

# PPP in practice – the Luxembourg experience

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AEMH conference, Brussels, may 7, 2009

# Models of public–private partnership in hospital provision

Model	Description
<b>Franchising</b>	Public authority contracts a private company to manage existing hospital
<b>DBFO (design, build, finance, operate)</b>	Private consortium designs facilities based on public authority's specified requirements, builds the facility, finances the capital cost and operates their facilities
<b>BOO (build, own, operate)</b>	Public authority purchases services for fixed period (say 30 years) after which ownership remains with private provider
<b>BOOT (build, own, operate, transfer)</b>	Public authority purchases services for fixed period after which ownership reverts to public authority
<b>BOLB (buy, own, lease back)</b>	Private contractor builds hospital; facility is leased back and managed by public authority
<b>Alzira model</b>	Private contractor builds and operates hospital, with contract to provide care for a defined population



Health care system in Luxembourg based on three fundamental principles:

- Compulsory health insurance (99% population coverage)
- Patient's free choice of provider (physician, hospital,...)
- Compulsory provider compliance with fixed set of fees for service

## Hospital payments - budgetisation

Budgetisation principles determined by contract between EHL (Association of Hospitals) and CNS (National Health Funds, former UCM)

Annual budget negotiated individually for each hospital (private and public) between CNS and hospitals

Strict separation between hospital budget and medical fees; no fee-sharing between hospital and specialists !



## Hospital payments - budgetisation

Fixed costs: Non-activity-related payments. Cost of keeping the hospital ready to treat patients

Variable costs: Activity-related payments. Paid according to units of activity accomplished and documented in invoices presented to the National Health funds

Bonuses of up to 2% of the total hospital budget, if adherence to a quality programme determined by the National Health Funds (EFQM)



# Hospital payments - budgetisation

## Fixed costs

Reimbursed at monthly schedules (1/12 of negotiated yearly budget) by National Health Funds

78% of total costs (2007)

- Personnel (75%)
- Building and equipment (11%)
- Management (3%)
- Amortisation (9%)
- .....

Nursing staff needs calculated following workload based on Canadian PRN system

# Hospital payments - budgetisation

Variable costs, reimbursed according to units of activity

22% of total costs (2007)

Reimbursed by lump sums („passages“) / working units in specific activity areas

- Pharmaceutical products (31%)
- Prosthetical devices (18%)
- Diagnostics (13%)
- Blood and plasma derivatives (6%)
- Radiology (3%)
- ...

# Hospital payments - budgetisation

Variable costs (22% of total costs)

Examples of „passages“ in specific activity areas

Chemotherapy :	816,40 €	
Operating theatre :	661,20 €	
ICU :	286,00 €	
Hemodialysis :	144,50 €	
Non-ICU ward :	40,80 €	
Magnetic resonance :	22,70 €	
Laboratory :	14,00 €	
Conventional radiology :	8,80 €	
Policlinics :	7,20 €	
Physiotherapy :	0,50 €	(2007)

# Hospital payments Investment



Major investment costs for construction and equipment are financed by the state at a rate of 80%.

Significant new equipment has to be authorized by the Minister of Health, in accordance with the National Hospital Plan (i.e. nuclear magnetic resonance, ...).



Hospital medicine in Luxembourg provided by both private and public hospitals.

All hospitals are not-for-profit institutions.

National hospital plan (plan national hospitalier, 2009) defines number and type of hospitals, number of beds, technical equipment, minimum standards for hospital services, etc.



Law defines 3 categories of acute care hospitals:

- Centre hospitalier régional (regional hospital center; > 340 beds, all departments)
- Hôpital général (general hospital; 175-340 beds)
- Hôpital de proximité (max. 175 beds, basic medical and surgical care; < 2014)

2.1 Projection des besoins en lits aigus.

	Lits aigus affectés aux trois régions hospitalières						
	RH Sud		RH Centre			RH Nord	
	CHEM	CSM	CHL	HK / Bohler	Zitha	HSL	CSJ
<b>Base 2001-2007</b>	612	118	579	337 / 68	226	260	82
	730		1210			342	
<b>A partir de 2009</b>	730		1210			342	



All hospitals considered equal with regard to budgetisation and investment strategies.

