

Global consumption trend of antifungal agents in humans from 2008 to 2018: data from 65 middle- and high-income countries

Supplementary material

Supplementary Table 1. The list of countries included in the analysis and the consumption of antifungal agents in 2018 expressed in DDD/1000 inhabitants/day

Country	Consumption of antifungal agents in 2018 (DDD/1000 inhabitants/day)	Sectors covered by the IQVIA dataset	Coverage (%)
Middle-income countries			
Algeria	0.785760	Retail	80
Argentina	0.621691	Retail	73
Belarus	0.810291	Retail and hospital	100
Bosnia and Herzegovina	0.126032	Retail	95
Brazil	1.199633	Retail	97
Bulgaria	0.761074	Retail and hospital	98
China	0.160904	Retail and hospital	72
Colombia	0.639731	Retail	71
Ecuador	0.956383	Retail	80
Egypt	0.404348	Retail	75
India	1.723632	Retail	95
Jordan	0.135072	Retail	71
Kazakhstan	0.580207	Retail and hospital	100
Lebanon	1.010133	Retail	77
Mexico	0.427554	Retail	61
Morocco	0.330253	Retail	88
Pakistan	0.326338	Retail	85
Peru	0.839937	Retail	67
Philippines	0.026854	Retail and hospital	100
Romania	0.782234	Retail and hospital	100
Russia	1.287239	Retail and hospital	97
Serbia	0.195835	Retail	93
South Africa	0.274218	Retail	62
Thailand	0.288247	Retail and hospital	71
Tunisia	0.666418	Retail and hospital	100
Turkey	1.643903	Retail	100
Venezuela	0.172807	Retail	78
High-income countries			
Australia	1.040098	Retail and hospital	90
Austria	0.929931	Retail and hospital	100
Belgium	3.366653	Retail and hospital	99
Canada	0.778622	Retail and hospital	100
Chile	0.826619	Retail	71
Croatia	0.520818	Retail and hospital	98
Czech Republic	0.679239	Retail and hospital	95

Estonia	1.505872	Retail	88
Finland	1.955249	Retail and hospital	100
France	1.341590	Retail and hospital	100
Germany	0.921194	Retail and hospital	100
Greece	1.739643	Retail	60
Hungary	1.106525	Retail and hospital	100
Ireland	1.153609	Retail and hospital	100
Italy	1.153446	Retail and hospital	99
Japan	0.572036	Retail and hospital	100
Kuwait	0.191237	Retail	35
Latvia	0.857868	Retail and hospital	100
Lithuania	0.779379	Retail and hospital	99
Luxembourg	1.458587	Retail	98
Netherlands	1.404919	Retail and hospital	91
New Zealand	1.672487	Retail and hospital	97
Norway	1.507496	Retail and hospital	100
Poland	1.168455	Retail and hospital	100
Portugal	2.204436	Retail and hospital	100
Puerto Rico	1.128264	Retail and hospital	93
Saudi Arabia	0.284742	Retail	45
Slovakia	0.832482	Retail and hospital	97
Slovenia	0.961012	Retail	98
South Korea	1.893054	Retail	99
Spain	0.721916	Retail and hospital	99
Sweden	0.949579	Retail and hospital	100
Switzerland	1.061542	Retail and hospital	100
Taiwan	0.294875	Hospital	83
United Arab Emirates	0.818168	Retail	45
United Kingdom	1.219625	Retail and hospital	89
United States	1.516197	Retail and hospital	89
Uruguay	0.750649	Retail	71

