

When antibiotics are *not* prescribed: findings from a low-consumption country

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Background

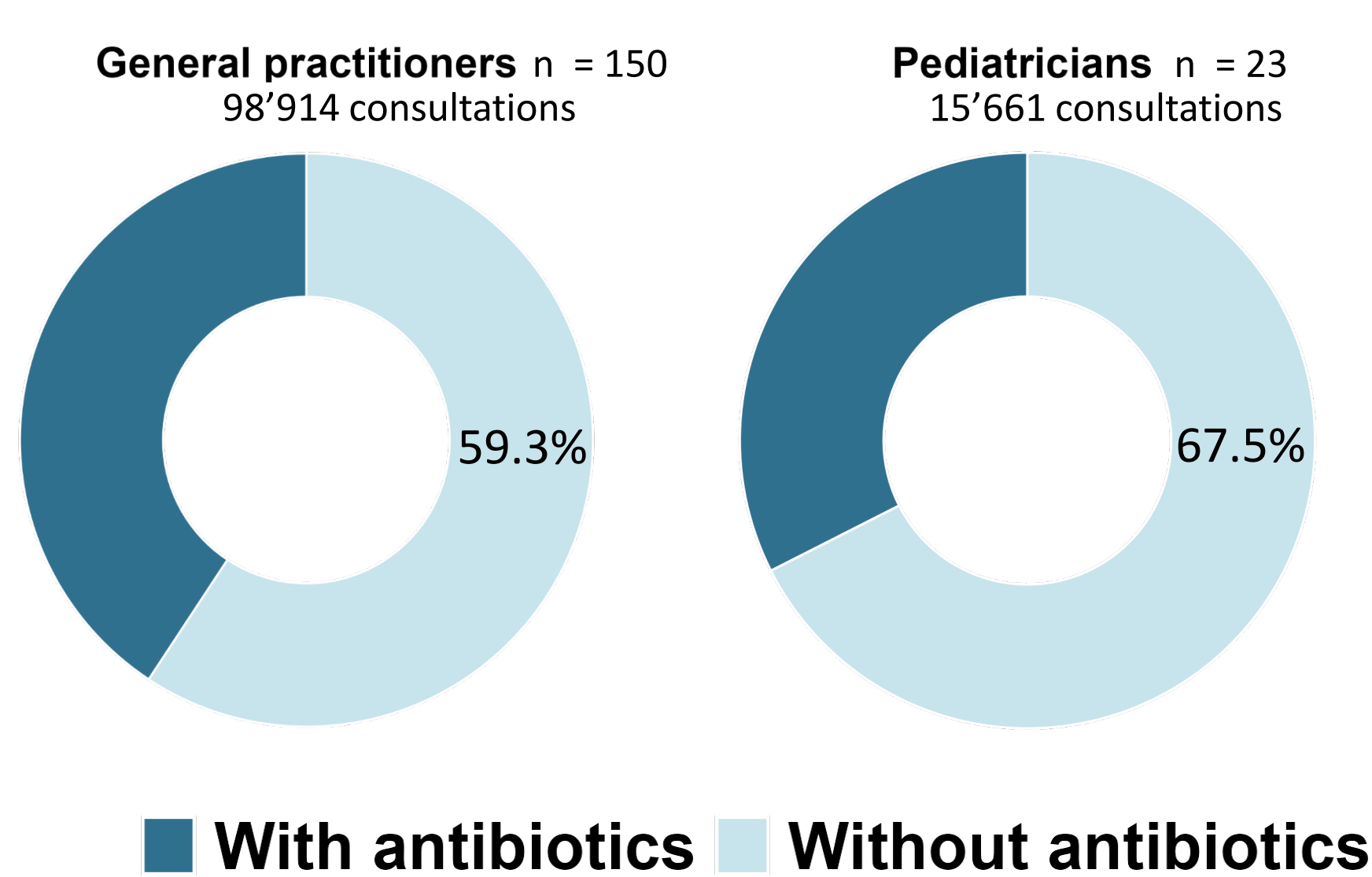
Antibiotic overuse remains a key driver of antimicrobial resistance worldwide. In countries with low antibiotic consumption, understanding when antibiotics are *not* prescribed can provide important insights on appropriate use and stewardship. However, continuous monitoring of non-prescription is generally limited. Switzerland has started to monitor cases of non-prescription within primary care sentinel surveillance.

