



Costing methodologies in European economic evaluation guidelines: commonalities and divergences

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Abstract

From both the methodological point of view and standardization of methodology, little attention has been paid to the estimation of direct costs in evaluation of healthcare technologies. The objective is to revise the recommendations on direct costs provided in European economic evaluation guidelines and to identify the commonalities and divergences among them. To achieve this, a comprehensive search through several online databases was performed resulting in 41 documents from 26 European countries, be they economic evaluation guidelines or costing guidelines. The results show a large disparity in methodologies used in estimation of direct costs to be included in economic evaluations of health technologies recommended by European countries. A lack of standardization of cost estimation methodologies influences arbitrariness in selecting costs of resources included in economic evaluations of medicinal products or any other technologies and, therefore, in decision making process necessary to introduce new technology. In addition, this heterogeneity poses a major challenge for identifying factors that could affect the variability of unit costs across countries.

Keywords Economic evaluation · Costing methodology · Guidelines · Standardization of methodologies

Introduction

Economic evaluation (EE) has become a key tool within the Health Technology Assessment (HTA) process for the evaluation and reimbursement of healthcare technologies [1]. The aim of EE of healthcare technologies is to provide information on the effect of a new treatment on health outcomes and costs, with the maximum achievable accuracy and precision given the existing evidence [2]. When estimating costs in an EE, all the resources used in the production process of a new technology should be considered. These resources should also consider the time horizon to take into account the cost of a long term consequences of the intervention [2].

Estimated costs should be reported in sufficient detail and appropriately adapted to the context in order both to

be useful for decision makers and to form the basic input for a health economic model or study [3]. Any method for estimating costs needs to address two broad questions, which influence the accuracy and precision that can be achieved; the degree of disaggregation used in the identification and measurement of resources (micro-costing vs. gross-costing), and the method for the valuation of resources (top-down vs. bottom-up). Each of these categories is well described in Špacírová et al. [4].

At least three stages can be considered in cost evaluation: Selection of perspective and resource identification, measurement and valuation. Most of the EU countries' guidelines inform on how to perform high-quality EE to be used as a decision-making tool for the inclusion of new health technologies. These guidelines are important to facilitate consistent decision-making and assist manufacturers in preparing their submissions. However, it has been identified that there are divergences in the methodological guidelines related to the estimation of the use of resources and their monetary valuation, including the cost measurement [5, 6]. Moreover, health economic methodological guidelines frequently do not provide sufficient details about the recommended cost allocation methods. This generally entails poor reporting of cost data in EE, typically reported at aggregated level

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