

Antimicrobial Stewardship for Newfoundland and Labrador (WHO AWaRe)

Choosing Wisely Canada Recommendation

Multiple recommendations exist for not using antibiotics for the treatment of upper respiratory infections, sore throat, otitis media, and other illnesses that are most likely viral in origin or for asymptomatic bacteriuria in non-pregnant women.

See www.choosingwiselycanada.org/primary-care/antibiotics for more details.

Practice Points

1. AWaRe (Access, Watch, Reserve) is a system developed by the World Health Organization (WHO) to group antibiotics according to their spectrum of activity against microbes and their risk of developing antimicrobial resistance.
2. The Access group comprises narrower spectrum antibiotics with low resistance potential while Watch group antibiotics are broader spectrum with higher resistance potential. The Reserve group includes antibiotics that should be considered as last-resort options.
3. For 90% of commonly encountered community-acquired infections, the primary choice is an Access group antibiotic.
4. The WHO's target is to have at least 60% of total antibiotic consumption being Access group antibiotics at a country level.

Data

1. Prescribing data were recorded by the Newfoundland and Labrador (NL) Pharmacy Network and made available by NL Health Services (NLHS) for the period from 1 Aug 2021–31 Aug 2022.
2. Antibiotics dispensed in the community were assigned to one of three categories according to the WHO AWaRe classification system – Access, Watch, Reserve.
3. Prescriptions of oral antibiotics were the focus for this analysis.

Results

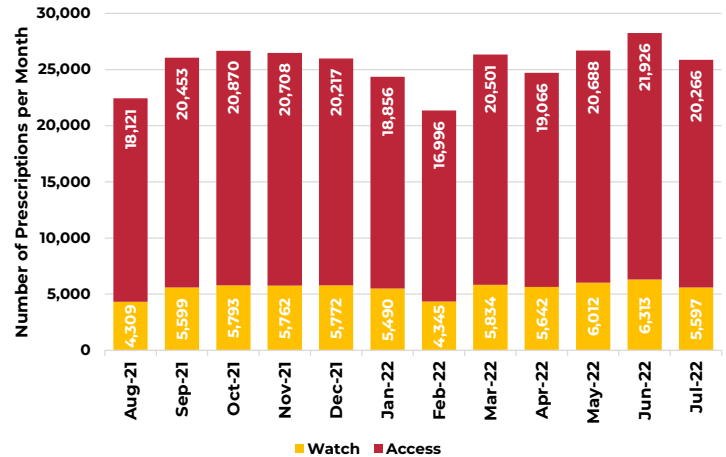


Figure 1. Total Number of Prescriptions per Month for Oral Antibiotics Analyzed by WHO AWaRe Categories, Aug 2021–Jul 2022

- There were 238,668 prescriptions for Access group antibiotics, 66,468 for Watch, and 2,325 for Reserve from 1 Aug 2021–31 Jul 2022.
- The average monthly prescriptions were 19,889 for Access, 5,539 for Watch, and 194 for Reserve.

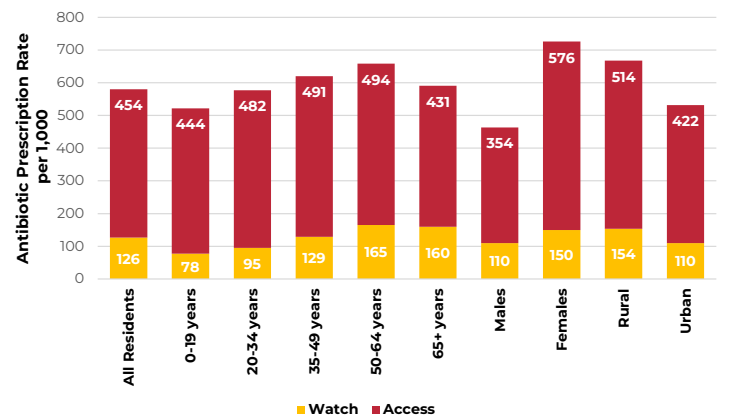


Figure 2. Antibiotic Prescription Rate per 1,000 Population Analyzed by WHO AWaRe Categories and Demographics, Aug 2021–Jul 2022

- Prescription rates for Access group antibiotics were highest in females and rural settings.
- The highest rates for Watch antibiotics were seen in older age groups (50–64 years, 65+ years).
- The proportion of prescriptions for Watch antibiotics increased with age.

