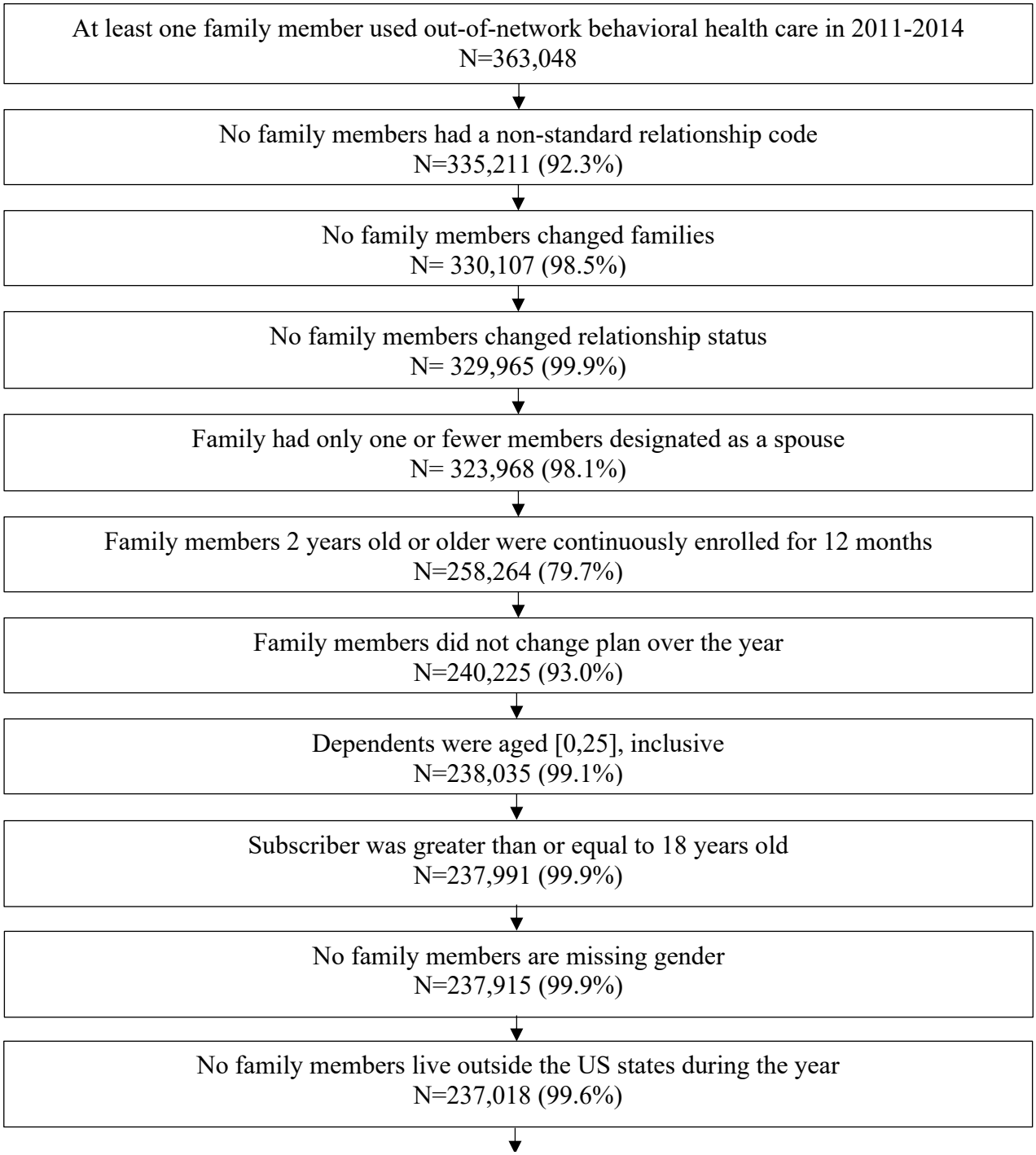
Web Appendix

Web Appendix Figure 1. Creation of the full and SES sample of family-years



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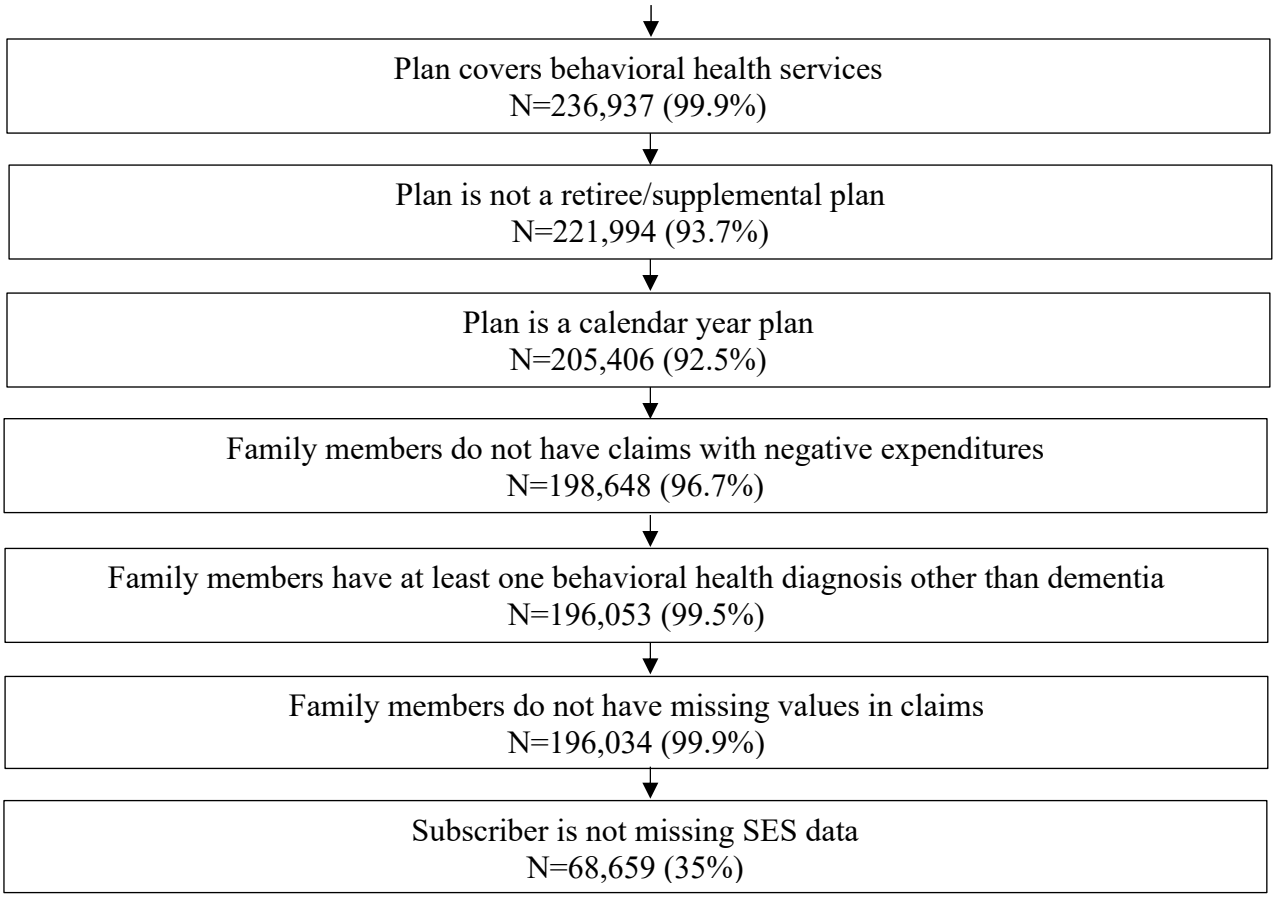

Web Appendix Table 2. Summary of balance billing[a] in the SES sample

	Mean	SD	Median	75th percentile	90th percentile
Among all family-years (n=68,659)					
Total Balance billing for family-year	$423	$2762	$0	$143	$720
Balance billing per member in family-year	$187	$1247	$0	$51	$286
Balance billing as a proportion of family out-of-network out-of-pocket expenditures	15%	23%	0%	24%	50%
Among family-years with any balance billing (n=32,777)					
Total Balance billing for family-year	$886	$3946	$159	$569	$1668
Balance billing per member in family-year	$391	$1783	$58	$218	$734
Balance billing as a proportion of family out-of-network out-of-pocket expenditures	30%	26%	24%	43%	66%

SD: Standard Deviation

a: Dollar amounts were adjusted for inflation to 2014 values.

