



EMILIA ROMAGNA REGIONAL PROJECT CONCERNING PHARMACOVIGILANCE OF DRUG INTERACTIONS IN POLYTREATED ELDERLY PATIENTS



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Objectives: Under the supervision of the Pharmacological Department of the University of Bologna, 7 hospitals in the Emilia Romagna Region participated in a multicentre pharmacovigilance study to evaluate the prevalence of 53 DDIs in the study population and their modifications after appropriate educational interventions for general practitioners (GPs).

Methods or Study Design: Drug prescriptions for elderly patients (aged ≥65 years) chronically treated with 5 or more drugs were collected during the first 6 months of the years 2011, 2012 and 2013. The study was divided into three periods: data collection during the first 6 months of the years 2011 and 2012 (first period); educational interventions for GPs during the last 6 months of the year 2012 (second period); and data collection after educational interventions during the first 6 months of the year 2013 (third period).

Figure 1. Approach to create the list of clinically important of DDIs.

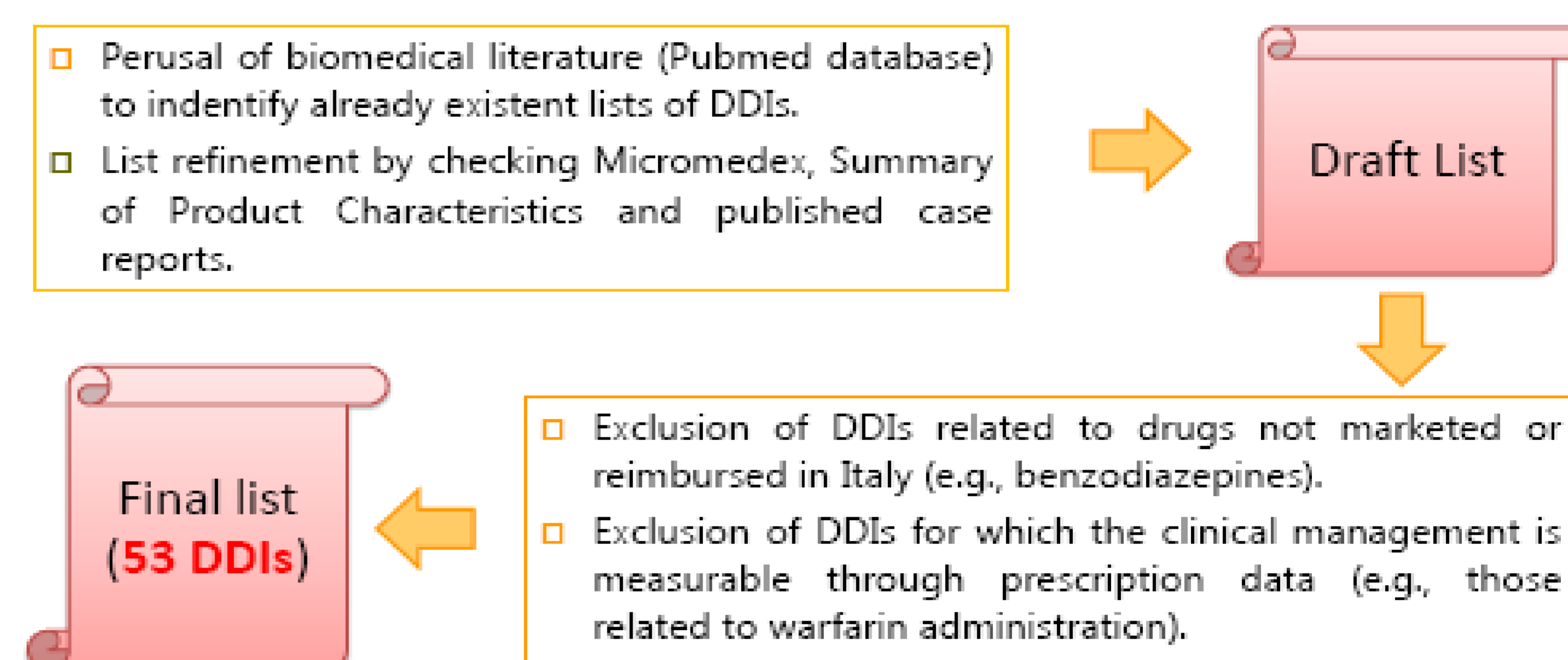


Figure 2. Trend of DDIs in elderly poly-treated patients.

