

Medication of Postpartum Depression and Maternal Outcomes:  
Evidence from Geographic Variation in Dutch Prescribing

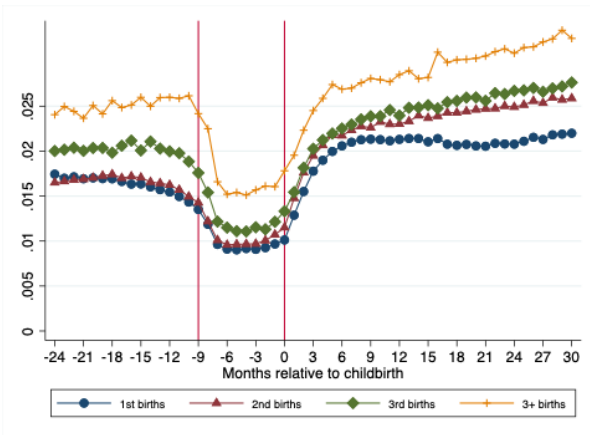
Janet Currie

Esmée Zwiers

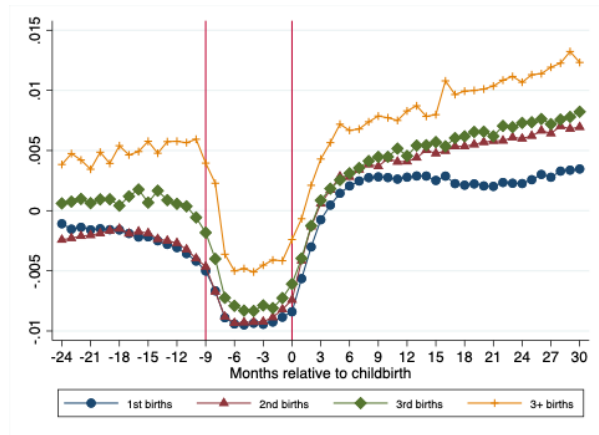
**ONLINE APPENDIX**

**Figure A1** *Antidepressant Usage by Parity*

(a) Raw data



(b) Residualized data



Notes: Panel (a) reports proportion of individuals dispensing a script for antidepressants at a pharmacy in each month relative to childbirth by birth order (N = 952,541). It splits the sample into four groups depending on birth order. Panel (b) plots residualized antidepressant use after controlling for maternal age at birth.

**Table A1** Summary Statistics for Outcome and Control Variables, by Prescribing Intensity

	All	Bottom Tercile	Middle Tercile	Top Tercile
	(1)	(2)	(3)	(4)
Number of observations	427,475	142,507	142,488	142,480
Antidepressants 1–10 mo.	0.025	0.021	0.025	0.029
<i>Outcome variables</i>				
Antidepressants 11–20 mo.	0.028	0.024	0.028	0.032
Antidepressants 21–30 mo.	0.030	0.026	0.029	0.035
Specialized treatment 1–10 mo.	0.044	0.039	0.045	0.050
Specialized treatment 11–20 mo.	0.044	0.038	0.043	0.050
Specialized treatment 21–30 mo.	0.043	0.038	0.042	0.049
Second birth < 24 months	0.226	0.236	0.225	0.218
Second birth < 30 months	0.393	0.412	0.390	0.377
Mother income>0 Y1	0.910	0.928	0.916	0.886
Mother income>0 Y2	0.905	0.923	0.910	0.883
Mother income>0 Y3	0.900	0.919	0.906	0.876
Mother income Y1, if positive	30,590	31,223	31,054	29,448
Mother income Y2, if positive	31,947	32,513	32,454	30,831
Mother income Y3, if positive	33,457	33,957	34,013	32,357
Father income>0 Y1	0.976	0.982	0.977	0.970
Father income>0 Y2	0.974	0.980	0.976	0.967
Father income>0 Y3	0.972	0.978	0.974	0.965
Father income Y1, if positive	51,295	52,866	52,059	48,851
Father income Y2, if positive	54,535	56,089	55,352	52,053
Father income Y3, if positive	58,002	59,576	58,894	55,419
Father and child same addr Y1	0.906	0.927	0.908	0.882
Father and child same addr Y2	0.896	0.919	0.899	0.871
Father and child same addr Y3	0.884	0.908	0.887	0.858
Father and child same mun. Y1	0.934	0.947	0.936	0.919
Father and child same mun. Y2	0.928	0.943	0.930	0.912
Father and child same mun. Y3	0.922	0.936	0.924	0.905
<i>Individual-level controls</i>				
Maternal age at birth	29.44	29.66	29.58	29.08
Paternal age at birth	32.23	32.45	32.35	31.88
Mother Dutch background	0.867	0.907	0.876	0.819
Father Dutch background	0.808	0.857	0.816	0.751
Multiple birth	0.017	0.017	0.017	0.017
Parents living together yr before birth	0.775	0.806	0.777	0.743
Mother income>0, bef. birth	0.968	0.974	0.970	0.959
Mother income, before birth, if positive	31,073	32,520	31,655	29,043

