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Relative Effectiveness Assessment of Pharmaceuticals: Similarities and Differences in 29 Jurisdictions

Sarah Kleijnen, MSc[1,2,], Elisabeth George, PhD[3], Scott Goulden, MSc[3], Anne d'Andon, MD[4], Pauline Vitré, PD, MSc[4], Boguslawa Osińska, MSc[5], Rafal Rdzany, PhD[5], Steffen Thirstrup, MD, PhD[6], Belen Corbacho, MSc[7], Bence Z. Nagy, MSc[8], Hubert G. Leufkens, PhD[2], Anthonius de Boer, MD, PhD[2], Wim G. Goettsch, PhD[1,2]*

[1]*College voor zorgverzekeringen, Diemen, The Netherlands;* [2]*Division of Pharmacoepidemiology and Clinical Pharmacology, Faculty of Science, Utrecht Institute for Pharmaceutical Sciences, Utrecht, The Netherlands;* [3]*The National Institute for Health and Clinical Excellence, London, UK;* [4]*Haute Autorité de santé, Paris, France;* [5]*Agency for Health Technology Assessment, Warsaw, Poland;* [6]*Institute for Rational Pharmacotherapy, Copenhagen, Denmark;* [7]*Andalusian HTA Agency, Seville, Spain;* [8]*Hungarian National Institute for Quality and Organizational Development, Budapest, Hungary*

A B S T R A C T

Objective: Assessment of the effectiveness compared with alternative treatment(s) plays an important role in many jurisdictions in determining the reimbursement status of pharmaceuticals. This type of assessment is often referred to as a relative effectiveness assessment (REA) and is carried out by many jurisdictions. Increased sharing of information across jurisdictions may save costs and reduce duplication. The objective of this study was to explore the main similarities and differences in the major methodological aspects of REA in multiple jurisdictions. **Methods:** Data were gathered with a standardized data extraction form by searching publicly available information and by eliciting information from representatives at relevant organizations. **Results:** Of the initially included 35 jurisdictions, data were gathered for 29 jurisdictions. There seem to be substantial similarities on the choice of the comparator, the role of indirect comparisons, and preferred end points in REAs (except for the use of health state utilities). Jurisdictions, however, differ in whether effectiveness (usual circumstances of health care practice) is estimated in case no (comparative) effectiveness data are available and how this is done. **Conclusion:** Some important methodological aspects for REA are approached in a similar way in many jurisdictions, indicating that collaboration on assessments may be feasible. Enhanced collaboration in the development of methods and best practices for REA between jurisdictions will be a necessary first step. Important topics for developing best practice are indirect comparisons and how to handle the gap between efficacy and effectiveness data in case good quality comparative effectiveness data are not yet available at the time of reimbursement decisions.

Keywords: comparative effectiveness, health technology assessment, pharmaceuticals, policy, reimbursement.

Introduction

Funding or reimbursement of a pharmaceutical by the health service or health insurance is one of the factors that determine timely access for patient to the pharmaceutical. The decision on whether a pharmaceutical is reimbursed is based on multiple factors. The efficacy and/or effectiveness compared with alternative interventions is typically considered one of the most important criteria in determining reimbursement status [1]. This type of assessment is often referred to as a relative efficacy/effectiveness assessment (REA) (for definition used in this article, see Fig. 1) [2–4]. An REA is a specific element of health technology assessment (HTA) that focuses on the clinical benefit of the intervention, whereas HTA is broader and can also include other aspects, such as ethical, cost, and cost-effectiveness considerations.

There are two types of REA, a rapid assessment and a full assessment. A rapid assessment is an assessment of one pharmaceutical within a limited time frame in comparison with one or more relevant alternative interventions. It can be the assessment of a new pharmaceutical launched into the market, or the (re)assessment of a pharmaceutical for a new indication or when new relevant data are available. For a full assessment, multiple technologies within a disease area are assessed. The latter type of assessment is typically conducted several years after the technologies have been introduced to the market. Such an assessment may not have to be carried out within a certain time frame. This analysis focuses on rapid assessments.

While there is general consensus that the decision-making process on reimbursement decisions should be undertaken within national and local contexts, there are potential efficiencies to be gained from enhanced collaboration around the collection of evidence underpinning these decisions. Increased sharing of information (e.g., methods, data requirements, and results) across jurisdictions may save costs and reduce duplication. A working group of the High Level Pharmaceutical Forum, a high-level political platform, was set up to support member states of the European Union in applying REAs in order to allow containment of pharmaceutical costs as well as a fair reward for innovation. After the completion of the High Level Pharmaceutical Forum 2005–2008, the European Network for Health Technology Assessment

* *Address correspondence to:* Sarah Kleijnen, College voor zorgverzekeringen, PO Box 80082, 3508 TB Diemen, The Netherlands.
E-mail: skleijnen@cvz.nl.

