HSD80

Adherent GLP-1 Therapy Was Associated With Lower A1C and Similar Total Medical Spending in a Real-World Matched Cohort

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BACKGROUND

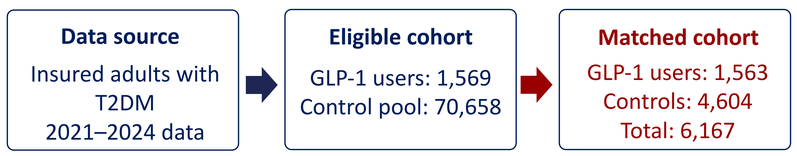
- Glucagon-like peptide-1 (GLP-1) receptor agonists improve glycemic and cardiovascular outcomes, but their real-world evidence on health care utilization and medical spending remains uncertain for payors.
- We compared clinical outcomes, acute care utilization, medical and pharmacy spending among **adherent GLP-1 users versus matched non-users** with type-2 diabetes (T2DM) in a regional plan.

METHODS

- **Data/design:** 2021–2024 regional health plan medical, pharmacy, enrollment, and laboratory data; retrospective matched cohort of adults with type 2 diabetes who were eligible for GLP-1 initiation in 2022–2023.

Treatment: Adherent GLP-1 users with:	Control: Matched non-users with:
▪ New GLP-1 prescription; ▪ PCP visit within 90 days before initiation; ▪ PDC ≥80% during the first 6 months after initiation	▪ No GLP-1, SGLT-2, or DPP-4 use during baseline/follow-up; ▪ Pseudo-index PCP visit dates matched in random order to pre-initiation PCP visit dates among GLP-1 user; ▪ Match up to 1:3

- **Matching:** GLP-1 users were matched up to 1:3 to controls on anti-diabetic medication use, demographics, Line of business (MA, Commercial, Medicaid), diabetes severity, baseline A1C, utilization, PCP attribution, and comorbidity burden. Balance was assessed using SMD <0.1 (Fig 1).
- **Outcomes:** 1-year post-index A1C, cardiovascular events, ER/IP utilization, total and inpatient medical spending, and gross pharmacy spending.
- **Models:** Logistic regression estimated adjusted odds ratios for binary outcomes; OLS estimated adjusted mean differences for A1C, utilization counts, and costs. Models adjusted for baseline outcomes, baseline A1C where applicable, and residual post-match imbalance.
- **Analytic Cohort Construction:**



Applied criteria: age ≥18, continuous medical coverage, no ESRD. New GLP-1 initiation identified in 2022–2023; baseline and one-year post-index outcomes assessed using 2021–2024 data. A1C models restricted to members with observed post-period A1C: n=4,607 / 6,167; 74.7% retained.

Adherent GLP-1 use was associated with lower A1C and fewer cardiovascular events, with similar total medical spending and acute care utilization.

Figure 2. Overall Results: Adjusted Effects

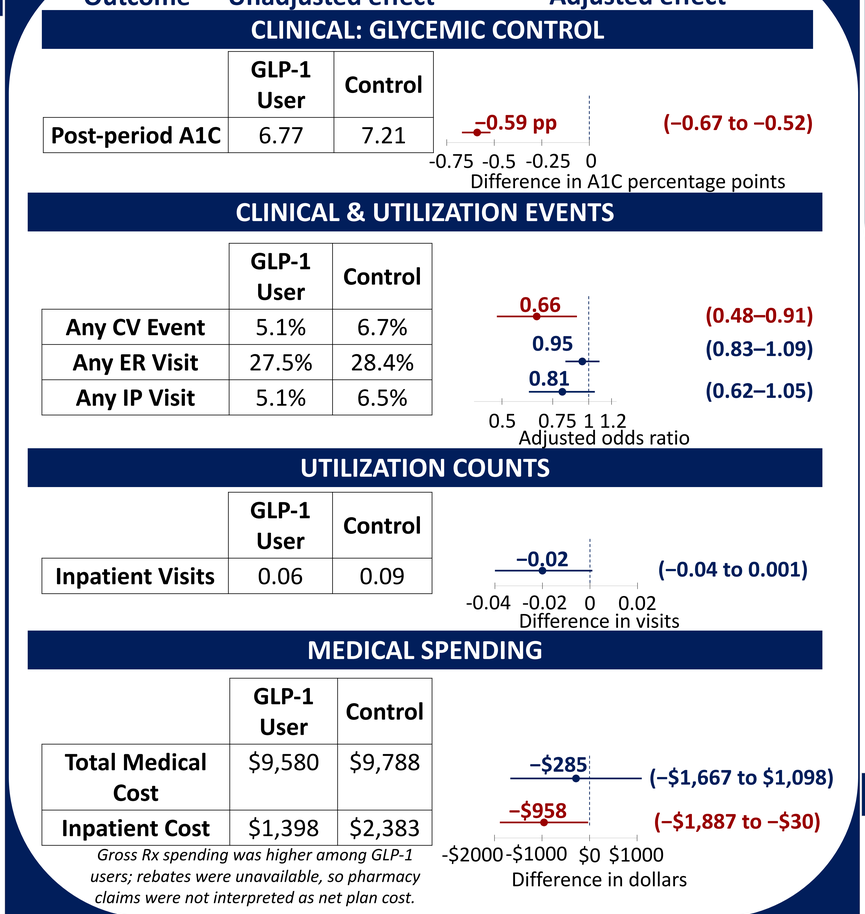
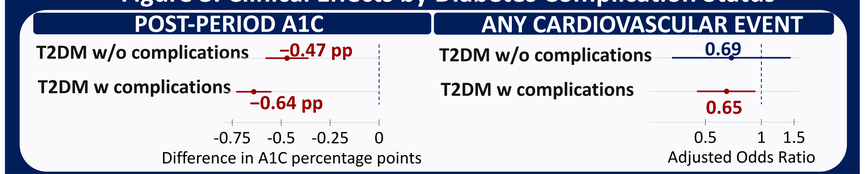