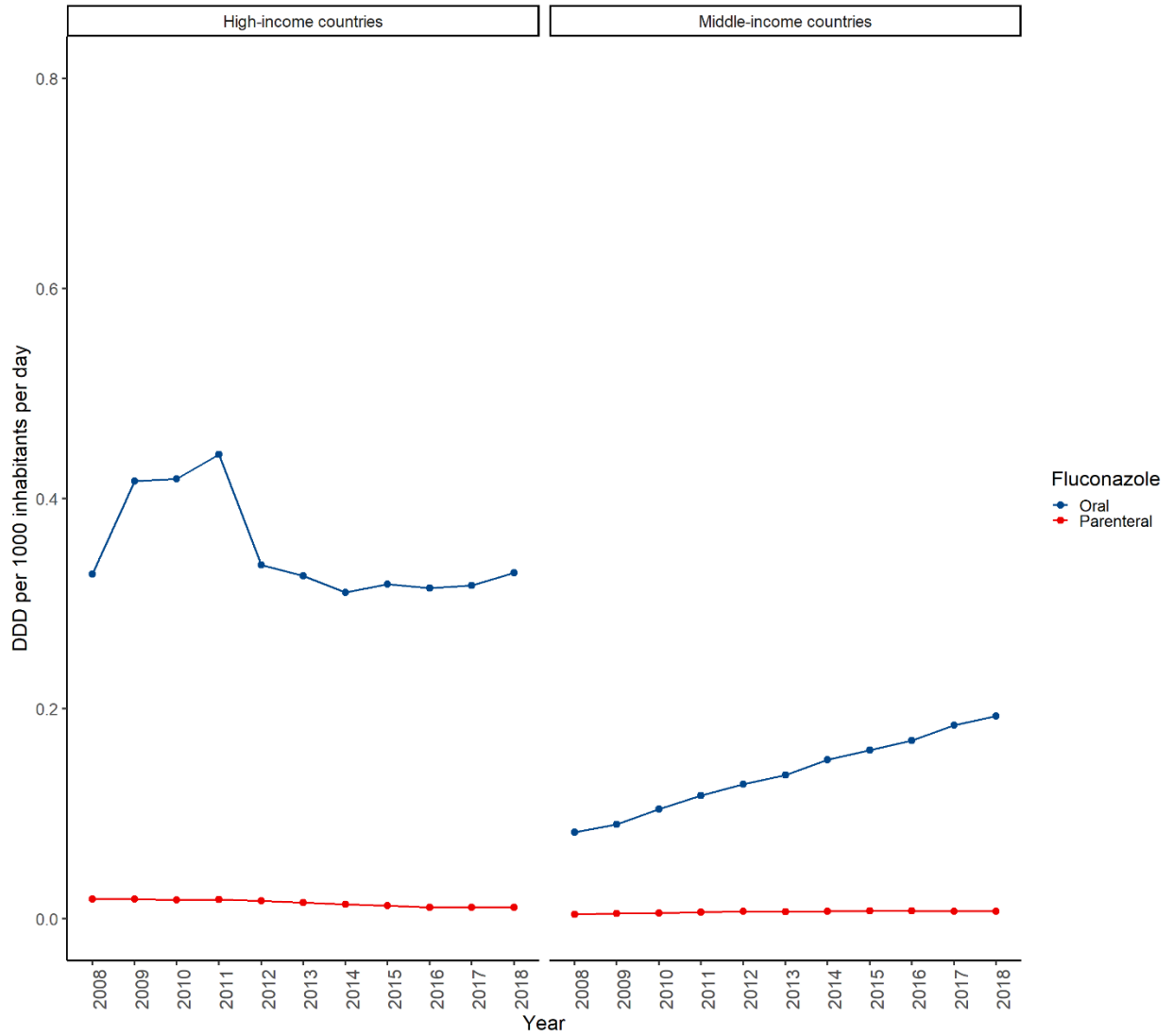
Country income levels are based on the 2018 World Bank classification.

The projected sales volumes form the basis of the MIDAS database used in our analysis. Details regarding sales volume in the community versus hospital sectors are not available in the IQVIA-MIDAS database. The information presented in Supplementary Table 1 represents coverage of the raw sales data sourced by IQVIA at the local level. To account for the fact that not all wholesalers from all sectors contribute their sales data, projections on the raw sales data was applied by IQVIA to estimate the total sales volume, based on knowledge of the market share of participating wholesalers in each country. Our results are representative of the true total sales volume in each country and are not affected by the limited raw data sources found in a few countries.

