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Fallgruppierung in der Psychiatrie im Kanton Zürich

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Switzerland...

- about 7.2 million inhabitants (migrants 20%)
- richest country of the world
- federal organizations (cantons)
- direct democracy
- expensive health care

Costs of (Mental) Health Care in Switzerland

- Switzerland provides the 2nd (GNP) most expensive respectively the 3rd o 4th most expensive (per capita) health care system worldwide
- Brain disorders consume 4% of the gross national product and cost each Swiss citizen an estimated €1200 per year
- The disorders that are traditionally regarded as mental disorders account for approximately 2⁄3 of the total costs
- The total direct expenditure for healthcare in Switzerland amounted to €29 billion in 2003
- the total costs of mental disorders amount to €5.6 billion thereof direct healthcare costs €2.1 billion, direct non-medical costs €0.2 billion and indirect costs €3.3 billion

Jaeger, Sobocki & Rössler (2008)

Structure of health care

- Mixed financing (state and sickness insurances (KVG))
- strict sectoral separation (inpatient/outpatient/rehabilitation)
- strict cantonal separation

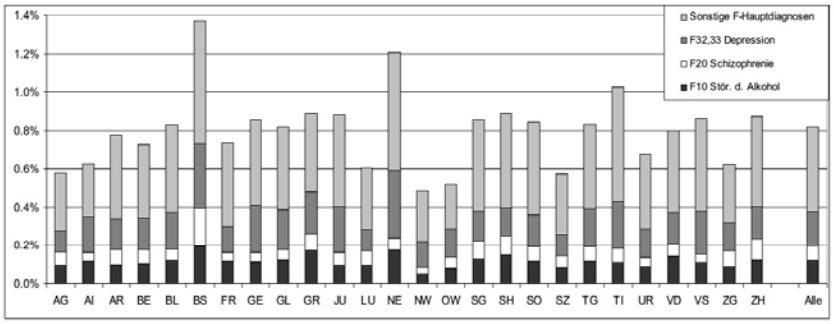
Bed ratio

- 1970: 2,9 beds per 1000 inhabitants
- 1993: 1,4 beds per 1000 inhabitants
- 42 hospitals with an average of 233 beds

Case - based Lump Sum

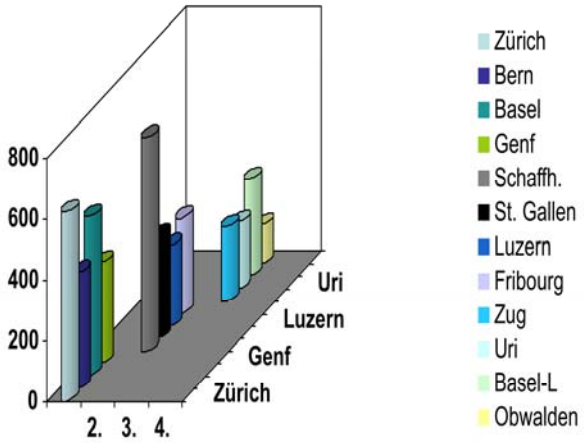
- Worldwide there are about 15 DRG systems
- ecnomic risks are split up between provider and payer
- The more variance in length of stay, the more risks for the provider
- Risks of „Upcoding“ for payer

Prevalence Rates of inpatient treatment



Kuhl & Herdt 2007

Inpatient days/1000 population



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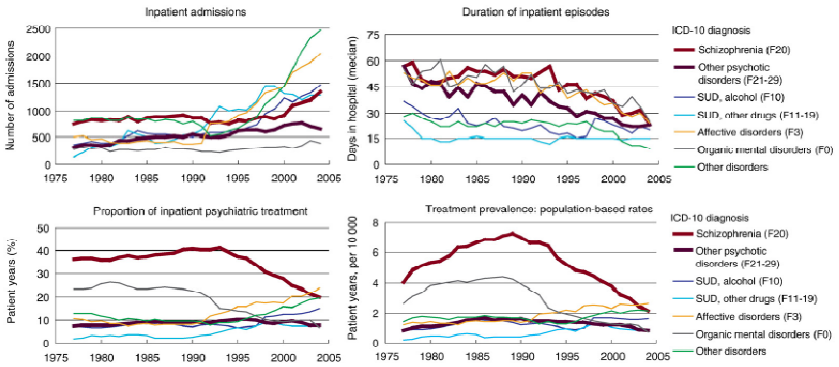
Trends in psychiatric hospitalisation



Lay, B., Nordt, C., Rössler, W., 2007

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Can We predict the length of stay by main diagnosis or by psychiatric syndromes?