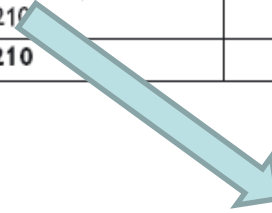
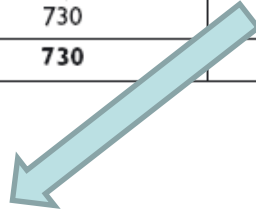
2 major differences:

Public hospital run by local and national authorities, private by not-for-profit (mainly confessional) organizations

Public hospital: salary system for doctors; private: doctors self-employed, paid on fee-for-service system

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Centre Hospitalier  
de Luxembourg

Centre Hospitalier  
Kirchberg

Administrative  
Council

Administrative  
Council

Ministry of Health

Archdiocese

Local authorities

Confessional  
foundation



Medical professionals' earnings (from normal fee-for-service payments) centrally pooled and reallocated by hospital management as salaries



Physicians self-employed

Paid on a fee-for-service basis

Cooperation contract with hospital („contrat d'agr ation“)

Fixed statutory fee levels identical for public and private hospitals



Allows employment of specialists producing fewer chargeable units  
(immunology, infectiology,..)

Allows employment of interns

Low motivation level for increasing workload

Hierarchy



High motivation level for increasing workload

Allows hiring highly qualified physicians

Possible obstacle for teamwork

No hierarchy between specialists

General direction assumed by medical professionals



# No cherry-picking...

Minimal service standards set by law

Acute hospitals supposed to provide defined set of services  
(included ICU, dialysis, pediatrics, psychiatry)

Hospital on-duty

Participation in acute healthcare delivery on alternate  
schedules

Emergency medical care provided without patient selection

Participation in shared structures

Interventional cardiology (INCCI) – public and private  
doctors offering 24h disponibility for PCI



# No cherry-picking ...

National departments („service national“) present on both public and private sites (i.e. juvenile psychiatry at Kirchberg Hospital)