Supplementary Table 2. Assessing the antifungal consumption trend using Mann-Kendall test

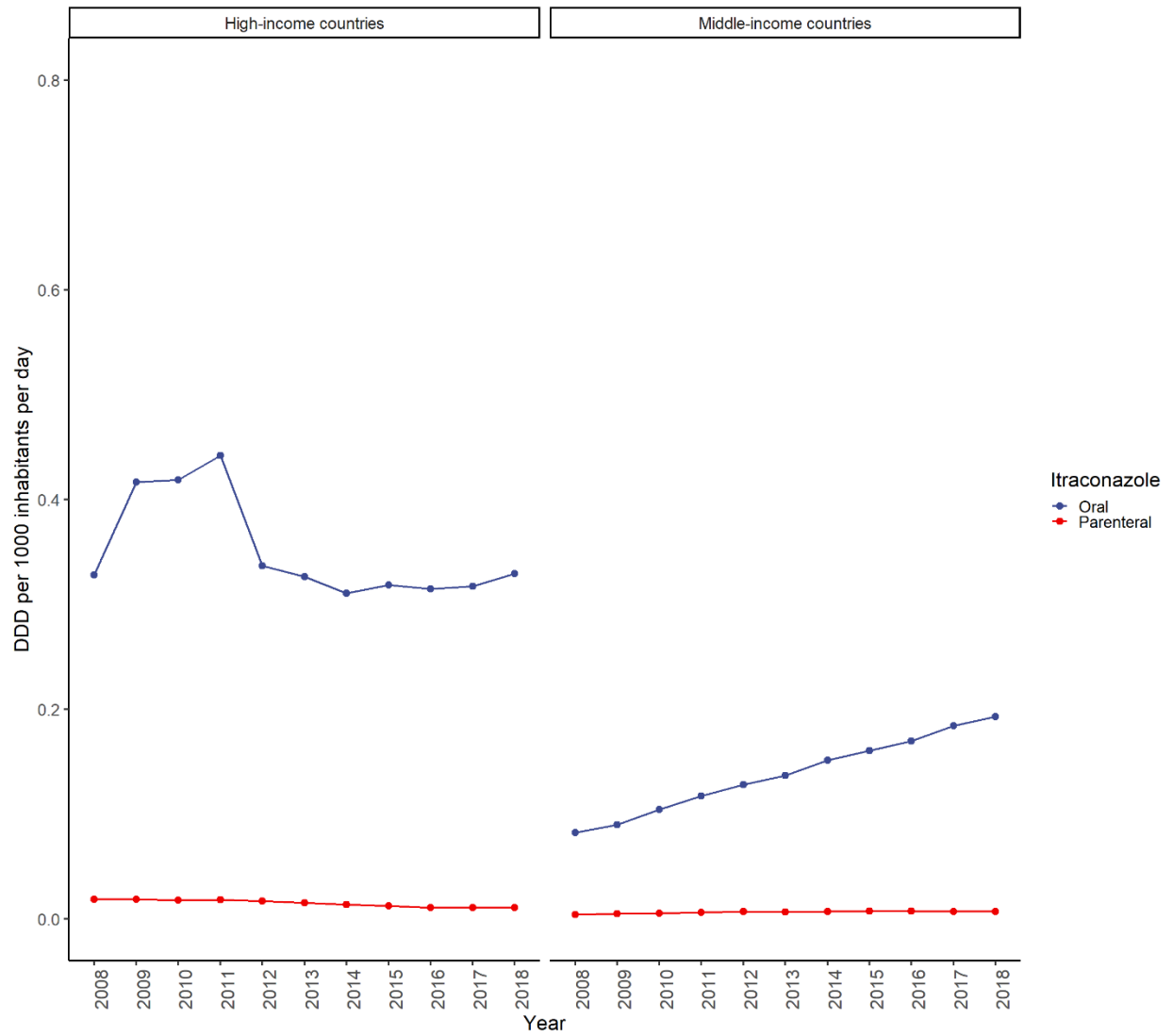
Antifungal agent	p-value
Echinocandins	2.624e-05
Anidulafungin	2.624e-05
Caspofungin	0.005069
Micafungin	0.0001864
Imidazoles	0.003093
Ketoconazole	0.003093
Miconazole	9.922e-05
Polyenes*	0.01273
Amphotericin B	0.01273
Triazoles	9.922e-05
Fluconazole	0.0001864
Isavuconazole	0.002663
Itraconazole	5.161e-05
Posaconazole	0.08677
Voriconazole	2.624e-05
Others	2.624e-05
Terbinafine	2.624e-05
Flucytosine	0.6404

Supplementary Figure 1. Comparison of oral versus parenteral fluconazole in middle- and high-income countries



DDD, defined daily dose.

Supplementary Figure 2. Comparison of oral versus parenteral itraconazole in middle- and high-income countries



DDD, defined daily dose.