VALUE IN HEALTH 18 (2015) 484–492

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.elsevier.com/locate/jval

Analysis of Medicine Prices in New Zealand and 16 European Countries

Sabine Vogler, PhD[1], *Kate Kilpatrick, BPharm(Hons)*[2], *Zaheer-Ud-Din Babar, BPharm, MPharm(Clin Pharm), PhD*[3,*]

[1]*Health Economics Department, WHO Collaborating Centre for Pharmaceutical Pricing and Reimbursement Policies, Gesundheit Österreich GmbH/Geschäftsbereich ÖBIG – Austrian Health Institute, Vienna, Austria;* [2]*Pharmacy Services, Waikato Hospital, Hamilton, New Zealand;* [3]*School of Pharmacy, Faculty of Medical & Health Sciences, School of Pharmacy, The University of Auckland, Auckland, New Zealand*

ABSTRACT

Objective: To compare prices of medicines, both originators and generics, in New Zealand and 16 European countries. **Methods:** Ex-factory price data as of December 2012 from New Zealand and 16 European countries were compared for a basket of 14 medicines, most of which were at least partially funded by the state in the 17 countries. Five medicines had, at least in some countries, generic versions on the market whose prices were also analyzed. Medicine price data for the 16 European countries were provided by the Pharma Price Information service. New Zealand medicine prices were retrieved from the New Zealand Pharmaceutical Schedule. Unit prices converted into euro were compared at the ex-factory price level. **Results:** For the 14 medicines surveyed, considerable price differences at the ex-factory price level were identified. Within the European countries, prices in Greece, Portugal, the United Kingdom, and Spain ranked at the lower end, whereas prices in Switzerland, Germany, Denmark, and Sweden were at the upper end. The results for New Zealand compared with Europe were variable. New Zealand prices were found in the lowest quartile for five medicines and in the highest quartile for seven other products. Price differences between the originator products and generic versions ranged from 0% to 90% depending on the medicine and the country. **Conclusions:** Medicine prices varied considerably between European countries and New Zealand as well as among the European countries. These differences are likely to result from national pricing and reimbursement policies.

Keywords: European Union, medicine prices, New Zealand.

Introduction

Access to essential medicines is a fundamental human right [1]. About one third of the world's population is unable to access essential medicines. The concept of essential medicines as a strategy to ensure access is not only intended for low- and middle-income countries, but it was argued that rich countries should follow the lead of poor countries and adopt a more systematic way of controlling the cost of medicines [2]. The price of a medicine is an important factor in the accessibility and affordability of medicines. The World Health Organization recommends that policymakers implement strategies to manage medicine prices to ensure that medicines are accessible to the community and the individual [3]. Medicines are considered a public health commodity; hence, in many countries, medicine prices, at least for specific, usually (partially) funded medicines, are regulated by the government [4]. In the European Union (EU), common understanding has been reached that pharmaceutical pricing and reimbursement policies should balance the partially conflicting policy goals of access to medicines, reward for innovation, and budget control [5] and that member states have the authority to regulate prices of medicines purchased by, or reimbursed by, the state [6].

Pharmaceutical pricing policies are thus affected by governments with regard to public health objectives, such as access to affordable medicines, and national industry policies, such as reward for innovation. In response to the pricing framework set by government authorities, the pharmaceutical industry often reacts by developing the most appropriate pricing strategies from its perspective [7]. An example would, for instance, be submission to the National Institute for Health and Care Excellence. It is well known that the National Institute for Health and Care Excellence in the United Kingdom, which operates with an approximately £30k threshold, receives a large proportion of submissions with a cost of approximately £29k per incremental cost-effectiveness ratio.

As a result of both government policies and pharmaceutical industry strategies, medicines prices differ among countries [8,9]. Differences may occur at different price levels; for instance, a country might have a comparably low ex-factory price level (i.e.,

* *Address correspondence to:* Zaheer-Ud-Din Babar, School of Pharmacy, Faculty of Medical & Health Sciences, The University of Auckland, Private Mail Bag 92019, Auckland, New Zealand. Tel.: +64 9 373 7599 Ext 88436, Fax: +64 9 367 7192.

E-mail: z.babar@auckland.ac.nz.

1098-3015$36.00 – see front matter

http://dx.doi.org/10.1016/j.jval.2015.01.003

the manufacturer price), but might have consistently high "end prices" (pharmacy retail prices) for the patients due to the adding of distribution remuneration such as margins and/or value-added tax rate [10,11].

One of the aims of both European and New Zealand medicines policies is to ensure that the public has access to affordable medicines [12]. New Zealand has been successful in containing pharmaceutical costs, primarily via the policies of the Pharmaceutical Management Agency of New Zealand who manages most of the pharmaceutical expenditures [13,14].

