Influence of regional drug-related policies interventions on spontaneous reporting of adverse drug reactions

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Background: National and regional-based drug-related policies interventions, especially those concerning reimbursement and modalities of distribution of medicines, are closely related to pharmacovigilance activities and should be taken into account when analyzing signals detected from spontaneous adverse drug reaction (ADR) reporting data.
In recent years, a number of measures have been put in force in Sicily in order to contain pharmaceutical expenditure. One of these, the so-called 'distribuzione per conto (DPC)', has been implemented in March 2014 as an alternative way for delivering medicines through community pharmacies. Drugs involved are class A-PHT medicines (drugs for which the therapeutic continuity between hospital and primary care is provided), including several generic and biosimilar drugs for chronic conditions, bought directly by local health authorities, which are granted a statutory minimum 50% discount by pharmaceutical companies. According to this regional-based pharmaceutical policy intervention, a generic/biosimilar drug undergoing DPC distribution may be switched to the corresponding originator (and reimbursed by the National Health System) only in case of poor tolerability, which have to be documented through ADR reporting to the national pharmacovigilance system.

Objective: To examine the influence of DPC drug distribution measure implementation on the ADR reporting rate in Sicily.

Methods:
The study was based on spontaneous reporting data, collected in Sicily from March 1st 2014 to February 28th 2015. We analyzed all the regional reports of suspected ADR related to 16 A-PHT class medicines (13 generic drugs and 3 biosimilars) involved in the DPC distribution in Sicily. Frequency analyses for the ADR reports concerning the selected drugs have been conducted, by comparing these reports to those reported during the same period of the previous year, at regional and national level.

Results:
Overall, 634 ADR reports (16.5% out of the regional reports) related to the generic or biosimilar medicines affected by this healthcare policy intervention have been collected in Sicily during a 1-year period, as compared to 151 (8.4%) sent for the same drugs in the previous year. In the same period, the originator products of these drugs were involved in only 58 reports , and 35 in the previous year.
Most of the reports were sent by first ever reporters and concerned non serious and well known ADRs. The most involved drugs were: clopidogrel (n=247), leflunomide (n=76), quetiapine (n=74) and olanzapine (n=57).
Overall, the ADR reports related to the selected generic or biosimilar medicines represented about 35% of all the ADRs reported in the same period in Italy for the same medicines, with higher proportions for leflunomide (52.8% out of the national reports), risperidone (47.5%) and clopidogrel (45.7%).

Conclusions: Our data confirm that spontaneous ADR reporting can be strongly influenced by regional drug-related policies interventions. Due to these interventions, a potential bias could occur when routinely performing drug safety signal detection, both at a regional that at a national level.