Real-World Patient Persistence and Adherence: A Comparison Of Long Acting Injectables and Oral Antipsychotics Used For The Treatment Of Schizophrenia in a Canadian Adult population

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BACKGROUND

- Schizophrenia is a chronic psychotic disorder that ranks among the top 10 causes of disability worldwide.[1] Canadian guidelines suggest the use of oral antipsychotics (Orals), as well as long acting injectables (LAIs) for the management of schizophrenia.[2] Despite this, there is low rates of LAI usage in Canada.
- Lower rates of treatment persistence and adherence can lead to relapse which can significantly impact patient outcomes and trajectory, potentially resulting in slow or incomplete remission and increased challenges in regaining prior levels of functioning.[3]
- Real world data comparing patient persistence and adherence in Canada is limited.

OBJECTIVE

- This study aims to compare persistence and adherence of LAIs and Orals within a 12-month analysis period.

METHODS

Data Source:

- Anonymized patient-level data were obtained from the IQVIA Ontario Drug Benefit (ODB) database, which tracks 100% of prescription drug claim transactions covered by the public ODB program. This data was obtained for all patients (>15 years of age) making a claim for an LAI or Oral between January 2021 and April 2023.

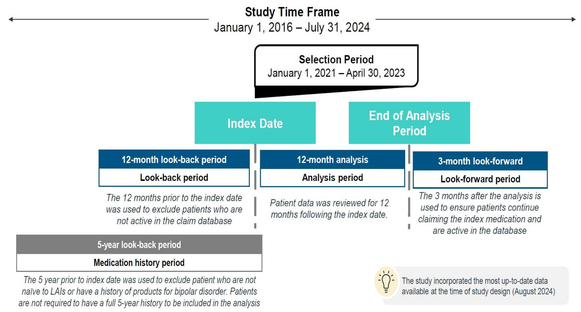
Study Design – Overview:

- In this retrospective cohort study, patients were indexed on the date of first claim for risperidone, aripiprazole and paliperidone palmitate LAI or Oral formulations and followed for 12 months to measure persistence and adherence. Persistence refers to the continuity of treatment, which may be measured by how long a patient stays on a given treatment. Patient persistence was measured over a 365-day time period. Adherence is defined as the degree to which a patient takes their medication as prescribed. Patient adherence was measured for a 12-month analysis period.

METHODS

- Patients were required to be active during the lookback period (12 months prior to index date) and the look-forward period (3-months following 12-month analysis period). Active patients are those that had at least 1 claim during the periods, either within or outside of the observed market. This was used to determine treatment experience and ensure that patients had valid claims activity for the duration of the study period. A 5-year medication history period was implemented to ensure patients were naïve to antipsychotics and had no history of bipolar medication use (Figure 1).
- The analysis leveraged the following variables from the longitudinal database:
  - Claim Date
  - Product Name and Strength
  - Quantity dispensed (units)
  - Number of days supplied

Figure 1: Study Design



Analysis – Persistence:

- Patients were considered persistent from their index date until discontinuation, defined as a treatment gap of more than 90 days or a switch of medication.

Analysis – Adherence

- Patient adherence was calculated using the proportion of days covered (PDC) method. PDC was is defined as the proportion of days that an individual was covered by the medication during the analysis period.
- PDC was calculated over the analysis period (365 days),

Statistical Analyses:

- Persistence between LAI and Orals was described using Kaplan-Meier curves and compared using log-rank tests.
- Wilcoxon rank sum test with continuity correction was used to compare the average PDC between LAIs and Orals.

RESULTS

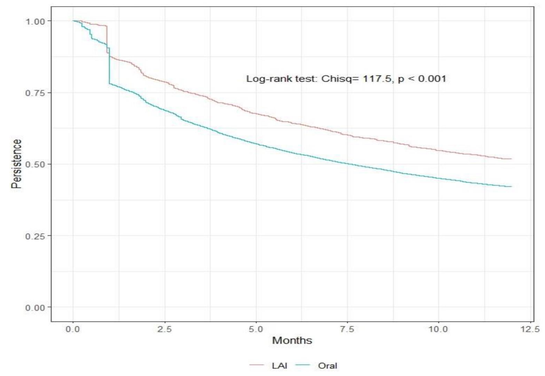
Study Populations:

- 45,072 patients were included in the analysis.
- 3,059 patients indexed on LAIs and 42,013 patients indexed on Orals.

Analysis– Persistence:

- By the end of the 12-month analysis period, 52% of patients are persistent on LAIs and 42% are persistent on Orals (Figure 2) ($p < 0.001$).
- The median days persistent over the 12-month analysis period was 365 days for LAIs and 230 days for Orals.

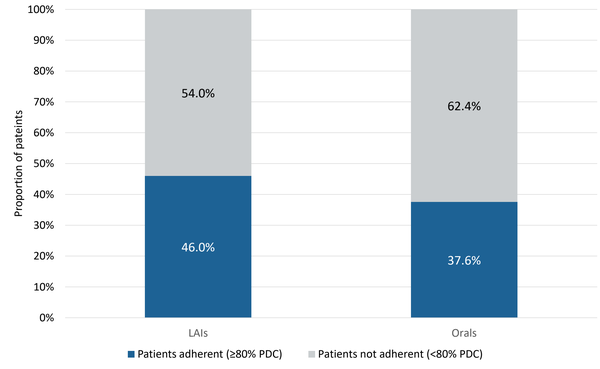
Figure 2: Kaplan-Meier curves for time to discontinuation



Analysis – Adherence

- LAIs have a significantly higher proportion of patients with a PDC of ≥80% at 12 months (46%) compared to Orals (37.6%, p=0.0001). (Figure 3)
- LAIs also have a significantly higher average PDC (62.2%) compares to Orals (54%, $p < 0.0001$).

Figure 3: Proportion of adherent patients



LIMITATIONS

- Diagnosis information is not available in the database; medication history was used to limit inclusion of bipolar disorder
- Study used public plan data from Ontario, patients in other provinces were not included
- Reasons for discontinuation were not documented in the longitudinal claims database.
- ODB database does not capture medications dispensed in hospitals or paid out-of-pocket

CONCLUSIONS

After 1 year of therapy:

- More patients were persistent on LAIs than Orals (52% vs 42%, p<0.001).
- Patients demonstrated greater adherence on LAIs than Orals (46% vs 37.6%, p<0.0001)

Overall, the results demonstrated that persistence and adherence to LAIs is stronger than Orals for patients in Ontario. This study adds to the currently available literature that suggests LAIs result in greater persistence and adherence than Orals. LAIs and Orals are both recommended for the management of schizophrenia. Strategies that support improved treatment persistence and adherence in patients with schizophrenia could reduce relapse rates and improve overall patient trajectories.

In summary, our study supports the growing body of evidence that LAIs offer a more reliable option for long-term treatment in patients requiring antipsychotic therapy.

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