Quantifying the burden of treatment-resistant depression in Ontario: Shedding light on an important mental health issue

AUTHORS: Brad Millson | G Sarah Power | Dr. Roger S. McIntyre

BACKGROUND

• Many patients with major depressive disorder (MDD) have inadequate response to anti-depressants (ADs).1
• In Canada, it has been estimated that 21.7% of MDD patients have treatment-resistant depression (TRD), defined as insufficient outcome on at least 2 trials of ADs.
• The economic impact of TRD has not been well described, especially in the province of Ontario.

OBJECTIVES

1. Describe the Ontario TRD patient population
2. Measure the economic burden of TRD to the Ontario healthcare system
3. Quantify the healthcare resource utilization (HCRU) of TRD patients in Ontario

METHODS

Study Design

• Retrospective, longitudinal cohort study of MDD patients between April 2005 and March 2017.
• Using Ontario administrative health records from multiple linked datasets held by the Institute for Clinical Evaluative Sciences, 3 cohorts were defined.

RESULTS & DISCUSSION

Objective 1: Describe TRD Patient Population

• 277 TRD cohort patients identified, with an average age of 52 years and 53% female.
• 34% were in the lowest income quintile and 58% received MDD diagnosis from general practitioner / family medicine (GP/FM).

Objective 2: Measure Economic Burden of TRD

• TRD patients incurred an incremental cost of $3,407 compared to the Non-TRD cohort and $9,932 compared to non-MDD, representing the economic burden of TRD.

Objective 3: Measure HCRU of TRD patients

• TRD patients had more all-cause outpatient visits than Non-TRD MDD and Non-MDD patients, driven by GP/FM and psychiatry visits.
• TRD patients had more depression-related GP/FM, psychiatry and ED visits than Non-TRD MDD patients.

Figure 2: All-cause HCRU visits over 2-year follow-up

Figure 3: MDD-related HCRU visits over 2-year follow-up

Data Source and Analysis

• TRD patients matched using propensity score methods to Non-TRD MDD and Non-MDD patients in a 1:4 ratio.
• All-cause and depression-related HCRU were assessed and healthcare costs calculated for each patient over two-year follow-up period.
• Unadjusted comparisons between TRD and other cohorts were made using negative binomial (HCRU) and gamma (costs) regression models.

Limitations

• This study may have been limited by patients without public drug coverage, and misclassification due to use of diagnostic codes in administrative health records.

Conclusions and Implications

• Patients with TRD use significantly more healthcare resources than non-TRD MDD patients, both all-cause and depression-related, and contribute a considerable economic burden to the Ontario healthcare system.
• This study highlights an unmet need for new, cost-effective therapies for the treatment of TRD.

Author Disclosure

This study was sponsored by Janssen Inc., and conducted by Brad Millson and Sarah Power, who are employees of IQVIA, and provided consulting services to Janssen Inc. Dr. Roger S. McIntyre received consultation fees from Janssen Inc. for this study.

References