Web Appendix Table 3. Differences in balance billing by member in family-year, by subscriber and family characteristics (n=68,659)

	Balance billing by member in family-year[a,b]	
	Marginal effect ($)	95% CI
Plan characteristics		
Carve-out status (versus Carve-in)	244*	(162, 327)
HMO (versus non-HMO)	73*	(38, 108)
Provider supply		
Short-term hospital beds per 10K people	3*	(0.1, 6)
Psychiatric hospitals per 10K people	-407	(-1357, 544)
In-network behavioral health providers (MD, PhD, MSW, RN) per 10K people	-3*	(-4, -2)
Subscriber highest level of educational attainment (ref= Bachelor's degree or higher)		
High school or lower	-99*	(-125, -72)
Some college	-84*	(-105, -62)
Associates degree	-76*	(-100, -51)
Subscriber income and net worth (ref= Income: <75K & net worth: <= 25K)		
Income: <75K & net worth: 25K-100K	-16	(-59, 27)
Income: < 75K & net worth: >=100K	7	(-34, 48)
Income: 75K-150K & net worth: <100K	-12	(-53, 29)
Income: 75K-150K & net worth: 100K-250K	-23	(-60, 15)
Income: 75K-150K & net worth: >250K	-26	(-61, 10)
Income: >150K & net worth: < 500K	-8	(-46, 30)
Income: >150K & net worth: >= 500K	2	(-35, 40)
Subscriber race-ethnicity and language (ref=white, any language)		
Asian, English	-2	(-55, 52)
Asian, other language	22	(-49, 93)
Black, any language	-.1	(-36, 35)
Hispanic, English	-7	(-102, 74)
Hispanic, other language	31	(-18, 81)
Other, any language	7	(-26, 40)
Subscriber age (ref=45-54 years old)		
18-24	-110*	(-163, -56)
25-34	-49*	(-73, -25)
35-44	-18	(-39, 2)
55-64	-7	(-30, 16)
65+	-25	(-76, 26)
Subscriber relationship (ref=single)		
Domestic partner, different gender	-135*	(-185, -85)
Domestic partner, same gender	-73	(-154, 7)
Spouse, different gender	-122*	(-144, -101)
Spouse, same gender	-176*	(-257, -95)
Number of dependents (ref=0)		
1	-51*	(-66, -35)
2	-52*	(-64, -40)

	Balance billing by member in family-year[a,b]	
	Marginal effect ($)	95% CI
3	-61*	(-72, -50)
4+	-71*	(-83, -59)
Diagnosis-type/s in family		
Adjustment disorder	18*	(2, 35)
PTSD	56*	(17, 95)
Generalized anxiety disorder	53*	(37, 70)
Obsessive compulsive disorder	66*	(20, 111)
Panic disorder	-23	(-52, 7)
Phobia disorders	73*	(24, 123)
Attention deficit hyperactivity disorder	-10	(-48, 28)
Other child behavioral health disorders	15	(-24, 54)
Pervasive developmental disorder	288*	(197, 379)
Bipolar disorder	28*	(9, 47)
Depression	40*	(24, 56)
Personality disorder	73*	(2, 143)
Schizophrenia	-67*	(-91, -43)
Alcohol use disorder	201*	(153, 249)
Drug use disorder	506*	(427, 584)
Other behavioral health disorders	45*	(23, 66)

*P<0.05

a: All models also control for subscriber employer characteristics (size, industry, region, etc.) whether or not plans are an HMO, unknown income and net worth < $150K and unknown income and net worth >= 150K, and calendar years. Marginal effects are generated using the margins command in STATA.

b: Models used a two-part model for total family-year balance billing. Part 1 of the two-part model uses logit to determine the probability of having any balance billing. Part 2 of the two-part model uses a gamma regression to determine the average change in balance-billing level among those with any balance billing. The results reported here combined parts 1 and 2 to report the change in balance-billing level among the full sample, unconditional on whether they had any balance billing.

Web Appendix Table 4. Differences in adjusted balance billing by subscriber and family characteristics, sensitivity analysis controlling for whether diagnoses occurred alone or together with other behavioral health diagnoses, (n=68,659)

