WENNBERG INTERNATIONAL COLLABORATIVE SPRING POLICY MEETING 2018

Prescription patterns, polypharmacy and potentially inappropriate medication in Swiss nursing homes: a descriptive analysis based on claims data

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Background

- Proportion of persons ≥ 65 years of age
  - 2015: 18%
  - 2045 (estimated): 26%
- Multimorbidity and polypharmacy (concurrent use of ≥ 5 different drugs) are common in nursing homes and associated with increased risk of
  - Adverse drug reactions
  - Hospitalization
  - Prescribing of PIM
- PIM: *potentially inappropriate medication*
  - 1991: Beers Criteria (updated in 2015)
  - 2010: Priscus-Liste

Objective

- Literature
  - Numerous studies concerning polypharmacy and PIM
  - To date: no comprehensive data for Swiss nursing homes

The aim of this study was to describe the general medication utilization in Swiss nursing homes and to assess the prevalence of residents with polypharmacy and supplies of PIM.

Methods

- Helsana claims data covering the years 2013 – 2016
- Inclusion criteria
  - Residents aged ≥ 65 years
  - Minimum stay in a nursing home of 28 days in the respective year
- Exclusion criterion
  - Nursing homes with invoices for nursing care based on lump sums

Methods

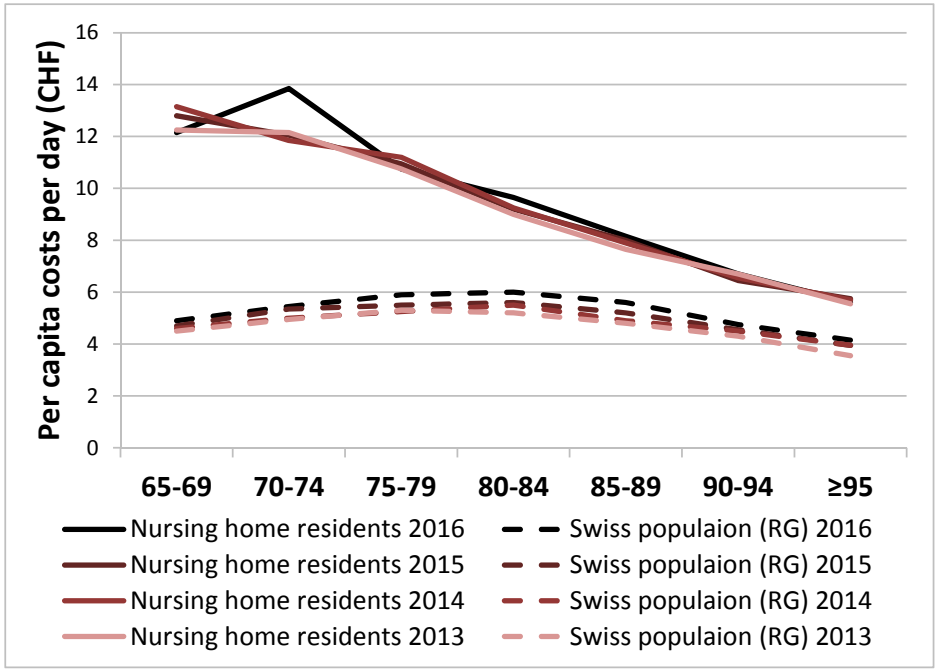
- Per capita costs per day for drugs according to
  - Age groups
  - Gender
- Polypharmacy (year 2016)
  - Drug supply of ≥ 5 different prescribed drugs (according to their ATC code) in a period of 3 months
- PIM (year 2016)
  - Identification: Beers criteria und Priscus list
- Results were extrapolated to Swiss population

