Incentives of DRG-based hospital payment systems

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Hospital payment: Advantages and disadvantages of different payment mechanisms

Payment mecha-nism	Patient needs (risk selection)	Activity		Expendi-ture control	Technical efficiency	Trans-parency	Quality	Admini-strative simplicity
		Number of cases	Number of services/ cases					
Fee-for-service	+	+	+	—	0	0	0	—

Risk of overtreatment

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Global budget								

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							Risk of overtreatment	
Global budget	—	—	—	+	0	—	0	+
							Risk of undertreatment	

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DRG based case payment								
Global budget	—	—	—	+	0	—	0	+

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Fee-for-service	+	+	+	—	0	0	0	—
DRG-based case payment	0	+	—	0	+	+	0	—
Global budget	—	—	—	+	0	—	0	+

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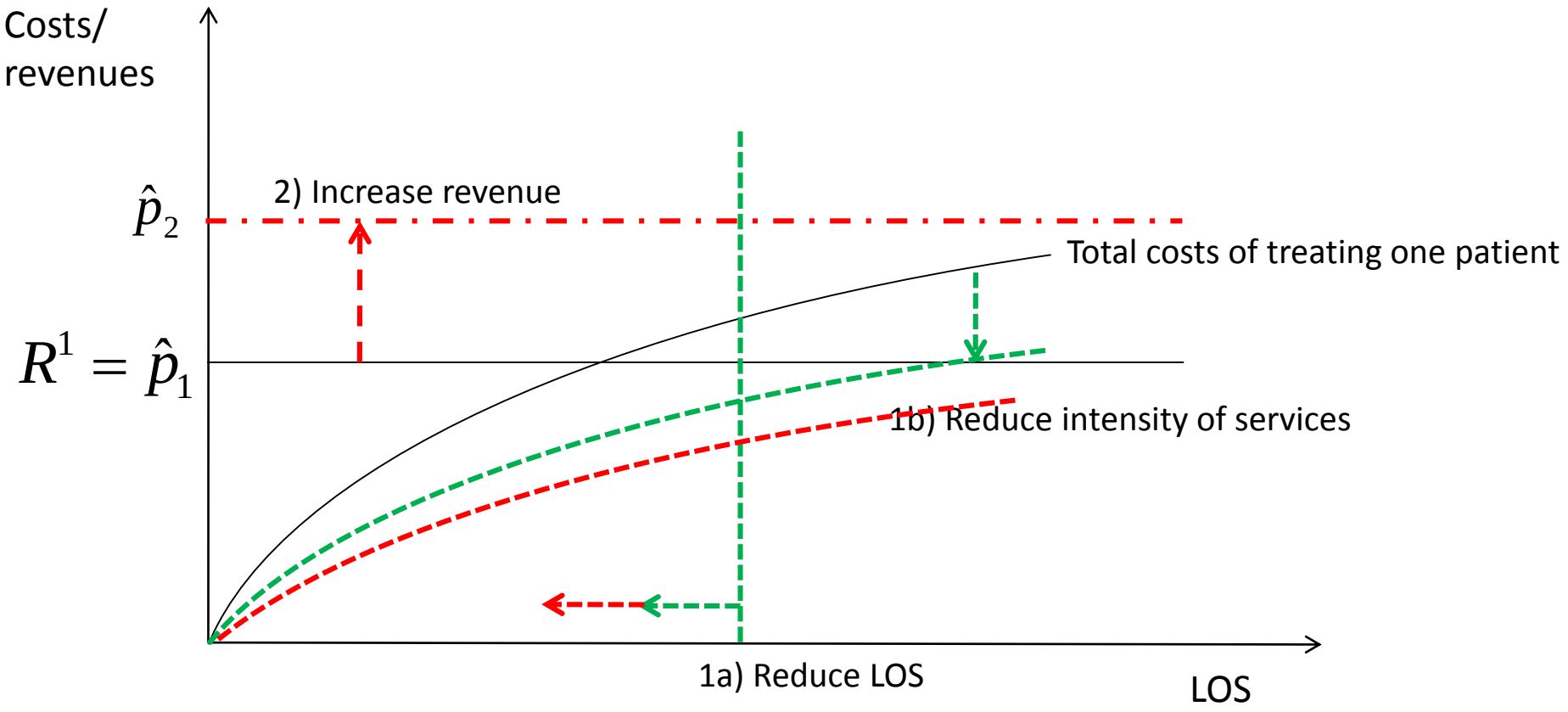
Payment mecha-nism	P… se…						lity	Admini-strative simplicity
Fee-for-service								—
DRG-based case payment								—
Global budget	—	—	—	+	0	—	0	+