Father income>0, bef. birth	0.943	0.958	0.945	0.926
Father income,before birth, if positive	40,493	42,908	41,288	37,282
<i>Postal code-level controls</i>				
Percent Dutch	75.51	82.63	77.75	69.13
Percent one parent households	7.19	6.45	7.11	8.00
Percent on benefits	9.70	7.86	9.39	11.86
Percent low-income households	40.96	35.34	40.07	47.48
Mean urbanicity	2.49	2.91	2.42	2.13
Mean population	9,546.0	8,728.6	10,036	9,874
Mean income women aged 15–45	20,398	21,398	21,007	18,789
Mean income men aged 15–45	34,343	36,889	35,147	30,992
Mean pos. income women aged 15– 45	0.814	0.833	0.821	0.788
Mean pos. income men aged 15–45	0.863	0.875	0.866	0.846

Notes: Column 1 shows summary statistics for the full sample, and in Columns (2) to (4) we divide individuals into terciles according to prescribing intensity to women aged 46 to 65 in their postal code in the year before the women gave birth. The sample size for each column is shown in the first row but is lower for outcomes related to specialized mental health care usage because we only observe these outcomes from 2011 to 2016, and for outcomes related to father's labor market outcomes (because we focus on the outcomes of fathers that we observe in all years surrounding childbirth).

**Table A2 Labor Market Outcomes for Fathers After Birth**

	Positive income			Log earnings		
	Y1 (1)	Y2 (2)	Y3 (3)	Y1 (4)	Y2 (5)	Y3 (6)
<b>Panel A1: OLS</b>						
AD 1–10 mo. after Birth	-0.006** (0.002)	-0.008** (0.002)	-0.010** (0.002)	-0.031** (0.007)	-0.027** (0.007)	-0.030** (0.007)
<b>Panel A2: 2SLS</b>						
AD 1–10 mo. after Birth	-0.116 (0.180)	-0.035 (0.197)	0.197 (0.217)	1.592 (0.938)	0.914 (0.843)	0.572 (0.826)
Weak IV 95% AR confidence set	[-0.527; 0.259]	[-0.484; 0.375]	[-0.211; 0.733]	[0.013; 4.100]	[-0.672; 2.833]	[-0.982; 2.452]
Mean outcome	0.976	0.974	0.972	€51,295	€54,535	€58,002
F-statistic 1 <sup>st</sup> stage	15.52	15.52	15.52	17.09	17.67	19.85
Observations	401,737	401,737	401,737	390,212	389,453	388,581
<b>Panel B1: OLS Top 25% income</b>						
AD 1–10 mo. after Birth	0.001 (0.002)	-0.002 (0.002)	-0.001 (0.002)	-0.012 (0.011)	-0.009 (0.014)	-0.018 (0.014)
<b>Panel B2: 2SLS Top 25% income</b>						
AD 1–10 mo. after birth	-0.071 (0.106)	-0.054 (0.117)	0.045 (0.133)	-0.092 (0.839)	0.336 (0.788)	-0.561 (1.032)
Weak IV 95% AR confidence set	[-0.314; 0.129]	[-0.322; 0.167]	[-0.230; 0.321]	[-1.835; 1.651]	[-1.302; 1.974]	[-2.708; 1.585]
Mean outcome	0.996	0.995	0.993	€78,989	€83,151	€87,642
F-statistic 1 <sup>st</sup> stage	23.13	23.13	23.13	21.14	22.77	22.12
Observations	106,336	106,336	106,336	105,635	105,508	105,259
<b>Panel C1: OLS Bottom 75% income</b>						
AD 1–10 mo. after Birth	-0.006** (0.002)	-0.008** (0.002)	-0.010** (0.002)	-0.022** (0.007)	-0.018* (0.008)	-0.019* (0.008)
<b>Panel C2: 2SLS Bottom 75% income</b>						
AD 1–10 mo. after Birth	-0.233 (0.296)	-0.132 (0.314)	0.173 (0.341)	1.292 (1.213)	-0.107 (1.136)	-0.107 (1.066)
Weak IV 95% AR confidence set	[-1.316; 0.441]	[-1.220; 0.584]	[-0.669; 1.286]	[-1.231; 5.496]	[-3.370; 2.705]	[-2.744; 2.319]
Mean outcome	0.969	0.967	0.965	€41,014	€43,902	€46,989
F-statistic 1 <sup>st</sup> stage	6.78	6.78	6.78	7.96	8.02	10.06
Observations	295,401	295,401	295,401	284,577	283,945	283,322

