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The impact of a Medicare Public Health Emergency policy change for continuous glucose monitors on utilization and total cost of care for diabetes

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Background

- U.S. Food and Drug Administration (FDA) approved the first professional continuous glucose monitor (CGM) in 1999
- According to Ruedy and colleagues, use of CGMs was associated with improvements in hemoglobin A1c as well as reduction in glycemic variability
- Data is currently lacking regarding the impact of CGM on total cost of care related to diabetes, including hospitalization/emergency department (ED) visits
- Coverage of CGMs for Medicare beneficiaries is determined by criteria outlined in the Local Coverage Determination (LCD) L38822:
  - Using multiple daily insulin injections or on continuous subcutaneous insulin infusion pump
  - Testing blood sugar at least four times per day with traditional finger stick tests
- On March 30th, 2020, Centers for Medicare and Medicaid services (CMS) issued a memo in response to the COVID-19 Public Health Emergency (PHE) to relax requirements on coverage of CGMs
- Providence Health Assurance (PHA) lifted prior authorization (PA) requirements on the preferred therapeutic CGM (Dexcom®)

Objectives

- Evaluate the impact of the PHE removal of PA on utilization of CGMs
- Assess impact of CGMs on management of diabetes and total cost of care related to diabetes, including hospitalization and ED visits
- Institutional Review Board (IRB) – approved
- Retrospective data review
- Study periods:
  - Pre-removal of PA: April 2019 – March 2020
  - Post-removal of PA: April 2020 – March 2021
- Programs utilized: EPIC®, PHAhub®, SQL®, Facets®
- Primary endpoints: change in utilization of CGM and total cost of care related to diabetes to the health plan and members
- Secondary endpoints: change in member’s hemoglobin A1c and number of hospitalization/ED visits
- Inclusion criteria:
  - PHA Medicare members
  - Diagnosis of diabetes, identified by the following ICD 10 codes: type 1 diabetes (E10), type 2 diabetes (E11), other (E08, E09, E13)
  - Initiation of a CGM post-PA removal identified as having a claim for a CGM in SQL® or Facets®
  - Continuous enrollment from April 2019 – March 2021
- Exclusion criteria:
  - Members in hospice
  - Members on dialysis
  - Mediations utilized by members were identified through SQL® and Facets® using Specific Therapeutic Class code and Standard Therapeutic Class code
  - Hospitalization and ED visits were identified through Facets and included if the admitting diagnosis include an ICD-10 code for diabetes
  - Cost of care was calculated through claims of diabetes medications, CGMs, hospitalization, and ED visits identified through SQL® and Facets®

Methods

- Study Limitations
  - Retrospective study design
  - Possible coding errors in program utilized
  - No statistical calculations
  - Confounding variable: unknown impact of the COVID-19 PHE on diabetes management and cost of care

Results

- Utilization of CGM increased in the time period after the PA was lifted
  - Utilization of CGM by diagnosis was similar between type 1 and type 2 diabetes
  - Majority of members who utilized a CGM were already using insulin users
- When comparing pre-PA removal data to post-PA removal data:
  - The total cost of care related to diabetes, including member paid and plan paid, increased
  - Number of hospitalizations decreased
  - Similar number of ED visits
  - Overall average HbA1c decreased
  - Members with higher pre-CGM HbA1c had more variability in the change in HbA1c compared to those with lower pre-CGM HbA1c
  - More members with type 2 diabetes saw a decrease in A1c compared to members with type 1 diabetes
  - Almost half of the members experienced no change or an increase in HbA1c
  - Majority of patients with any change in HbA1c had less than 1% change

Going Forward

- Further data collection and analysis in a larger cohort is needed to determine if the use of CGMs truly increase total cost of care while decreasing member’s hemoglobin A1c
- Expand data collection to population outside of Medicare members
- Expand to further evaluate use of CGMs in type 1 versus type 2 diabetes

References