Healthcare databases for paediatric studies: a report from the GRiP network global survey

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Background A global federation of available healthcare databases on infants, children, and adolescents could provide currently missing power and data comparability to improve knowledge on disease burden, and drug/vaccine use and safety.
Objectives To identify and describe globally automated healthcare databases as a first step to create a collaborative network.
Methods In frame of the Global Research in Paediatric (GRiP) network (http://www.grip-network.org), we performed a web-based survey among all databases that were identified through manual revision of the pharmacoepidemiology/pharmacovigilance conference abstracts, the Bridge.to.Data database or by direct knowledge of the GRiP network members. The survey solicited information on the database contact and custodian, available population, exposure and outcome information, as well as access, governance, and sharing possibilities.
Results A total of 125 databases were identified globally (in Europe, North- and South-America, in Asian-Pacific area, and Africa) and were invited to participate to a survey. To date, 61 answers were received (49%), with 52% of respondents (N= 32) agreeing to collaborate with the GRiP network in future pharmacoepidemiology studies. Collaborating databases are located in 8 different European countries (N= 21), in 4 Asian/Pacific area countries (N= 5), in Canada (N= 4) and in the US (N= 2); one is available in more than one country. The data sources comprise a total of 40 million children (<18 years). Sixteen databases capture outpatient data and 9 have both, outpatient and inpatient data from primary care physicians and/or insurance claims. Immunization data are available in 22 databases. Patient-level linkage between drug/vaccine prescription and outcome data is feasible for all collaborating databases.
Conclusions Identified databases agreeing to collaborate in a unique global network hold an enormous potential for improving paediatric pharmacoepidemiological studies. A first step towards a collaborative approach is being made by characterizing available databases and the scope and type of available data. Identification and participation requests will continue, while first proof of concept studies on the use of antibiotics will start.

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