The transparency of national healthcare costs in the 'European Union Five' (EU-5)

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Background

Cost analyses present themselves in various forms, including cost-utility, cost-effectiveness, cost-consequence and budget impact analyses. Such analyses play a key role in the reimbursement of health technologies across the European Union (EU). As these analyses commonly require data on healthcare resource use (HRU) and the corresponding cost of such use, access to country specific costs is imperative in order to accurately estimate the financial impact of technologies. Inaccuracies lead to differences in cost estimates between countries and within countries across analyses of similar technologies. Busse *et al.*[1] highlight the current inconsistencies between international data (focusing on Diagnosis-Related Group [DRG] tariffs), suggesting that an alternative approach is required for the most accurate cost estimates. Thus, the availability and access to transparent costing data is vital for accurate decision-making.

Objective & Methods

The objective of this research was to assess the transparency and ease of access to HRU costs in France, Germany, Italy, Spain and the UK ('EU-5').

In order to do this we tested access to a range of exemplary costs that represented cross-section of the economic inputs often required in analyses. These included staff costs (GP and nurse costs), drug prices, hospital bed day and out-patient visit costs, and DRG tariffs. Targeted searches and contact with country-specific representatives was used to highlight existing national documentation/databases for the EU-5. The transparency and availability of costs were assessed via ease of access (including restrictions and the need for paid registration), the need for assumptions to generate cost estimates (such as calculating down from a macro level), and how up to date the costs were.

Results

The availability of national publically available data differed across countries (Table 1). The UK was the most transparent in access to national databases containing all the information we searched for, however free access to the online British National Formulary (BNF) is only granted from a UK IP address. Germany was also transparent in reporting cost data and national databases were located for all the information we searched for. National drug cost databases were identified online for all countries. Cost information for DRG codes was found for all countries, although Italy's database required a clinician's registration. However, the UK's DRG information is almost 2 years old, and the most recent Spanish source identified was from 2010. Online databases for drug costs were sourced across all five nations, but some required paid registration. Where not explicit, HRU costs can be indirectly derived from total procedure codes. The Agence Technique de l'Information sur l'Hospitalisation (ATIH) in France provided cost breakdowns of many HRG tariffs (including GP costs to the cost of bed days on hospital wards). Similar DRG breakdowns are also available on request from UK hospitals under the Freedom of Information Act 2000.

National uniformed cost databases were more difficult to identify in Italy and Spain due to the regional format of their health systems. A representative from the Agenzia Italiana del Farmaco (AIFA) informed us that there are regional differences in costs but that a website reform will improve access in 2014. A representative of the Ministerio de Sanidad, Servicios Sociales e Ingualdad (MSSSI) similarly confirmed a variation in costs across Spanish regions but pointed us in the direction of decrees with cost data issued by certain regions (such as Valencia). These variations in Spanish and Italian costs are illustrated by wide ranges cost estimates in the published literature.

Table 1. Sources of national HRU cost data

Country	DRG	GP & nurse costs	Hospital bed day costs	Outpatient visit costs	Cost of pharmaceuticals
	ATIH: Classification Commune des Actes Medicaux (CCAM) [2]	National Institute of Statistics and Economic Studies (INSEE)[3] ATIH: CCAM [2]	*National database not identified* World Health Organisation (WHO)[4] secondary source	*National database not identified* WHO[4] [secondary source]	MedicPrix[5] Assurance Maladie[6]
	G-DRG[7]	Gesundheitsberichterstattung des Bundes[8] DeStatis[9]	Gesundheitsberichterstattung des Bundes[8]	Gesundheitsberichterstattung des Bundes[8]	Gelbe liste Rote Liste[10] (registration)
	www.drg.it[11] (registration)	L'Istituto nazionale di statistica (Istat)[12]	*National database not identified* WHO[4] secondary source	*National database not identified*	AIFA[13] Giofil[14] (registration)
	Ministerio de Sanidad, Servicios Sociales e Igualdad (Pesos Costes)[15]	Instituto Nacional de Estadistica[16] eSalud[17] (registration)	eSalud[17] (registration) Decrees in selected regions	eSalud[17](registration) Decrees in selected regions	Vademecum.es[18]
	Payment by Results (PbR), Department of Health[19]	Personal Social Services Research Unit: NHS Reference Costs[20]	Personal Social Services Research Unit: NHS Reference Costs[20]	Personal Social Services Research Unit: NHS Reference Costs[20]	British National Formulary[21] MIMS[22]