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Issue

- Long inpatient stays of patients with mental disorder in Switzerland
- Requirement to optimize treatment
- Call for alternative remuneration systems

OECD, 2008; Rössler et al., 1999; Schuhmacher et al., 1986; Lauber et al., 2006; Blais et al., 2003, Horn et al., 1989, Creed et al., 1997

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Research Questions

1. How does LOS vary within and between diagnostic groups?
2. Do
   (1) ICD-based diagnostic groups or
   (2) psychiatric syndromes

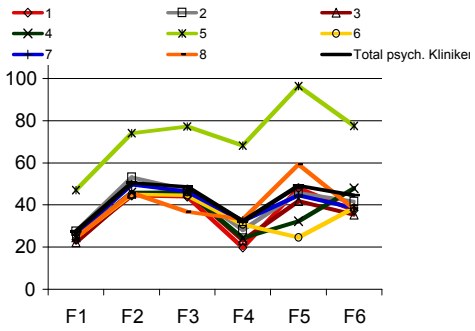
   explain LOS?
3. What are the implications for the development of a new remuneration system?

Predicting LOS by psychiatric diagnosis or syndromes

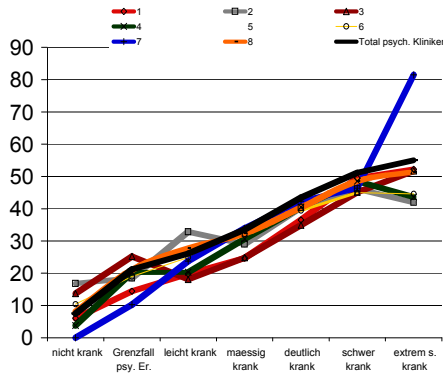
Method (1)

- **Sample:**
  - Psychiatric admission between 1997 and 2003
  - LOS between 3 and 365 days
  - N=37788 vs. N=30616 cases
    - 52% females, 48% males
    - age=44 yrs. (SD=18 yrs.)
- **ICD-based diagnostic Groups:** 21 (F00-F69)
- **Statistical analyses:** Analysis of covariance

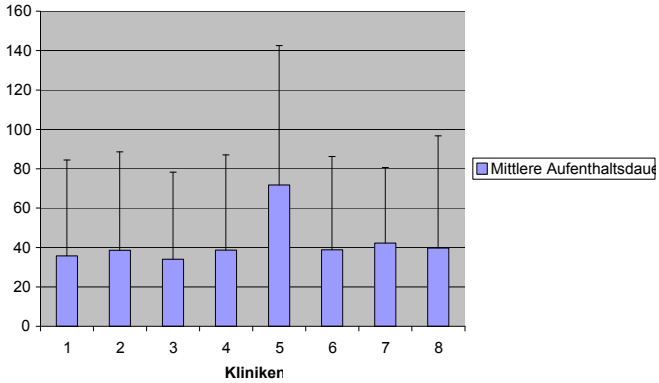
Length of Stay by Diagnoses



Length of Stay by Severity of illness



Means and standard deviation in „days“ (Hospital)



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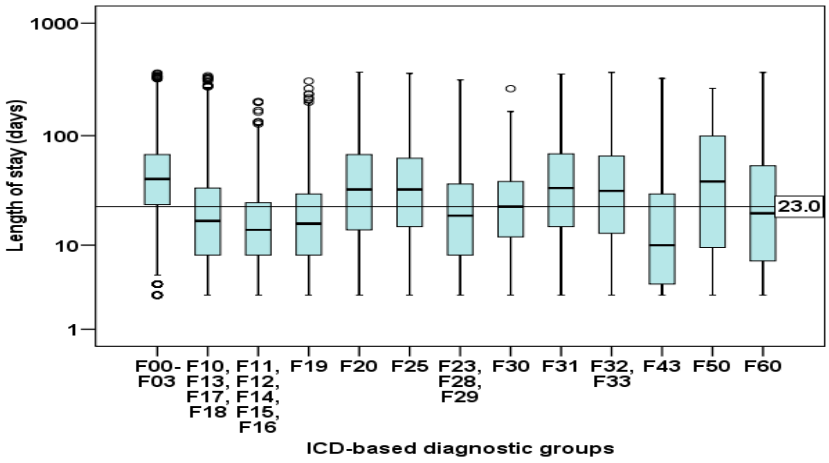
Results: LOS across ICD-based groups (1)