	Total family-year balance billing[a,b]	
	Marginal effect ($)	95% CI
Plan characteristics		
Carve-out status (versus Carve-in)	407*	(320, 494)
HMO (versus non-HMO)	154*	(80, 229)
Provider supply		
Short-term hospital beds per 10K people	7*	(1, 14)
Psychiatric hospitals per 10K people	-719	(-2708, 1270)
In-network behavioral health providers (MD, PhD, MSW, RN) per 10K people	-7*	(-10, -5)
Subscriber highest level of educational attainment (ref= Bachelor's degree or higher)		
High school or lower	-223*	(-284, -162)
Some college	-182*	(-225, -140)
Associates degree	-166*	(-218, -113)
Subscriber income and net worth (ref= Income: <75K & net worth: <= 25K)		
Income: <75K & net worth: 25K-100K	-15	(-105, 75)
Income: < 75K & net worth: >=100K	27	(-55, 109)
Income: 75K-150K & net worth: <100K	18	(-67, 103)
Income: 75K-150K & net worth: 100K-250K	-29	(-108, 50)
Income: 75K-150K & net worth: >250K	-36	(-110, 38)
Income: >150K & net worth: < 500K	15	(-63, 93)
Income: >150K & net worth: >= 500K	37	(-38, 113)
Subscriber race-ethnicity and language (ref=white, any language)		
Asian, English	7	(-107, 121)
Asian, other language	43	(-91, 178)
Black, any language	14	(-60, 89)
Hispanic, English	-1	(-85, 83)
Hispanic, other language	76*	(-14, 166)
Other, any language	18	(-49, 86)
Subscriber age (ref=45-54 years old)		
18-24	-364*	(-563, -165)
25-34	-146*	(-202, -91)
35-44	-50*	(-91, -9)
55-64	-29	(-74, 15)
65+	-60	(-169, 49)
Subscriber relationship (ref=single)		
Domestic partner, different gender	-47	(-191, 96)
Domestic partner, same gender	73	(-96, 242)
Spouse, different gender	-24	(-61, 13)
Spouse, same gender	-212	(-547, 122)
Number of dependents (ref=0)		
1	33*	(0.5, 65)
2	17	(-8, 41)
3	-6	(-28, 16)

	Total family-year balance billing[a,b]	
	Marginal effect ($)	95% CI
4+	-28*	(-51, -5)
Diagnosis		
Adjustment disorder only	-139*	(-203, -75)
Adjustment disorder and at least one other diagnosis	71*	(30, 111)
PTSD only	-276	(-817, 265)
PTSD and at least one other diagnosis	71*	(3, 140)
Generalized anxiety disorder only	-49	(-122, 224)
Generalized anxiety disorder and at least one other diagnosis	109*	(70, 148)
Obsessive compulsive disorder only	-5	(-206, 196)
Obsessive compulsive disorder and at least one other diagnosis	116*	(37, 194)
Panic disorder only	-	-
Panic disorder and at least one other diagnosis	-87*	(-157, -17)
Phobia disorders only	-117	(-418, 183)
Phobia disorders and at least one other diagnosis	117*	(37, 198)
Attention deficit hyperactivity disorder only	-	-
Attention deficit hyperactivity disorder and at least one other diagnosis	-69	(-159, 22)
Other child behavioral health disorders only	-210*	(-383, -38)
Other child behavioral health disorders and at least one other diagnosis	52	(-36, 140)
Pervasive developmental disorder only	528*	(348, 708)
Pervasive developmental disorder and at least one other diagnosis	305*	(215, 395)
Bipolar disorder only	-206*	(-345, -67)
Bipolar disorder and at least one other diagnosis	50*	(9, 91)
Depression only	-28	(-102, 47)
Depression and at least one other diagnosis	39	(-2, 81)
Personality disorder only	-26	(-789, 737)
Personality disorder and at least one other diagnosis	120*	(9, 231)
Schizophrenia only	-318*	(-582, -53)
Schizophrenia and at least one other diagnosis	-160*	(-232, -88)
Alcohol use disorder only	811*	(618, 1003)
Alcohol use disorder and at least one other diagnosis	240*	(169, 310)
Drug use disorder only	1040*	(863, 1217)
Drug use disorder and at least one other diagnosis	649*	(568, 729)
Other behavioral health disorders only	-182*	(-302, -62)
Other behavioral health disorders and at least one other diagnosis	111*	(68, 156)

a: All models also control for subscriber employer characteristics (size, industry, region, etc.), unknown income and net worth < $150K and unknown income and net worth >= 150K and calendar years. Marginal effects are generated using the margins command in STATA.

b: Models used a two-part model for total family-year balance billing. Part 1 of the two-part model uses logit to determine the probability of having any balance billing. Part 2 of the two-part model uses a gamma regression to determine the average change in balance-billing level among those with any balance billing. The results reported here combined parts 1 and 2 to report the change in balance-billing level among the full sample, unconditional on whether they had any balance billing.

