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Title

Differences in Diabetes Control in Telemedicine vs. In-Person Only Visits in Ambulatory Care Setting

Priority 1 (Research Category)

Clinical research (other)

Presenters

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Abstract

Importance: The COVID-19 pandemic has led to increased utilization of telemedicine. Patients with diabetes are a vulnerable population that require regular treatment and monitoring. Little is known about the impact visit modality on diabetes outcomes in an ambulatory setting.

Objective: Compare proportions of patients with diabetes with uncontrolled diabetes among those with telemedicine versus in-person only ambulatory visits and examine differences by age, race, gender, ethnicity, and insurance.

Design: A retrospective cohort study.

Setting: The largest academic healthcare system in the state of Georgia with ambulatory clinics in urban, suburban and rural settings.

Participants: Adults with diabetes scheduled for an ambulatory primary or specialty clinic visit between May 2020 and May 2021 were included. Patients were compared among three visit groups: those with all in-person visits, those with one telemedicine visit, and those with 2+ telemedicine visits. Demographics including age, race, ethnicity, gender, insurance status, and comorbidities were extracted from the electronic medical record.

Main Outcomes and Measures: The primary clinical outcome was uncontrolled diabetes, defined as HbA1c ≥ 9.0%. Chi-square test was used to determine crude differences in uncontrolled diabetes between visit groups. Multivariable logistic regression was used to assess differences in uncontrolled diabetes between visit groups following risk adjustment.

Results: A total of 18,148 ambulatory clinic visits for patients with diabetes were scheduled during the study period, and 11.6% had uncontrolled diabetes. There was no difference in proportion of patients with uncontrolled diabetes between all in-person visits (834 (11.6%)), one telemedicine visit (558 (11.8%)), or 2+ telemedicine visits (709 (11.4%)) (p = 0.80). Patients with 2+ telemedicine visits had

significantly lower odds of uncontrolled diabetes compared to all in-person visits after adjusting for age, gender, race, ethnicity, insurance status, and comorbidities (OR: 0.88; 95% CI: 0.79 - 0.99, p = 0.03).

Conclusions and Relevance: Telemedicine visits were associated with a lower odds of uncontrolled diabetes. Further work is warranted to explore the relationship between telemedicine visits, equitable access to care, and diabetes outcomes.