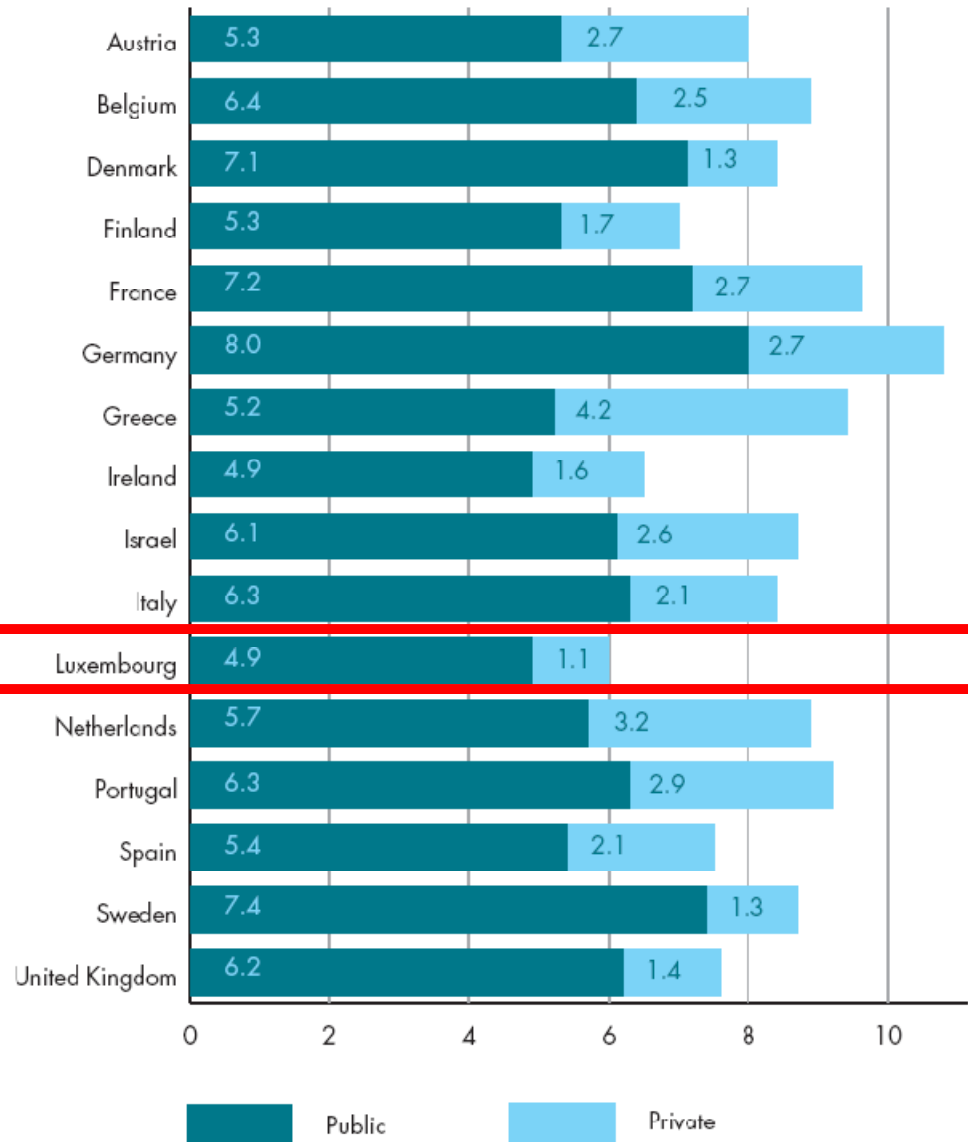
Continuous medical education

Offered by both public and private hospitals

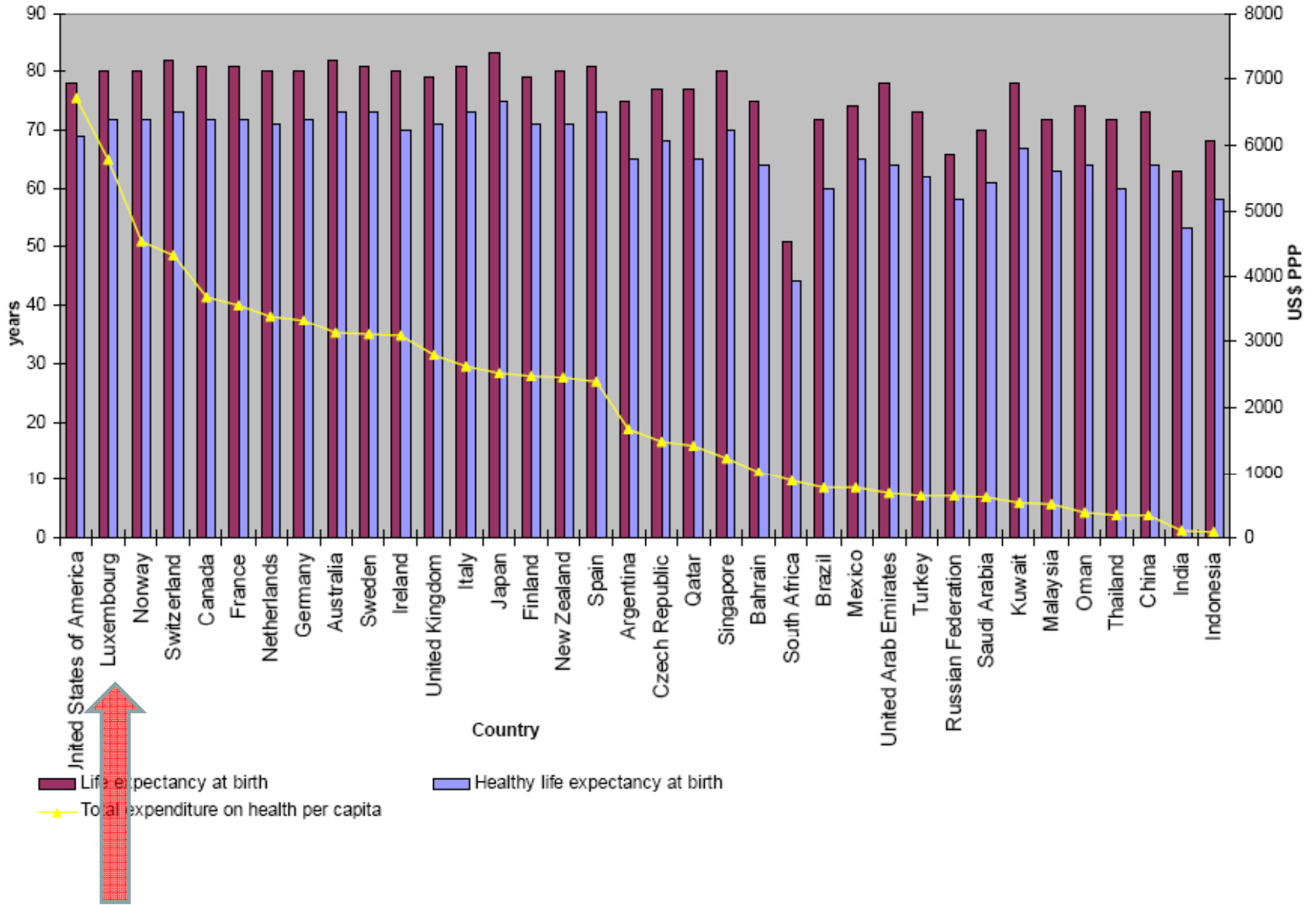
Cooperation with University of Luxembourg and foreign universities (education of medical students, interns, general practitioners, specialists)

