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The EuroMedicines Project

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Abstract The EuroMedicines Project created a single drug directory at a single time point (late 1998) to cover most of the member states of the European Union (EU) and some of the candidate states, so as to aid drug regulators, physicians and patients. It shows the wide variations in availability of medicines across Europe, e.g. there were 1974 active drugs with 18 554 branded products in Germany, compared to 1041 active drugs and 1954 products in Sweden. Only 7% of all active ingredients were available in all EU members. Among antimigraine drugs, triptans were widely available, but there were differences in licensed doses and in the ranges of products in different countries. These differences seem to have little scientific basis and to arise from different historical, cultural and commercial influences in each market. EuroMedicines Project will be a useful resource for exploring these issues.

Key words Drug regulation • Availability • Europe

Introduction

European institutions are increasingly harmonised and an example of this is centralised drug licensing through the European Medicines Evaluation Agency. Over time, this will harmonise drug availability across Europe [1]. But in the meantime, many anomalies exist arising from the previous national systems that operated varying standards. The result of this is that older drugs are available in only one or some of the European states but not in others, or that doses and indications vary between countries. Discrepancies also exist in patterns of drug use between different countries, which arise in part from the availability of medicines. There seems little scientific rationale for these variations.

Although each European country is required to maintain a directory of all drugs available within it and make this publicly available, in practice such directories are either difficult to obtain or incomplete. In practice, many European regulatory agencies depend on a commercial directory of drugs produced by a for profit organisation. This does not contain information on dosage form and other important aspects and is not available for academic research, except at great expense.

Access to such a comprehensive directory of all drugs available in Europe would be of value to drug regulators and most importantly to physicians and to patients so as to improve the quality of care that can be offered to patients travelling within the single European market.

This is just one of the many challenges of pharmaceutical policy in Europe. Others include: ensuring equitable access for patients to safe, effective and good quality medicines; improving the quality of use of medicines for better health outcomes; ensuring value for money in health services; and achieving all of this while balancing industrial

policy objectives, i.e. maintaining employment and encouraging the pharmaceutical industry to continue to develop innovative drugs.

Transparency of information is an important start to this and, therefore, we undertook the EuroMedicines Project. Our aim was to create a drug directory for all European Union (EU) member countries. A parallel project was also to create a similar directory, which could be merged for as many of the candidate member states as possible. We then planned to make this directory available to regulators, the pharmaceutical industry, to health professionals and to patients.

Methods

The methods and data sources have been outlined elsewhere [2]. Briefly, we sought data from all EU member states and later from East European candidate states. The data collection was essentially a census at a specific time point, i.e. the second half of 1998.

Each medicine was classified by the WHO anatomical therapeutic chemical code, e.g. anti-migraine drugs N02C, selective serotonin agonists N02CC, sumatriptan N02CC01 [3]. Other details include pharmaceutical form, strength and pack size, marketing authorization holder, year of approval and reimbursement status. This often required collaborating with centres across Europe to draw on a wide variety of information sources.

Results

Within the European Union, data was obtained for all members states except Greece. Data was also obtained from seven candidate member states, including Poland, Hungary, Czech Republic, Slovak Republic, Bulgaria, Lithuania, Estonia (Fig. 1). The data was inevitably not directly comparable from country to country and in some aspects was incomplete, e.g. we obtained no information on dermatological drugs from Portugal.

The numbers of active ingredients available varied enormously from country to country, ranging from a high of 1974 in Germany down to 1041 in Sweden (Fig. 2a). In general, Scandinavian countries have the lowest number of active drugs. In terms of brand names, Germany again had the largest number of brand name products with a total of 18, 554 compared to Sweden with 1954 (Fig. 2b).

Extraordinarily, only 7% of active drugs were available in all European countries and there are marked discrepancies between what was available in one and another country. For instance, of all the drugs available in Germany, only 42% were available in Sweden. Conversely, of all the drugs available in Sweden, 83% were available in Germany. This is a reflection of the number of drugs in each market, but the pattern for Sweden compared to Germany was generally true of Scandinavian states in general compared to all other countries and suggests that the Scandinavian states have a culture of tighter market regulations than most other European countries.