Study population

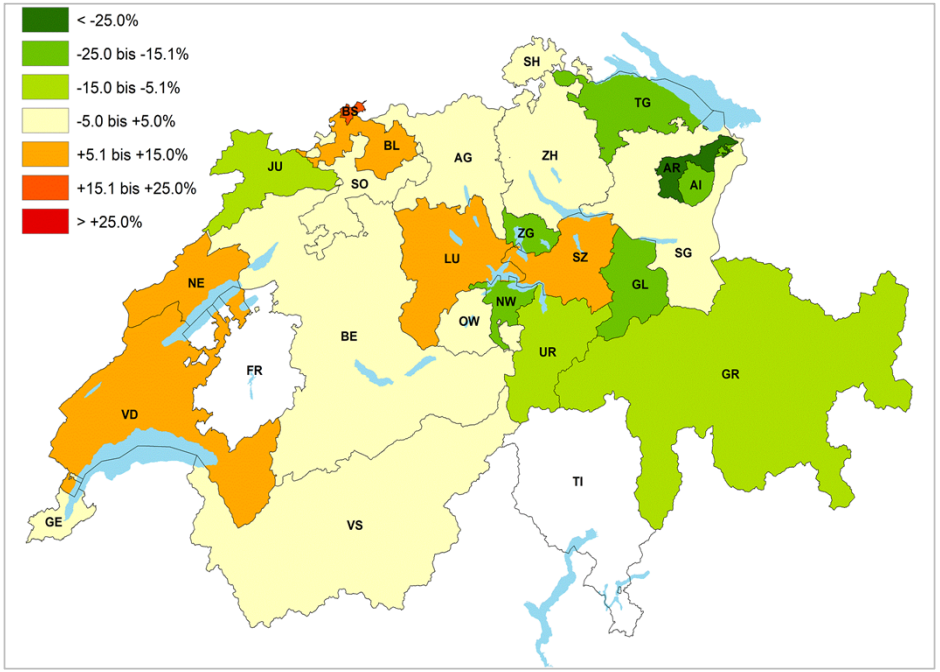
		2013	2014	2015	2016	Change since 2013 (%)
		n = 88,923	n = 91,421	n = 93,257	n = 91,166	+2.5
Gender (%)	♂	72.9	72.0	71.6	71.9	+1.1
	♀	27.1	28.0	28.4	28.1	+6.4
Ø Age		85.7	85.7	85.8	85.7	+0.0
Nr of drug supp-lies in thousands		4,754.8	5,153.3	5,257.4	5,360.2	+12.7
Medication costs in million (CHF)		193.7	202.9	203.7	210.4	+8.6

Per capita costs per day for drugs

- Average per capita costs per day (2016)
  - Swiss nursing homes: CHF 8.55
  - Swiss population ≥ 65 years of age: CHF 5.45



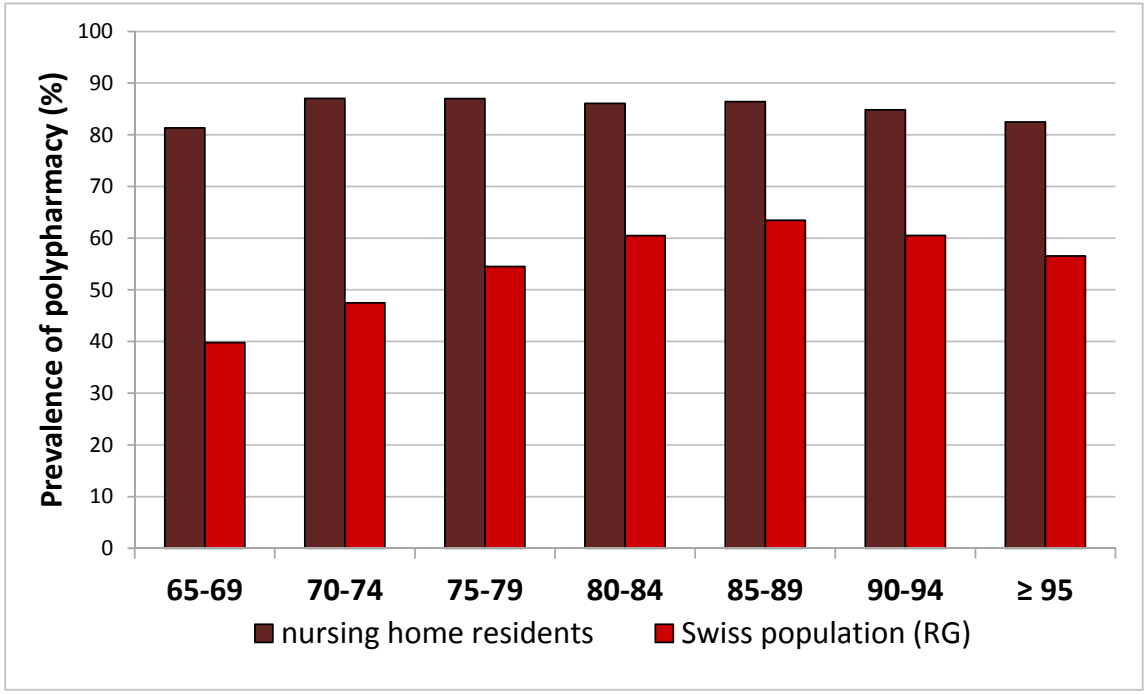
Abbreviations: RG, reference group



FR, TI: not applicable because of lump sums

Polypharmacy (≥ 5 drug supplies in 2nd quarter of 2016)