Two observations stand out:

1) all payment mechanisms provide conflicting incentives for "activity" and "expenditure control", with DRGs best for efficiency;

2) <u>none</u> provide incentives <u>for producing high quality outcomes</u>

Incentives under DRG-based hospital payment



Intended and unintended consequences

Incentives of DRG-based hospital payment	Strategies of hospitals
1. Reduce costs per patient	a) Reduce length of stay • optimize internal care pathways • inappropriate early discharge ('bloody discharge')
	b) Reduce intensity of provided services • avoid delivering unnecessary services • withhold necessary services ('skimping/undertreatment')
	c) Select patients • specialize in treating patients for which the hospital has a competitive advantage • select low-cost patients within DRGs ('cream-skimming')
2. Increase revenue per patient	a) Change coding practice • improve coding of diagnoses and procedures • fraudulent reclassification of patients, e.g. by adding inexistent secondary diagnoses ('up-coding')
	b) Change practice patterns • provide services that lead to reclassification of patients into higher paying DRGs ('gaming/overtreatment')
3. Increase number of patients	a) Change admission rules • reduce waiting list • admit patients for unnecessary services ('supplier-induced demand')
	b) Improve reputation of hospital • improve quality of services • focus efforts exclusively on measurable areas

Positive and negative consequences are closely related

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→ "dumping" (avoidance), "creaming" (selection) and "skimping" (undertreatment)
→ up/wrong-coding, gaming

Payment mecha-nism	Patient needs (risk selection	Activ		pendi-ure ntrol	Technical efficiency	Trans-parency	Quality	Admini-strative simplicity
		Number of cases	nber of vices/ ases					
Fee-for-service	+	+	+	—	USA 1980s			—
DRG based case payment	0	+	—	0	+	+	0	—
Global budget	—	—	—	+	European countries 1990s/2000s			+

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Fee-for-service	+	+	+	–	USA 1980s			–
DRG based case payment	0	+	–	0	+	+	0	–
Global budget	–	–	–	+	European countries 1990s/2000s			+

"prospective"

"activity-based"

Empirical evidence (I)

Hospital activity and length-of-stay after introduction of DRG-based payment in the US

Country	Study	Activity	ALoS
US, 1983	US Congress - Office of Technology Assessment, 1985	▼	▼
	Guterman et al., 1988	▼	▼
	Davis and Rhodes, 1988	▼	▼
	Kahn et al., 1990		▼
	Manton et al., 1993	▼	▼
	Muller, 1993	▼	▼
	Rosenberg and Browne, 2001	▼	▼