Notes: Panels B and C split the sample by household income (mean of the sum of maternal and paternal income in the two years prior to first birth). Positive income is a dummy variable and indicates that an individual had income greater than zero in the full calendar years after the birth year (Y1–Y3). Log earnings conditional on employment (after an inflation correction) is also reported for the three years after the birth year (Y1–Y3). The number of observations is lower because we restrict the sample to births for which we observe the father, and income of the father in the two calendar years prior to the birth year, the year of birth, and the three calendar years after childbirth. All specifications include area-level fixed effects, year of birth fixed effects, individual controls, and postal code-level controls. Robust standard errors are clustered at the area level and are shown in parentheses. \*\*  $p < 0.01$ , \*  $p < 0.05$ .

**Table A3 Family Formation Part II**

	Mother lives at same address			Mother lives in same area			2 <sup>nd</sup> birth
	Y1 (1)	Y2 (2)	Y3 (3)	Y1 (4)	Y2 (5)	Y3 (6)	<24 mo (7)
<b>Panel A1: OLS</b>							
AD 1–10 mo. after Birth	-0.004** (0.001)	-0.007** (0.001)	-0.008** (0.001)	-0.004** (0.001)	-0.005** (0.001)	-0.005** (0.001)	-0.091** (0.004)
<b>Panel A2: 2SLS</b>							
AD 1–10 mo. after Birth	0.055 (0.120)	0.080 (0.129)	0.052 (0.141)	0.036 (0.112)	0.081 (0.120)	0.086 (0.125)	-0.394 (0.620)
Weak IV 95% AR confidence set	[-0.171; 0.352]	[-0.163; 0.399]	[-0.242; 0.374]	[-0.197; 0.291]	[-0.145; 0.379]	[-0.148; 0.395]	[-1.806; 0.895]
Mean outcome	0.993	0.992	0.990	0.994	0.994	0.993	0.226
F-statistic 1 <sup>st</sup> stage	15.23	15.23	15.23	15.23	15.23	15.23	15.23
Observations	427,475	427,475	427,475	427,475	427,475	427,475	427,475
<b>Panel B1: OLS Top 25% income</b>							
AD 1–10 mo. after birth	-0.001 (0.002)	-0.000 (0.002)	-0.000 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.145** (0.010)
<b>Panel B2: 2SLS Top 25% income</b>							
AD 1–10 mo. after Birth	0.080 (0.134)	-0.023 (0.134)	-0.031 (0.138)	0.034 (0.116)	0.009 (0.119)	-0.068 (0.125)	-0.684 (0.804)
Weak IV 95% AR confidence set	[-0.172; 0.385]	[-0.301; 0.256]	[-0.317; 0.256]	[-0.185; 0.276]	[-0.214; 0.279]	[-0.328; 0.191]	[-2.514; 0.828]
Mean outcome	0.995	0.995	0.994	0.996	0.996	0.995	0.279
F-statistic 1 <sup>st</sup> stage	21.88	21.88	21.88	21.88	21.88	21.88	21.88
Observations	106,868	106,868	106,868	106,868	106,868	106,868	106,868
<b>Panel C1: OLS Bottom 75% income</b>							
AD 1–10 mo. after birth	-0.004** (0.001)	-0.007** (0.001)	-0.009** (0.002)	-0.004** (0.001)	-0.005** (0.001)	-0.006** (0.001)	-0.081** (0.004)
<b>Panel C2: 2SLS Bottom 75% income</b>							
AD 1–10 mo. after Birth	0.030 (0.172)	0.119 (0.193)	0.084 (0.207)	0.027 (0.158)	0.108 (0.174)	0.162 (0.185)	-0.430 (0.853)
Weak IV 95% AR confidence set	[-0.396; 0.558]	[-0.282; 0.864]	[-0.386; 0.758]	[-0.364; 0.513]	[-0.254; 0.745]	[-0.186; 0.913]	[-3.217; 1.681]
Mean outcome	0.993	0.991	0.989	0.994	0.993	0.992	0.209
F-statistic 1 <sup>st</sup> stage	7.16	7.16	7.16	7.16	7.16	7.16	7.16
Observations	320,607	320,607	320,607	320,607	320,607	320,607	320,607