Web Appendix Table 5a. Summary of balance billing[a] in full sample using trimmed balance-balance billing values

	Mean (SD)	Median	75th percentile	90th percentile
Among all family-years (n=190,072)				
Total balance billing for family-year	$363 ($1934)	$0	$155	$692
Balance billing per member in family-year	$165 ($945)	$0	$57	$283
Balance billing as a proportion of family out-of-network out-of-pocket expenditures	17% (25%)	0%	28%	54%
Among family-years with balance billing (n=93,222)				
Total balance billing for family-year	$741 ($2710)	$161	$530	$1472
Balance billing per member in family-year	$337 ($1329)	$60	$212	$669
Balance billing as a proportion of family out-of-network out-of-pocket expenditures	32% (26%)	27%	48%	69%

SD: Standard Deviation

a: Dollar amounts were adjusted for inflation to 2014 values.

Web Appendix Table 5b. Summary of balance billing[b] in the SES sample using trimmed balance billing values

	Mean (SD)	Median	75th percentile	90th percentile
Among all family-years (n=66,648)				
Total balance billing for family-year	$350 ($1986)	$0	$125	$615
Balance billing per member in family-year	$157 ($901)	$0	$46	$246
Balance billing as a proportion of family out-of-network out-of-pocket expenditures	14% (23%)	0%	22%	48%
Among family-years with balance billing (n=31,165)				
Total balance billing for family-year	$748 ($2852)	$148	$494	$1436
Balance billing per member in family-year	$336 ($1294)	$53	$195	$654
Balance billing as a proportion of family out-of-network out-of-pocket expenditures	30% (25%)	23%	42%	65%

SD: Standard Deviation

b: Dollar amounts were adjusted for inflation to 2014 values.

Web Appendix Table 6. Adjusted differences in probability of any balance billing, and differences in level of total balance billing among those with any balance billing and among all family-years, by plan characteristics, provider supply, and subscriber and family characteristics, using trimmed balance billing values (n=66,648)

	Difference in the probability of any balance billing (n=66,648) [a,b]		Difference in the level of balance billing among family-years with any balance billing [a,c] (n=31,165)		Difference in level of balance billing among all family-years [a,d] (n=66,648)	
	Percentage points	95% CI	$	95% CI	$	95% CI
Plan characteristics						
Carve-out status (versus Carve-in)	28*	(26, 29)	426*	(238, 614)	494*	(361, 626)
HMO (versus non-HMO)	15*	(13, 17)	78	(-36, 192)	151*	(96, 206)
Provider supply						
Short-term hospital beds per 10K people	-0.003	(-0.2, 0.1)	9	(-1, 19)	4	(-1, 9)
Psychiatric hospitals per 10K people	7	(-41, 55)	98	(-2977, 3174)	-98	(-1387, 1583)
In-network behavioral health providers (MD, PhD, MSW, RN) per 10K people	0.03	(-0.04, 0.1)	-11*	(-15, -8)	-5*	(-7, -3)
Subscriber highest level of educational attainment (ref= Bachelor's degree or higher)						
High school or lower	-4*	(-6, -3)	-249*	(-337, -162)	-149*	(-191, -107)
Some college	-4*	(-5, -3)	-200*	(-268, -133)	-127*	(-160, -93)
Associates degree	-3*	(-5, -2)	-180*	(-260, -99)	-111*	(-150, -72)
Subscriber income and net worth (ref= Income: <75K & net worth: <= 25K)						
Income: <75K & net worth: 25K-100K	-2	(-4, 0.5)	10	(-123, 143)	-7	(-71, 57)
Income: < 75K & net worth: >=100K	-1	(-3, 0.7)	31	(-91, 153)	6	(-53, 65)
Income: 75K-150K & net worth: <100K	-4*	(-6, -2)	101	(-32, 234)	16	(-47, 78)
Income: 75K-150K & net worth: 100K-250K	-2	(-4, 0.3)	26	(-92, 145)	1	(-56, 58)
Income: 75K-150K & net worth: >250K	-2	(-3, 0.2)	22	(-88, 131)	-1	(-54, 52)
Income: >150K & net worth: < 500K	-2	(-4, 0.2)	49	(-68, 166)	10	(-46, 67)
Income: >150K & net worth: >= 500K	1	(-0.7, 3)	66	(-49, 181)	41	(-16, 97)
Subscriber race-ethnicity and language (ref=white, any language)						
Asian, English	-1	(-4, 2)	152	(-59, 364)	61	(-39, 161)
Asian, other language	-2	(-5, 1)	122	(-120, 363)	42	(-71, 155)
Black, any language	-1	(-3, 4)	-44	(-151,63)	-30	(-81, 20)
Hispanic, English	-0.9	(-3, 1)	41	(-94, 177)	12	(-52, 77)
Hispanic, other language	-0.6	(-3, 1)	194*	(21, 367)	86	(3, 168)
Other, any language	0.8	(-1, 3)	36	(-73, 145)	23	(-30, 77)
Subscriber age (ref=45-54 years old)						
18-24	-3	(-8, 1)	-364*	(-546, -181)	-188*	(-272, -105)
25-34	-3*	(-4, -1)	-102*	(-183, -22)	-67*	(-105, -29)
35-44	-1	(-2, 0.2)	-27*	(-92, 38)	-19	(-50, 13)
55-64	-0.03	(-1.2, 1)	12	(-61, 86)	6	(-30, 42)
65+	-8*	(-10, -6)	74	(-118, 265)	-34	(-192, 46)
Subscriber relationship (ref=single)						