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Results: Prediction of LOS by diagnosis (1)

Model 1: ICD-based groups

Explanation of variance

(EOV) = 9%

↓

Model 2: ICD-based groups + sample characteristics (main effects)

EOV = 18%

↓

Model 3: ICD-based groups + sample characteristics (interaction effects)

EOV = 20%

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Method (2)

- Sample:
  - Psychiatric admission in 1-12/08
  - LOS between 3 and 120 days
  - N= 613 cases
    - 56.6% females, 43.4% males
    - age= 43 yrs. (SD=16 yrs.)
- 9 syndrom scores and a total score (Association for Methodology and Documentation in Psychiatry – AMDP, 1981)
- Statistical analyses: Hierarchical multiple linear regression analysis

Building Case Groups by Psychopathology

Cut off	1 point	2 points
Paranoid-hallucinatory syndrome	≥ T 50	≥ T 70
Depressive syndrome	≥ T 50	≥ T 70
Psychoorganic syndrome	≥ T 50	≥ T 70
Manic syndrome	≥ T 50	≥ T 70
Hostility syndrome	≥ T 50	≥ T 70
Vegetative syndrome	≥ T 50	≥ T 70
Apathy syndrome	≥ T 50	≥ T 70

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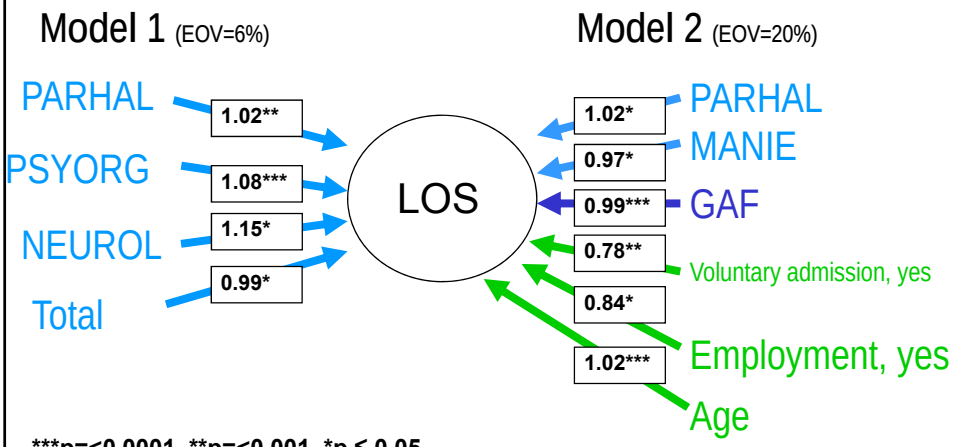
Results: Prediction of LOS by syndromes (2)



***p=<0.0001, **p=<0.001, *p ≤ 0.05

Conclusions

1. LOS varied within diagnostic categories
2. ICD-based groups or AMDP syndromes cannot sufficiently explain LOS
3. New remuneration systems should consider alternative groupings, measures, methods

Introduction

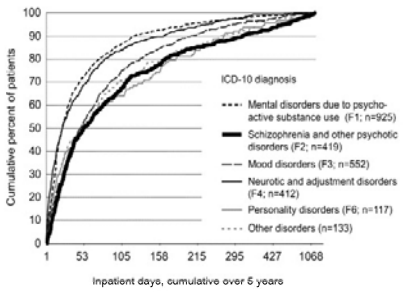
- Increase of (re-) admission rates to psychiatric hospitals
- Individual and economic consequences
- Knowledge about predictors of readmission insufficient

Klinkenberg & Calsyn, 1996; Kent & Yellowless, 1994; Lay et al., 2006; Montgomery & Kirpatrick, 2002; Rössler, 2003; Roick et al., 2004; Salize et al., 2007

Risk factors for psychiatric readmission

Who are the difficult patients?

- Psychotic patients
- 60% experience only one inpatient episode
- 10% of the heavy user consume 50 % 0f inpatient treatment



Lay, Lauber,Rössler (2006)

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Research Questions

1. What are the predictors of readmission to psychiatric hospital?
2. How to prevent readmission to psychiatric hospital?

