



SPPI for Human health activities session OECD PPPS programme on hospital services, lessons learnt

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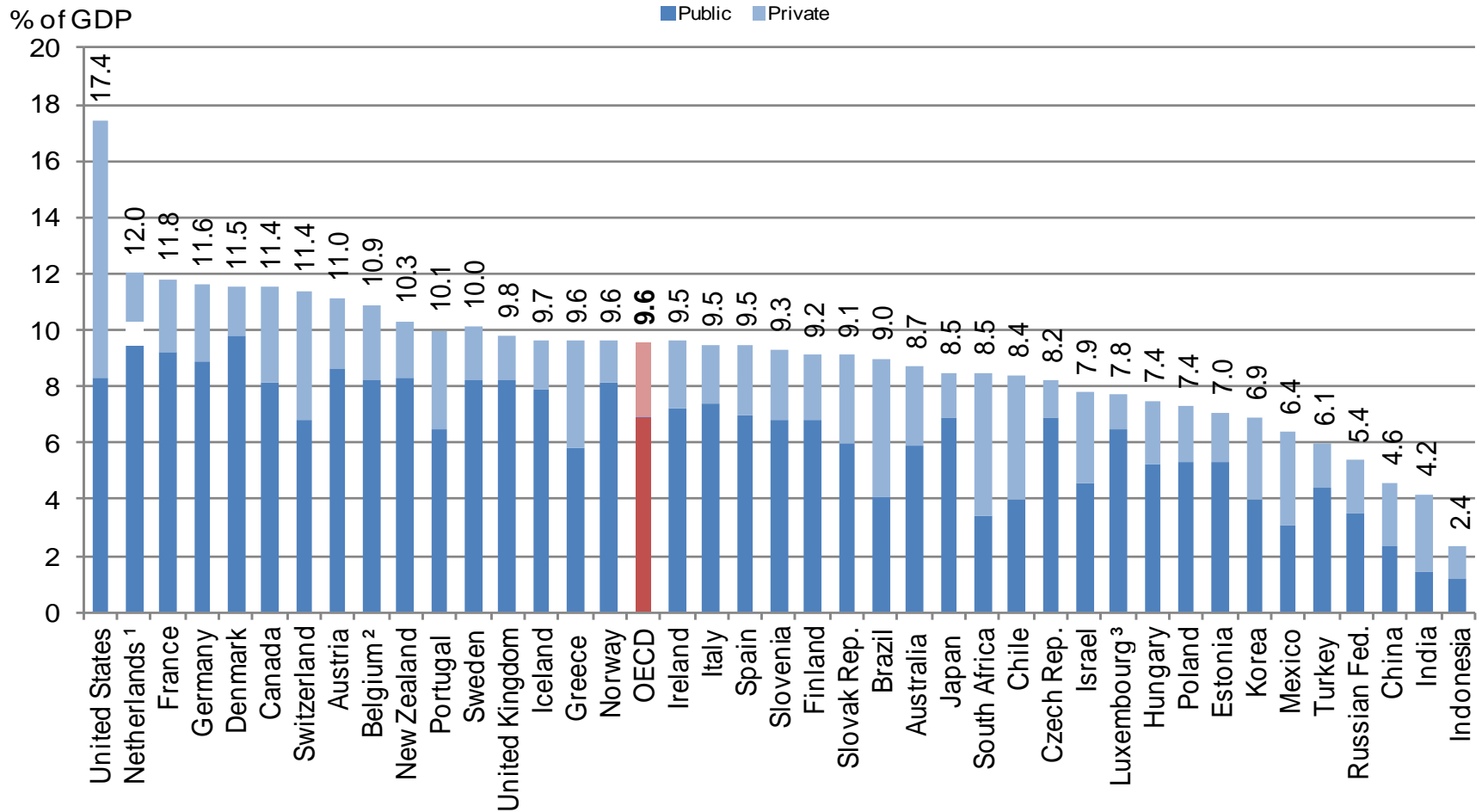
OECD Eurostat PPPS program on hospital services - *Background*

- Project started in 2007 to develop **output-based hospital PPPs** aiming to improve PPPs for health as a whole
- Five pilot studies carried out to assess the feasibility of the methodology
- Pilot studies results published in 2010
- Implementation in December 2013 for 2011 PPPs calculation within the framework of the Eurostat-OECD PPP programme



Why a need to develop PPPS for hospital services? (1/2)

Total health expenditure as a share of GDP, 2010





Why a need to develop PPPS for hospital services? (2/2)

- In the past, volume of outputs of non-market services were estimated by volume of inputs
 - Implies zero productivity growth
- OECD, Eurostat and others have worked towards producing output-based measures of the volume of these services and growth overtime



PPPs for hospital services: Can lessons be learned?

- In the perspective of the construction of temporal price indices for hospital services, what lessons could be learnt from the PPPs program on hospital services?



