





CENTER FOR PUBLIC HEALTH MEDICAL UNIVERSITY OF VIENNA Department of Health Economics

Towards more equitable medicine use? Developments in socio-economic determinants of the consumption of prescribed and non-prescribed medicines in Austria

Sabine Vogler^{1,*}, August Österle², Susanne Mayer³

¹ WHO Collaborating Centre for Pharmaceutical Pricing and Reimbursement Policies, Pharmacoeconomics Department, Gesundheit Österreich GmbH (Austrian Public Health Institute), Austria

² Institute for Social Policy, Department of Socioeconomics, Vienna University of Economics and Business, Austria

³ Department of Health Economics, Center for Public Health, Medical University of Vienna, Austria

*correspondence: sabine.vogler@goeg.at

Background

- A variety of determinants can impact the utilisation of prescribed and non-prescribed medicines.
- These include pharmaceutical policies to ensure affordable and equitable access to medicines, medicine prices, economic situation/ developments).

Objectives

- To analyse the socio-economic determinants in medicine use in Austria in 2014
- To compare the findings to 2006/2007 data

Methods

- Cross-sectional data from the second wave (2014) of the European Health Interview Survey were analysed and compared to the results of the first wave in 2006/2007 (Mayer & Österle, 2015).
- Multivariate logistic regression analyses were performed in order to determine the association between the socio-economic status (measured by education, income and employment status, controlled for age, gender, health status and outpatient visits) and the utilisation of prescribed and non-prescribed medicines in Austria.

Table 1. Sample characteristics (2014)

		Non-prescribed		Prescribed		Both	
	n	n	%	n	%	n	%
Total	14,363	2,723	19.0	4,944	34.4	2,393	16.7
Sex							
Men	6,350	1,032	16.3	2,262	35.6	711	11.2
Women	8,013	1,691	21.1	2,682	33.5	1,682	21.0
Age							
25-34	2,285	622	27.2	409	17.9	248	10.9
35-44	2,919	755	25.9	607	20.8	386	13.2
45-54	3,698	761	20.6	1,114	30.1	604	16.3
55-64	2,900	416	14.3	1,328	45.8	517	17.8
65-74	1,844	143	7.8	1,023	55.5	460	25.0
75+	717	26	3.6	463	64.6	178	24.8

Results

- The composition of medicine use changed between 2006/2007 and 2014: In 2014 (Table 1), an increased number of people reported using only non-prescribed medicines (19.0% in 2014 vs. 10.1% in 2006/2007), whereas the utilisation of only prescribed medicines (34.4% in 2014 vs. 41.1% in 2006/2007) decreased. In contrast, consumption of both prescribed and non-prescribed medicines slightly increased (16.7% in 2014 vs. 12.7% in 2006/2007).
- The 2014 data analysis (Figure 1) confirmed a prowell-off gradient in non-prescribed medicine use that had also been observed in the 2006/2007 data.
 For prescribed medicines, the pro-worse-off education gradient for prescribed medicines remained
- stable but, at the same time, higher income was associated with a higher chance of such medicine consumption in 2014.

Figure 1. Non-prescribed medicine use (only), prescribed medicine use (only), medicine use of both types versus no medicine use by socioeconomic status, controlled for age, sex, outpatient visits, chronic conditions, self-perceived health (not shown) (2014)

Non-pres	cribed medication	Prescribed medication			
Employment status	RRR (95% CI)	Employment status Ri	RR (95% CI)		
Employed (reference group) Unemployed	•	Employed (reference group) Unemployed	·		
Homemaker Retired		Homemaker Retired	1.80 (0.47-2.19)***		
Highest education		Highest education			
ISCED 0-2 (reference group) ISCED 3-4 ISCED 5 ISCED 6-8	1.32 (1.09-1.58)*** 1.60 (1.30-1.89)*** 1.89 (1.52-2.36)***	ISCED 0-2 (reference group) ISCED 3-4 ISCED 5 ISCED 6-8	 0.78 (0.64-0.94)**		
Net equivalent income < first quintile (reference group First-second quintile Second-third quintile Third-fourth quintile Fourth-fifth quintile)	Net equivalent income < first quintile (reference group) First-second quintile Second-third quintile Third-fourth quintile Fourth-fifth quintile) 		
0 0.5	1 1.5 2 2.5	0 0.5	1 1.5 2 2.5		

Notes: Multinomial logistic regression with no medicine use as reference group (n = 4,303); n, number of cases; RRR, multivariate relative-risk ratios; CI, 95% confidence interval; *** = significant at 1%, ** = significant at 5%. Likelihood Ratio Chi-square = 6,487.44 (df = 69, p < 0.0001), McFadden's R² = 0.17, n = 14,363.

Discussion and conclusion

- The results about socio-economic determinants in medicine use are in line with findings for other healthcare services, confirming that higher educated people likely consume more health resources paid out-of-pocket such as non-prescribed medicines.
- After 2006/2007, Austria saw a decreasing use of prescribed medicines and an increasing use of non-prescribed medicines. The results suggest growing inequity in the consumption of non-prescribed medicines.
- The stable pro-worse-off education gradient for prescribed medicines over the years, however, suggests that pharmaceutical policies in Austria were able to contribute to equitable access to prescription medication.

Funding

No funding was received for this research.

References

Mayer S, Österle A (2015): Socioeconomic Determinants of Prescribed and Non-Prescribed Medicine Consumption in Austria. European Journal of Public Health, 25(4), 597-603.