

MEASURING DELAYS IN THE AVAILABILITY OF NEW MEDICINES WITHIN EUROPE USING A TIME-TO-PRICE INDICATOR

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Background

According to the experience from Europe, patients in some countries have to wait multiple times longer to access new innovative medicines.

Despite the EU effort to ensure comparable treatment options for patients in all of the member countries (for example through the Transparency directive 89/105/EEC), there are considerable gaps between them today. COGVIO performed an analysis to map the delayed availability of new innovative treatments in the 29 European Economic Area countries. [1]

Objectives

The objective was to design and perform a fast and adaptive analysis using our own new defined Time-to-price indicator. It serves as a proxy for determining whether the medicine has passed the post-marketing national pricing decisions. The analysis consists of the following three sections:

- 01 Time-to-price distribution
- 02 Time-to-price rate
- 03 Impact of economic factors on Time-to-price

Methods

Time-to-price was defined as an indicator of the availability of a single medicine, measuring the days elapsed between the marketing authorisation date and the first date when the medicine's price was available in the national price referencing source (uptake or accessibility through reimbursement system was not taken into account). If the medicine's price was available in more than one national reference source, we took into account the earlier date of the available price.

- 29 countries from the European Economic Area were included in the analysis. *See Table 1 with listed countries and corresponding national pricing sources.
- 92 centrally registered medicines with the first product authorised in January 2017 and the last in July 2019 were studied.
 - 66 innovative medicines
 - 26 biosimilar medicines
- Marketing authorisation date and other information were obtained from the European Public Assessment Report.
- Date of the first established price for individual packages in national price reference sources was obtained from Cogvio Price Monitor.

The analysis also defined the rate of access to new medicines for EU countries. It was measured by the percent of medicines with an available price in the national reference source, registered within a specified time frame.

44 medicines registered during 2017 were selected and the rate of access for each country was analyzed. The data lock point on the medicines' prices was in August 2019.

Results

01 Time-to-price distribution

Figure 1 shows the results of the Time-to-price distribution in EEA countries. The top three countries in access to new medicines according to the median in Time-to-price indicator were Denmark (98 days), Austria and the United Kingdom (114 days). On the other end, the countries with the highest median in Time-to-price indicator were Romania (500 days), Estonia (432 days) and Iceland (396 days).

High variance in Time-to-price was observed on the EU market between individual countries, with the fastest product of 13 days (Trelegy Ellipta in the United Kingdom) and the slowest with 965 days (Movymia in Latvia).

High variance in Time-to-price was observed within individual countries as well, with a range of fastest to slowest product spanning from 317 days (Cyprus) to 911 days (Norway). The average difference between the lowest and highest time-to-price of a country was 742 days.

Median TTP for EEA region was 278 days.

02 TTP rate

There was a total of 44 medicines centrally registered during the year 2017 included in the Time-to-price rate analysis. Figure 2 shows the percent and number of products in scope that obtained prices in the national reference source in each year - a proxy of availability of centrally registered products to individual market each year.

Three countries with the highest Time-to-price rate were Denmark (86%), Italy (86%) and Germany (70%). On the opposite side, the countries with the lowest Time-to-price rate were Poland (11%), Ireland (11%) and Norway (14%).

The mean rate of access across EEA countries was 39%

03 Impact of economic factors

We analyzed how the median Time-to-price of a country is influenced by their health expenditure and GDP per capita. 25 countries were included in the analysis.

Figure 3 shows the relationship between health expenditure (per capita in PPP Int\$) and median Time-to-price (days) with a negative correlation (Pearson coefficient: -0.59), indicating the presence of a tendency of higher Time-to-price (slower access to innovative medicines) in countries with lower health expenditure per capita.

Among countries with lower healthcare expenditure (below 3,000 int\$ PPP), 40% have Time-to-price between 280 - 379 days, followed by 30% with over 380 days.

Among countries with higher healthcare expenditure (above 5,000 int\$ PPP), 83% have Time-to-price between 80 - 179 days.

Figure 4 shows the relationship between the gross domestic product (per capita in PPP Int\$) and median Time-to-price (days) with a negative correlation (Pearson coefficient: -0.51), indicating the presence of a tendency of higher Time-to-price (slower access to innovative medicines) in countries with lower gross domestic product per capita.