In New Zealand, medicines are classified as either funded medicines or nonfunded medicines. Funded medicines are listed on the Pharmaceutical Schedule and are subsidized by the government from the pharmaceutical budget [14]. In New Zealand, medicines will cost the patient either NZ $5 (around €3) an item if the medicine is fully funded or both the patient and the government will pay for the medicine if the medicine is partly subsidized. For medicines not available on the Pharmaceutical Schedule (nonfunded medicines), the patient has to pay "out of pocket" [15].

In European countries, there are different national pricing and reimbursement policies that apply similar tools but vary in detail [12,16]. As in New Zealand, medicines used in the outpatient sector may be funded, at least partially, or not; thus, medicines are classified either as nonreimbursable (no public funding) or as reimbursable, which means that they are eligible for reimbursement. In most European countries, several reimbursable medicines are not fully funded by public payers but instead are reimbursed to a specific percentage [17]. In the inpatient sector, some high-cost medicines are used that are fully funded by the government, resulting in no cost for the inpatients [18].

In European countries, prices of reimbursable medicines tend to be regulated at ex-factory or wholesale (i.e., pharmacy purchasing) price level, whereas manufacturers are usually permitted to set the price of nonreimbursable medicines [19]. A key methodology guiding public authorities in deciding on the medicine prices is external price referencing, that is, the practice of using the price(s) of a medicine in one or several countries to derive a benchmark or reference price for the purposes of setting or negotiating the price [20]. This is a frequently used approach, applied in all EU member states except Denmark, Sweden, and the United Kingdom, and in Norway and Switzerland [21]. However, value-based pricing, when the price of a medicine is set according to the value it generates, is much less common as a policy: It is in place only in Sweden. The United Kingdom had planned to introduce it in 2014; however, it has refrained from doing so now. Nevertheless, nearly in all European countries, some element of value-based pricing is being used [22]. Wholesale and pharmacy remuneration is added, usually for all medicines. They usually take the form of fixed mark-ups and regressive margin schemes, but they might also be organized as fee-for-service remuneration, which covers the cost of pharmacy services such as in England, The Netherlands, and Switzerland [23]. Unlike many other countries in which prices for patients are increased by several fees, duties, and taxes, the value-added tax is the only add-on on the pharmacy retail prices net in European countries, and usually a lower rate is applied on medicines compared with the standard rate, amounting to around 5% till 20% [24,25].

A number of studies that analyze and compare medicine prices in European countries have been published. In some studies, several European countries have been selected whereas in others a comparison has been done with the United States [8–10,26–34]. Some price analyses focused on generic medicine prices compared with the originators [35–38]. To our knowledge, no comparison between New Zealand prices and prices in other high-income economies, such as European countries, has been undertaken. Moreover, it has often been thought that medicines available on the Pharmaceutical Schedule in New Zealand and subsidized by the government have very low prices in international terms; however, very little empirical evidence is available to substantiate this claim [39].

Hence, in this study, we compare medicine prices in European countries with New Zealand prices for a basket of medicines, all of which are funded in New Zealand and most of which are, at least partially, funded by the government in the European countries. This research will allow the assessment of differences in prices of medicines, including originator and generic medicines, among the countries.

Methods

Country Selection

Seventeen countries were selected for the price survey and the analysis. These were New Zealand and 16 European countries: Austria, Belgium, Denmark, Germany, Greece, Finland, France, Italy, Ireland, The Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom. Fourteen of the 16 European countries are members of the EU (Norway and Switzerland are nonmembers), and they have similar economic situations to New Zealand even though some countries (Greece, Portugal, Spain, and Ireland) have been strongly hit by the global financial crisis [23]. All selected European countries apply price regulation for at least part of the medicines on the market [40]. Three of the 14 European countries (Denmark, Sweden, and the United Kingdom) currently do not use international price comparisons (external price referencing) in the pricing decisions.

Medicine Selection

Selecting the basket of medicines was guided by the following principles: to have an equal balance of medicines of different indications, of different price segments (medicines to be known as high-price medicines and those of high volume but lower prices), different patent expiry status, and different reimbursement status. Another major selection criterion for the medicines, and particularly for the pharmaceutical presentation subject to the analysis, was the actual availability of medicines on the market in most of the countries.

We drew up a preliminary sample of 43 medicines, applied the selection criteria, and generated a final list of 14 medicines. The medicines were checked to ensure that for every medicine each country had available price data for identical or at least comparable presentations. *Comparable presentations* were defined as medicines with the same pharmaceutical form (e.g., tablets and vial), the same dosage, and the same or, if not available, the closest pack size. If price data on generics were available, the lowest-priced generic version was chosen. In total, for 5 of the 14 medicines, generics versions were available, however, with variations in country coverage. In case the originator medicines were available under two brands with a different price, the lower priced brand was selected. If the originator presentation was available only in a different pack size than the one of the selected presentation, this pack size was also chosen for the generic version, if available, to ensure comparability. Table 1 presents the selected medicines and the actual presentation chosen for the price comparison and analysis and provides information on the country coverage and possible limitations. Although high country coverage (at least 14 of the 17 countries) was ensured for the selected medicines with regard to the originator, the coverage of the generics was poor in most of the cases. We still decided to