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Method

- **Catchment area:** City of Mannheim (Germany)
- **Data collection:** 1992-1996
- **Sample:**
  - N=103 vulnerable patients with schizophrenia (F20.0)
  - 61.2% ♂
  - Ø-age=35 yrs. (SD=10.1)
- **Statistical analyses:** Methods of Survival Analysis

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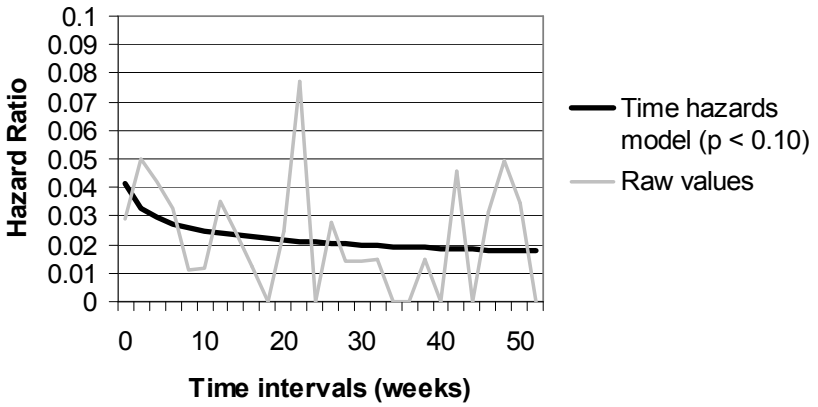
Results: Risk of readmission over time



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Results: Multivariate longitudinal models

Predictors		Model 1			Model 2		
		OR	95% CI	p	OR	95% CI	p
Intercept		0.04	0.02-0.07	< 0.0001	0.05	0.03-0.11	< 0.0001
Medication							
	Neuroleptic, yes	0.13	0.06-0.27	< 0.0001	0.17	0.08-0.34	< 0.0001
Global needs							
	Clinical met needs	1.85	1.47-2.34	< 0.0001	-	-	-
Single needs							
	Underactivity, yes	-	-	-	2.77	1.46-5.48	< 0.01
	Violence to self and others	-	-	-	2.81	1.02-6.59	< 0.05
	Management of household affairs	-	-	-	2.31	1.16-4.47	< 0.05
Social support	≥12 (median); main effect				1.67	0.54-4.42	Ns
	≥12 (median); interaction effect	-	-	-	0.43	0.19-1.02	< 0.05

Risk factors for psychiatric readmission

Conclusions

1. Clinical and social factors contributed to readmission

2. Prevention of readmission should focus on
   a) needs
   b) compliance
   c) time after discharge/social support

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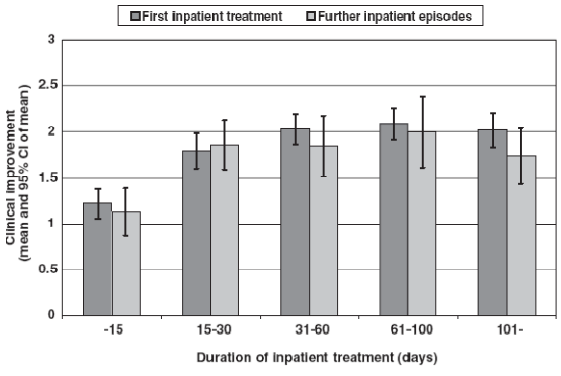
Length of first admission and treatment outcome



Lauber, C., Lay, B., Rössler, W., 2006

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Length of first admission and treatment outcome

Duration of first inpatient treatment: association with short-term and long-term outcome

Duration of first inpatient treatment (days)	Improvement of clinical symptoms during first inpatient treatment			Cumulative length of further inpatient treatment		Number of further inpatient episodes	
	N	Mean	(SD)	Mean	(SD)	Mean	(SD)
<15	115	1.22	(.85)	25.44	(84.08)	.42	(.98)
15–30	77	1.79	(.83)	5.13	(22.79)	.16	(.49)
31–60	92	2.03	(.82)	21.54	(60.22)	.37	(1.06)
61–100	78	2.09	(.75)	24.83	(82.13)	.44	(1.09)
>100	96	2.02	(.93)	47.66	(138.58)	.45	(1.02)
ANOVA statistics	$F=18.98$; $df=4449$; $p<.001$			$F=2.59$; $df=4453$; $p=.04$		$F=1.27$; $df=4453$; $p=.28$	

SD: standard deviation.