Among countries with lower gross domestic product (below 30,000 int\$ PPP), 50% had Time-to-price between 280 - 379 days, followed by 25% with over 380 days.

Among countries with higher gross domestic product (30,000 - 49,000 int\$ PPP), 47% had Time-to-price between 80 - 179 days, followed by 27% with 280 - 379 days.

Norway was an outlier with exceptionally high gross domestic product (over 65,000 int\$ PPP) and had Time-to-price 164 days.

Conclusions

The Time-to-price distribution analysis showed high inequality in access to new innovative therapies between EEA countries, with some countries gaining access to new medicines 5 times slower compared to the faster ones. In addition, the delay of access unpredictably varies importantly within countries themselves.

The results of Time-to-price rate analysis indicate that some countries markedly lag in providing access to medicines registered in 2017, with patients on some markets only being able to access less than 10% of those.

The impact study of economic factors on Time-to-price showed a potential association with countries' health expenditure (R = -0.59) and gross domestic product per capita (R = -0.51).

Naturally, multiple factors contribute to delay in access to innovative therapies. The rising cost of innovative therapies may be an important one. Our analysis indicates that countries with better economic indicators are faster adopters, while poorer ones struggle to follow.

Hidden elements affecting the delay in access are harder to reveal. For example, the agility of national regulatory and reimbursement systems might accelerate or slow down the access to medicines. On the other hand, marketing authorisation holders doubtlessly prioritize the access to markets where higher profits are to be made. [2] In addition, external price referencing forces them to launch on markets where the initial price would be maximal, which happens to be also countries with higher gross domestic product and population size. [2]

References

- [1] EPPIA Patient W.A.I.T. Indicator 2018 survey, March 2018.
- [2] Cheap or timely drug? Practical impact of external reference pricing policy in the European Union. Cogvio, Value Outcomes, CERGE-EI, October 2019.

Figure 1 – Time-to-price distribution in EEA countries (days)

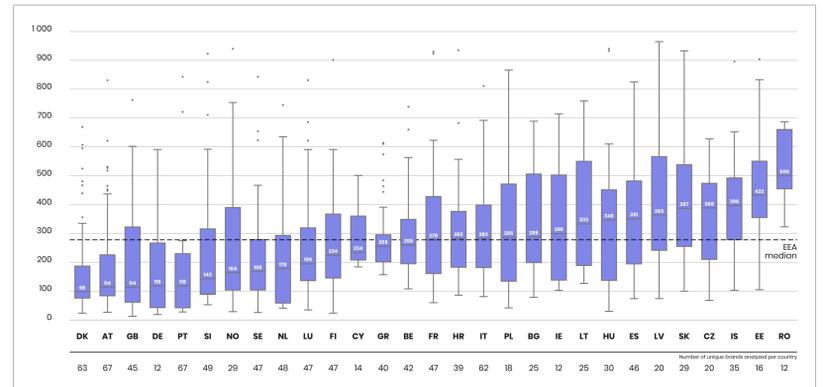


Figure 2 – TTP rate in EEA countries (% total)

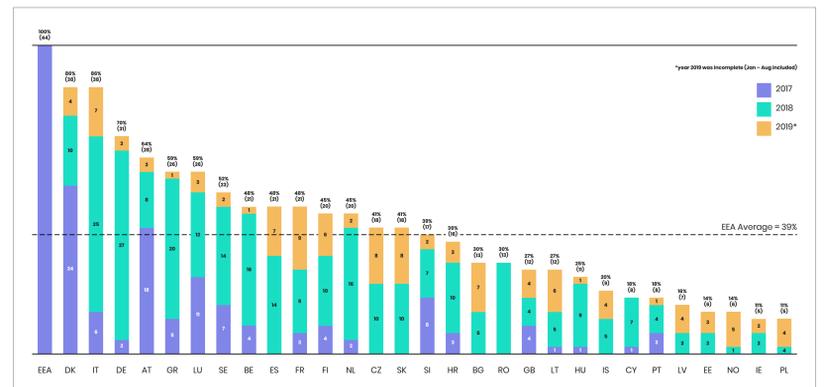


Figure 3 – Health expenditure (per capita in PPP Int\$ in 2016) and Time-to-price median (days)