Figure 3. Clinical Effects by Diabetes Complication Status



RESULTS

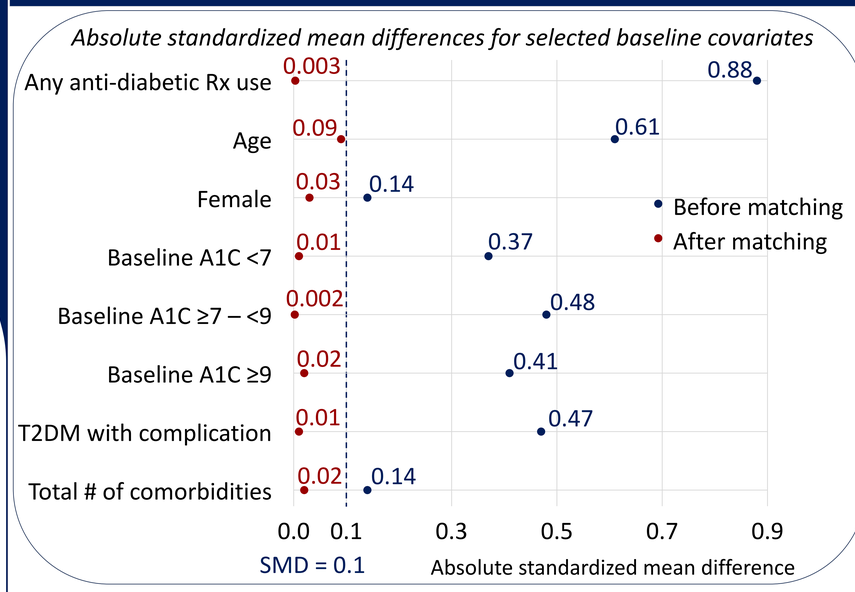


Figure 1. Baseline Covariate Balance Before and After Matching.

- Matching achieved strong baseline balance; most post-match SMDs were <0.10 (Fig 1).
- Adherent GLP-1 use was associated with lower A1C overall and within each LOB: Medicare Advantage, Commercial, and Quest (Fig 2).
- Cardiovascular events were lower overall among adherent GLP-1 users; reductions were statistically significant in Commercial members and directionally favorable in Quest (Fig 2).
- Total medical spending and acute care utilization were not significantly higher overall or within LOB subgroups (Fig 2).
- A1C reductions were consistent across LOBs and complication subgroups; cardiovascular event reductions were most evident among Commercial members and members with diabetes complications (Fig 3).

CONCLUSION

- Adherent GLP-1 use was associated with significantly lower post-period A1C across all LOBs and complication subgroups.
- Cardiovascular event reductions were significant overall, in Commercial members, and among members with diabetes complications.
- Total medical spending was similar despite lower inpatient spending, suggesting potential offsets in non-acute medical spending.

Limitation: Net pharmacy costs after rebates were unavailable, limiting interpretation of pharmacy cost burden.