

Impact of Ambulatory Care Pharmacy on Glycated Hemoglobin

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Introduction

- Recent Centers for Disease Control and Prevention data indicates that 26.9 million Americans have been diagnosed with diabetes.¹
- Of these 26.9 million Americans with diagnosed diabetes, 50% have a glycated hemoglobin (HbA_{1c}) greater than the American Diabetes Association target for most adults of 7%.²
- The introduction of ambulatory care pharmacy practice (ACPP) has been identified as a strategy for improving diabetic care, however the direct impact of ACPP on HbA_{1c} when introduced to an established traditional primary care practice is currently unclear.
- This ACPP operates through a collaborative practice agreement (CPA) that grants the collaborating pharmacist authority to make changes to relevant medications and diabetic supplies.

Study Rationale

- Literature is lacking comparing pharmacist impact on patients' HbA_{1c} within a CPA with those receiving usual care from primary care provider.
- This study also aims to affirm the benefits of ACPP services since initiation in February 2020.

Methods

- Retrospective cohort study of patients seen within a primary care practice followed by the ACPP from February 1, 2020 to December 31, 2020 compared with patients not referred to ACPP services.

Methods

Table 1. Patients enrolled in the intervention group

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> Diagnosis of diabetes Participated in at least one encounter with the ACPP Received at least one follow-up HbA_{1c} measurement following the ACPP encounter 	<ul style="list-style-type: none"> Any patient not meeting the inclusion criteria was excluded

- The providers will be recorded for each patient in the intervention group, and a matching number of patients from each provider will be included in the control group.

Table 2. Patients enrolled in the control group

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> Diagnosis of diabetes Recent HbA_{1c} data available 	<ul style="list-style-type: none"> Participated in at least one encounter with the ACPP Any patient not meeting the inclusion criteria was excluded

- Patient encounters in the intervention group will be completed in-person or via telehealth, according to patient preference.
- Follow-up with the ACPP is determined based on patients' diabetes control, adjustments in diabetes regimen, transportation accessibility, and scheduling availability.

Outcomes

Primary: median change in HbA_{1c} amongst patients referred to the ACPP versus those not referred for diabetic management

Secondary

- Percentage of patients achieving HbA_{1c} ≤ 7%
- Percentage of patients achieving HbA_{1c} ≤ 8%

Statistical Analysis

- The primary outcome will be analyzed using a paired t-test.
- Descriptive statistics will be used to summarize the results of the secondary outcomes.

Data Collection

Intervention group

- Provider
- Encounter dates
- HbA_{1c} prior to pharmacy referral
- HbA_{1c} at end of study period
- Time from initial encounter date to HbA_{1c} at end of study period

Control group

- Provider
- Nearest HbA_{1c} before February 2020
- HbA_{1c} at end of study period

References

- Centers for Disease Control and Prevention. *National Diabetes Statistics Report, 2020*. Atlanta, GA: Centers for Disease Control and Prevention, US Department of Health and Human Services; 2020.
- ADA, "Standards of Medical Care in Diabetes - 2020," January 2020