Changing Prescribing Patterns of Type 2 Diabetes Medications from 2002–2010: An Electronic Health Record-Based Evaluation

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Abstract

Background:

The implementation of electronic health records (EHRs) may support evaluations of health care delivery, such as the prescription of newly approved medications, to adults with diabetes. We aimed to evaluate prescribing patterns of thiazolidinediones and novel glucose-lowering drug classes using electronic prescribing data contained in an outpatient EHR from 2002–2010.

Methods:

We identified adults with type 2 diabetes seen from 2002–2010 who were newly prescribed rosiglitazone (ROSI), pioglitazone (PIO), or a novel glucose-lowering drug class (other). The annual number of new prescriptions and their relative percentages (per 1000 patients) were calculated.

Results:

From 2002–2010, 6209 patients with type 2 diabetes were newly prescribed 8858 eligible medications. In 2006, ROSI and PIO accounted for 44% and 37% of new prescriptions, respectively. After 2007, the relative percentage of new ROSI prescriptions declined more rapidly than PIO prescriptions, falling to 7% and 47% of peak levels, respectively, by 2010. By 2010, the relative percentages of new ROSI, PIO, and other prescriptions were 2%, 18%, and 80%, respectively.

Conclusions:

Evaluations of EHR data represent a cost-effective method for evaluating diabetes medications with new Food and Drug Administration warnings or indications. Validation of demographic and clinical data will expand the scope of EHR-based evaluations of health care delivery and outcomes for adults with diabetes.

J Diabetes Sci Technol 2013;7(1):119–122

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