

Supplementary Material

Article Title: Valproic Acid Use Trends, Patterns and Predictors in Females of Reproductive Age in the United States

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Supplementary Table 1. Unweighted sample sizes of demographic and clinical characteristics of females aged 12 to 49 years in the United States, Medical Expenditure Panel Survey (MEPS) 2017, 2019, and 2021

	No VPA (N = 8,368)	VPA (N = 43)
Median age (IQR)	34 (24-42)	36.5 (25.3-45)
Age distribution		
12 to 24	2,136	9
25 to 34	2,157	10
35 to 49	4,075	24
Race		
White only	6,167	30
Black only	1,299	10
Multiracial/other	902	3
Ethnicity		
Hispanic	2,012	6
Not Hispanic	6,356	37
Marital status		
Married	3,428	5
Not married	4,940	38
Region		
Midwest	1,889	7
Northeast	1,279	7
South	3,127	16
West	2,073	13
Insurance status		
Insurance coverage	7,916	41
No insurance	452	2
Poverty category		
Poor to low income	3,220	21
Middle to high income	5,148	22
General health status		
Good to excellent	7,108	22
Poor to fair	1,260	21
Mental health status		
Good to excellent	7,236	23
Poor to fair	1,132	20
Bipolar disorder		
No	8,125	30
Yes	243	13
Epilepsy/seizure		
No	8,221	33
Yes	147	10
Headache/migraine		
No	7,572	32
Yes	796	11
Depressive episode		
No	7,006	25
Yes	1,362	18
Prescribed contraceptive use ^a		
No	6,997	38
Yes	1,371	5
Contraceptive management encounter ^b		
No	7,497	40
Yes	871	3
Any contraceptive use ^c		
No	6,862	38
Yes	1,506	5

^aPrescribed contraceptive use includes events in the prescribed medicines file (Multum Lexicon codes).

^bContraceptive management encounter includes ICD-10-CM Z30 from the medical conditions file.

^cAny contraceptive use defined as having either a prescribed contraceptive or a contraceptive management encounter.

Supplementary Box 1.

Category	ICD-10-CM Codes
Other non-psych or neurologic disorder	M19, M54, Z76, Z00, E87, Z48, C44, I10, L97, I21, M62, E11, J45, I72
Other psychiatric or neurologic disorder	F34, F39, F91, F84, F43, F42, F99, F41, F20, F90, F03 R45, R25, R41 G30, G20, G47, G45
Migraine or headache syndromes	G43; G44; R51
Depressive episode	F32
Bipolar disorder	F31
Convulsive disorder	R56, G40

Supplementary Table 2. Sensitivity analysis using firth logistic regression for predictors of valproic acid use among females aged 12 to 49 years

	n	Odds Ratio	95% CI	P value
Poverty category				
Middle to high income	5,312	(Ref)	(Ref)	(Ref)
Poor or near poor or low-income	3,342	0.73	(0.39, 1.36)	.318
Marital status				
Married	3,522	(Ref)	(Ref)	(Ref)
Not married	5,132	4.63	(2.01, 12.93)	<.001
Perceived general health				
Good or very good or excellent	7,331	(Ref)	(Ref)	(Ref)
Fair or poor	1,323	3.11	(1.54, 6.29)	.002
Perceived mental health				
Good or very good or excellent	7,459	(Ref)	(Ref)	(Ref)
Fair or poor	1,195	2.95	(1.45, 5.99)	.003

Supplementary Table 3. Sensitivity analysis using firth logistic regression for predictors of valproic acid use among U.S. females with bipolar, headache, or seizure disorders

	n	Odds Ratio	95% CI	P value
Age group				
Under 12 years or over 49 years	1,047	(Ref)	(Ref)	(Ref)
12 to 49 years	1,187	.70	(.43, 1.13)	.143
Marital status				
Married	877	(Ref)	(Ref)	(Ref)
Not married	1,357	1.59	(.92, 2.84)	.098
Poverty category				
Middle to high income	1,262	(Ref)	(Ref)	(Ref)
Poor or near poor or low-income	972	1.37	(.82, 2.31)	.238
Region				
South	787	(Ref)	(Ref)	(Ref)
Northeast	379	1.68	(.88, 3.15)	.114
West	538	1.45	(.77, 2.70)	.248
Midwest	530	.98	(.49, 1.89)	.945
Perceived general health				
Good or very good or excellent	1,507	(Ref)	(Ref)	(Ref)
Fair or poor	727	1.16	(.65, 2.04)	.622
Perceived mental health				
Good or very good or excellent	1,651	(Ref)	(Ref)	(Ref)
Fair or poor	583	1.62	(.91, 2.86)	.098