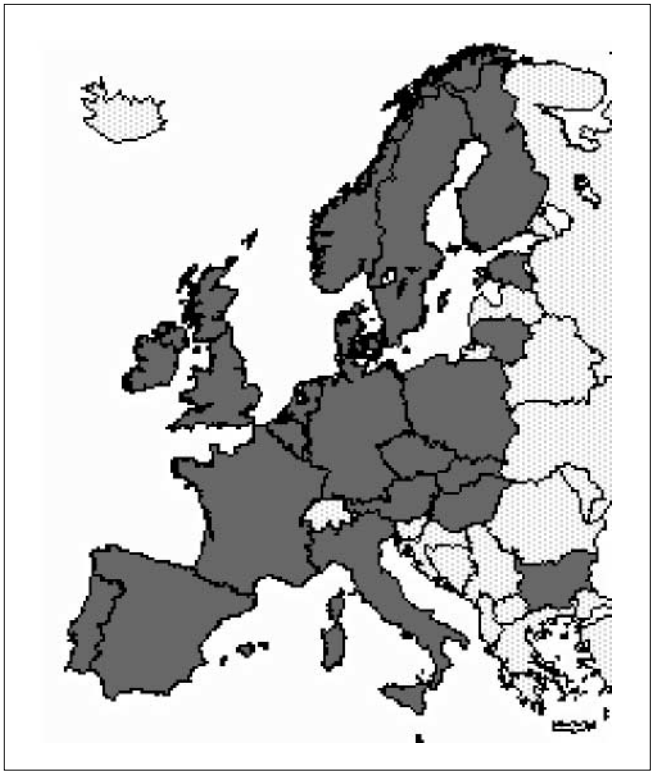

Fig. 1 Countries supplying data to the EuroMedicines Project

The numbers of drugs by therapeutic area were also examined. In general, more drugs were available for use in the central nervous system or cardiovascular system, depending on which country one examined. However, the greatest variation existed in drugs available for the central nervous system; here, there were enormously wide differences with, for instance, Italy having 25 preparations available only in Italy while Denmark had only one unique preparation in its national directory. Again, this may imply tighter regulation of the market in Scandinavian countries. As a further example, consider the availability of nootropics and psychostimulants (N06BX). Here, Italy had 11 drugs with 48 preparations, Germany 7 drugs with 8 preparations, but the UK had only one such drug with one preparation. Again, this reflects national patterns of diagnosis and medical culture.

In considering the anti-migraine drugs, one might for example examine the triptans. Sumatriptan was widely available at the time of data collection. In some countries, there was a wide variety of preparations, e.g. 19 in the UK where

parallel importing and rebranding of products from other markets was common. Naratriptan was at the time available in only 7 European Union states, in one preparation. Rizatriptan was available in 3 states and zolmitriptan in 9 states. Almotriptan was not licensed in any state at the time. There were enormous variations in price between these compounds.

Furthermore there were discrepancies in the licensed doses of triptans from the summary of product characteristics in Europe and those in the US (Table 1). Other anti-migraine drugs showed less variability. Pizotifen was widely available in most countries and usually in only one preparation. Clonidine for migraine was available in only 5 countries, although it was more widely available as an anti-hypertensive. Only 5 countries listed methysergide. Ergotamine and dihydroergotamine preparations were widely available: Britain has a large concentration of compounds of ergotamine with cyclizine and caffeine.

