

Evaluation of the effect of exclusion clauses in disability insurance.

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Conflict of interest disclosure

- Liesbeth Wijnvoord works at Movir, the insurance company that provided the data. No additional funding was received and Movir had no involvement regarding analysis and interpretation of the data or in the decision to submit this research for presentation; there are no other relationships or activities that could appear to have influenced the presented work.



Learning objectives:

After this presentation you will be able to:

- Describe the goal of exclusion clauses in disability insurance.
- Understand how the effect of exclusion clauses can be evaluated.
- Identify aspects of solidarity, but also of potential inequality in insurance



Outline

- What are exclusion clauses?
- Knowledge/knowledge gaps
- Research project
- Conclusions
- Implications



Evaluating and influencing the risk at application: underwriting

- Longer deferred period
- Limited duration of insurance policy (expiration)
- Exclusion clauses
- Charge of extra premium
- Rejection



Risk

Probability	Severity				
	Insignificant	Minor	Moderate	Significant	Catastrophic
Certain	MEDIUM	HIGH	EXTREME	EXTREME	EXTREME
Likely	MEDIUM	HIGH	HIGH	EXTREME	EXTREME
Possible	LOW	MEDIUM	HIGH	EXTREME	EXTREME
Unlikely	LOW	LOW	MEDIUM	HIGH	EXTREME
Remote	LOW	LOW	MEDIUM	HIGH	HIGH



Exclusion clauses in private disability insurance

- Specific condition or risk factor leading to increased risk of claims.
- Exclusion clause to neutralise this risk.
- No benefit if sickness absence is caused by the condition specified in the exclusion.



Do exclusion clauses work the way they are supposed to work?

- Hazard of sickness absence periods and the number of sick days
- Previous research:
 - More claims, but no difference in length of claim (1)
 - No relation between exclusions and claims (2)



Method

- Database:
 - 15,632 applicants for private disability insurance
 - Higher educated self-employed
 - Longterm insurance cover
 - Deferred period 30 days
 - Applicants January 1st 1993 to January 1st 2010
 - Follow-up to July 1st 2011; 139,786 person years
 - Periods of sickness absence >30 days



Descriptives

- A: 12,997 applicants (83.1%) no exclusion
- B: 1,756 persons (11.2%) exclusion during the whole follow-up period
- C: 422 (2.7%) exclusion from the start of their insurance contract that ended
- D: 457 (2.9%) exclusion added to their insurance policy at a later stage
- 5582 periods of SA, of these 132 periods of SA related to the exclusion present
- 11,865 individuals experienced no SA.



Results

	Group A	Group B	Group C	Group D
0 SA periods	10036 (77.2 %)	1305 (74.3 %)	270 (64 %)	254 (55.6 %)
1 SA period	2054 (15.5 %)	312 (17.8 %)	105 (24.9%)	117 (25.6 %)
2 SA periods	595 (4.6%)	90 (5.1 %)	28 (6.6%)	50 (10.9 %)
3 SA periods	206 (1.6%)	31 (1.8 %)	13 (3.1%)	21 (4.6 %)

Table 1. number of SA periods



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Table 1. number of SA periods

Results

All SA	HR all SA	95% CI
	Unadjusted	
Group A	1	
Group B	1.29	1.19 - 1.40
Group C	1.26	1.10 - 1.44
Group D	1.65	1.48 - 1.84
	Duration all SA	95% CI
	Unadjusted	
Group A	174.95	164.33 - 186.57
Group B	245.74	211.78 - 279.81
Group C	213.15	133.46 - 299.29
Group D	162.73	104.33 - 229,10

Table 2A. Hazard rates and total duration of sickness absence for all SA periods



Results

All SA	HR all SA	95% CI
	Unadjusted^b	
Group A	1	
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Table 2A. Hazard rates and total duration of sickness absence for all SA periods



Results

SA unrelated to exclusion	HR SA unrelated	95% CI
	Unadjusted	
Group A	1	
Group B	1.17	1.08 - 1.28
Group C	1.15	1.00 - 1.33
Group D	1.44	1.28 - 1.62
	Duration SA unrelated	95% CI
	Unadjusted	
Group A	174.65	162.44 - 185.19
Group B	221.22	189.30 - 255.00
Group C	207.61	127.54 - 294.58
Group D	86.11	42.83 - 133.20

Table 2B. Hazard rates and total duration of sickness absence for SA periods unrelated to the exclusions only.



Results

SA unrelated to exclusion	HR SA unrelated	95% CI
	Unadjusted^b	
Group A	1	
Group B	1.17	1.08 - 1.28
Group C	1.15	1.00 - 1.33
Group D	1.44	1.28 - 1.62
	Duration SA unrelated^b	95% CI
	Unadjusted	
Group A	174.65	162.44 - 185.19
Group B	221.22	189.30 - 255.00
Group C	207.61	127.54 - 294.58
Group D	86.11	42.83 - 133.20

Table 2B. Hazard rates and total duration of sickness absence for SA periods unrelated to the exclusions only.



Conclusions

- Sickness absence risk of persons with exclusions is higher
- Duration of sickness absence of persons with exclusions longer
- Also for unrelated sickness absence!
- Exclusion clauses do not fully neutralize the higher risk of sickness absence.





Implications

- Persons with an exclusion clause may feel discriminated against.
- Exclusion clauses still allow for a certain measure of solidarity.
- Greater solidarity between the different risk groups could improve accessibility of disability insurance, but may also lead to higher overall premiums.
- The question is to what extent a person less vulnerable should be allowed to profit from this





Take home messages

- Exclusion clauses are used to neutralize higher than average risks of sickness absence.
- The sickness absence risk of insured persons with exclusions is higher than the risk of those without exclusions.
- Persons with exclusions have on average more sick days
- Differentiating risk groups according to one's medical situation can be seen as discrimination against people with health conditions.



Literature:

- 1. Wildhagen P, Nijhuis F, Maarse J. Effectiviteit van uitsluitingsclausules bij arbeidsongeschiktheidsverzekeringen: onderzoek in opdracht van Het Verbond van Verzekeraars, afdeling Arbeidsongeschiktheid. : Rijksuniversiteit Limburg; 1994.
- 2. Hamilton WT, Hall GH. Risk factors for ill health insurance claims. J Insur Med 2003;35(1):17-25.
- To be published shortly in the European Journal of Public Health: Health based risk neutralization in private disability insurance.

