



# Do smokers use more health care services While paying less ?

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## Background

- Smokers: more consumption, more cost
- Solidarity: cost paid by the others
- Policy: individual responsibility
  - Discount in premium setting (carrots)
  - Financial penalty like copayment (sticks)
  - Priority setting in access (waiting list)
  - Wellness incentive (attainment and participation)

## Background

- Not enough distinction:
  - current, former, and never smoker
- Mostly about cost incurred by the society
  - how about cost incurred by smokers (OOP)?
- Ex-ante moral hazard
  - not enough incentive for smoker to quit

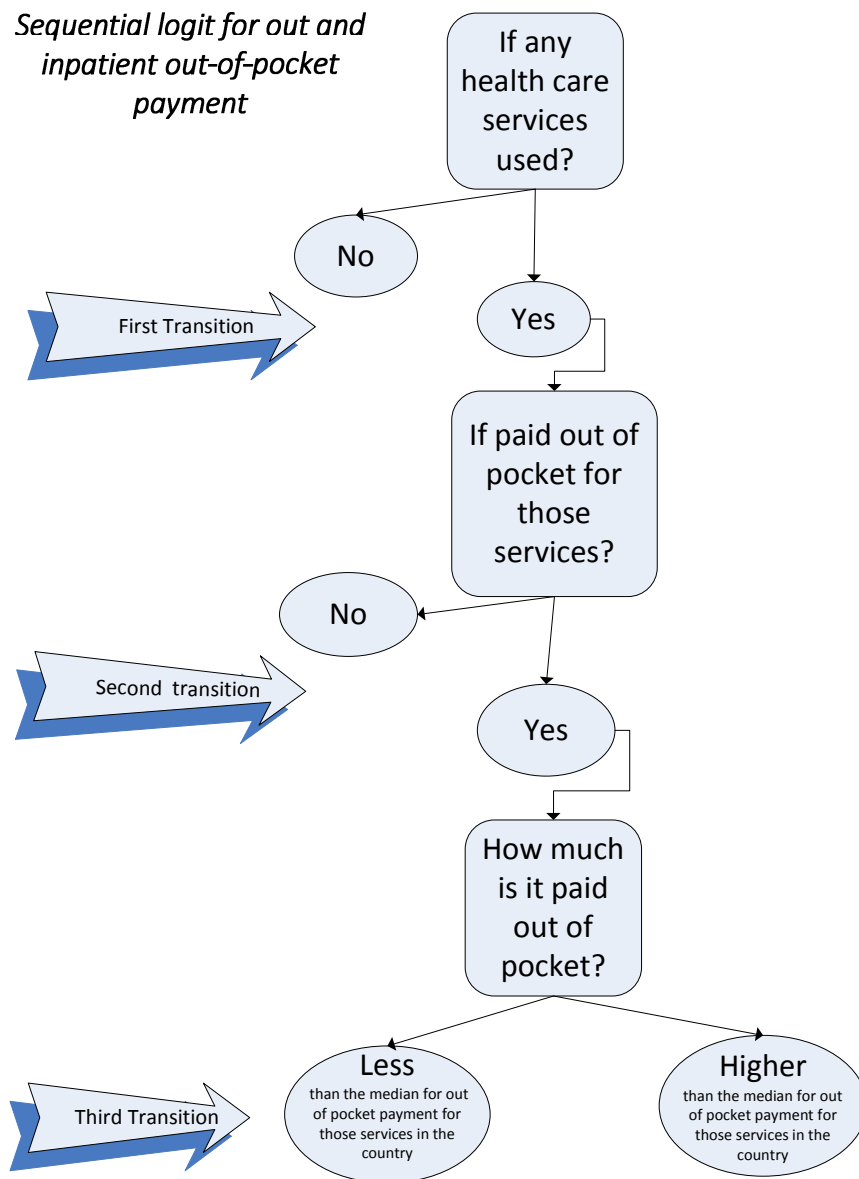
## Study aim

- Questions to be addressed:
  - Do smokers (former, current) use more health care services than never smokers?
  - Do they pay out of their own pocket or from a collective “pocket”?
- Hypothesis:
  - smokers use more health care services but pay less than never smoker

