

## OBJECTIVES

The evaluation of the content of prescriptions is one of the important indicator for the Physicians' prescribing behavior towards rational drug use (RDU). It may guide to develop strategies for extensification of RDU. Determining the state of different parts of the country in terms of RDU would contribute to make assumptions country wide. In this study, we aimed to investigate the content of injectable antibiotic including prescriptions of Turkish family physicians in primary care health services, both for country-wide and provinces which would enable to make comparisons according to injectable antibiotic prescription habits of different parts of the country.

## METHODS

In this study, the electronic prescription data prescribed by Turkish Family physicians in 2013 are evaluated retrospectively via Prescription Information System (PIS). In addition, records made by family physicians are evaluated via FPIS and the number of injectable

antibiotic prescriptions are determined. Dispersion of prescribed injectable antibiotics established in terms of ratio of items/box/costs. The provinces are compared by percentage of injectable antibiotics prescriptions. For the cost analysis, we used drug resale prices for the year 2010.

## RESULTS

It was shown that in the year 2013, 50.28% of all visits to primary care family physicians in Turkey were resulted with prescriptions. Among these prescriptions, proportion of those containing injectable forms was 6.97% (8.084.616 prescriptions). The ratio of injectable antibiotic containing prescriptions was 1.97% in country-wide (2.290.621 prescriptions). The proportion of injectable antibiotics among all drugs prescribed, in terms of total number of prescription items is 0.7% (2.318.010 items), in terms of general boxes is 2.76% (14.989.780 boxes) and in terms of cumulative cost is 0.95% (95.288.793 TL). Most commonly prescribed injectable antibiotics were ceftriaxone (27.85%), cefazolin (21.64%) and cefuroxime (18.08%) (Table 1).

According to the comparison of the provinces by the prescriptions containing injectable antibiotics Şırnak (7.63%) take the place on the top and followed by Mardin (6.34%) and Diyarbakir (6.21%) (Fig.1). Zonguldak (0.81%), Tunceli (0.79%) and Artvin (0.61%) are at the end of the list (Fig.1). According to the cost of antibiotics; cefuroxime (38.57%), ceftriaxone (27.54%) and cefazolin (22.7%) ranked at the top of the list (Table 2). Among the prescriptions containing injectable antibiotics, the number of injectable antibiotic items per prescription is found 1.01, number of injectable antibiotic boxes per related prescriptions is found 6.54 and the cost of injectable antibiotic per prescription is found 41.6 TL.

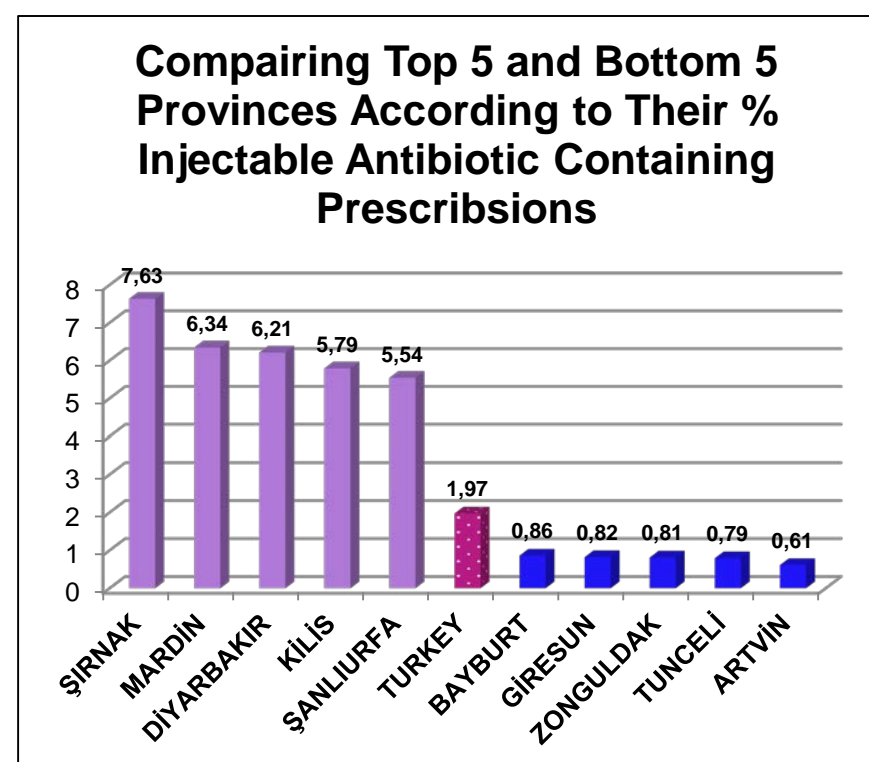


Fig. 1

Row of Item	ATC 5 Code	ATC 5 Name	Number of Item	% of Item	Number of Box	Row of Box
1	J01DD04	ceftriaxone	645478	%27.85	3005029	3
2	J01DB04	cefazolin	501513	%21.64	4544204	1
3	J01DC02	cefuroxime	418993	%18.08	3788027	2
4	J01CE08	benzathine benzylpenicillin	287855	%12.42	327413	9
5	J01CR01	ampicillin and enzyme inhibitor	143677	%6.2	1137622	4
6	J01CE30	combinations	96627	%4.17	563332	5
7	J01GB03	gentamicin	74698	%3.22	479987	7
8	J01FF02	lincomycin	68243	%2.94	561213	6
9	J01FF01	clindamycin	52146	%2.25	434299	8
10	J01GB06	amikacin	7462	%0.32	45644	10

Table 1

Row of Cost	ATC 5 Code	ATC 5 Name	Total Cost (TL)	% of Cost	Number of Box	Row of Box
1	J01DC02	cefuroxime	36.748.727,18	%38.57	3788027	2
2	J01DD04	ceftriaxone	26.245.309,87	%27.54	3005029	3
3	J01DB04	cefazolin	21.626.126,88	%22.7	4544204	1
4	J01CR01	ampicillin and enzyme inhibitor	3.444.018,83	%3.61	1137622	4
5	J01FF01	clindamycin	2.284.749,37	%2.4	434299	8
6	J01FF02	lincomycin	1.613.647,95	%1.69	561213	6
7	J01CE30	combinations	1.048.879,05	%1.1	563332	5
8	J01CE08	benzathine benzylpenicillin	791.915,37	%0.83	327413	9
9	J01GB03	gentamicin	689.766,38	%0.72	479987	7
10	J01GB06	amikacin	203.053,64	%0.21	45644	10

Table 2

## CONCLUSION

The establishment that family physicians in Turkey tend to prescribe wide spectrum antibiotics, and that the first three most commonly prescribed injectable antibiotics were cephalosporins indicate irrational antibiotic prescribing in the primary health care.