**Guidance for pediatric use of novel therapeutics in the EU and the US**

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Declaration of interest: This study was performed under the umbrella of Copenhagen Centre for Regulatory Science (CORS). CORS is a cross-faculty university anchored institution involving various public (Danish Medicines Agency, Copenhagen University) and private stakeholders (Novo Nordisk, Lundbeck, Ferring pharmaceuticals, LEO pharma) as well as patient organisations (Rare Diseases Denmark). The centre is purely devoted to the scientific aspects of the regulatory field and has a patient-oriented focus and the research is not company-specific product or directly company related.

**Background and Objectives**

Pediatric legislations in the European Union (EU) and the United States (US) have increased medicines approved for use in the pediatric population. However, despite the similarity in these legislations, key differences also exist. It is hypothesized that restricting the scope to the proposed adult indication, as in the US, would allow for the ignorance of potential unmet pediatric need and pediatric use in the US, compared to the EU where a wider scope is applied. This study compares pediatric prescription information for novel therapeutics approved in both the EU and the US to report on the differences in the guidance for pediatric use.

**Methods**

We compared the guidance for pediatric use in the EU Summary of Product Characteristics (SmPC) and the US Prescribing Information (USPI) for all granted indications as of March 2020 for novel therapeutics approved between 2010 and 2018 (217 products) in both regions (Figure 2).

In each region, we collected the date of approval, authorization status (as of March 2020), and orphan designation. For each product, the SmPCs and USPIs were scrutinized to collect information about all approved therapeutic indications (condition and/or target disease) for adults and/or pediatrics. For each drug-therapeutic indication pair, the level of pediatric guidance for use in the SmPC/USPI was categorized as "Use", "Don't use", "Inconclusive guidance" or "No guidance" (see figure 1) for each pediatric subgroup.

**Results**

We found that for 21% (45/217) of the therapeutics, guidance for pediatric use differed for 18% (61/348) of the listed indications, with an equal distribution between USPIs and SmPCs providing a higher level of guidance for pediatric use in one region as compared to the other (49% (30/61) in the US; 51% (31/61) in EU).

**Discussion**

Even though the legal framework of mandatory pediatric legislation in the EU and the US provides a basis for differences in pediatric research obligations for the same product in the two regions, we observed only a few discrepancies between the guidance for pediatric use in the prescription information approved in the respective regions. Only 18% of the indications representing 21% of novel products approved in both the EU and the US between 2010 and 2018 differed in the guidance for pediatric use. Furthermore, an equal share was seen between discrepancies having a higher level of information for pediatric use in one region compared to the other (49% (n = 30) in the US; 51% (n = 31) in the EU).

**Conclusion**

Although the EU pediatric regulation gives a broader mandate for requiring pediatric drug development, this was not reflected in the prescription information approved by the two regulatory authorities.