

Different methodological approaches of external price referencing lead to different medicine prices.

O09: Impact of the external price referencing (EPR) methodology on medicine prices – Simulation of existing EPR models

Background

- External price referencing (EPR) is a frequently used medicine pricing policy
- It aims to lead to more affordable (lower) prices
- Different dimensions are to be taken into consideration when designing an EPR system, e.g.
 - Basket of reference countries
 - Calculation of the benchmark price
 - Exchange rate
 - Weighting price data of reference countries

Objective

- To investigate the impact of changes in the EPR methodology on medicine prices (list prices)

Methods

Parameter	Methodological approaches
Model	Discrete-event simulation (DES)
Price data	Fictitious prices
Countries included	All 28 EU Member States except Denmark, Sweden and UK; plus Iceland, Norway and Switzerland
Time period	Period of 120 months, starting Q1 /2015
Base case	“Real-life setting”: Dimensions of EPR in the countries as in place in 2015, as surveyed
Simulations	Different scenarios were simulated
Assumptions	Prices were held constant until a re-evaluation was due according to legislation No consideration of price deflation/ inflation Exchange rates were held constant EPR was assumed to be the sole pricing policy in the EPR-applying countries Launch countries: Germany (assumed price: 100) and Italy (assumed price: 70)

Findings

Countries	Base case	Discounts	Revisions (every 6 months)	PPP adjustment	Basket change (4 countries)	Basket change (30 countries)	Minimum price	Exchange rate (yearly)	Exchange rate (monthly)
AT	94.0	82.0	76.5	88.2	94.0	85.0	70.0	94.0	94.6
BE	94.0	82.0	76.5	88.9	94.0	85.0	70.0	94.0	94.6
BG	70.0	19.0	69.5	32.9	67.5	83.9	54.7	62.5	58.1
CH	93.0	66.0	86.5	129.5	77.1	84.2	62.3	95.8	98.2
CY	74.0	47.0	70.0	57.6	66.2	72.4	48.0	75.6	76.3
CZ	70.0	35.0	69.5	45.5	67.8	83.9	56.2	62.7	58.1
DE	89.0	72.0	79.9	80.0	87.7	85.0	77.9	88.9	90.4
EE	70.0	32.0	69.5	50.6	67.8	83.9	56.0	62.8	59.2
EL	70.0	22.0	69.5	58.0	67.5	83.9	54.7	62.6	59.0
ES	70.0	29.0	69.5	62.5	67.5	83.9	55.8	62.7	59.3
FI	78.6	37.2	74.7	87.0	74.6	81.5	52.7	91.2	91.8
FR	82.2	34.5	79.7	82.8	76.9	84.2	54.7	90.0	90.3
HR	67.8	11.4	65.7	41.1	70.5	77.0	50.1	66.4	63.1
HU	70.0	56.0	69.5	35.6	70.0	70.0	70.0	62.5	61.1
IE	89.1	59.2	82.5	82.9	77.1	84.2	57.3	91.3	92.0
IS	88.8	72.8	84.8	91.9	73.6	80.6	54.7	99.4	99.3
IT	70.0	23.2	69.5	70.0	67.5	83.9	54.7	65.0	59.7
LT	70.1	13.7	69.5	42.2	77.0	84.2	55.8	64.4	61.6
LU	94.0	82.1	76.5	95.7	67.5	83.9	70.0	94.0	94.6
LV	70.0	34.5	69.5	47.1	67.5	83.9	54.7	65.2	62.4
MT	75.5	25.2	74.0	55.4	77.1	84.2	56.2	74.0	72.0
NL	81.6	55.4	75.1	75.1	68.8	75.3	56.3	84.8	86.5
NO	84.0	50.5	73.1	99.4	63.7	78.9	53.9	87.4	80.2
PL	70.6	16.4	69.8	40.6	76.9	84.2	54.7	67.2	64.7
PT	78.2	22.2	75.2	56.1	77.0	84.0	55.8	81.9	79.9
RO	70.0	18.5	69.5	34.4	67.5	83.9	54.7	66.4	64.7
SI	82.2	32.1	76.5	58.9	67.5	83.9	63.0	90.0	90.3
SK	70.0	24.3	69.5	47.1	67.5	83.9	54.3	62.6	59.2
Ø price / base case	78.1	41.2 - 47.2%	73.6 - 5.8%	65.6 - 16.0%	73.0 - 6.5%	82.2 + 5.3%	58.2 - 34.2%	77.3 - 1.0%	75.8 - 3.0%

Base case (continuation of 2015 methodology):

- 21.9% after 10 years

Simulations with highest impacts:

- Consideration of discounts (assumed 20% discount in 6 large economies and mandatory discounts in DE, EL & IE): -47.2%
- Calculation based on lowest price in ref. countries: -34.2%

Simulations with mixed impacts:

- Adjusting price data to PPP: -16%

Simulations with further impacts:

- Regular price revisions
- Changes in the basket of reference countries
- Shorter intervals of the average exchange rates

Conclusions

- The methodological design of EPR can result in (partially substantial) changes of the price
- Savings for payers through strategic choices



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