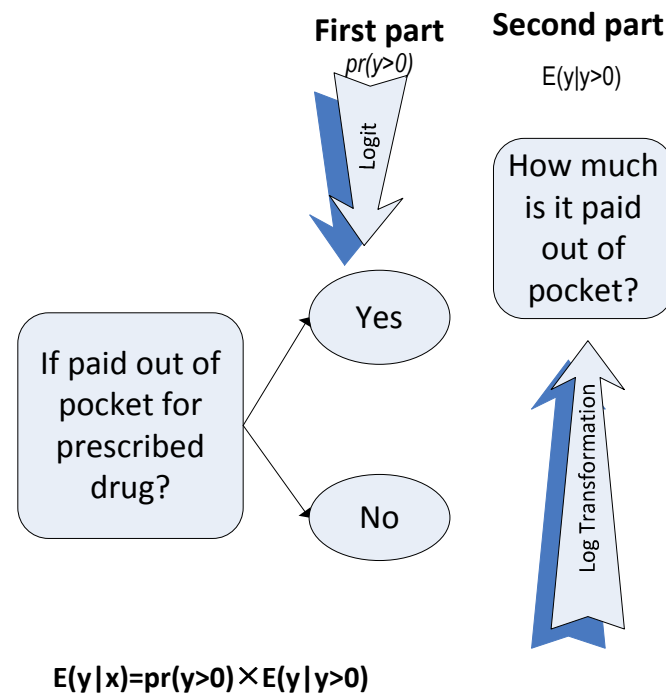
## Methods

- Data: SHARE Wave 1 in 11 European countries
- Out-of-pocket payment (OOP)
  - outpatient, inpatient, nursing home, and prescribed drug
- Daily smoking
  - current, former vs. never smoker
- Control variables
- “Zero mass” problem

*Sequential logit for out and inpatient out-of-pocket payment*



*Two part model for prescribed drug*



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# Result

### *Descriptive statistics*

	<i>Out-of-pocket payments (€) for</i>			<i>Daily smoking (%)</i>		
<b>Country</b>	Outpatient care	Inpatient care	Prescribed drug	current	former	never
<i>Austria</i>	44	23	116	18	18	64
<i>Germany</i>	70	25	85	18	27	56
<i>Sweden</i>	169	10	98	17	38	45
<i>Spain</i>	67	10	64	16	21	63
<i>Italy</i>	268	22	157	18	25	57
<i>France</i>	61	9	33	15	27	59
<i>Denmark</i>	155	3	195	32	32	36
<i>Greece</i>	165	62	124	26	18	56
<i>Switzerland</i>	232	114	133	20	25	55
<i>Belgium</i>	116	85	254	18	31	51
<i>Netherland</i>	92	6	31	24	38	38
<i>Total</i>	124	32	117	20	28	53



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### Summary results of sequential logit

		<i>Out-of-pocket payments for</i>					
		<i>Outpatient care</i>		<i>Inpatient care</i>		<i>Nursing home care</i>	
		OR	P value	OR	P value	OR	P value
<i>Either used or not?</i>	<i>Current smoker</i>	0.71	0.000	1.05	0.372	0.71	0.135
	<i>Former smoker</i>	1.07	0.158	1.28	0.000	0.93	0.677
<i>Either paid or not?</i>	<i>Current smoker</i>	0.96	0.317	0.87	0.322	2.09	0.214
	<i>Former smoker</i>	1.08	0.058	0.98	0.873	2.08	0.054
<i>Either paid high or low amount?</i>	<i>Current smoker</i>	1.00	0.990	1.05	0.753	1.11	0.897
	<i>Former smoker</i>	1.09	0.078	0.99	0.924	0.59	0.267

### Summary results of two part model for prescribed drug

	<i>First part</i>		<i>Second part</i>	
	OR	p value	Coefficient	p value
<i>Current smoker</i>	0.90	0.006	-0.04	0.132
<i>Former smoker</i>	1.10	0.007	0.05	0.011



## Discussion & Conclusion

- Should reject or accept the Hypothesis?
- Challenging elements of individual responsibility .
  - Carrot: current smokers use HC less.
  - Stick: hard to implement in inpatient setting
  - Priority setting in access: hard to use in inpatient setting
  - Wellness incentive: Appropriate?