Impact of CMS Competitive Bidding Program on Medicare Beneficiary Safety and Access to Diabetes Testing Supplies: A Retrospective, Longitudinal Analysis

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Study Overview

Goal

• Assess the impact of the implementation of the CBP on acquisition of SMBG supplies among Medicare beneficiaries with diabetes within the nine test markets.

Population

• CMS data from 2009-2012 that showed supplies acquisition records for all beneficiaries with a diagnosis of diabetes and a record of insulin treatment (n=529,627) were used.
Methods

- The 2009 records were separated into two cohorts of patients with records for both insulin and SMBG supplies:
  - Inclusion in the test sites (TEST; n=43,939)
  - All other non-test sites (NON-TEST; n=485,688)
- CMS definitions were used to calculate beneficiary acquisition of insulin and SMBG.
  - Full Insulin acquisition was defined as >80% of the proportion of days covered (PDCs).
  - Full SMBG acquisition was defined as coverage for >80% PDCs days, based on three test strips per day.
Study Overview

Methods

• Patients with records for full Insulin acquisition and either full SMBG acquisition (Full/Full) or partial acquisition of SMBG supplies (Full/Partial) were identified in each cohort.

• Insulin records:
  – 349,200 (65.9%) of beneficiaries were treated with short- or rapid-acting insulin (including premixed insulins) with or without long-acting or NPH insulin
  – 180,427 (34.1%) were treated with long-acting or NPH insulin, only

• Propensity score matching was adopted to reduce selection bias due to imbalance in study covariates
Summary of Findings

• 4-year survival was significantly associated with full acquisition of SMBG supplies among both Test and Non-Test beneficiaries.

• A notable shift in SMBG acquisition from the Mail-Order to retail channel was seen in the Test cohort but not the Non-Test cohort.

• An alarming percentage of beneficiaries in both Test and Non-Test cohorts had no record of SMBG; however a higher percentage was observed in the Test cohort.

• CBP was significantly associated with an increase in percentage of Test beneficiaries with partial or no acquisition of SMBG supplies.
Summary of Findings

• A significantly higher percentage of TEST beneficiaries migrated from Full to Partial or No SMBG in 2011.

• Migration from Full to Partial or No SMBG was significantly associated with higher mortality, increased number of hospitalizations and increased inpatient costs.

• Migration from Full to Partial or No SMBG was significantly associated with gender (female) and ethnicity (black).

• Migration from Partial or No SMBG to Full acquisition somewhat mitigates the effects of prior Partial or No SMBG acquisition.
Suspected Causes for Disruption of Access to SMBG Supplies

- Difficulty in securing new SMBG product supplier
- Reduced product selection
- Questionable Accuracy of Mail-Order products
Recommendations

• Given the prospective approach taken in implementing competitive bidding, CMS should be held to the same safety monitoring standards as other clinical trials.

• CMS needs to demonstrate its ability to measure the effects of any experimental program so they can ascertain whether any harm is being done.

• Medicare beneficiaries need to be protected from harm before future efforts at benefits manipulation are initiated.