	Difference in the probability of any balance billing (n=66,648) [a,b]		Difference in the level of balance billing among family-years with any balance billing[a,c] (n=31,165)		Difference in level of balance billing among all family-years[a,d] (n=66,648)	
	Percentage points	95% CI	$	95% CI	$	95% CI
Domestic partner, different gender	1	(-2, 5)	-52	(-269, 164)	-13	(-119, 93)
Domestic partner, same gender	0.2	(-4, 4)	159	(-165, 482)	75	(-114, 359)
Spouse, different gender	1*	(0.02, 2)	-41	(-100, 17)	-12	(-56, 25)
Spouse, same gender	-4	(-12, 4)	-403*	(-692, -114)	-203	(-412, 71)
Number of dependents (ref=0)						
1	1*	(1, 2)	-21	(-72, 29)	0.2	(-24, 25)
2	2*	(1, 2)	17	(-22, 56)	20*	(1, 38)
3	1*	(1, 2)	-42*	(-77, -8)	-10	(-27, 6)
4+	-0.1	(-0.7, 0.4)	-24	(-60, 12)	-12	(-30, 5)
Diagnosis						
Adjustment disorder	4*	(3, 5)	36	(-17, 89)	47*	(21, 73)
PTSD	0.1	(-2, 2)	199*	(73, 325)	94*	(33, 155)
Generalized anxiety disorder	3*	(2, 4)	156*	(103, 209)	99*	(72, 125)
Obsessive compulsive disorder	7*	(5, 9)	156*	(18, 293)	137*	(62, 212)
Panic disorder	-0.2	(-2, 2)	-166*	(-255, -77)	-79*	(-122, -36)
Phobia disorders	6*	(3, 8)	134	(-6, 273)	110*	(36, 184)
Attention deficit hyperactivity disorder	3*	(1, 5)	-85	(-209, 39)	-19	(-81, 43)
Other child behavioral health disorders	5*	(3, 7)	-50	(-171, 71)	10	(-52, 71)
Pervasive developmental disorder	8*	(5, 10)	597*	(380, 814)	377*	(257, 497)
Bipolar disorder	2*	(1, 3)	26	(-36, 87)	26	(-4, 57)
Depression	4*	(3, 4)	115*	(61, 168)	80*	(54, 106)
Personality disorder	1	(-2, 4)	251*	(25, 477)	124	(13, 235)
Schizophrenia	-9*	(-11, -7)	-102*	(-201, -4)	-110*	(-150, -69)
Alcohol use disorder	0.2	(-1, 2)	814*	(658, 971)	383*	(306, 459)
Drug use disorder	6*	(5, 8)	1763*	(1539, 1988)	944*	(824, 1265)
Other behavioral health disorders	3*	(2, 4)	188*	(117, 259)	112*	(76, 148)

SES: Socioeconomic status; ref: Reference group

*P<0.05

a: All models also controlled for subscriber employer characteristics (size, industry, region, etc.), unknown income and net worth < $150K and unknown income and net worth >= 150K, and calendar year. Regressions used a two-part model for total family-year balance billing and marginal effects were generated using the margins command in STATA.

b: Part 1 of the two-part model used logistic regression to determine the probability of having any balance billing.

c: Part 2 of the two-part model used a gamma regression to determine the average difference in the level of balance billing among SES sample family-years with any balance billing.

d: The combined parts 1 and 2 report the average difference in the level of balance billing among all family-years in the SES sample, unconditional on whether or not they had any balance billing.