Notes: Panels B and C split the sample by household income (mean of the sum of maternal and paternal income in the two years prior to first birth). In the first three columns, the outcome variable is equal to one when the mother and the child live at the same address; in Column 4 to 6, the outcome variable is equal to one if the mother and child live in the same area (i.e., municipality). Column 7 is a dummy variable that is equal to one if the mother had a second child within 24 months. All specifications include area-level fixed effects, year of birth fixed effects, individual controls and postal code-level controls. Robust standard errors are clustered at the area level and are shown in parentheses. \*\* p < 0.01, \* p < 0.05.

**Table A4 Heterogeneity: First stage, Antidepressant Use and Mother's Labor Market Outcomes**

	Antidepressant use			Mother positive income		
	Mo. 1–10 (1)	Mo. 11–20 (2)	Mo. 21–30 (3)	Y1 (4)	Y2 (5)	Y3 (6)
<b>Panel A1: OLS – Mothers with Dutch background</b>						
AD 1–10 mo. after birth		0.575** (0.006)	0.395** (0.005)	-0.078** (0.004)	-0.081** (0.004)	-0.085** (0.004)
<b>Panel A2: 2SLS – Mothers with Dutch background</b>						
New patients aged 46–65	0.189** (0.054)					
AD 1–10 mo. after birth		0.709** (0.228)	0.664* (0.266)	-0.370 (0.402)	0.157 (0.446)	0.385 (0.450)
Weak IV 95% AR confidence set		[0.190; 1.228]	[0.112; 1.322]	[-1.365; 0.465]	[-0.681; 1.348]	[-0.460; 1.676]
Mean outcome	0.023	0.026	0.028	0.925	0.920	0.915
F-statistic 1 <sup>st</sup> stage	12.36	12.36	12.36	12.36	12.36	12.36
Observations	370,679	370,679	370,679	370,679	370,679	370,679
<b>Panel B1: OLS – Older mothers</b>						
AD 1–10 mo. after birth		0.608** (0.007)	0.410** (0.008)	-0.056** (0.005)	-0.065** (0.005)	-0.077** (0.006)
<b>Panel B2: 2SLS – Older mothers</b>						
New patients aged 46–65	0.187** (0.061)					
AD 1–10 mo. after birth		0.308 (0.305)	0.233 (0.345)	0.220 (0.406)	0.375 (0.475)	0.512 (0.520)
Weak IV 95% AR confidence set		[-0.627; 0.881]	[-0.758; 0.951]	[-0.625; 1.386]	[-0.613; 1.739]	[-0.364; 2.315]
Mean outcome	0.020	0.023	0.024	0.948	0.942	0.937
F-statistic 1 <sup>st</sup> stage	9.47	9.47	9.47	9.471	9.471	9.471
Observations	210,959	210,959	210,959	210,959	210,959	210,959
<b>Panel C1: OLS – Younger mothers</b>						
AD 1–10 mo. after birth		0.550** (0.007)	0.376** (0.007)	-0.110** (0.005)	-0.120** (0.005)	-0.117** (0.005)
<b>Panel C2: 2SLS – Younger mothers</b>						
New patients aged 46–65	0.202** (0.071)					
AD 1–10 mo. after birth		0.865** (0.317)	1.056** (0.403)	-1.871* (0.772)	-0.653 (0.605)	-0.644 (0.598)
Weak IV 95% AR confidence set		[0.206; 1.902]	[0.458; 2.852]	[-5.617; -0.877]	[-2.630; 0.605]	[-2.598; 0.599]
Mean outcome	0.030	0.033	0.036	0.873	0.869	0.864
F-statistic 1 <sup>st</sup> stage	8.09	8.09	8.09	8.09	8.09	8.09
Observations	216,516	216,516	216,516	216,516	216,516	216,516

