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## Preview

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**Titel:** **What factors are associated with poor medication adherence in multimorbid older patients with hyperpolypharmacy?**

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### Generelle Daten

**Gewünschte Art der Präsentation: \*** Poster oder Vortrag

**Thema: \*** General practice / Family medicine

### Abstract Text

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**Introduction**  
Knowledge of medication adherence is important to assess treatment effectiveness, prevent unnecessary drug escalation or support deprescribing. Adherence data comes mainly from polypharmacy studies ( $\geq 5$  concurrent drugs), yet studies on adults with hyperpolypharmacy (HPP) ( $\geq 10$  drugs) are lacking - but are needed to reflect our aging multimorbid /multi-drug patients. Thus, we aim to determine prevalence, and uncover potential factors associated with poor medication adherence in hospitalized patients with HPP.

**Methods**  
We used baseline data from the OPERAM (“Optimising PharmacothERapy in Multimorbid elderly”) trial conducted in 4 European centers. Inpatients aged  $\geq 70$  yrs with  $\geq 3$  comorbidities were included in this analysis if they had HPP on admission. Data were collected on demographics, clinical characteristics, health care contacts and quality of life (QoL) using the EQ5D-VAS (0-100 points, with higher scores relating to higher QoL). Adherence was assessed with the Morisky Medication Adherence Scale-8 (MMAS-8)<sup>®1</sup>, and patients were categorized into 2 groups: high (MMAS 8 points) vs low/medium adherence (MMAS  $< 8$  points). Potential risk factors for low/medium adherence were first identified using univariable logistic regression. All variables with p-value  $< 0.20$  were included in a multivariable model.

**Results**  
Of 978 patients with HPP (median number of drugs 13, interquartile range [IQR] 11-16) and MMAS-8 data, 517 (52.9%) had low/medium adherence, with a median MMAS-8 of 6.75 (IQR 5.75-7). Compared to the high adherence group, patients with low/medium adherence were younger (median 78 vs 80 yrs) and had more comorbidities (median 14 vs 12). In multivariable analyses, an increasing number of comorbidities was associated with higher odds of low/medium adherence (p for trend 0.004, Table 1); while the odds were lower with older age (odds ratio [OR] 0.71, 95% confidence interval [CI] 0.53-0.94 for  $\geq 80$  vs  $< 80$  yrs), community nurse visits (OR 0.58, 95% CI 0.43-0.78), and QoL (OR 0.99, 95% CI 0.98-0.99 per 1-point increase in EQ5D-VAS).

**Conclusion**  
Suboptimal medication adherence was highly prevalent in this older population with HPP, and was associated with age, number of comorbidities and absence of community nurse visits. These findings highlight the important role of community nurse visits to improve medication adherence; and suggest that GPs should address poor medication adherence in highly multimorbid patients with HPP, to look



for deprescribing opportunities.

Table 1: Factors associated with low/medium medication adherence in multivariable analyses\*

Variable	OR	95% CI	P-value
Age ≥80 years (vs. <80 years)	0.71	0.53 – 0.94	0.016
Female sex (vs. male sex)	1.19	0.90 – 1.58	0.23
Number of chronic medications at baseline			
- 10 - 11	Reference		
- 12 - 13	0.88	0.61 – 1.27	0.32
- 14 - 15	0.80	0.52 – 1.22	
- 16 - 17	0.66	0.41 – 1.05	
- 18 - 19	1.39	0.74 – 2.62	
- ≥ 20	1.01	0.60 – 1.70	
Current smoking (vs. non-smoking)	1.20	0.72 – 2.01	0.48
Education level			
- less than high school	Reference		
- High school	0.90	0.66 – 1.23	0.06
- University	1.42	0.95 – 2.11	
Number of chronic comorbidities			
- ≤ 5	Reference		
- 6 - 10	1.07	0.53 – 2.14	0.004 <sup>†</sup>
- 11 - 15	1.33	0.66 – 2.69	
- 16 - 20	1.91	0.90 – 3.97	
- ≥ 21	2.32	1.10 – 4.93	
GP contact <sup>‡</sup> (yes vs. no)	1.35	0.73 – 2.48	0.34
Community nurse contact (e.g. Spitzer / sans à domicile visits) <sup>‡</sup> (yes vs. no)	0.58	0.43 – 0.78	<0.001
EQ5D-VAS for QoL <sup>§</sup> (per 1-point increase in score)	0.99	0.99 – 0.99	0.001

Legend: CI, confidence interval; EQ5D-VAS for QoL, EQ5D-Visual Analogue Scale for quality of life; GP, general practitioner/primary care physician; OR, odds ratio; vs., versus.

\* results from a multivariable logistic regression model adjusted for all variables shown in the table (i.e. age, sex, and all variables with a p-value <0.2 in the univariable analyses). Low/medium adherence was defined as <8 points on the Morisky Medication Adherence Scale-8 (MMAS-8). (Use of Morisky medication adherence measure questionnaire is protected by US copyright laws. Permission for use is required. A license agreement was obtained from Donald E. Morisky, ScD, ScM, MSPH, Professor, Department of Community Health Sciences, UCLA Fielding School of Public Health, 650 Charles E. Young Drive South, Los Angeles, CA 90095-1772, USA (dmorisky@ucla.edu).)  
<sup>†</sup> at least one contact in the last 6 months.  
<sup>‡</sup> EQ5D-VAS for QoL, patient self-reported health-related quality of life, ranging from 0 to 100 points, with higher scores relating to higher quality of life. In the statistical model, the odds ratio relates to a 1-point increase in the EQ5D-VAS QoL score.  
<sup>§</sup> p-value for linear trend is 0.004. p-value for overall significance is 0.002.

Referenzen:

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