RESEARCH LETTER

Trends in Dispensing of Zolpidem and Low-Dose Trazodone Among Commercially Insured Adults in the United States, 2011-2018

In 2012, 19% of US adults reported regular insomnia or sleeping problems. Medications most commonly used for insomnia are zolpidem (a benzodiazepine receptor agonist) and trazodone (a sedating antidepressant used in low doses for insomnia). Prescriptions for these drugs increased during the 1990s and early 2000s, but recent trends have not been adequately described. Understanding contemporary trends is important given that zolpidem is approved by the US Food and Drug Administration (FDA) for insomnia and backed by abundant efficacy data, but documented safety concerns exist. In contrast, trazodone is not FDA approved for insomnia and has limited efficacy data and undocumented safety for this indication. We measured the dispensing of these drugs from 2011 to 2018 among commercially insured US adults.

Methods | Using the 2011 to 2018 IBM MarketScan Research Databases, we measured trends in dispensing of zolpidem and low-dose trazodone among US adults (aged ≥18 years) with employer-sponsored insurance or Medicare supplemental plans. The MarketScan databases contain health care and pharmacy claims from approximately 350 payers across the US and are considered generally representative of individuals with employer-provided insurance. We calculated the annual percentage of adults with at least 1 dispensing of zolpidem or low-dose trazodone among all adults who contacted the health care system in a given year. The 2011 to 2018 IBM MarketScan Research Databases were used to measure trends in the dispensing of zolpidem and low-dose trazodone among US adults (aged ≥18 years) with employer-sponsored insurance or Medicare supplemental plans. For each year, the percentage of adults who received at least 1 dispensing of low-dose trazodone (<150 mg/d or ≤50 mg/d) or any dosage of zolpidem was calculated among all adults who contacted the health care system in the year and had at least 12 months of prior continuous medical and drug insurance (mean of 16.6 million adults per year in the MarketScan databases). Individuals who had trazodone dispensed multiple times in a given year were counted only if all prescriptions dispensed were below the dose threshold to avoid counting individuals tapering up to or down from higher dosages (more likely indicated for depression). Multivariable binomial regression models were used to estimate the annual percentage change in the dispensing of each drug in 2011 to 2018, adjusted for age, sex, and depression diagnosis, in which depression diagnosis was defined as having at least 2 outpatient codes or 1 inpatient code for depression in the past year. The short black dashes above the vertical bars indicate the 95% CIs around the annual percentages.
Results | From 2011 to 2018, among an annual mean of 16.6 million adults in MarketScan, the percentage of adults who were dispensed low-dose trazodone (<150 mg/d) increased from 1.25% (95% CI, 1.25%-1.25%) (294,266 of 2,058,327) to 1.82% (95% CI, 1.81%-1.83%) (214,326 of 11,784,445), while the percentage of adults dispensed zolpidem decreased from 4.56% (95% CI, 4.55%-4.57%) (938,323 of 20,583,278) to 2.50% (95% CI, 2.49%-2.51%) (294,266 of 11,784,445). The adjusted annual change was 0.07% (95% CI, 0.07%-0.07%) for trazodone and −0.25% (95% CI, −0.25% to −0.24%) for zolpidem. Results for trazodone were similar for dosages less than or equal to 50 mg/d (Figure 1).

Among adults with a diagnosis of insomnia (annual mean of 781,790 adults), the percentage of adults dispensed low-dose trazodone (<150 mg/d) increased from 8.68% (95% CI, 8.68%-9.03%) (63,215 of 728,229) to 10.14% (95% CI, 10.11%-10.17%) (74,610 of 756,840) (Figure 2).
In 2018, zolpidem was still being dispensed more frequently than low-dose trazodone, but the gap between these drugs has narrowed since 2011, suggesting an increasing preference toward off-label use of trazodone for insomnia. Study limitations include that the MarketScan databases lacked explicitly documented treatment indications and captured only commercially insured individuals. More studies evaluating the efficacy and safety of trazodone for insomnia are warranted.

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COMMENT & RESPONSE

Prejudices of a Referenced Philosopher

To the Editor The message of “social solidarity” and collaboration in Dr Berwick’s Viewpoint was eloquent. Unfortunately, it was undermined by referencing a philosopher, Immanuel Kant, whose “racist and sexist prejudices had a profound impact on the shape of his moral and political theory.” The Kant reference to the “moral law within” that underscored the entire article was misrepresented in a way that gave a skewed perception of its meaning.

Kant’s moral law is unconditional rationality even in distress. Kant thought that individuals who can rationalize can be moral and, while he writes that his concepts are applicable to all persons, he makes it clear who is a “person” and a “sub-person.” He characterized White women as having to be guided toward morality, stating that “I hardly believe that the fair sex is capable of principles,” while characterizing female scientists as aberrations. On race, he perpetuated a racial hierarchy that “[N]ative Americans and Negroes cannot be educated or govern themselves. Thus, serve only as slaves” and that “the inhabitants of India” were incapable of abstract thinking and not suited for leadership roles.

Kant’s work on ethics and morality is profound and meaningful, but it erases the struggles women and people of color...