Lauber, C., Lay, B., Rössler, W., 2006

Mental Health care is value-based

Severity of Illness

Intensity and complexity of Treatment

CMHT | ACT | Crisis Centre | Mental Hospital/Department

Institutions and Services

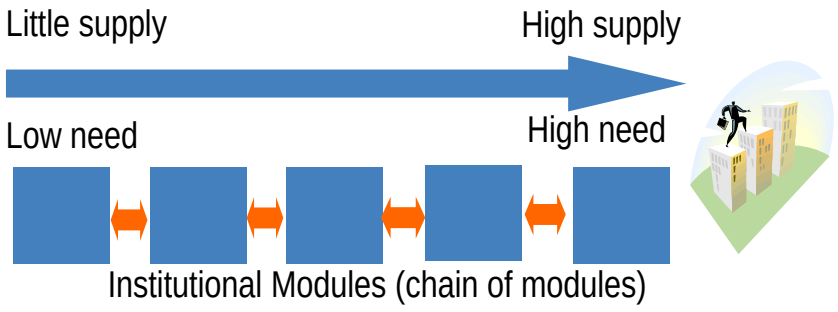
Alternatives to Inpatient Care

- Crisis House (+/-)
- Home Treatment (+)
- ACT (+++)
- Acute Day Hospital (1/4 - 1/3 ++)

What are the arguments for community-based mental health care?
WHO Regional Office for Europe's Health Evidence Network (HEN)
August 2003

Focus on Institutions

- Legal regulations → priority of outpatient over inpatient care
- Choice of institutions → least restrictive alternative



Focus on Institutions

Low supply — High supply

Low need — High and complex need

GP

Inpatient care

Compulsory treatment

The English Model of Integrated Care

Little supply — High supply

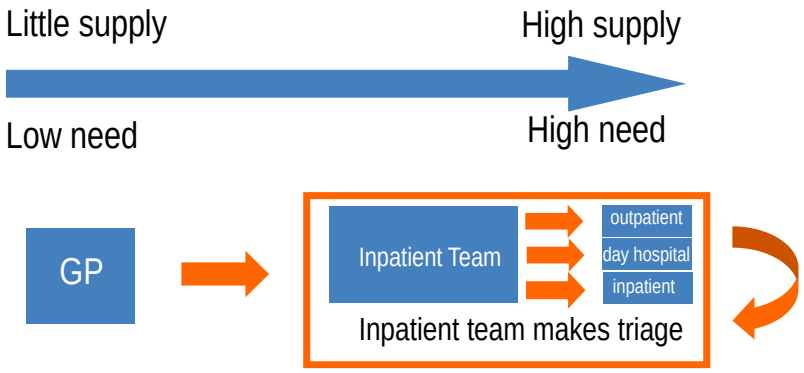
Low need — High need

Community Team

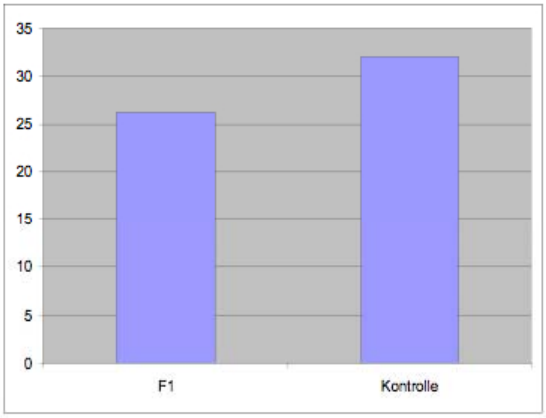
Inpatient Care

Community Team also cares for inpatients

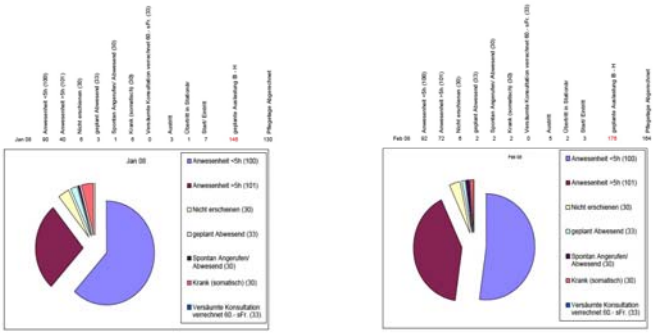
The Swiss Model of Integrated Care (1)
A randomized controlled trial



Reduction of lenght of stay



Integrated Care Zurich
use of acute day hospital



Integrated Care Zurich

- Reduced lenght of stay
- Enhanced patient satisfaction
- Reduced social problems

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Participating partners

- I Warnke
- V. Ajdacic Gross
- U. Herwig
- HJ Haug
- HJ Salize

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Vielen Dank für Ihre Aufmerksamkeit