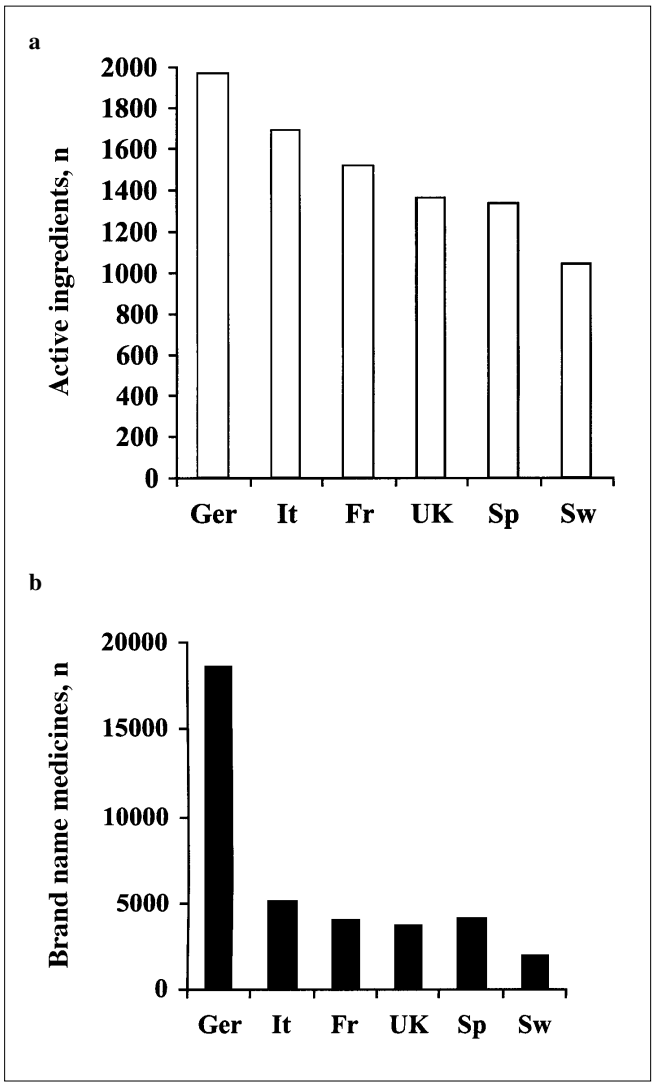

Fig. 2a,b *Variations in availability of drugs across selected European countries*. **a** Active ingredients. **b** Brand name medicines. *Ger*, Germany; *Fr*, France; *It*, Italy; *UK*, United Kingdom; *Sp*, Spain; *Sw*, Sweden

Discussion

This project described a wide variability in drug availability across the European Union at a single point in time. This was less true for anti-migraine drugs than in many other areas. Having defined what drugs are now available, other questions need to be asked, e.g. why are there discrepancies in the summary of product characteristics between different countries? There are no clear explanations for such differences, which should be a matter of concern for public health. Why is there a wide range of drugs within a particular area within one country, while other countries seem to manage on much smaller numbers of drugs in the same class? Some of these differences may indicate the prevailing morbidities in different European countries, but others may say more about medical culture or, as attributed by Garattini and Garattini [3], about the promotion by different pharmaceutical companies in different countries.

The EuroMedicines Project has therefore been a tool to raise questions on the regulation of the pharmaceutical market and will serve to improve transparency and harmonisation in the European Union medicines markets. It will allow regulators and others to compare their performance with other states. In pharmacoeconomics, it will be useful in identifying appropriate comparators.

Table 1 Variation in dose ranges of triptans licensed in different European countries and in the USA

	Authorised doses, mg					
	UK	France	Germany	Italy	Sweden	USA
Naratriptan	2.5	2.5–5.0	2.5	NA	2.5	1.0–2.5
Zolmitriptan	2.5–15	2.5–10	2.5–10	2.5–10	2.5–10	5–30
Sumatriptan nasal spray	20–40	10–40	20–40	20–40	20–40	10–20

NA, not available

However, more needs to be done: the data need continual updating although this should be easier now with increased central licensing and mutual recognition of licensing. The next project, EuroMedStat, will go on to collect utilisation data, both in terms of volume and cost, and to compare costs of drugs across European countries. We would like to facilitate access to the EuroMedicines data to interested researchers and invite you to visit our website (www.euromedicines.org).

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