Method

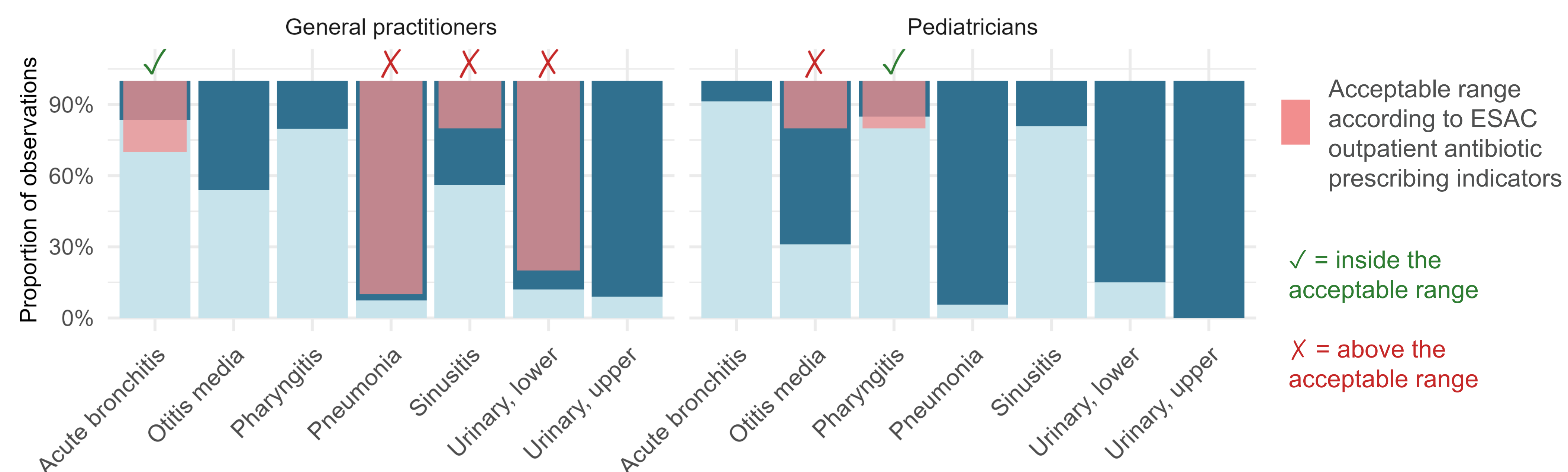
Primary care physicians in the Swiss Sentinella network report up to 5 infection cases per half day, with or without antibiotic prescriptions. The repeated surveys, conducted in June/July and September over two-week periods, were introduced in 2023 and target consultations for sinusitis, acute otitis media (AOM), pharyngitis, acute bronchitis, pneumonia and urinary tract infections, enabling comparison with European Surveillance of Antibiotic Consumption (ESAC) quality indicators [1]. Patients managed by phone by the reception staff and not seen in consultation were not included. Statistical analysis included chi-square tests and multiple logistic regression.