Discussion

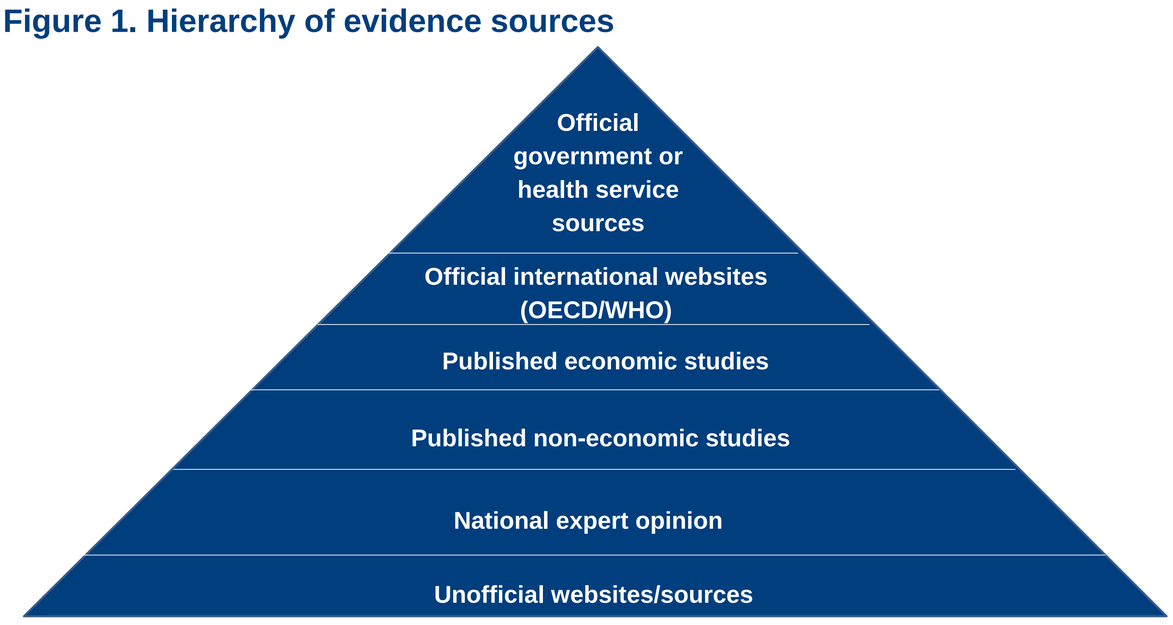
Accurate national hospital costs were difficult to establish which may be representative of the setup of the healthcare systems. Although GP and nurse salary information is available from national statistics websites, the UK's state funded system provide the hourly *cost to the NHS* of such staff. Furthermore, hospital specific costs can be obtained through written requests to NHS Trusts or the Department of Health. Systems that are (at least partially) private tend to have wider variations between hospitals. This is exemplified by the Italian DRG calculator in which the user has the option to see the DRG tariff depending on the selected region. Furthermore, the availability of access to published data in Spain is highly dependent on region.

The year of publication is also important with more assumptions required on weaker sources. Such assumptions may include the inflating out of date figures (and the choice of inflation measure), or calculations down from high-level data (such as hourly nurse costs calculated from annual average salary rates).

As cost data is not consistently available it is important to achieve some sort of consistency in the choice of alternative sources of data for economic analyses. We propose a hierarchy of evidence (Figure 1), where the optimal data sources are higher up the pyramid with national health service or government published data is the most reliable source. If this is unavailable, other sources may include international statistics (e.g. the WHO), already published economic analyses containing cost data, or key opinion leader opinion (although precise costs can be hard to establish this way).

In conclusion, healthcare costing data is not consistently transparent across all the EU-5. Given the stringent requirements of health technology assessment and the importance of cost data to healthcare decision makers there is a clear need for transparency and ease of access to this information. Whilst some nations provided transparent HRU cost data, others did not, this can lead to inconsistent inputs across cost-effectiveness analyses.

Figure 1. Hierarchy of evidence sources



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