Cf. Table 7.4 in Busse et al. 2011

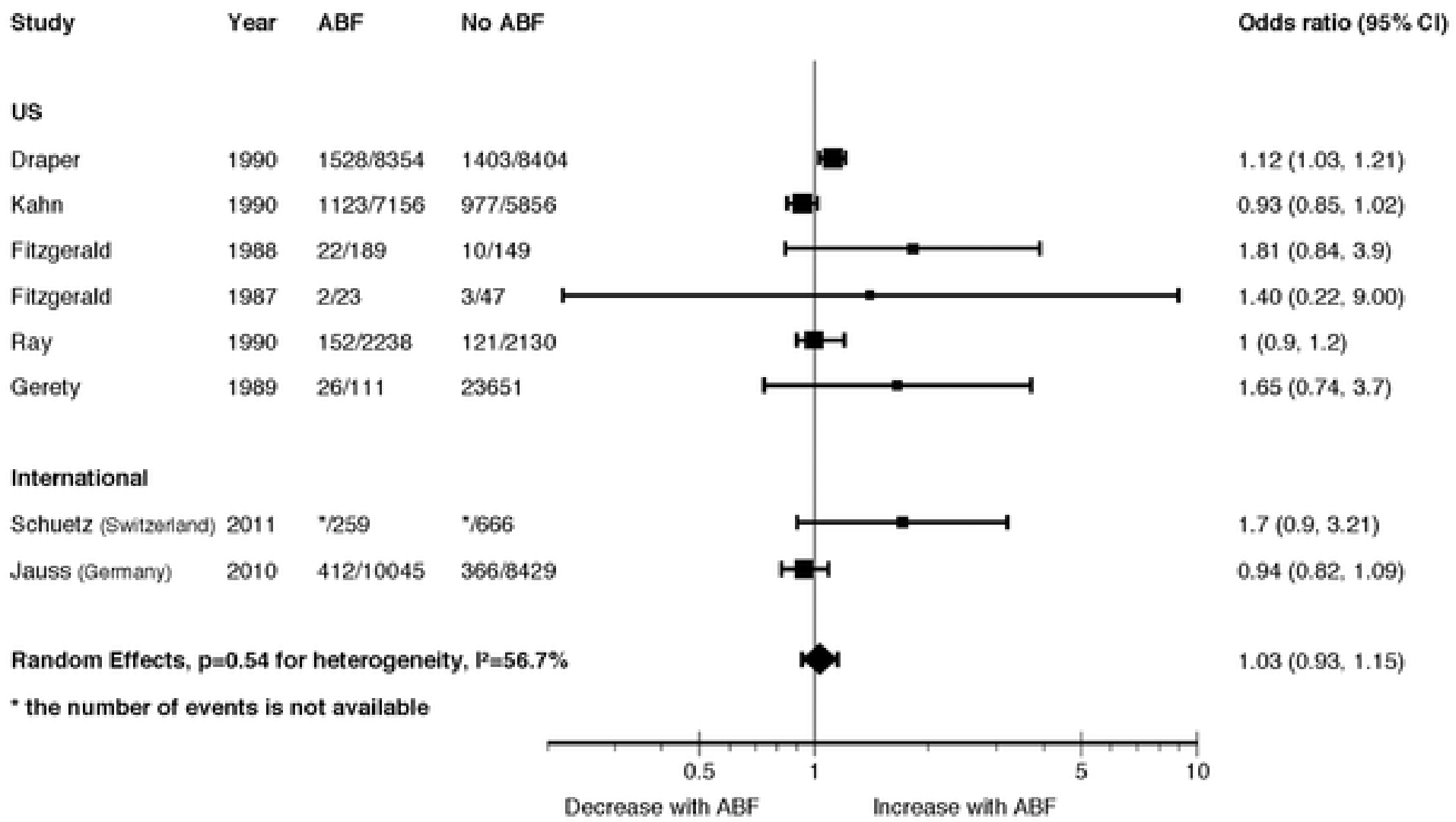
Empirical evidence (II)

European countries 1990/ 2000s

Country	Study	Activity	ALoS
Sweden, early 1990s	Anell, 2005	▲	▼
	Kastberg and Siverbo, 2007	▲	▼
Italy, 1995	Louis et al., 1999	▼	▼
	Ettelt et al., 2006	▲	
Spain, 1996	Ellis/ Vidal-Fernández, 2007	▲	
Norway, 1997	Biørn et al., 2003	▲	
	Kjerstad, 2003	▲	
	Hagen et al., 2006	▲	
	Magnussen et al., 2007	▲	
Austria, 1997	Theurl and Winner, 2007		▼
Denmark, 2002	Street et al., 2007	▲	
Germany, 2003	Böcking et al., 2005	▲	▼
	Schreyögg et al., 2005		▼
	Hensen et al., 2008	▲	▼
England, 2003/4	Farrar et al., 2007	▲	▼
	Audit Commission, 2008	▲	▼
	Farrar et al., 2009	▲	▼
France, 2004/5	Or, 2009	▲	

Cf. Table 7.4 in Busse et al. 2011

Acute Care Mortality Forest Plot



Palmer et al. (2014): Activity-Based Funding of Hospitals PLoS ONE 9(10): e109975. doi:10.1371/journal.pone.0109975

Conclusions

- DRG-based hospital payment systems can have intended and unintended consequences
- Achieving intended and avoiding unintended consequences depends on the strength of the incentives
- Monitoring unintended consequences is important
- In general, most studies find that effects are less strong than proponents may hope or opponents may feat

Thank you very much for
your time and attention!

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