

Trends in National Health Service drug expenditure in Italy: how volume (DDD), price and mix effects weight on 1999-2000 variations

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Background: Prescribing indicators for general practice have been used in National Health Services for over two decades. Beside prescription drug costs have risen sharply in recent years, there is little consensus about how expenditure differences are driven by volume, price drug variations and shift versus more expensive formulations (mix effect)

Objectives: To separate the different factors contributing to rising prescription drug expenditures: volume, price and mix effects.

Methods. Drug prescription data from all 16,000 Italian pharmacies, referring to 1st semester 1999 and 1st semester 2000, have been analyzed according to Anatomical Chemical Therapeutic (ATC) classification. Defined Daily Doses (DDDs), prices, and expenditures have been calculated and variation has been weighted using Laspeyres index, according to volume of prescription (DDD), price and mix effects.

Results: Main results for I level of ATC groups are summarized in the following table. Differences (?) is reported in percentage and analysis by ATC subgroups, data will be presented.

ATC groups	Expenditure (€)	? ?? ? 1999-2000	? ?? ? due to:		
			DDDs	Price	Mix
C Cardiovascular	1.752.820.476	18.2	10.6	2.0	4.7
J Antiinfectives	977.108.333	5.9	-0.2	-0.3	6.5
A Gastrointestinal	762.533.423	22.2	16.5	3.6	1.2
R Respiratory	423.574.544	27.2	10.4	6.0	8.7
L Oncologicals	353.634.646	0.5	-4.0	1.3	3.4
N CNS system	346.289.526	22.9	17.4	-7.9	13.6
G Genito-Urinary	302.578.093	9.6	3.4	-1.2	7.3
M Muscolo-skeletal	286.359.539	15.5	4.6	9.1	1.2
B Blood	267.899.796	28.5	16.5	5.7	4.3
H Hormones.	125.256.988	14.9	7.9	5.1	1.4
D Dermatological	78.107.559	18.9	16.5	-4.3	2.0
S Sensory organs	58.195.631	23.3	16.8	3.5	6.7
P Antiparasitic	6.821.129	11.5	10.6	5.1	-4.0
V Various	13.943.479	3.6	3.9	-0.6	0.4
Total	5.755.123.163	15.8	10.5	1.7	3.0

Conclusion. Cost effective prescribing is considered as an important element of the “effective delivery of appropriate healthcare”. We feel that analysis of different factors contributing to the variation of prescription expenditures (i.e., volume, price, and mix) is important for appropriate cost-management strategies