An Automated Approach to Diagnosis Verification: Effects on Utilization of Glucagon-like Peptide-1 Agonists (GLP-1a)

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BACKGROUND

- The GLP-1a medications are a substantial cost driver with rapidly growing public interest and utilization among patients with and without type 2 diabetes mellitus (T2DM).[1,2]
- These medications are recommended to improve clinical and economic outcomes in patients with T2DM.[3] However, the pharmacoeconomic value of the GLP-1a medications is less certain in patients using them for weight loss alone.[4,5]
- Thus, many healthcare payers do not cover the GLP-1a medications labeled for weight loss on their formularies. A concern to payers with this benefit design is that the GLP-1a medications on formulary for T2DM may be used off-label for weight loss.
- Prior authorizations are the primary strategy payers use to ensure the medications are used for their covered diagnosis; however, this strategy can be resource intensive and time consuming.
- An alternative strategy is to require proof of a covered medical diagnosis at the point-of-sale during the claim adjudication process. This method automates diagnosis verification and is intended to improve efficiency while preventing payment for non-covered diagnoses.

OBJECTIVES

- Assess the effects of requiring a diagnosis code for T2DM at the point-of-sale for GLP-1a medications.
  - Compare change in GLP-1a utilization.
  - Compare change in per-member-per-month (PMPM) total cost.
  - Evaluate delays in therapy within the group that required diagnosis codes.

METHODS

DESIGN

- This was a pharmacy benefits manager-led, retrospective, cohort study that analyzed pharmacy claims data to assess utilization of GLP-1a medications.
- The study compared two groups:
  - **Intervention group:** Members in health plans that require diagnosis codes.
  - **Control group:** Members in health plans that do not require diagnosis codes.
- All included members shared similar formulary structure regarding GLP-1a medications and cost-sharing.

INTERVENTION

- The diagnosis code requirement is a method of diagnosis verification where pharmacies must submit International Classification of Diseases (ICD) diagnosis codes with claims for GLP-1a medications.
  - The allowable ICD-10 diagnosis code for T2DM is E11.
  - Pharmacies must also maintain records that confirm the diagnosis of T2DM.
- If an appropriate diagnosis code is not entered, then the claim is automatically rejected. The pharmacy receives a rejection response stating that a diagnosis code for T2DM is required.
- When implemented in January 2023, pharmacies were required to submit diagnosis codes with claims for GLP-1a medications if the member was enrolled in a plan with this requirement.

FIGURE 1: STUDY TIMELINE

ENDPOINTS

- Change in the proportion of members with any claim for a GLP-1a medication.
  - Difference-in-differences between the intervention and control groups.
- Percent change in total GLP-1a PMPM cost for each group.
- The average delay in dispensing of GLP-1a medications among claims that were rejected due to not having a diagnosis code and then later paid with an appropriate diagnosis code.

STATISTICAL ANALYSIS

- The proportion of members utilizing GLP-1a medications was determined by dividing the number of unique members with paid GLP-1a claims by the total number of members (GLP-1a utilizers and non-utilizers) within each study group and time period.
- The proportion of utilizing members was assessed in a 4 x 4 Chi-square table including each group and time period.
- Following a statistically significant result in the initial Chi-square, four post-hoc Chi-square tests were performed to assess pairwise differences between and within study groups. The Bonferroni method was used to adjust the alpha value for multiple comparisons.

RESULTS

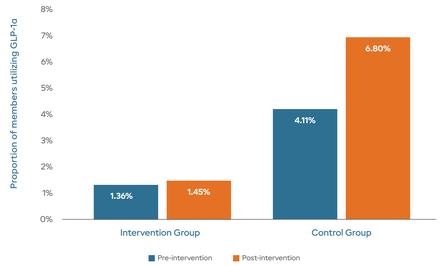
TABLE 1: GLP-1A UTILIZER DEMOGRAPHICS

Characteristic	Intervention	Control
Count of GLP-1a utilizing members	4,089	4,200
Mean age (years ± SD)	53 ± 10	52 ± 11
Male sex (%)	45%	41%
Mean GLP-1a claims per utilizing member	5.6	4.7