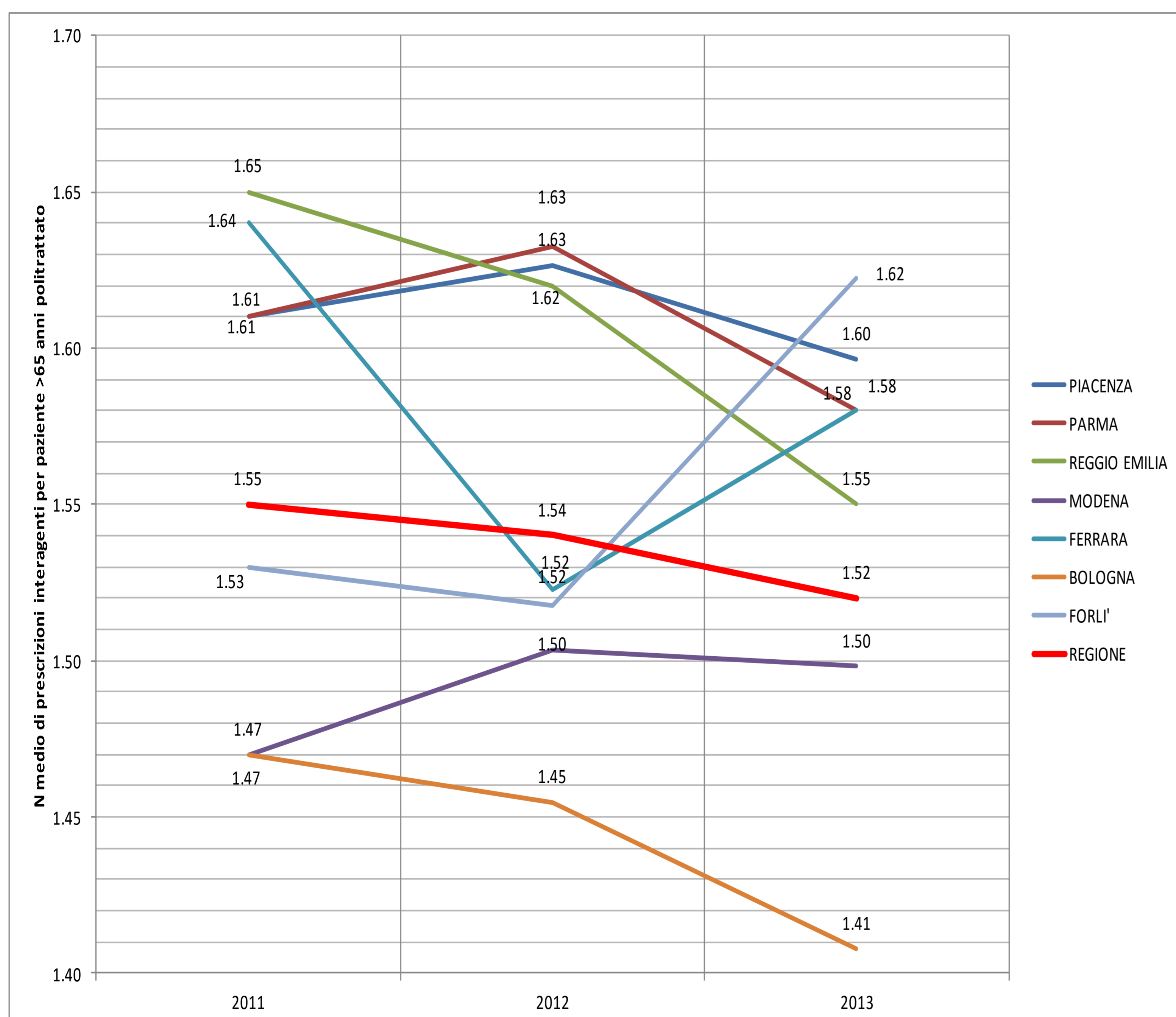


Figure 3. Trend of DDIs pre / post interventions.

INTERACTIONS	REGION 2011 (%)	REGION 2012 (%)	REGION 2013 (%)	ODDS % 2013-2012 pre-post interventions
Antidiabetics- Beta blockers	17,5	18,8	20,3	+1,5
ACE I / Sartans - NSAIDs	19,7	18,3	16,4	-1,9
Diuretics - NSAIDs	17,2	15,8	13,6	-2,3
NSAIDs/ASA - Corticosteroids	9,3	9,4	9,7	+0,3
vit.K Antagonist- PPI	8,2	8,5	8,9	+0,3
ACE I / Sartans – K Sparing Diuretics	8,6	8,3	8,2	-0,07
ACE I / Sartans + Diuretics – NSAIDs (Triple Whammy)	8,5	7,8	6,8	-1,0
vit.K Antagonist- statins	6,9	7,3	7,7	+0,3
Antidiabetics - Fluoroquinolones	5,5	5,6	5,8	+0,2
Clopidogrel – PPI	3,2	4,2	5,6	+1,4
Fluoroquinolones – Corticosteroids	4,2	4,3	4,4	+0,07

Results: Percentages of polytreated elderly patients in the first 6 months of 2011, 2012 and 2013 were, respectively, 15.2%, 15.6% and 16.7%. For each patient the mean number of DDIs was 1.5 in the entire period. The most common DDIs (prevalence more than 10%) showed the following modifications between the first and third periods: antidiabetics and beta blockers +1.5%; ACE inhibitors/Sartans and NSAIDs -1.9%; diuretics and NSAIDs -2.3%; SSRI and NSAIDs/acetylsalicylic acid -0.8%; and triple whammy interactions (ACE inhibitors, diuretics, NSAIDs) -1%.

Conclusions: From our results, the educational interventions for GPs showed efficacy in limiting the mean number of DDIs for polytreated elderly patients, especially for DDIs regarding NSAIDs.