5,721 Ontario residents over the age of 18 who were dispensed a new outpatient prescription for levetiracetam (between January 1, 2004 and March 1, 2017). The index date was the date that levetiracetam was dispensed.

Patients Excluded (n=721)

- 1. Evidence of hospital discharge or ED visit in the 2 days prior to index date (n=628)
- 2. Evidence of end-stage renal disease (n=81)
- 3. No evidence of epilepsy (defined as no evidence of any of the following: history of hospital encounter for seizure, electroencephalography in the prior 5 years, or anti-epileptic prescription in the prior 120 days) (n=32)

4,980 levetiracetam users

2,306,016 Ontario residents over the age of 18 who were not dispensed a prescription for levetiracetam (between January 1, 2004 and March 1, 2017). The index date was randomly assigned (e.g. a fake levetiracetam start date).

Patients Excluded (n=892,877)

- 1. Evidence of hospital discharge or ED visit in the 2 days prior to index date (n=21,670)
- 2. Evidence of end-stage renal disease (n=12,017)
- 3. No evidence of epilepsy (defined as no evidence of any of the following: history of hospital encounter for seizure, electroencephalography in the prior 5 years, or anti-epileptic prescription in the prior 120 days) (n=859,190)

1,413,139 levetiracetam non-users

Matched by chronic kidney disease stage, hospital encounter for seizure in 90 days, and propensity score

(1:2)

3,980 levetiracetam users

7,960 levetiracetam non-users