Background & Objectives

Major depressive disorder (MDD) is associated with high costs—as much as $200 billion (direct and indirect costs) per year in the US. Despite available therapies, many patients appear to have too many side effects.

Adjuvant atypical antipsychotics (AAPs) are treatment options for patients with more severe MDD, who are inadequately responding to antidepressant therapies.

The objective of this study was to examine healthcare utilization and costs, as well as medication adherence among patients with severe MDD treated with adjunctive AAP.

Methods

Retropective cohort study using the Truven Health Analytics MarketScan® Medicaid (Commercial), and Medicare Supplemental (MS) databases.

Included patients who:
- had ≥1 inpatient or ED visit for MDD (ICD-9: 296.x, 298.x, 299.x; ICD-10: F32.x, F33.x) in any diagnosis field during the study period (1/1/15-12/31/16);
- received a single adjunctive oral AAP (1x, 2x, or 3x per pharmacy claim for brexpiprazole, lurasidone, quetiapine [3x AAPs commonly used in MDD]) during the identification (ID) period (1/1/15-12/31/16) and MS while on an antidepressant therapy;
- were ≥18 years on the index date; and
- had ≥6 months continuous enrollment during both baseline and follow-up periods (defined as 6 months after the index date); and
- were ≥18 years on the index date.

Excluded patients who:
- used multiple AAs on index date;
- had a diagnosis for schizophrenia or bipolar disorder any time during study period; were Medicare and Medicaid dual eligible; or were in a capitated plan;
- Three cohorts, defined by index date:
  - Brexpiprazole
  - Lurasidone
  - Quetiapine

Outcomes measured (all measured during the 6-month follow-up period):
- Adherence, measured by proportion of days covered (PDC; number of days when medication was available/365).

Clinical characteristics, defined by either switch or gap of ≥30 days supply
- All-cause healthcare utilization and costs
- Hospital care: hospitalization or emergency department (ED) visits
- Medical cost: sum of outpatient and inpatient costs

Statistical analysis

Multivariable analyses

Linear regression models for PDC and costs; all costs adjusted to Y2016

Results

Study population characteristics

Healthcare utilization and costs during the follow-up period

Brexpiprazole users had increased all-cause utilization and costs compared to lurasidone and quetiapine.

Probability of Continuation

After adjustment, the rate of all-cause hospital care was higher in quetiapine compared to brexpiprazole users [Odds ratio (95% CI): 1.45 (1.19 - 1.76); p=0.001], but did not differ between lurasidone and brexpiprazole users [Odds ratio (95% CI): 1.20 (0.93 - 1.54); p=0.215]

Quetiapine users had increased all-cause costs compared to brexpiprazole users [Estimate (95% confidence interval): quetiapine $2,209 ($1,267 - $3,147); p=0.047], all-costs did not differ between lurasidone and brexpiprazole [$913 ($2,033 - $3,359); p=0.543]

Limitations

The study was limited by its design and data source; as we relied on insurance claims data, we cannot determine if patients who we identified as treatment failures actually experienced adverse events.

Conclusions

In patients with MDD and a variety of illness types, augmentation with brexpiprazole was associated with:
- reduced risk of discontinuation
- increased overall healthcare use and costs
- increased hospital care use and costs
- decreased adherence
- increased costs compared to quetiapine
- AAP treatment choice may impact subsequent healthcare utilization.

References