Web Appendix Table 7. Differences in balance billing by member in family-year, by subscriber and family characteristics, using trimmed balance billing values (n=66,648)

	Balance billing by member in family-year[a,b]	
	Marginal effect ($)	95% CI
Plan characteristics		
Carve-out status (versus Carve-in)	235*	(173, 297)
HMO (versus non-HMO)	70*	(45, 95)
Provider supply		
Short-term hospital beds per 10K people	2	(-0.6, 4)
Psychiatric hospitals per 10K people	3	(-664, 669)
In-network behavioral health providers (MD, PhD, MSW, RN) per 10K people	-2*	(-3, -1)
Subscriber highest level of educational attainment (ref= Bachelor's degree or higher)		
High school or lower	-68*	(-87, -49)
Some college	-59*	(-74, -44)
Associates degree	-51*	(-69, -34)
Subscriber income and net worth (ref= Income: <75K & net worth: <= 25K)		
Income: <75K & net worth: 25K-100K	-9	(-39, 20)
Income: < 75K & net worth: >=100K	-2	(-29, 26)
Income: 75K-150K & net worth: <100K	-3	(-31, 25)
Income: 75K-150K & net worth: 100K-250K	-3	(-30, 23)
Income: 75K-150K & net worth: >250K	-7	(-32, 18)
Income: >150K & net worth: < 500K	-3	(-29, 23)
Income: >150K & net worth: >= 500K	9	(-17, 35)
Subscriber race-ethnicity and language (ref=white, any language)		
Asian, English	25	(-19, 70)
Asian, other language	23	(-29, 75)
Black, any language	-13	(-36, 9)
Hispanic, English	4	(-25, 33)
Hispanic, other language	36	(-1, 72)
Other, any language	11	(-13, 36)
Subscriber age (ref=45-54 years old)		
18-24	-68*	(-111, -25)
25-34	-16	(-34, 2)
35-44	-3	(-18, 11)
55-64	6	(-10, 22)
65+	-7	(-44, 30)
Subscriber relationship (ref=single)		
Domestic partner, different gender	-105*	(-143, -68)
Domestic partner, same gender	-71*	(-126, -16)
Spouse, different gender	-103*	(-118, -88)
Spouse, same gender	-168*	(-213, -123)
Number of dependents (ref=0)		
1	-55*	(-67, -44)
2	-42*	(-51, -33)

	Balance billing by member in family-year[a,b]	
	Marginal effect ($)	95% CI
3	-54*	(-62, -46)
4+	-57*	(-66, -49)
Diagnosis-type/s in family		
Adjustment disorder	19*	(8, 31)
PTSD	46*	(18, 74)
Generalized anxiety disorder	44*	(32, 55)
Obsessive compulsive disorder	55*	(22, 88)
Panic disorder	-36*	(-56, -17)
Phobia disorders	53*	(19, 87)
Attention deficit hyperactivity disorder	-8	(-36, 20)
Other child behavioral health disorders	-3	(-30, 24)
Pervasive developmental disorder	167*	(112, 221)
Bipolar disorder	14*	(0.4, 28)
Depression	37*	(26, 49)
Personality disorder	69*	(16, 122)
Schizophrenia	-51*	(-69, -33)
Alcohol use disorder	174*	(139, 209)
Drug use disorder	417*	(362, 472)
Other behavioral health disorders	50*	(33, 66)

*P<0.05

1: All models also control for subscriber employer characteristics (size, industry, region, etc.) whether or not plans are an HMO, unknown income and net worth < $150K and unknown income and net worth >= 150K, and calendar years. Marginal effects are generated using the margins command in STATA.

2: Models used a two-part model for total family-year balance billing. Part 1 of the two-part model uses logit to determine the probability of having any balance billing. Part 2 of the two-part model uses a gamma regression to determine the average change in balance-billing level among those with any balance billing. The results reported here combined parts 1 and 2 to report the change in balance-billing level among the full sample, unconditional on whether they had any balance billing.

Web Appendix Table 8. Differences in adjusted balance billing by subscriber and family characteristics, sensitivity analysis controlling for whether diagnoses occurred alone or together with other behavioral health diagnoses, using trimmed balance billing values (n=66,648)