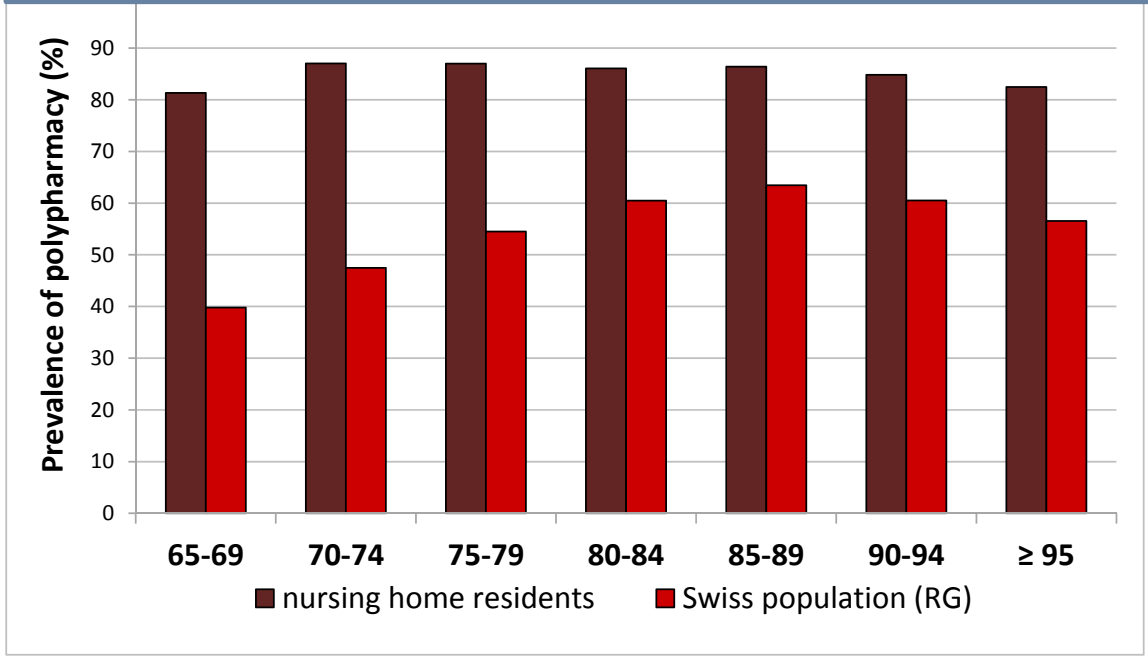
- Average prevalence of polypharmacy
  - In Swiss nursing homes: 85.5%
  - In Swiss population ≥ 65 years of age: 50.4%



Abbreviations: RG, reference group

Polypharmacy (≥ 5 drug supplies in 2nd quarter of 2016)

- Average number of drug supplies
  - In Swiss nursing homes: 9.3
  - In Swiss population ≥ 65 years of age: 5.6



Abbreviations: RG, reference group

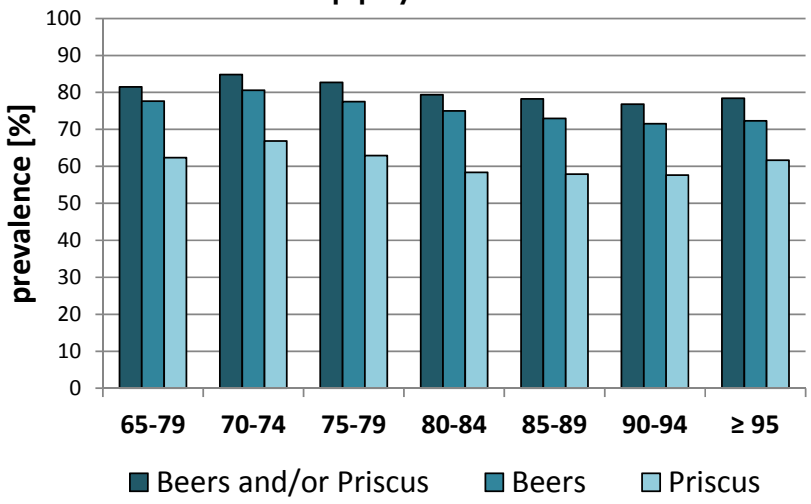
Potentially inappropriate medication (PIM) in nursing homes in 2016