PPPs for hospital services: *from input to output based PPPs*

- Production of health services:
 - Uses input approach
 - Only wages are directly measured, all other input prices are approximated through reference PPPs
 - **In concept**, input approach cannot reflect productivity differences between countries
 - **In practice**, wages and salaries are difficult to measure and there is an unknown bias from using reference PPPs for other cost items

- Move to output measure of hospital services
 - **As in most of the countries, absence of market prices, use of “quasi prices**



Output-based PPPs for hospital services: *Methodological framework (1/2)*

- Calculate PPPs poses difficulties for ...
 1. Identifying products that are comparable across countries
 2. Representativeness of products
 3. No meaningful market price for comparison
- Requires implementation of an output survey of hospital services:
 - Identify representative and comparable hospital products (case-types) using diagnoses and procedures codes



Output-based PPPs for hospital services: *Methodological framework (2/2)*

- Two types of cases-types: medical and surgical
- Use the *International Classification of Diseases (ICD)* to identify cases-types
- Cases-types included were common procedures or diagnoses. They account for a significant percentage of hospital expenditures
- International comparability of product classification systems is limited for *Diagnosis Related Group (DRG)*-type system
- Use **quasi-prices**: costs per unit of case-type
 - Unobserved prices that emulate a competitive situation where prices equal average costs per products



Output-based PPPs for hospital services: *Sample of service products*

- Medical cases: 7, no operating room procedures are performed
- Surgical cases: 21 in-hospital, plus 4 types using out-patient procedures
- Only 'standard' hospitalisation cases: omit very long stays or transfers



Output-based PPPs for hospital services: *Products definition (1/2)*

M01 Acute myocardial infarction
M02 Angina pectoris
M03 Cholelithiasis
M04 Heart failure
M05 Malignant neoplasm of bronchus and lung
M06 Normal delivery
M07 Pneumonia

S01 Appendectomy
S02 Caesarean section
S03 Cholecystectomy
S04 Colorectal resection
S05 Coronary artery bypass graft
S06 Discectomy
S07 Endarterectomy: vessels of head and neck
S08 Hip replacement: total and partial
S09 Hysterectomy: abdominal and vaginal
S10 Knee replacement
S11 Mastectomy
S12 Open prostatectomy
S13 Percutaneous transluminal coronary angioplasty (PTCA)
S14 Peripheral vascular bypass
S15 Repair of inguinal hernia
S16 Thyroidectomy
S17 Transurethral resection of prostate (TURP)
S18 Arthroscopic excision of meniscus of knee
S19 Cataract surgery
S20 Ligation and stripping of varicose veins - lower limb
S21 Tonsillectomy and/or adenoidectomy

*Separate items
for inpatient and
outpatient*



Output-based PPPs for hospital services: *Products definition (1/2)*

S03 Cholecystectomy

<i>Case type description</i>	Cholecystectomy is here defined as the surgical removal of the gallbladder or of a part of the gallbladder. These interventions can be employed for treating a number of diseases including symptomatic gallstones or neoplasms. It is the most common method for treating symptomatic gallstones. Surgical options include the standard procedure, called laparoscopic cholecystectomy, and an older more invasive procedure, called open cholecystectomy.
<i>ICD-9-CM codes</i>	51.21, Other partial cholecystectomy 51.22, Cholecystectomy 51.23, Laparoscopic cholecystectomy 51.24, Laparoscopic partial cholecystectomy
<i>Rules</i>	Principal diagnosis of cholelithiasis (K80), cholecystitis (K81) or other diseases of gallbladder (K82)
<i>Inclusion</i>	Partial colecistectomy
<i>Exclusion</i>	



Output-based PPPs for hospital services: *Quasi-prices* (1/3)

- Provide, in theory, an indication of the ***purchasers willingness-to-pay*** (usually government or insurer) and the ***providers willingness-to-accept*** these value as the price for hospital services
- Can be ***negotiated price*** or ***administrated price*** but need to ***include direct costs, capital costs and overhead***



Output-based PPPs for hospital services: *Quasi-prices* (2/3)

- ***Negotiated* or *administered rates*** could be labelled as ‘quasi-prices’ to signal that:
 - they are not necessarily the result of market transactions
 - they are not prices that apply to transactions between producers and consumers of health services
 - they are not observed
- As a general principle, the ***full set of costs should be reflected in the quasi-price***



Output-based PPPs for hospital services: *Quasi-prices* (2/3)

- ***Negotiated quasi-prices :***
 - Established through independent negotiations between purchasers/third party payers and providers
 - Are not necessarily directly tied to the cost of care
 - Could include profit margins (or losses if some services are cross-subsidised by others).

- ***Administered quasi-prices***
 - Reflective of average costs per product
 - Important that the scope of costs reflected in the administered price is similar across countries



Output-based PPPs for hospital services: *Data collected*

- Survey conducted using a standardized questionnaire to collect quasi prices for selected case-types
- Quasi-prices extracted from existing database: health administrations and national insurance
- Number of cases were also collected and used to calculate values and share weights
- Derived Price level indices (PLIs) – ratio of PPPs to exchange rate.



Output-based PPPs for hospital services: *Some results for 2011*

- In 2013, the methods used for calculate Output-based PPPs for hospital services have been officially implemented
- Data collected through the annual hospital PPPs survey for European countries and hopefully soon on an annual basis for OECD non-European countries
- Detailed results are available in Koechlin *et al.* (2014)



Output-based PPPs for hospital services: *What lessons could be learnt?*

- An opportunity to develop temporal price indices for hospital services and health?
 - Measure output prices
 - Product approach
 - Quasi-prices
 - Regular collection: low cost method as use of existing data (initialisation is more expensive)

- Further steps to improve methodology
 - Improve comparability with the developments of the DRGs system
 - Treatment of residential care
 - Better take into account quality differences
 - Regular collection



Output-based PPPs for hospital services: *more detailed information*

Francette Koechlin, Paul Konijn, Luca Lorenzoni and Paul Schreyer (2014), *Comparing hospital and health prices and volumes internationally: results of a Eurostat/OECD project*, OECD Health working papers, N° 75 available at:

[http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DELSA/HEA/WD/HWP\(2014\)8&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DELSA/HEA/WD/HWP(2014)8&docLanguage=En)

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THANK YOU VERY
MUCH FOR YOUR
ATTENTION

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