Notes: Panel A focuses on mothers with a Dutch background. Panels B and C split the sample by maternal age at birth (above and below median). The antidepressant use dummies for months 1 to 10, 11 to 20, and 21 to 30 are equal to one if the woman was dispensed at least one script for antidepressants in these months. Positive income is a dummy variable and indicates that an individual had income greater than zero in the full calendar years after the birth year (Y1–Y3). All specifications include area-level (municipality) fixed effects, individual controls, and postal code-level controls. Robust standard errors are clustered at the area level and shown in parentheses. \*\* p < 0.01, \* p < 0.05

**Table A5** *First Stage, Subsequent Antidepressant Use After 5 Years*

	<b>Antidepressant use</b>					
	Mo. 1–10 (1)	Y1 (2)	Y2 (3)	Y3 (4)	Y4 (5)	Y5 (6)
<b>Panel A1: OLS</b>						
AD 1–10 mo. after birth		0.789** (0.004)	0.440** (0.005)	0.356** (0.005)	0.330** (0.006)	0.306** (0.005)
<b>Panel A2: 2SLS</b>						
New patients aged 46–65	0.202** (0.052)					
AD 1–10 mo. after birth		0.643** (0.196)	0.662* (0.268)	0.781* (0.305)	0.375 (0.310)	0.417 (0.303)
Weak IV 95% AR confidence set		[0.120; 1.011]	[0.106; 1.271]	[0.268; 1.596]	[-0.331; 1.020]	[-0.214; 1.048]
Mean outcome	0.025	0.030	0.033	0.038	0.043	0.047
F-statistic 1st stage	15.38	15.38	15.38	15.38	15.38	15.38
Observations	404,821	404,821	404,821	404,821	404,821	404,821
<b>Panel B1: OLS Top 25% income</b>						
AD 1–10 mo. after birth		0.803** (0.011)	0.478** (0.014)	0.411** (0.014)	0.385** (0.015)	0.357** (0.014)
<b>Panel B2: 2SLS Top 25% income</b>						
New patients aged 46–65	0.346** (0.074)					
AD 1–10 mo. after birth		0.725** (0.145)	0.754** (0.217)	0.676** (0.222)	0.760** (0.273)	0.904** (0.299)
Weak IV 95% AR confidence set		[0.424; 0.998]	[0.346; 1.248]	[0.259; 1.182]	[0.300; 1.437]	[0.400; 1.645]
Mean outcome	0.013	0.015	0.017	0.021	0.024	0.027
F-statistic 1 <sup>st</sup> stage	21.92	21.92	21.92	21.92	21.92	21.92
Observations	101,207	101,207	101,207	101,207	101,207	101,207
<b>Panel C1: OLS Bottom 75% income</b>						
AD 1–10 mo. after birth		0.786** (0.004)	0.433** (0.006)	0.347** (0.006)	0.321** (0.006)	0.297** (0.006)
<b>Panel C2: 2SLS Bottom 75% income</b>						
New patients aged 46–65	0.163** (0.062)					
AD 1–10 mo. after birth		0.629* (0.303)	0.624 (0.403)	0.875 (0.470)	0.217 (0.468)	0.207 (0.446)
Weak IV 95% AR confidence set		[-0.600; 1.259]	[-0.373; 1.939]	[0.084; 3.061]	[-1.312; 1.375]	[-1.248; 1.310]
Mean outcome	0.029	0.035	0.038	0.044	0.049	0.054
F-statistic 1 <sup>st</sup> stage	6.85	6.85	6.85	6.85	6.85	6.85
Observations	303,614	303,614	303,614	303,614	303,614	303,614

Notes: Panels B and C split the sample by household income (mean of the sum of maternal and paternal income in the two years prior to first birth). The antidepressant use dummies for month 1 to 10 is equal to one if the woman was dispensed at least one script for antidepressants in these months. The antidepressant use dummies Y1–Y5 are equal to one if the woman was dispensed at least one script for antidepressants in these full calendar years after childbirth. All specifications contain area-level fixed effects, year of birth fixed effects, individual controls, and postal code-level controls. Robust standard errors are clustered at the area level and are shown in parentheses. \*\* p < 0.01, \* p < 0.05.



