Differential pricing for pharmaceuticals: overview of a widely debated pricing concept and key challenges

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BACKGROUND
• Development of pharmaceuticals requires significant investments for research and development (R&D), which the companies attempt to recover, especially in patent protected products, by imposing higher profit maximising prices [1,2].
• Lower income countries are facing restricted or delayed access to innovative drugs as a result of high prices and the various price maximising strategies employed by the manufacturing companies in response to external reference pricing (ERP) [1,2-3].
• Differential pricing (DPR) is based on the economic concept of price discrimination whereby prices of the same products are varied set for different consumer groups in different geographical or socio-economic segments based on the income or purchasing power of those buyers [4].
• This can improve access to medicines in lower income countries while preserving incentives for R&D through higher prices in higher income countries [12-13].
• Different DPR approaches have been suggested [5,6] but DPR use is currently mainly limited in low and middle income countries around the world to products such as vaccines, contraceptives, and antiretrovirals [4,7].

OBJECTIVES
• This study aimed to assess the current situation of DPR for pharmaceuticals in the European Union (EU) including the key DPR principles and challenges for its implementation.

METHODS
• A literature review was conducted in MEDLINE®, WHO, OECD, and European Commission websites, complemented by a grey literature search.
• Key DPR principles were identified and current implementation challenges in the EU were assessed.

RESULTS
Key DPR Principles
• Different DPR approaches were described for pharmaceuticals:
  • Ramsey (1927) developed a well-known DPR theory stating that prices should differ across markets according to inverse relation of the demand elasticity. This approach would generate enough revenues to covered R&D costs while ensuring that more price-sensitive uses, i.e., lower income countries are charged at a lower price than less-price sensitive users [7].
  • Another approach to DPR proposed by Danzon et al. (2013), called "value-based differential pricing", was aimed to have prices reflecting marginal value acknowledged in each country through the use of individual incremental cost-effectiveness ratio (ICER) threshold based on willingness to pay within each country [1].
• Other approaches involve separating price setting and the recovery of fixed R&D costs following different options [1].

DPR in debate
• DPR is highly discussed among national, EU institutions and industry, as illustrated in Table 1, given the differences in GDP per capita and price levels of EU countries (Figures 142).