Public-private Mix in Provision of Hospital Care across European countries

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Outline

- Introduction
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  - Quality, cost containment, casemix
- Empirical evidence
  - From 2000 onwards in European countries
- Conclusions

Introduction

- In several European countries, private and public hospitals co-exist and compete for publicly-funded patients:
  - England, France, Germany, Italy, Norway and Spain
- Private hospitals prominent in France (60%), Germany (65%)
- In England and Norway, public provision is dominant (95%)

Introduction

- Netherlands: all hospitals are private non-profit
- Hospital payment by DRG is currently common for public/private hospitals
- This was not the case in the past, eg fixed budget (England), fee for service (France and Germany)
  - And payment can differ between public and private hospitals

Cost containment - theory

- **Private** hospitals have strong incentives to contain costs
  - Because they can appropriate and distribute profits
  - Additional effort translates into an increase in profits

Cost containment - theory

- **Public** hospitals with profit *constraints* or *soft budgets* have <u>weaker</u> incentives to contain cost

  - But public hospitals tend to have larger *excess demand*
  - More difficult to turn down a patient
  - This may induce them to be more efficient

  - Public hospitals are able to better exploit scale or scope economies if they are larger

Casemix - theory

- Hospital casemix tends to be *lighter* in private hospitals than in public hospitals when:
  - Private hospitals have an incentive to select low severity patients
  - Or do not have the facilities to treat the more severe patients
  - Private hospitals do not provide emergency services

Quality - theory

- “quality is higher for private hospitals because they **compete** more aggressively for patients”

- “quality is lower for private hospitals because they **skimp** on quality”

- Theory highlights key role of
  - **demand responsiveness** to quality
  - degree of provider **altruism**
  - The latter pushes them to work at a negative profit margin

Quality - theory

- *Hospital **quality** tends to be higher in private hospitals than in public hospitals when:*
  - **Demand responsiveness** to quality is relatively high
  - Doctor motivation and **altruistic concerns** are relatively low
  - Private hospitals are paid by FFS and public hospitals are paid by a fixed budget / have volume restrictions
  - There is low heterogeneity in doctors' degree of altruistic concerns
  - Other potential factors include: doctor payment (salary, FFS); availability of emergency department

Empirical evidence

- Literature published from 2000 onwards
- European countries
  - evidence is geographically clustered
- Public & private hospitals treating publicly-funded patients

Quality

Table 2. Differences in quality, efficiency and casemix between public and private hospitals

Country	study	*quality measure*	quality is higher (>), lower (<), similar (=) in private hospitals
England	Moscelli et al. (2018)	readmissions	=
England	Perotin et al. (2013)	patient satisfaction	=
England	Chard et al. (2011)	health gain	>
England	Browne e al. (2008)	functional status complications	? >
France	Milcent (2005)	AMI mortality	= , >

Quality in England

- Moscelli et al. (2018)
- 133 planned/elective/non-emergency treatments in 2013-14
- no differences btw public/private in emergency **readmissions**
- after controlling for unobserved patient severity

  - Instrumental variable approach, based on distance

  - Public/private paid the same DRG tariff

  - Private hospitals have fewer readmissions after controlling for extensive observable patient characteristics

Quality in England

- Perotin et al. (2013)
  - no difference in **patient satisfaction** in 2007
  - switching regression model

- Chard et al. (2011)
- private treatment centres in 2008/9 had higher quality for **hip** and **knee** and similar quality for **varicose vein** and **hernia** surgery

  - **Patient reported outcomes** such as **Oxford hip/knee score**

  - Participation in study was voluntary (selection issues?)
  - Different payment regime
  - Does not control for unobserved factors

Quality in France

- Milcent (2005)

- Public and private not-for-profit hospitals have similar **AMI mortality**

- **Private for-profit** hospitals have instead lower AMI mortality
  - Public and private not-for-profit hospitals subject to a *global budget*
  - Private for-profit hospitals were paid by *fee-for-service.*

Efficiency

		efficiency measure	efficiency is higher (>), lower (<), similar (=) in private hospitals
Germany	Herr (2008)	costs	<
Germany	Tiemann et al. (2009)	costs	<
Germany	Herr et al. (2011)	costs	=
Italy	Barbetta et al. (2007)	technical efficiency	=
Italy	Berta et al. (2010)	technical efficiency	= , <
Italy	Daidone et al (2009)	technical efficiency	= , <
Switzerland	Farsi et al. (2008)	costs	=
England	Siciliani et al. (2013)	length of stay	>
Norway	Bjorvatn (2018)	length of stay	>

Efficiency in Germany

- Herr (2008)
- Private hospitals less efficient than public hospitals

  - Both on technical efficiency and allocative efficiency

  - 1,500 hospitals in 2001-03
  - stochastic frontier approach

  - controls for quality by including hospital mortality rates
  - Private hospitals paid FFS and longer length of stay

Efficiency in Germany

- Same result in Tienmann and Schreyogg (2009)
  - 1000 hospitals in 2002-2006

- but not in Herr et al. (2012) over same period
  - Smaller ample of 541 hospitals
  - DRG payment introduced in 2004
  - difference in efficiency before 2004 may reflect differences in behaviour under a fee-for-service system

Efficiency in Italy

- Barbetta et al. (2007)

- **Private non-profit** hospitals more efficient than public ones
  - Technical efficiency
  - before the introduction of the DRG system
  - 500 hospitals in 1995-2000
  - no control for quality.

- But efficiency **converged** once a DRG payment system was introduced

Efficiency in Italy

- Berta et al. (2010)
- private **for-profit** hospitals have **lower** technical efficiency than not-for-profit and public hospitals in 1998-2007

- Also confirmed by Daidone and D'Amico (2009)
  - Smaller sample in one region (Lazio) in 2000-2005
  - This is due to higher nurses-per-bed ratio
  - even after controlling for quality (mortality/readmission rates).

Casemix

		casemix	casemix is lighter (<), similar (=), heavier (>) in private hospitals
England	Street et al. (2010)	Patient characteristics	<
England	Browne e al. (2008)	Severity	<
England	Chard et al. (2011)	Severity	<
Norway	Bjorvatn (2018)	Co-morbidities	=

Other reviews

- Eggleston et al (2008) reviews 31 US studies since 1990
  - whether for-profit hospitals provide higher quality (mortality rates and other adverse events), depends on region, data and period of analysis

- Hollingsworth (2008) reviews 317 studies across a range of countries
  - public and non-profit hospitals tend to be more efficient than for-profit ones
  - heterogeneity in findings across countries / institutional settings.

Conclusions

- **Quality**. Handful of large studies, England and France
  - Some studies suggest no quality differences
  - Other suggest quality higher for private hospitals mostly in settings where hospital payment differs
  - Tendency to pay both public and private hospitals by DRG

- **Efficiency**
  - Germany, Italy, Switzerland: private hospitals are as efficient or less efficient than public hospitals.
  - One study from England and one from Norway though suggests the opposite.

Conclusions

- Existing limited evidence across European countries does not suggest systematic differences in quality and efficiency across ownership type.

- This seems to be even more the case if public and private hospitals are subject to the same payment system.

Translation into primary care

- Like secondary care, primary care provision has two key dimensions
  - quality and efficiency

- Differences between primary care (PC) and secondary care
  - PC organisations are smaller and less capital intensive
  - In some countries, primary care doctors are self-employed
  - Payment system may be different

- Literature on public-private mix in primary care not well developed
  - PC tends to be either public or private within a country
  - measures of quality and efficiency more difficult to obtain.

Thank you!