3 most supplied PIM

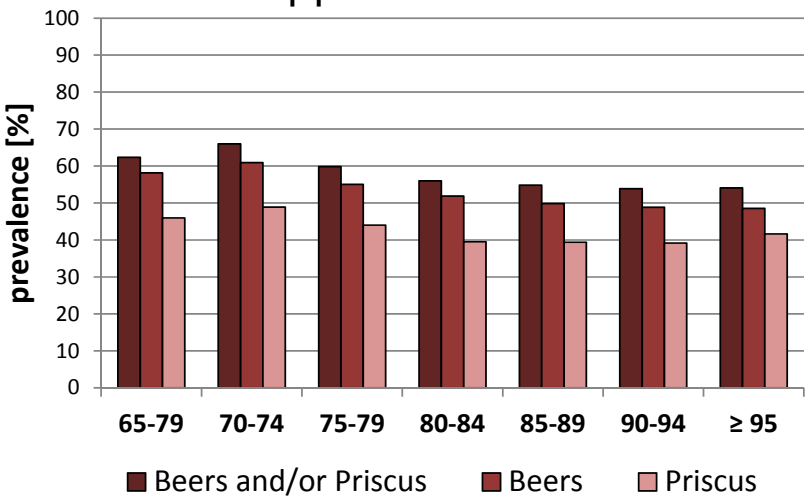
Beers and/or Priscus:	79.1%
Beers:	74.0%
Priscus:	59.5%

Beers and/or Priscus:	56.2%
Beers:	51.3%
Priscus:	40.9%

≥ 1 supply of a PIM



≥ 3 supplies of same PIM

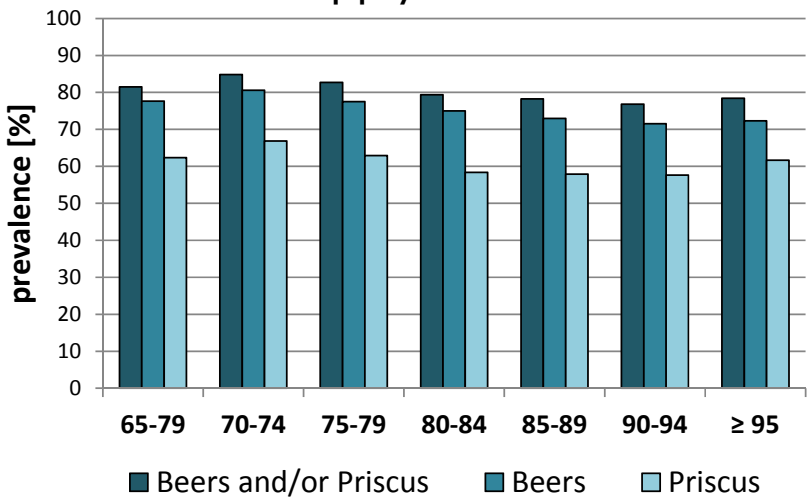


Potentially inappropriate medication (PIM) in nursing homes in 2016

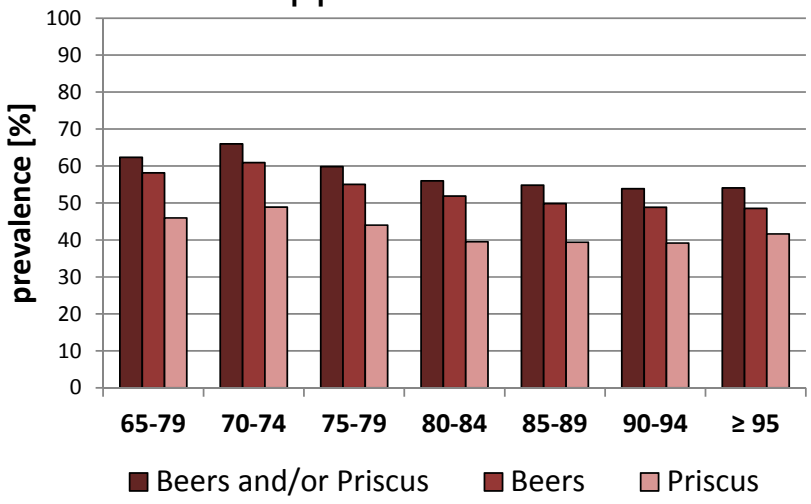
3 most supplied PIM

PIM active agent	Beers (B)/Priscus (P)	≥ 1 supply of same PIM (%)	Long-term supply (≥ 3 supplies of same PIM) (%)
Quetiapine	B	22.4	15.2
Lorazepam	B/P	20.2	8.9
Zolpidem	B/P	13.0	8.5

≥ 1 supply of a PIM



≥ 3 supplies of same PIM



Conclusion

- Prioritization of really necessary therapies and drugs seems to take place in nursing home setting
- Frequent prescription of PIM (including antipsychotics such as quetiapine or dependency inducing agents such as benzodiazepines)
- Guideline-oriented therapy is often not possible in elderly people
- Exchange between all health care experts involved in the treatment is necessary
- Side effects caused by the prescription of PIM do not only burden our health care system, but also and primarily the affected patient

Starting a therapy is the simple part of prescription practice

Thank you for your attention!

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