

# Socio-economic pattern in polypharmacy and medication review among older adults: a population-based study

Justine Bochud<sup>1</sup> ; Dr. Axelle Braggion<sup>1,2</sup> ; Dr. Mathieu Jendly<sup>1</sup> ; Prof. Line Guenette<sup>3</sup> ; Prof. Valérie Santschi<sup>4</sup> ; Prof. Arnaud Chioleri<sup>1, 2, 5</sup>

<sup>1</sup> Population Health Laboratory (#PopHealthLab), University of Fribourg, Switzerland

<sup>2</sup> Swiss School of Public Health (SSPH+), Zurich, Switzerland

<sup>3</sup> Population Health and Optimal Health Practices Research Unit, CHU de Québec Research Centre and Faculty of Pharmacy, Université Laval, Québec, Canada

<sup>4</sup> La Source, School of Nursing Sciences, HES-SO University of Applied Sciences and Arts Western Switzerland, Lausanne, Switzerland

<sup>5</sup> School of Population and Global Health, McGill University, Montreal, Canada

## BACKGROUND

**Polypharmacy**, defined as the **daily use of five or more medications**, is a major risk factor for falls, hospitalizations, morbidity, and mortality, representing a growing challenge for primary care. Structured **medication reviews** are strongly recommended to optimize treatments and mitigate these risks.

## OBJECTIVE

To describe the **prevalence of polypharmacy**, the **proportion of medication review**, and **their association with socio-economic status** among older adults in Switzerland.

## METHODOLOGY

- We performed a secondary analysis of the 2024 International Health Policy Survey in Switzerland, based on a representative sample of 2'634 community-dwelling adults aged 65 and over.
- We estimated the prevalence of polypharmacy (regular use of  $\geq 5$  prescribed medications) and of medication review in the last 12 months as reported by participants. Socio-economic status was defined by income and education.
- We assessed the associations between participants' characteristics, polypharmacy, and medication review using stratified analyses and prevalence ratios (PRs) estimated with modified Poisson regression.

## RESULTS

- 2'152 participants were included (51% women; mean age: 75 years).
- 20% reported taking  $\geq 5$  prescribed medications daily.** Polypharmacy prevalence increased with age (**Table 1**), number of physicians consulted in the last 12 months (PR = 6.5 for  $\geq 4$  versus 0 physician), lower education level (PR = 1.4 for primary versus tertiary), and lower income (PR = 1.3 for CHF < 5000 versus  $\geq 9000$ ).
- Among participants with polypharmacy, 84% reported a medication review in the past 12 months.** Review rates were similar across education levels but were slightly less frequent among those with lower income (**Figure 1**).



**Table 1: Prevalence of polypharmacy by age and sex**

	65-74	75-84	85+	65+
<b>Total population</b>	14%	23%	32%	19%
<b>Men</b>	14%	23%	35%	19%
<b>Women</b>	13%	24%	30%	19%

## TAKE HOME MESSAGES

- Among older adults in Switzerland, polypharmacy increased with age and with lower income.**
- Medication review was frequent among older adults, but less so among those with lower income.**
- Findings suggest an inverse care law phenomenon - those who need care most are least likely to receive it.**

**Figure 1: Proportion of medication review by age and income among older adults with polypharmacy**