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Relative efficacy: the extent to which an intervention does more good than harm under ideal circumstances, compared to one or more alternative interventions [2]

Relative effectiveness: the extent to which an intervention does more good than harm compared to one or more intervention alternatives for achieving the desired results when provided under the usual circumstances of health care practice [2]

Surrogate endpoint: a laboratory measurement or a physical sign used as a substitute for a clinically meaningful endpoint that measures directly how a patient feels, functions or survives [5]

Composite endpoint: An endpoint that consists of multiple endpoints that are combined into a new single outcome measure by using a predefined algorithm [6]

Health state utility: value assigned to the quality of life in a health state, normally on a scale of 0 (dead) to 1 (full health)

Fig. 1 – Definitions.

(EUnetHTA) was identified as an appropriate candidate for developing scientific recommendations for improvements in REA of pharmaceuticals in Europe. The overarching objective of EUnetHTA Joint Action is to put into practice an effective and sustainable HTA collaboration in Europe that brings added value at the European, national, and regional levels.

As a first step, an analysis was conducted of the arrangements and the scientific methods used for REA in current national practice. The objective of this study was to explore the main similarities and differences in the major methodological aspects of REA in multiple jurisdictions: the choice of comparator, the use of indirect comparisons, the use of outcome measures, and the use of efficacy data for effectiveness assessments.

Methods

Data were captured with a standardized data extraction form developed by seven EUnetHTA partners (AETSA [ES], AHTAPol [PO], CVZ [NL], HAS [FR], ESKI [HU], IRF [DE], and the National Institute for Health and Clinical Excellence [UK]) that conduct HTAs of pharmaceuticals. The form included 38 open or multiple-choice questions (the multiple-choice questions were to be answered with yes/no or always/sometimes/never). Data were gathered by searching publicly available information and by eliciting information from representatives at relevant organizations (see Fig. 2). The answers were checked by the researchers for inconsistencies and clarity, and if needed were queried. Defining or exploring the exact meaning of the term "relative effectiveness" was not the purpose of this work. As a result, terms such as "relative effectiveness assessment" were not specifically defined in the data extraction form. The responses received therefore reflect the individual respondents' understanding of the term.

Originally, we included 31 European jurisdictions and four English-speaking non-European jurisdictions, most of which are known to have a well-established HTA process for pharmaceuticals (Canada, Australia, and New Zealand) or is known for its interest in REA (the United States).

For each jurisdiction, in particular, the major methodological aspects of the "comparative analysis" were collected. The comparative analysis refers to assessing the efficacy and/or effectiveness of pharmaceutical(s) in comparison to alternatives. Relevant definitions that were used are provided in Figure 1 [2,5,6]. The results were double-checked by representatives of the respective organizations.

Data were gathered between May 1, 2010, and May 1, 2011.

Results

Of the originally included 35 jurisdictions, data were gathered for 29 jurisdictions (Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Italy, Latvia, Luxembourg, Malta, the Netherlands, New

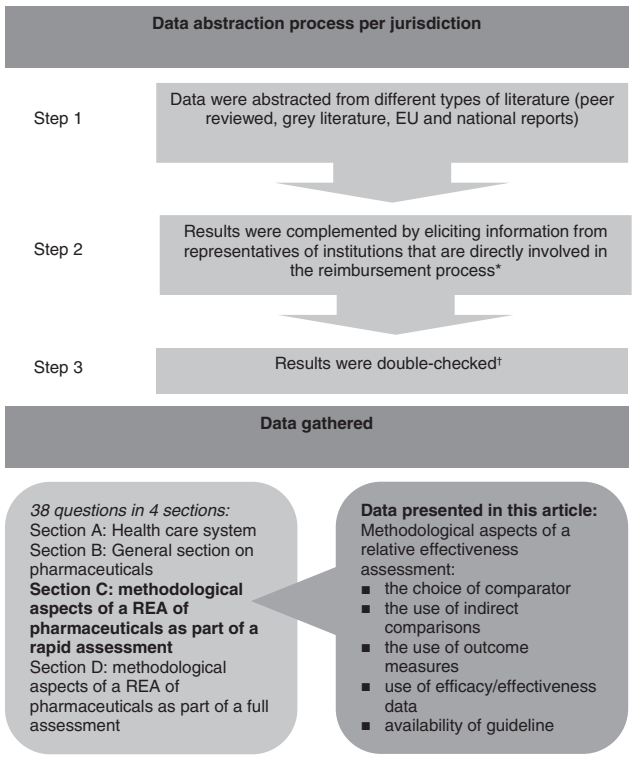

Fig. 2 – Methods. *A semistructured questionnaire that focused on information unavailable in the literature was administered. The questions were either mailed and filled in independently by the expert or administered through a telephone interview. In both cases, the answers were checked by the researchers for inconsistencies and clarity and challenged if needed by asking queries. †The results were double-checked by representatives from the respective institutions.