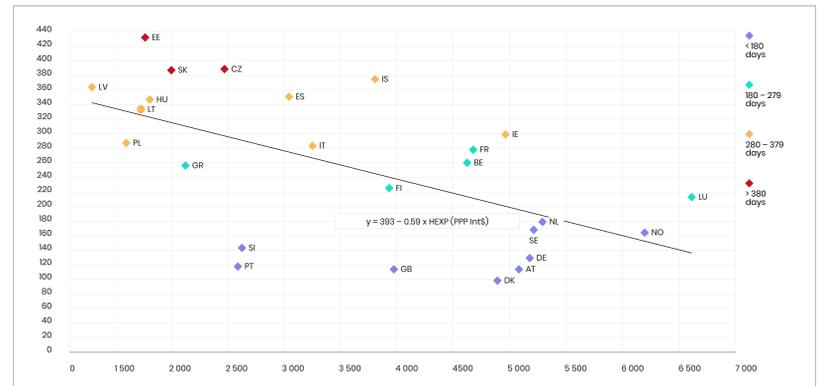


Figure 4 – Gross domestic product (per capita in PPP Int\$ in 2016) and Time-to-price median (days)

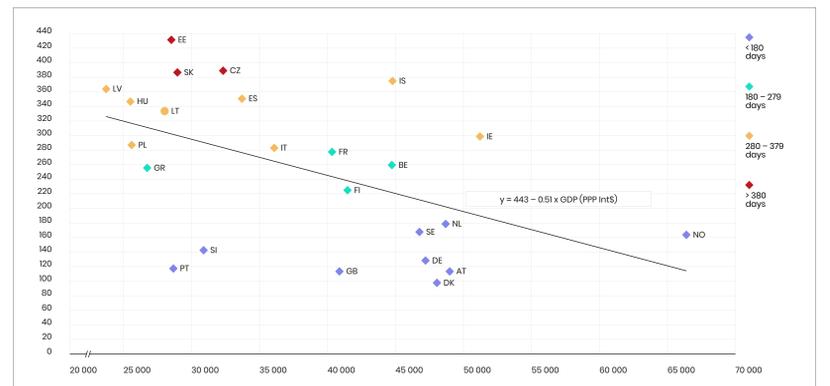


Table 1 – National pricing sources

Country	National Pricing Source
AT	Central database developed by the Österreichische Apothekervereinigung (ÖAV) (Austria)
BE	Central database developed by the Centrale Federatie van Apothekers (CFVA) (Belgium)
BG	Belgian Center for Pharmaceutical Economics (CEPE) (Belgium)
DE	National Institute for Health Insurance (IHK) (Germany)
DK	National Council on Prices and Reimbursement of Medicinal Products, Budgets, Register, Coding System (National Council on Prices and Reimbursement of Medicinal Products, Budgets Register, Coding System) (Denmark)
EE	Pharmaceuticals Information System (PIS) (Estonia)
ES	List of reimbursable medicinal products published by the State Institute for Drug Control, Spain (Spain)
FR	List of reimbursable medicinal products published by the Ministry of Health, France (France)
GB	Central database developed by the Medicines Division of the Department of Health, United Kingdom (United Kingdom)
GR	Central database developed by the Ministry of Health, Greece (Greece)
HR	Central database developed by the Ministry of Health, Croatia (Croatia)
IE	Central database developed by the Health Services Executive, Ireland (Ireland)
IT	Central database developed by the Ministry of Health, Italy (Italy)
LV	Central database developed by the Ministry of Health, Latvia (Latvia)
LT	Central database developed by the Ministry of Health, Lithuania (Lithuania)
NL	Central database developed by the Ministry of Health, Netherlands (Netherlands)
NO	Central database developed by the Norwegian Medicines Agency (Norway)
PL	Central database developed by the Ministry of Health, Poland (Poland)
PT	Central database developed by the National Authority of Medicines and Health Products (Portugal)
RO	List of medicinal products for human use published by the National Authority of Health (Romania)
SE	Central database developed by the Swedish Pharmaceutical Benefits Agency (Sweden)
SI	List of medicinal products published by the Public Agency for the Regulation of Medicinal Products and Medication Devices (Slovenia)
SK	List of medicinal products published by the Ministry of Health of the Slovak Republic (Slovakia)

Figure 5 – Median Time-to-price in Europe

