INTRODUCTION

The American Psychiatric Association characterizes postpartum depression (PPD) as a major depressive episode with peripartum onset or within 4 weeks of childbirth. In clinical practice, PPD is often recognized as depression that occurs between 4 weeks and up to 1 year after childbirth.1

Symptoms may include diminished interest/pleasure, depressed mood, difficulty bonding with the baby, insomnias, and thoughts of suicide.1,2

PPD affects an estimated 10–20% of women in the United States following childbirth.3–6 Estimates vary widely due to assessment methods (e.g., interviews, Patient Health Questionnaire–9 [PHQ-9], Edinburgh Postnatal Depression Scale [EPDS]), timing, and population characteristics.3

OBJECTIVE

To estimate the rate of PPD cases among live births in a large, nationally representative commercial insurance claims database.

METHODS

Study design and data source

This was a retrospective cohort study, using de-identified claims (1/2012-12/31/2014) from the commercial claims core data set that is part of the Toren-Health Analytics MarketScan Research Databases.

Study cohort and PPD case identification

Criteria that were used to develop the study cohort are described in Figure 1:

- Date of first delivery in identification period was defined as the index date.
- Subsequent claims identifying a live birth were considered evidence of a new pregnancy if the subsequent claim was at least 6 months after the first live birth; all live births were included in the analysis.

PPD case identification was based on an observation period that began at Week 3 through 12 months following a live birth to avoid identifying short-term depression as PPD.

PPD cases were identified based on diagnostic codes (depression or adjustment disorder), procedure codes (psychotherapy, electroconvulsive therapy), and drug codes for pharmacologic treatment on the inpatient, outpatient, or pharmacy claims.

Case identification criteria were varied in sensitivity analyses (SA) to determine the impact on the PPD rate.

- SA1: Anxiety considered a qualifying diagnosis on an inpatient claim or on a second outpatient claim.
- SA2: Criteria for SA1 inclusion of other antidepressants and anxiolytics as qualifying prescription drugs.
- SA3: Single claim for either depression or treatment with ECT, TMS, psychotherapy, electroconvulsive therapy.
- SA4: 6-month observation period for case identification.

RESULTS

A total of 350,193 deliveries were identified from 2012-14 in the database; of these, 25,984 cases of PPD were identified according to base case criteria, demonstrating an overall PPD rate of 7.2% (Table 2).

Among age groups, the rate of PPD was found to be highest in women aged 17 years (10.0%), compared with 7.0% among women aged 18–34 years and 7.5% in women aged 35 years (Table 2).

PPD rates varied by geographic region, with the highest rate observed in the Midwest (8.5%) and the lowest in the South (6.7%) (Table 2). In the sensitivity analysis, SA3 (the inclusion of any indication of depression/mood or adjustment disorder diagnosis, or treatment) resulted in the highest PPD case rate of 18.3%, whereas SA4 (an observation period of only 6 months) resulted in a rate of only 4.3% (Figure 2).

More than three-quarters of PPD cases were characterized by moderate service utilization (78.2%), followed by high utilization (15.6%); no treatment (7.2%) and low utilization (0.3%) (Figure 3). Overall, 88.2% of cases used at least 1 PPD-related pharmacologic treatment and 2 pharmacologic treatments were observed in 40.4% of cases.

LIMITATIONS

Estimates of PPD frequency are based on administrative claims data rather than direct assessment using a screening tool; these estimates do not include women with PPD who do not seek treatment.

Results may not be generalizable to non-commercial or larger patient populations.

The study included only those with adequate follow-up and continuous enrollment, which may have excluded patients who potentially have disengaged due to severe depression or other factors.

Data are from a sample only and therefore, the prevalence of PPD may be higher in low- and middle-income countries,7 which have not been addressed in this study. In addition, estimated PPD rates in this sample may differ from other populations in the U.S. due to different characteristics related to age, socioeconomic status, or history of PPD.

CONCLUSIONS

In 2014, prevalence estimates for PPD ranged between 5.0% and 19.5% based on the base case and sensitivity analyses using the studies’ databases.

The base case rate of PPD using a commercial claims database is lower than rates reported in studies using direct assessment. This suggests that there may be a true rate of under-recognition of PPD who may not be identified and who do not receive treatment.

These findings suggest that there are opportunities to enhance screening programs to ensure that all patients are appropriately diagnosed and treated.

Further research using other sources of data to validate claims based identification of PPD cases may be warranted.

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