**Table A6a** *First Stage and Outcomes – Linear Trends Interacted With Fixed Postal Code Controls*

	Antidepressant use			Mother positive income		
	Mo. 1–10 (1)	Mo. 11–20 (2)	Mo. 21–30 (3)	Y1 (4)	Y2 (5)	Y3 (6)
<b>Panel A1: OLS</b>						
AD 1–10 mo. after birth		0.573** (0.005)	0.390** (0.005)	-0.092** (0.004)	-0.101** (0.004)	-0.104** (0.004)
<b>Panel A2: 2SLS</b>						
New patients aged 46–65	0.204** (0.050)					
AD 1–10 mo. after birth		0.610** (0.209)	0.673** (0.237)	-0.799* (0.388)	-0.124 (0.402)	-0.094 (0.389)
Weak IV 95% AR confidence set		[0.134; 1.045]	[0.227; 1.259]	[-1.759; -0.069]	[-0.959; 0.791]	[-0.903; 0.791]
Mean outcome	0.025	0.028	0.030	0.910	0.905	0.900
F-statistic 1st stage	16.55	16.55	16.55	16.55	16.55	16.55
Observations	427,475	427,475	427,475	427,475	427,475	427,475
<b>Panel B1: OLS Top 25% income</b>						
AD 1–10 mo. after birth		0.612** (0.013)	0.421** (0.013)	-0.028** (0.006)	-0.033** (0.007)	-0.045** (0.008)
<b>Panel B2: 2SLS Top 25% income</b>						
New patients aged 46–65	0.339** (0.072)					
AD 1–10 mo. after birth		0.626** (0.161)	0.558* (0.217)	-0.179 (0.265)	0.316 (0.316)	0.001 (0.300)
Weak IV 95% AR confidence set		[0.291; 0.961]	[0.150; 1.010]	[-0.783; 0.320]	[-0.278; 0.973]	[-0.622; 0.564]
Mean outcome	0.013	0.014	0.016	0.978	0.972	0.968
F-statistic 1st stage	22.36	22.36	22.36	22.36	22.36	22.36
Observations	106,868	106,868	106,868	106,868	106,868	106,868
<b>Panel C1: OLS Bottom 75% income</b>						
AD 1–10 mo. after birth		0.566** (0.006)	0.385** (0.006)	-0.096** (0.004)	-0.106** (0.004)	-0.107** (0.004)
<b>Panel C2: 2SLS Bottom 75% income</b>						
New patients aged 46–65	0.167** (0.060)					
AD 1–10 mo. after birth		0.637* (0.322)	0.725* (0.354)	-1.247* (0.625)	-0.439 (0.576)	-0.214 (0.581)
Weak IV 95% AR confidence set		[-0.287; 1.433]	[0.059; 2.093]	[-4.029; -0.319]	[-2.207; 0.873]	[-1.881; 1.338]
Mean outcome	0.029	0.033	0.035	0.887	0.883	0.878
F-statistic 1st stage	7.64	7.64	7.64	7.64	7.64	7.64
Observations	320,607	320,607	320,607	320,607	320,607	320,607

Notes: Panels B and C split the sample by household income (mean of the sum of maternal and paternal income in the two years prior to first birth). The antidepressant use dummies for month 1 to 10, 11 to 20, and 21 to 30 are equal to one if the woman was dispensed at least one script for antidepressants in these months. Positive income is a dummy variable and indicates that an individual had income greater than zero in the full calendar years after the birth year (Y1–Y3). All specifications contain area-level fixed effects, year of birth fixed effects, individual controls, and postal code-level controls. Interactions between the fixed postal-level controls and linear time trends are also added to the model. Robust standard errors are clustered at the area level and are shown in parentheses. \*\*  $p < 0.01$ , \*  $p < 0.05$ .