TABLE 2: OVERALL MEMBERSHIP DEMOGRAPHICS

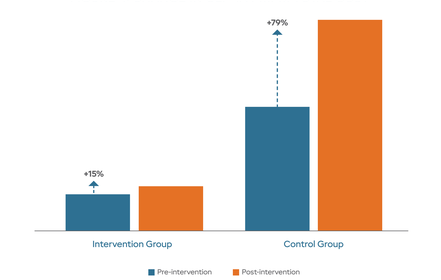
Characteristic	Intervention	Control
Total membership during study period	233,747	63,767
Mean age (years ± SD)	35 ± 19	38 ± 20
Male sex (%)	48%	49%

FIGURE 2: CHANGE IN GLP-1A UTILIZATION



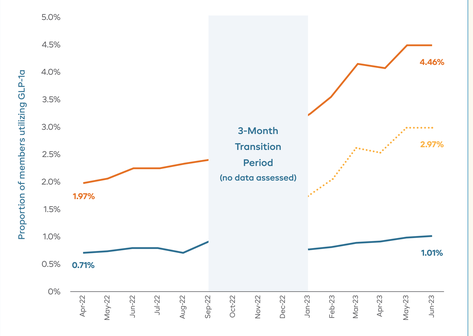
- The proportion of overall members utilizing GLP-1a medications did not significantly increase in the intervention group (P = 0.016) but did significantly increase in the control group (P < 0.0001).
- **The difference in differences was -2.6% favoring the intervention group.**

FIGURE 4: CHANGE IN GLP-1A PMPM TOTAL COST



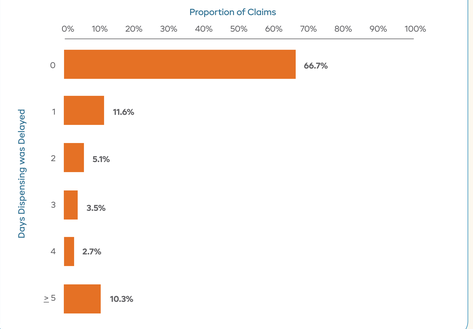
- The control group had a greater percentage increase in PMPM total cost compared to the intervention group.

FIGURE 3: MONTH-BY-MONTH GLP-1A UTILIZATION



- On a month-by-month basis, utilization of GLP-1a medications increased steadily in the control group while the intervention group saw less change.
- If the intervention group had changed similarly to the control group, the proportion of utilizing members would have more than doubled from September 2022 to June 2023.

FIGURE 5: DELAYS IN DISPENSING



- Among resubmitted claims that were subsequently paid, the mean delay in dispensing was 2.4 ± 8.9 days.
- Among resubmitted claims that were subsequently paid, 67% were dispensed on the same day as the initial rejection and 90% were dispensed within 4 days.

TABLE 3: REJECTED CLAIMS DURING THE INTERVENTION PERIOD

Claim Status	Count
Total claims rejected due to diagnosis code	11,529
Rejected and subsequently paid (%)	5,236 (45%)
Rejected and never paid (%)	6,293 (55%)

LIMITATIONS

- The study did not account for baseline differences between the intervention and control groups that may have affected GLP-1a utilization. Variables that may have affected outcomes include region-specific prescribing patterns, prevalence of diabetes, prevalence of obesity, and socioeconomic status. Alternatively, propensity-matching may have yielded more balanced study groups and increased the internal validity of the study.
- A relatively short duration of 12 months does not assess the long-term effects of the diagnosis code requirement. For example, there may be a learning effect where pharmacies become more proficient at acquiring diagnosis verification over time.
- The alternative to the diagnosis code requirement is prior authorization, and it is unknown how this method compares to prior authorization at preventing payment for non-covered uses.

CONCLUSIONS

- Requiring a diagnosis code at the point-of-sale for GLP-1a medications was associated with a smaller increase in GLP-1a utilization and costs compared to a group that did not require diagnosis codes.
- Among members who had claims rejected due to the diagnosis requirement, the delay in dispensing was typically less than one day for those who had T2DM.
- Overall, this study suggests that requiring diagnosis codes at the point-of-sale is an effective utilization management strategy.

DISCLOSURE

This research was conducted by Navitus Health Solutions, Madison, WI without external funding.

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