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Nancy S. Berg
ISPOR
Lawrenceville, NJ, USA

Dear HMA-EMA Joint Big Data Taskforce:

ISPOR – the professional society for health economics and outcomes research - is pleased to respond on behalf of its membership to the summary report of the Heads of Medicines Agencies (HMA) - EMA Joint Big Data task force. We strongly agree that resolution of these critical issues can be strengthened with input from a wide variety of stakeholders and thank the Agencies for this opportunity to provide our comments.

ISPOR is a scientific and educational society with many of its members engaged in evaluation of pharmaceuticals using real-world evidence and big data. Our membership includes over 20,000 individuals across a range of disciplines, including health economics, epidemiology, public health, pharmaceutical administration, psychology, statistics, medicine, data science, and more, from a variety of stakeholder perspectives, such as the life sciences industry, academia, research organizations, payers, patient groups, government (including some from European regulatory agencies), and health technology assessment bodies. The research and educational offerings presented at our conferences and in our journals are relevant to many of the issues and questions raised in this request for information.

We have chosen to respond to selected sections where the recommendations were particularly relevant to our mission.

ISPOR would be happy to answer any questions about our response, as well as to participate in any follow-up consultations on the relevant program items mentioned within the report.

Sincerely,



Nancy S. Berg
CEO & Executive Director
ISPOR

First, we congratulate the Heads of Medicines Agencies (HMA) and the European Medicines Agency (EMA) for producing comprehensive recommendations for approaching regulatory issues regarding big data. Big data are becoming increasingly important to understanding real world usage and outcomes of pharmaceutical products, and thus can contribute to better understanding of the effectiveness and safety of therapies, when done in a scientifically rigorous manner. ISPOR, the leading professional society for health economics and outcome research, and our members have a vested interest in working with regulatory bodies on appropriate use of big data, bringing diagnostic and therapeutic innovations and advances faster and more efficiently to patients who need them. While this report touches on many aspects related to the usage of big data, our comments are confined to those areas especially relevant to ISPOR and its members.

Data Standards (page 11)

We agree with the assessment that no single data standard has the depth and breadth to be applicable to all data sets, while also encouraging common general principals and striving to optimize the number of different standards. However, we also suggest keeping the perspectives focused on the unique nature of this research setting. Big data by nature is characterized by fragmentation, sparsity, and rapid evolution, making it difficult to apply conventional data standards. Other agencies and data experts are also looking at minimum data set models for observational data evaluation: (i) South Korea (HIRA's guidance for understanding relevant methodologies for collection and analysis of RWD in terms of HTA), (ii) Europe (EUnetHTA WP5) and the European Medicines Agency (EMA) activities regarding minimal datasets and qualification procedures for disease specific registries, and (iii) Observational Health Data Sciences and Informatics (OHDSI) consortium, with members around the world, on the Observational Medical Outcomes Partnership (OMOP) common data model, (iv) Duke-Margolis collaborative efforts with the USFDA on data standards and quality, (v) USFDA real-world evidence program framework. These are a sub-set of efforts in which our members actively participate. We encourage the Agencies to continue to engage with experts and agencies who are also looking at data models and other methods to evaluate reliability and relevance of registry and electronic health care data which may be very relevant to big data. Creating globally relevant standards will reduce duplicative efforts and encourage producers of these data to adhere to standards.

Data Quality (page 13)

We agree that understanding underlying data quality is the starting point for a credible study – both the source data and derived evidence, however we encourage the agencies to combine thinking about data quality with data standards. Clearly, as identified in the Report, the definition of ‘quality’ data will depend on the regulatory context of use. Specifically, is a particular data set “fit for purpose”? For example, a data set could be of very high quality according to certain parameters, but be missing key endpoints that might be important to answer the specific question at hand. Thus, we suggest that the recommendation to establish minimum sets of data quality standards be organized around different contexts of use (or “use cases”).

Data Sharing and Access (page 14)

We agree that data sharing and access will be paramount to big data being able to deliver on the promise of faster research and development, and access to life saving therapies. However, we encourage including data source owners in these discussions as the intellectual property issues mentioned on page 15 should be addressed. We also agree with the recommendation: ‘Promote...sharing of the analyses arising from data sharing activities e.g. by publication or open sharing via data access platforms.’ With many stakeholders, including European regulators, ISPOR is working on a transparency project focused on an observational study registration process. The goal of this effort is to encourage posting of results as well as documents such as analysis plans and protocols, and should be relevant to regulators assessing acceptability of big data analyses. We welcome continued regulatory participation in this effort as it will also have synergies for big data studies.

Regulatory Acceptability of Big Data Analyses (page 19)

We agree with your assessment regarding reducing and understanding variability in the evidence generation pathway. Increasing trust and transparency will support regulatory uptake and utilization. The recommendation regarding mandating transparency and format around the study reporting to document datasets, protocol, tools and versions used is consistent with the effort that ISPOR is leading with a multi-stakeholder group (including regulators) to find a place to register observational data (of which big data will be one type). Again, we appreciate that European regulators are engaging with us on this topic, and value continued, and even greater, engagement.