Results

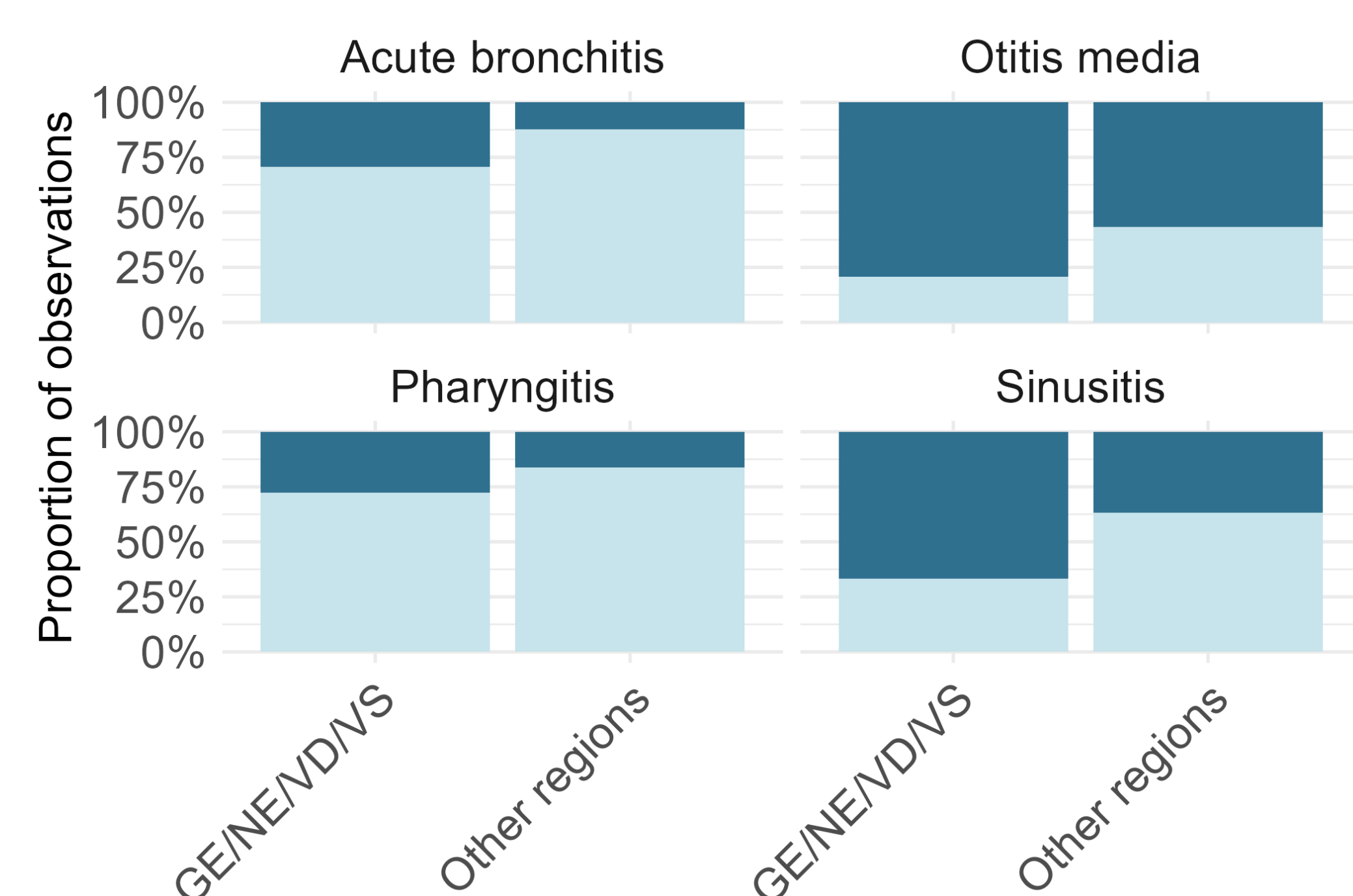
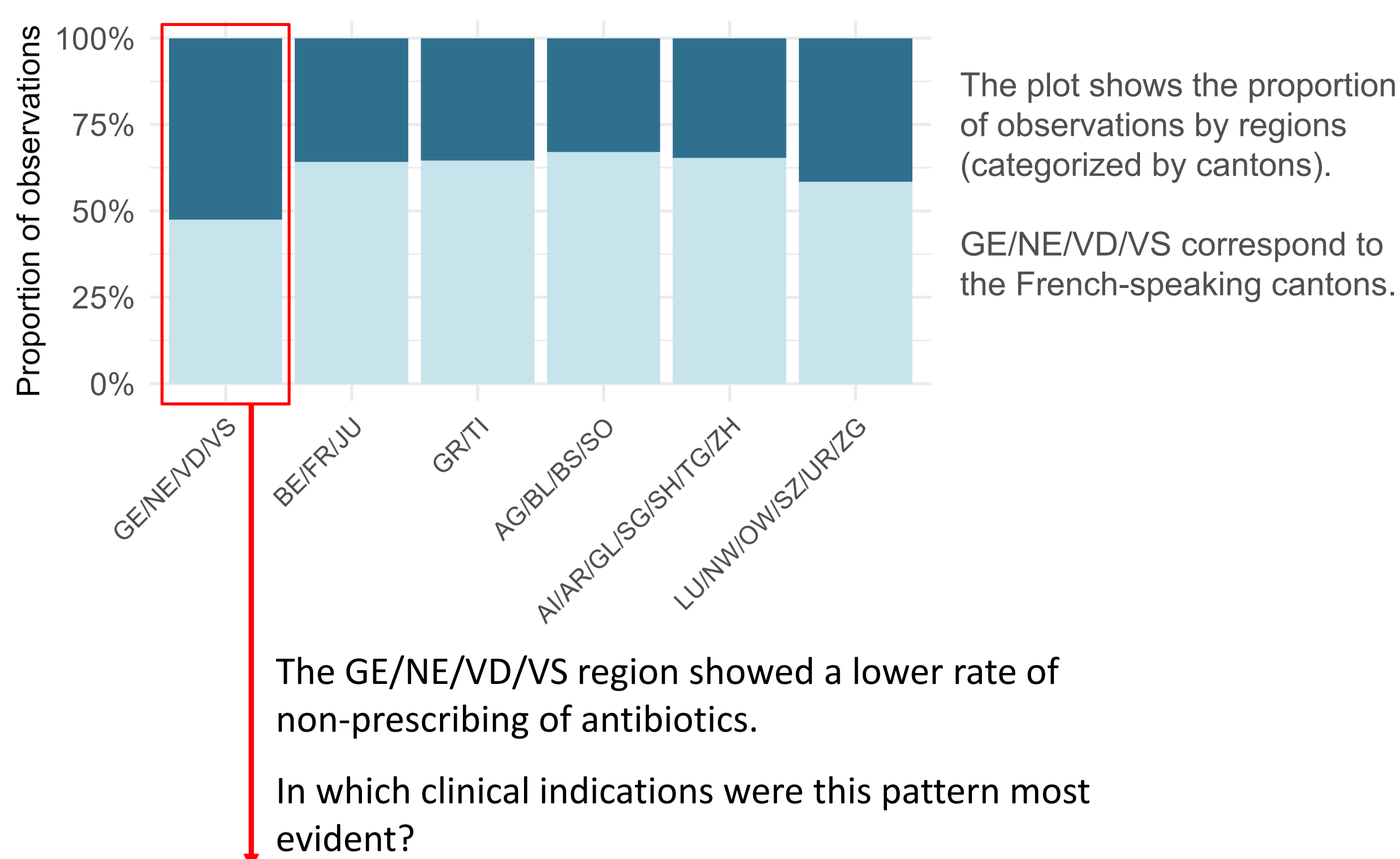
What proportion of consultations result in *no* antibiotic prescription?



At which proportions were antibiotics *not* prescribed by indication? What proportion fell within the acceptable ESAC ranges?



Was a regional variation observed?



Other interesting results :

- Prescribing *no* antibiotics was more frequent in group practices compared to individual practices (65.9% vs 54.6%), and among younger physicians (69.9% in the 31-45 years age group, 59.9% in the 46-65 age group, vs 32.6% in > 65 years).
- In the multivariate model, clinical indication was the most strongly associated factor with antibiotic prescription, with higher odds of prescribing for pneumonia, urinary tract infections (upper and lower) and AOM.
- The French-speaking region, patient's age, individual practice and the physician's age were significantly associated with antibiotic prescribing, whereas physician specialty (GPs vs pediatricians), urban-rural typology, patient's and physician's gender were not improving the model.

Conclusion

Antibiotic prescribing for sinusitis in adults and AOM in children remains well above ESAC targets, indicating room for improvement.

Clinical indication was the main driver of prescribing, supporting diagnosis-specific stewardship approaches. Variations by practice type, physician age and linguistic region revealed persistent variability.

Strengthening primary-care stewardship interventions remains necessary, even in Switzerland where overall antibiotic use is low.