**Table A6b** *First Stage and Outcomes – Year of Childbirth Fixed Effects Interacted With Fixed Postal Code Controls*

	Antidepressant use			Mother positive income		
	Mo. 1–10 (1)	Mo. 11–20 (2)	Mo. 21–30 (3)	Y1 (4)	Y2 (5)	Y3 (6)
<b>Panel A1: OLS</b>						
AD 1–10 mo. after birth		0.573** (0.005)	0.390** (0.005)	-0.092** (0.004)	-0.101** (0.004)	-0.104** (0.004)
<b>Panel A2: 2SLS</b>						
New patients aged 46–65	0.200** (0.050)					
AD 1–10 mo. after birth		0.588** (0.215)	0.658** (0.240)	-0.651 (0.380)	0.075 (0.412)	0.127 (0.407)
Weak IV 95% AR confidence set		[0.098; 1.034]	[0.207; 1.253]	[-1.592; 0.063]	[-0.699; 1.095]	[-0.638; 1.134]
Mean outcome	0.025	0.028	0.030	0.910	0.905	0.900
F-statistic 1 <sup>st</sup> stage	15.68	15.68	15.68	15.68	15.68	15.68
Observations	427,475	427,475	427,475	427,475	427,475	427,475
<b>Panel B1: OLS Top 25% income</b>						
AD 1–10 mo. after birth		0.612** (0.013)	0.421** (0.013)	-0.028** (0.006)	-0.034** (0.007)	-0.045** (0.008)
<b>Panel B2: 2SLS Top 25% income</b>						
New patients aged 46–65	0.334** (0.072)					
AD 1–10 mo. after birth		0.636** (0.167)	0.561* (0.224)	-0.142 (0.270)	0.338 (0.324)	-0.012 (0.307)
Weak IV 95% AR confidence set		[0.289; 0.984]	[0.139; 1.028]	[-0.756; 0.365]	[-0.271; 1.076]	[-0.651; 0.566]
Mean outcome	0.013	0.014	0.016	0.978	0.972	0.968
F-statistic 1 <sup>st</sup> stage	21.39	21.39	21.39	21.39	21.39	21.39
Observations	106,868	106,868	106,868	106,868	106,868	106,868
<b>Panel C1: OLS Bottom 75% income</b>						
AD 1–10 mo. after birth		0.566** (0.006)	0.385** (0.006)	-0.096** (0.004)	-0.106** (0.004)	-0.107** (0.004)
<b>Panel C2: 2SLS Bottom 75% income</b>						
New patients aged 46–65	0.160** (0.061)					
AD 1–10 mo. after birth		0.598 (0.334)	0.706 (0.365)	-1.071 (0.609)	-0.194 (0.585)	0.075 (0.610)
Weak IV 95% AR confidence set		[-0.428; 1.425]	[0.020; 2.187]	[-3.784; -0.046]	[-1.757; 1.484]	[-1.314; 2.068]
Mean outcome	0.029	0.033	0.035	0.887	0.883	0.878
F-statistic 1 <sup>st</sup> stage	6.98	6.98	6.98	6.98	6.98	6.98
Observations	320,607	320,607	320,607	320,607	320,607	320,607

Notes: Panels B and C split the sample by household income (mean of the sum of maternal and paternal income in the two years prior to first birth). The antidepressant use dummies for month 1 to 10, 11 to 20, and 21 to 30 are equal to one if the woman was dispensed at least one script for antidepressants in these months. Positive income is a dummy variable and indicates that an individual had income greater than zero in the full calendar years after the birth year (Y1–Y3). All specifications contain area-level fixed effects, year of birth fixed effects, individual controls, and postal code-level controls. Interactions between the fixed postal-level controls and year-of-birth fixed effects are also added to the model. Robust standard errors are clustered at the area level and are shown in parentheses. \*\*  $p < 0.01$ , \*  $p < 0.05$ .

**Table A7** Relationship of the Instrument to Opioid and Antibiotics Prescriptions

	Opioids (1)	Antibiotics (2)
New patients aged 46–65	-0.001 (0.046)	0.096 (0.126)
Mean outcome	0.029	0.311
F-statistic 1st stage	0.000	0.584
Observations	427,475	427,475

Notes: The outcome variables are equal to one if a woman was dispensed an opioid or antibiotics prescription in the calendar year after giving birth. All specifications include area-level fixed effects, year of birth fixed effects, individual controls, and postal code-level controls. Robust standard errors are clustered at the area level and are shown in parentheses. \*\*  $p < 0.01$ , \*  $p < 0.05$ .