

Appendices (as supplied by the author)

Appendix 7. The association between factors and shortage at the DIN level among DINs listed on formularies

Parameter	Parameter level	Branded		Generic	
		OR (95% CI)	Overall p-value*	OR (95% CI)	Overall p-value*
Market structure	B/G Multiple	0.69 (0.46, 1.05)	0.220	0.62 (0.44, 0.88)	0.024
	B only	0.78 (0.53, 1.15)			
	G single			0.62 (0.41, 0.92)	
	G multiple			0.58 (0.40, 0.82)	
	B/G Single	1		1	
DIN age (every year increase)		1.02 (1.01, 1.03)	<0.001		
DIN age	≥3yr			1.74 (1.42, 2.14)	<0.001
	<3yr			1	
Route form	Injection	1.56 (0.94, 2.61)	0.098	1.13 (0.83, 1.54)	0.853
	Oral non-solid	1.13 (0.63, 2.00)		1.03 (0.67, 1.57)	
	Oral solid special release	0.79 (0.51, 1.23)		0.95 (0.75, 1.20)	
	Other	1.62 (0.97, 2.69)		1.16 (0.80, 1.68)	
	Oral solid regular release	1		1	
Interaction of manufacturer type and top 50 manufacturer	Branded=No, Top50=No	2.20 (0.92, 5.28)	0.015		
	Branded=No, Top50=Yes	2.02 (1.28, 3.18)			
	Branded=Yes, Top50=No	1.47 (0.97, 2.22)			
	Branded=Yes, Top50=Yes	1			
Interaction of manufacturer size and top 50 manufacturer	large, top50=No			1.87 (1.21, 2.88)	<0.001
	large, top50=Yes			2.48 (1.68, 3.65)	
	medium, top50=No			2.32 (1.44, 3.75)	
	medium, top50=Yes			2.87 (1.58, 5.19)	
	Small			1	
Essential medicine	Yes			1.15 (0.99, 1.32)	0.061

		No		1	
N of provinces on formulary (weighted)				1.10 (1.08, 1.13)	<0.001
Listing price		1.00 (0.99, 1.00)	0.065		
Anatomical Therapeutic Chemical Classification (Level 1)	Alimentary tract and metabolism	0.66 (0.29, 1.50)	0.047	0.49 (0.28, 0.88)	0.002
	Blood and blood forming organs	0.48 (0.16, 1.45)		0.12 (0.04, 0.36)	
	Cardiovascular system	0.89 (0.41, 1.93)		0.50 (0.29, 0.86)	
	Dermatologicals	0.50 (0.24, 1.01)		0.43 (0.23, 0.79)	
	Genito-urinary system and sex hormones	0.63 (0.29, 1.36)		0.64 (0.35, 1.19)	
	Systemic hormonal preparations, excluding sex hormones and insulins	0.25 (0.09, 0.67)		0.56 (0.26, 1.20)	
	Anti-infectives for systemic use	0.43 (0.19, 0.99)		0.63 (0.36, 1.11)	
	Antineoplastic and immunomodulating agents	0.39 (0.15, 1.00)		0.61 (0.32, 1.17)	
	Musculoskeletal system	0.92 (0.35, 2.38)		0.45 (0.25, 0.81)	
	Nervous system	0.58 (0.27, 1.22)		0.60 (0.35, 1.02)	
	Antiparasitic products, insecticides and repellents	1.20 (0.17, 8.67)		0.48 (0.14, 1.69)	
	Respiratory system	0.84 (0.41, 1.73)		0.85 (0.48, 1.51)	
	Various	0.56 (0.10, 2.99)		0.94 (0.28, 3.19)	
	Sensory organs	1		1	
Model fit statistics	C-statistic	0.672		0.62	
	AIC	1630.5037		6198.62	
	Log likelihood	-790.2518		-3071.31	

DIN: drug identification number; B: branded manufacturers; G: generic manufacturer; OR: Odds Ratio; CI: Confidence Interval; AIC: Akaike information criteria

* Based on Type III Wald Test.