	Total family-year balance billing[a,b]	
	Marginal effect ($)	95% CI
Plan characteristics		
Carve-out status (versus Carve-in)	371*	(310, 433)
HMO (versus non-HMO)	147*	(95, 199)
Provider supply		
Short-term hospital beds per 10K people	4	(-0.3, 8)
Psychiatric hospitals per 10K people	-10	(-1398, 1378)
In-network behavioral health providers (MD, PhD, MSW, RN) per 10K people	-5*	(-111, -20)
Subscriber highest level of educational attainment (ref= Bachelor's degree or higher)		
High school or lower	-147*	(-190, -105)
Some college	-126*	(-156, -96)
Associates degree	-107*	(-144, -70)
Subscriber income and net worth (ref= Income: <75K & net worth: <= 25K)		
Income: <75K & net worth: 25K-100K	-0.5	(-64, 63)
Income: < 75K & net worth: >=100K	13	(-45, 70)
Income: 75K-150K & net worth: <100K	33	(-27, 93)
Income: 75K-150K & net worth: 100K-250K	16	(-40, 72)
Income: 75K-150K & net worth: >250K	10	(-42, 62)
Income: >150K & net worth: < 500K	26	(-29, 81)
Income: >150K & net worth: >= 500K	54	(-0.2, 108)
Subscriber race-ethnicity and language (ref=white, any language)		
Asian, English	59	(-23, 141)
Asian, other language	44	(-53, 141)
Black, any language	-21	(-73, 31)
Hispanic, English	16	(-43, 75)
Hispanic, other language	76*	(12, 141)
Other, any language	24	(-24, 73)
Subscriber age (ref=45-54 years old)		
18-24	-233*	(-373, -94)
25-34	-65*	(-104, -26)
35-44	-15	(-44, 14)
55-64	-0.2	(-32, 32)
65+	-20	(-98, 57)
Subscriber relationship (ref=single)		
Domestic partner, different gender	-16	(-116, 85)
Domestic partner, same gender	40	(-79, 160)
Spouse, different gender	-17	(-43, 9)
Spouse, same gender	-274*	(-514, -34)
Number of dependents (ref=0)		
1	0.5	(-22, 24)
2	18	(0.03, 35)
3	-10	(-25, 5)

	Total family-year balance billing[a,b]	
	Marginal effect ($)	95% CI
4+	-19*	(-36, -3)
Diagnosis		
Adjustment disorder only	-66*	(-111, -20)
Adjustment disorder and at least one other diagnosis	63*	(34, 92)
PTSD only	-130	(-506, 246)
PTSD and at least one other diagnosis	57*	(8, 106)
Generalized anxiety disorder only	1	(-51, 53)
Generalized anxiety disorder and at least one other diagnosis	86*	(58, 113)
Obsessive compulsive disorder only	-23	(-168, 122)
Obsessive compulsive disorder and at least one other diagnosis	107*	(50, 165)
Panic disorder only	-99*	(-149, -49)
Panic disorder and at least one other diagnosis	-	-
Phobia disorders only	-48	(-264, 168)
Phobia disorders and at least one other diagnosis	88*	(30, 145)
Attention deficit hyperactivity disorder only	-	-
Attention deficit hyperactivity disorder and at least one other diagnosis	-55	(-121, 12)
Other child behavioral health disorders only	-206*	(-330, -82)
Other child behavioral health disorders and at least one other diagnosis	20	(-45, 84)
Pervasive developmental disorder only	284*	(155, 414)
Pervasive developmental disorder and at least one other diagnosis	211*	(146, 276)
Bipolar disorder only	-129*	(-227, -32)
Bipolar disorder and at least one other diagnosis	24	(-7, 54)
Depression only	-0.1	(-53, 53)
Depression and at least one other diagnosis	53*	(23, 84)
Personality disorder only	84	(-447, 615)
Personality disorder and at least one other diagnosis	93*	(13, 174)
Schizophrenia only	-215*	(-401, -28)
Schizophrenia and at least one other diagnosis	-118*	(-170, -67)
Alcohol use disorder only	668*	(532, 805)
Alcohol use disorder and at least one other diagnosis	232	(181, 283)
Drug use disorder only	891*	(764, 1018)
Drug use disorder and at least one other diagnosis	523*	(466, 579)
Other behavioral health disorders only	-113*	(-198, -28)
Other behavioral health disorders and at least one other diagnosis	123*	(91, 155)

a: All models also control for subscriber employer characteristics (size, industry, region, etc.), unknown income and net worth < $150K and unknown income and net worth >= 150K and calendar years. Marginal effects are generated using the margins command in STATA.

b: Models used a two-part model for total family-year balance billing. Part 1 of the two-part model uses logit to determine the probability of having any balance billing. Part 2 of the two-part model uses a gamma regression to determine the average change in balance-billing level among those with any balance billing. The results reported here combined parts 1 and 2 to report the change in balance-billing level among the full sample, unconditional on whether they had any balance billing.