Diabetes Mellitus (DM) Prevalence, Incidence, Drug Regimens and Insulin Therapy Cost by Type Among Four Million Commercially Insured Members Continuously Enrolled For 4.5 Years

K.L. Bonner, P.F. Glasser

Objective

To estimate the prevalence and trends in cost of drug therapy Type 1 (T1) and Type 2 (T2) diabetes mellitus (DM) that includes insulin in order to assess the cost modeling of insulin use.

Methods

All commercially insured members in 12 health plans were selected who met costs criteria outlined between Jan. 1, 2011 and June 30, 2015. Members were identified with a pharmacy claim (Rx) for any DM drug listed in Table 2, with at least one DM diagnosis code (D) for diagnosed diabetes (15,413 patients with no diagnosis code for T1 or T2 (5569) were excluded).

The remaining members were categorized using the algorithm shown in Figure 5. a.

Results

There were 3,947,175 members in the sample, with a mean age of 54.4 years.

- 74,698 (1.90% Rx for insulin and any T1 Dx and Dx for diabetic ketoacidosis; 19 patients (0.01%) Rx for insulin and any T1 Dx and Dx for gestational diabetes mellitus, T1 Dx as of June 30, 2015.
- 130,111 (3.60%) Rx for NIDA other than metformin or pramlintide, Rx for any T1 Dx and Rx for diabetic ketoacidosis as of June 30, 2015.
- 1,730,016 of the 3,947,175 (6.90 percent) had a diagnosis code for gestational diabetes mellitus, T1 Dx as of June 30, 2015.

The percentage of study members classified by claims-based algorithm as Type 1 or Type 2 diabetes mellitus, respectively; Q1 & 2 = January 1 to June 30 of specified year; T1 Dx = classified by claims-based algorithm as Type 1 diabetes mellitus; T2 Dx = classified by claims-based algorithm as Type 2 diabetes mellitus; T1 and T2 Dx = classified by claims-based algorithm as Type 1 or Type 2 diabetes mellitus, respectively; Q1 & 2 = January 1 to June 30 of specified year; T1 Dx and T2 Dx = diagnosed diabetes in the United States code-based algorithm as Type 1 or Type 2 diabetes mellitus, respectively; Q1 & 2 = January 1 to June 30 of specified year; T1 Dx and any T1 Dx = members diagnosed by claims-based algorithm as Type 1 diabetes mellitus, respectively; Q1 & 2 = January 1 to June 30 of specified year; T1 Dx and any T2 Dx = members diagnosed by claims-based algorithm as Type 1 or Type 2 diabetes mellitus, respectively; Q1 & 2 = January 1 to June 30 of specified year; T2 Dx and any T2 Dx = members diagnosed by claims-based algorithm as Type 2 diabetes mellitus, respectively; Q1 & 2 = January 1 to June 30 of specified year.

Limitations

These results describe a continuously enrolled sample of members from one or more commercially insured population and may not be generalizable to other populations.

By design, all members in the study sample age 45 years or under the course of the study.

Conclusions

- Over the past four years, the fraction of members in a commercial insured population using insulin increased from 5.0 percent to 5.3 percent.
- The fraction of members using insulin increased about 6.0 percent, from 2.7 percent to 4.4 percent.
- These increases were driven mostly by an increased number of members for each type of diabetes treated with insulin and increased insulin costs.

References