Medical Training Center at Kirchberg Hospital

### Public and private expenditure on health as a percentage of the gross domestic product (GDP) in the EU-15 and Israel



### Life expectancy and health expenditure





## Threats and Opportunities ...

Cost containment – becomes more and more a priority

Monitoring of health care delivery so far put more focus on quantity, rather than quality of output (problem of fee-for-service system in liberal medicine)

Tight legal and administrative regulation – few incentives for applying modern economic and management strategies



# Threats and Opportunities ...

Few incentives for cooperation and interdisciplinary teamwork for doctors in private hospitals

Lack of vertical and horizontal hierarchy between private specialists

System differences opposed to cooperation and synergies between private and public hospitals



## Evaluation of service quality and effectiveness

Integration of evaluation into the mentality of the health care professions

New hospital plan defines quality-evaluating instruments, i.e. service based internal peer-review, hospital quality evaluating commission, national coordinating committee

Departmentalisation with coordinating senior physicians (under liberal status)



# Transborder medicine

25% of insured workers are commuters from neighbouring countries

Small proportion seeks medical care in Luxembourg

Population used to seeking goods and services in different member states, only few minutes drive away

Cost to Luxembourg's system could significantly increase:

- paying for medical (hospital) treatment received abroad
- not benefiting from the service activity within the national economy



# Transborder medicine

Underuse of Luxembourg hospitals ?

⇒ Impact upon equity of distribution of care throughout the country

Incentive to ensure that Luxembourg's health care of such high quality that citizens not tempted to cross borders

Necessity to develop evaluation and accreditation standards to be able to prove this high quality to the consumer (also those abroad)

High-level income as incentive for highly qualified professionals to provide high-quality care in Luxembourg (PPP setting)



# SUMMARY

PPP as a unique model in Luxembourg delivery of hospital medical care

Identical basic conditions for both public and private hospitals (budgetisation, investment)

Not-for-profit situation

Efficacy improvement, cost containment and quality evaluation as priorities in coming years

Transborder medicine as a possible major threat



# Key issues in public-private partnerships in hospitals

Cost

Benefit – for profit providers ?

Quality

Flexibility

Complexity

# Key issues in public-private partnerships in hospitals

Cost

Quality

Flexibility

Complexity









**Total expenditure on health care per capita US\$ PPP (public and private) in the EU-15 and Israel**

	2001	2002
Austria	2 174	2 220
Belgium	2 441	2 515
Denmark	2 523	2 580
Finland	1 841	1 943
France	2 588	2 736
Germany	2 735	2 817
Greece	1 670	1 814
Ireland	2 059	2 367
Israel	1 623	1 531
Italy	2 107	2 166
Luxembourg	2 900	3 065
Netherlands	2 455	2 643
Portugal	1 662	702
Spain	1 567	1 646
Sweden	2 370	2 517
United Kingdom	2 012	2 160

US\$ PPP = purchasing power parity in US dollars.

**Selected health care resources per 100 000 population in the EU-15 and Israel for the latest available year**

	Nurses (year)	Physicians (year)	Acute hospital beds (year)
Austria	587.4 (2001)	332.8 (2002)	609.5 (2002)
Belgium	1 075.1 (1996)	447.9 (2002)	582.9 (2001)
Denmark	967.1 (2002)	364.6 (2002)	340.2 (2001)
Finland	2 166.3 (2002)	316.2 (2002)	229.9 (2002)
France	688.6 (2002)	333.0 (2002)	396.7 (2001)
Germany	973.1 (2001)	335.6 (2002)	627.0 (2001)
Greece	256.5 (1992)	451.3 (2001)	393.8 (2000)
Ireland	1 676.2 (2000)	238.3 (2001)	299.5 (2002)
Israel	598.4 (2002)	371.3 (2002)	218.0 (2002)
Italy	296.2 (1989)	606.7 (2001)	394.4 (2001)
Luxembourg	779.3 (2002)	259.3 (2002)	558.7 (2002)
Netherlands	1 328.2 (2001)	314.9 (2002)	307.4 (2001)
Portugal	394.0 (2001)	331.2 (2001)	330.8 (1998)
Spain	367.2 (2000)	324.3 (2000)	296.4 (1997)
Sweden	975.1 (2000)	304.1 (2000)	228.3 (2002)
United Kingdom	497.2 (1989)	163.9 (1993)	238.5 (1998)
Average for EU-15	676.9 (2000)	353.1 (2001)	407.7 (2001)