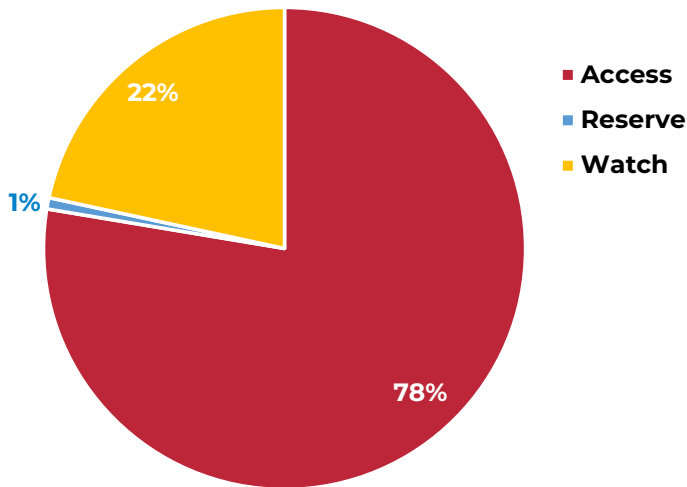


Figure 3. Percentage of Antibiotic Prescriptions Analyzed by WHO AWaRe Categories, Aug 2021–Jul 2022

- The majority of prescriptions were for Access antibiotics.

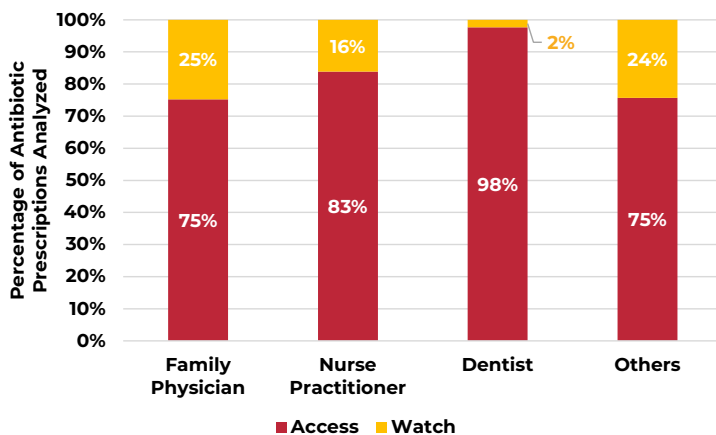


Figure 4. Percentage of Antibiotic Prescriptions Analyzed by WHO AWaRe Categories and Health Provider, Aug 2021–Jul 2022

- Nurse Practitioners had a slightly lower percentage of Watch antibiotic prescriptions as compared to other providers.
- The majority of prescriptions by dentists were for Access antibiotics.

Table 1. Antibiotic Prescription Length in Days Analyzed by WHO AWaRe Categories, Aug 2021–Jul 2022

WHO Category	No. Prescriptions	Average Length (Standard Deviation)	Median Length
Access	238,668	9.40 (9.94)	7
Reserve	2,325	47.0 (29.0)	30
Watch	66,468	9.32 (11.75)	7

- Reserve antibiotics had the greatest average prescription length as compared with other groups, possibly reflecting cases where infections were hard to clear due to resistant organisms.

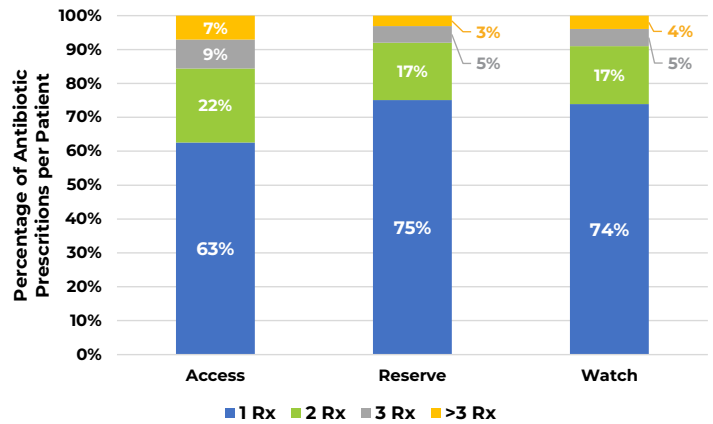


Figure 5. Percentage of Antibiotic Prescriptions per Patient Analyzed by WHO AWaRe Categories, Aug 2021–Jul 2022

- The percentage of patients who received three or more antibiotic prescriptions was slightly higher for Access antibiotics as compared to other groups.

Conclusions

- 78% of prescriptions in the community setting were for Access group antibiotics which satisfied the WHO's target of 60% that aims to optimize antibiotic use and curb antimicrobial resistance.
- Prescriptions for Watch group antibiotics were more common in older age groups which may be explained by a greater incidence of complex health conditions in those groups.
- More data are needed to monitor antibiotic use as viral infections are likely to increase in prevalence after the COVID-19 pandemic.