

# Use of Drugs in Rural Compared to Urban Regions of NL

## Objective

To determine whether there are rural differences in drug use compared to urban regions of the province.

## Practice Points

1. 42% of NL's 521,000 population live in rural regions.
2. Potentially unnecessary drug use is high in NL; particularly use of antibiotics, long-term use of proton pump inhibitors (PPIs), chronic use of benzodiazepines, and of antipsychotics in seniors, and use of psychotropic drugs in long-term care facilities (LTCFs).

Recommendations for use of these drugs have been propagated by Choosing Wisely Canada.

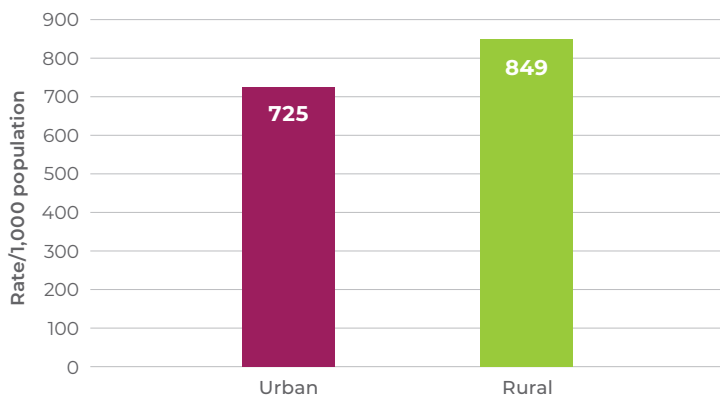
3. Turnover of and vacancies for Family Physicians (FPs) are high in rural regions of the province.

## Data

Data on community drug use were obtained from the NL Pharmacy Network at the NL Centre for Health Information and on residents in LTCFs from the RAI documentation done quarterly.

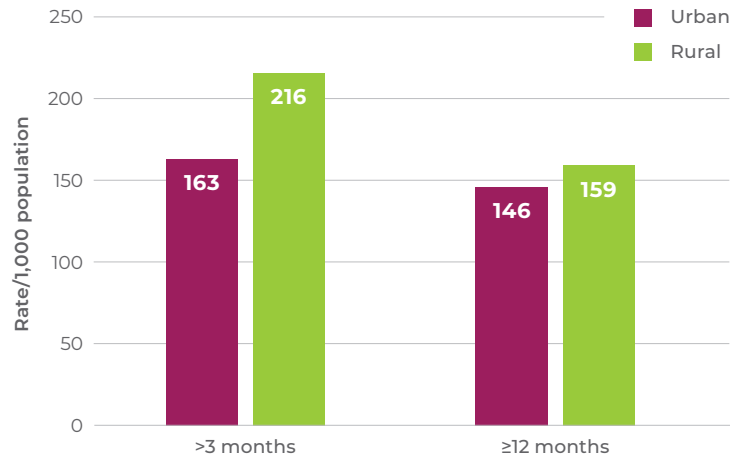
Postal codes were used to define regions.

## Results



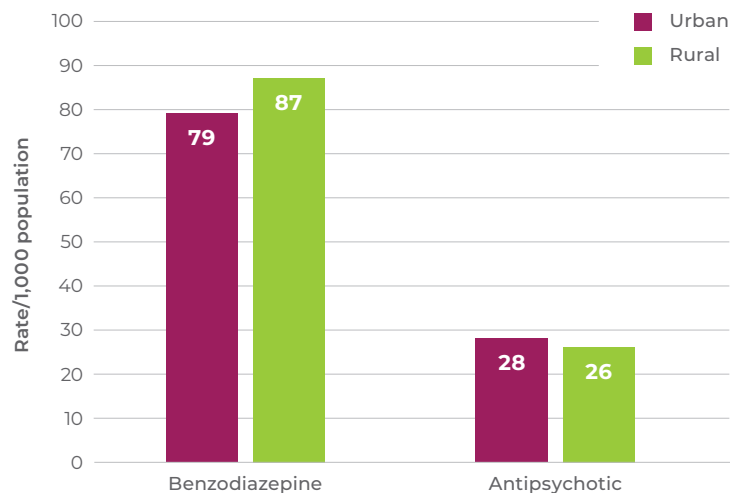
**Figure 1. The Rate of Antibiotic Prescriptions/1,000 Population in Urban vs Rural Regions of NL, 2019/20**

- The rate of antibiotic prescriptions/1,000 people was 17% higher in rural compared to urban regions.



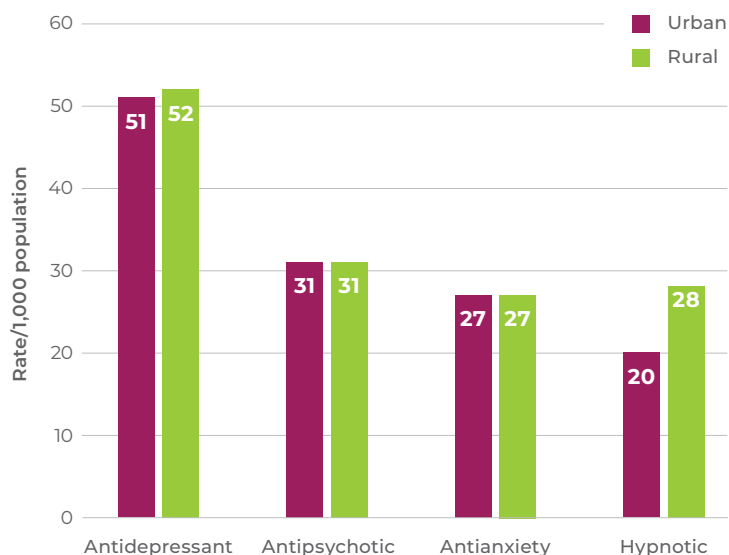
**Figure 2. Rate of Long-term PPI Use/1,000 People in Rural vs Urban Regions, 2018/19**

- The rate of PPIs prescribed for >3 months/1,000 people was 33% higher in rural compared to urban regions. However, the rate prescribed for ≥12 months was only 9% higher.



**Figure 3. The Rate of Benzodiazepine and of Antipsychotic Prescriptions/1,000 People in Rural and Urban Regions, 2019/20**

- NL has a far higher rate of chronic benzodiazepine use in seniors than Canada.
- The rate of benzodiazepine prescriptions/1,000 people was 10% higher in rural compared to urban regions.
- The rate of antipsychotic prescriptions/1,000 people was 7% lower in rural compared to urban regions.



**Figure 4. The Per Cent of Residents of Rural and Urban LTCF Taking Psychotropic Drugs, 2020/21**

- There was little difference in the use of antidepressants, antipsychotics, and anti-anxiety drugs in rural vs urban LTCF residents. However, the use of hypnotics was 39% higher in rural vs urban residents.

## Conclusions

1. Use of antibiotics, long-term PPIs, benzodiazepines in the community and in LTCFs was higher in rural vs urban regions.
2. Improvement in potentially unnecessary drug use may require different approaches in rural compared to urban settings. Integration of pharmacists into community teams should target appropriate use of drugs, both those that are overutilized and those that are underutilized.
3. There are substantial demographic differences across the regions of NL with more women and children in urban areas and more seniors in rural areas. Even with correction for these differences, the highest rates of antibiotic use were in rural areas.