not powered to test for statistical significance. ICD-10 diagnosis codes to identify DM and CVD patients did not capture all possible diagnoses related to the disease state. Furthermore, this study relied on CPT codes rather than actual hemoglobin A1c lab values. Finally, individual member progress was not tracked.
- Future studies can investigate adherence and health outcomes by having a follow-up period greater than 1 year from the date of enrollment. In addition, access to electronic health record data may include better outcomes data such as hemoglobin A1c lab values, hospitalizations related to diabetic events, cardiovascular-related procedures, and other variables. Future studies can implement a longitudinal approach that would allow for tracking of each member's adherence behavior over time to provide a more robust analysis of the prescription savings program's impact.

## CONCLUSION

- Leveraging a health plan-sponsored program to provide refill reminders and reductions on member out-of-pocket cost can help to address medication affordability and potentially improve adherence and health outcomes.
- The results of this study support continued exploration of these types of programs and their impact to medication affordability and clinical outcomes.
- While the analysis of health outcomes lacked statistical significance, a reduction in abnormal hemoglobin A1c lab values and CVD-related hospitalizations suggest promising potential for similar programs to potentially mitigate adverse health events.

## REFERENCES

1. Iuga AO, McGuire MJ. Adherence and health care costs. *Risk Manag Healthc Policy*. 2014;7:35-44. Published 2014 Feb 20. doi:10.2147/RMHP.S19801