Access and Quality of Care by Insurance Type for Low-Income Adults Before the Affordable Care Act

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Table 2. Unadjusted Logistic Regression Models of Access to Care and Quality of Care, by Insurance Type

OUTCOME	Private			Medicaid			Medicare			Uninsured		
Access to Outpatient Care	OR	CI	Mean	OR	CI	Mean	OR	CI	Mean	OR	CI	Mean
No personal doctor	1.00	Ref	36.9%	0.68*	(0.45, 1.01)	28.4%	0.51***	(0.35, 0.75)	23.2%	2.89***	(2.19, 3.82)	62.8%
Difficulty accessing PCP appointment	1.00	Ref	11.1%	1.92**	(1.16, 3.19)	19.5%	0.79	(0.47, 1.35)	9.1%	2.46***	(1.67, 3.61)	23.6%
Difficulty accessing specialist appointment	1.00	Ref	9.7%	2.54***	(1.54, 4.19)	21.5%	1.50	(0.91, 2.49)	13.9%	2.14***	(1.43, 3.23)	18.7%
Emergency Room Utilization												
ER as usual location of care	1.00	Ref	4.1%	0.50	(0.19, 1.34)	2.1%	1.16	(0.47, 2.88)	4.7%	4.97***	(2.60, 9.53)	17.4%
Use of ER when doctor not available	1.00	Ref	8.0%	2.37***	(1.37, 4.11)	17.2%	1.48	(0.87, 2.52)	11.5%	2.56***	(1.62, 4.03)	18.3%
Affordability and Cost of Care												
Delayed care due to cost	1.00	Ref	25.0%	1.32	(0.89, 1.97)	30.6%	0.90	(0.63, 1.29)	23.1%	3.49***	(2.60, 4.69)	53.8%
Delayed medication due to cost	1.00	Ref	26.7%	1.56**	(1.08, 2.27)	36.3%	1.10	(0.79, 1.53)	28.6%	2.26***	(1.69, 3.00)	45.2%
> $500 out-of-pocket spending in past year	1.00	Ref	37.7%	0.33***	(0.21, 0.51)	16.6%	0.57***	(0.41, 0.79)	25.6%	0.79*	(0.59, 1.05)	32.2%
> $1,000 out-of-pocket spending in past year	1.00	Ref	24.5%	0.33***	(0.19, 0.57)	9.7%	0.61***	(0.42, 0.88)	16.5%	0.97	(0.71, 1.32)	23.9%
Delayed paying bills due to medical costs	1.00	Ref	31.3%	1.33	(0.92, 1.93)	37.7%	1.21	(0.88, 1.68)	35.6%	1.99***	(1.51, 2.64)	47.6%
Self-Reported Quality of Care												
Fair or poor quality of care	1.00	Ref	38.1%	1.43*	(0.99, 2.05)	46.8%	0.82	(0.59, 1.14)	33.5%	2.57***	(1.92, 3.43)	61.3%

Notes: *p<0.10, **p<0.05, ***p<0.01

OR = Odds ratios from multivariate logistical regression. Private insurance was the reference group for all odds ratios; CI = 95% confidence interval

Table 3. Adjusted Logistic Regression Models of Access to Care and Quality of Care, by Insurance Type

| OUTCOME	Private			Medicaid			Medicare			Uninsured		
Access to Outpatient Care	AOR	CI	PP	AOR	CI	PP	AOR	CI	PP	AOR	CI	PP
No personal doctor	1.00	Ref	35.5%	0.82	(0.52, 1.30)	31.8%	0.82	(0.55, 1.24)	31.7%	3.07***	(2.24, 4.19)	59.0%
Difficulty accessing PCP appointment	1.00	Ref	13.4%	1.13	(0.65, 1.96)	14.7%	0.64	(0.36, 1.16)	9.3%	2.11***	(1.41, 3.15)	23.3%
Difficulty accessing specialist appointment	1.00	Ref	11.1%	1.78**	(1.00, 3.17)	17.3%	1.26	(0.71, 2.24)	13.3%	2.01***	(1.30, 3.10)	18.9%
Emergency Room Utilization												
ER as usual location of care	1.00	Ref	4.4%	0.43	(0.16, 1.20)	2.0%	1.40	(0.57, 3.45)	5.9%	4.54***	(2.46, 8.40)	15.9%
Use of ER when doctor not available	1.00	Ref	9.4%	1.53	(0.79, 2.96)	13.4%	1.21	(0.67, 2.16)	11.0%	2.32***	(1.41, 3.81)	18.4%
Affordability and Cost of Care												
Delayed care due to cost	1.00	Ref	27.7%	0.87	(0.54, 1.38)	25.2%	0.69*	(0.45, 1.06)	21.6%	3.79***	(2.72, 5.28)	54.9%
Delayed medication due to cost	1.00	Ref	30.1%	1.03	(0.65, 1.64)	30.7%	0.73	(0.49, 1.10)	25.0%	2.45***	(1.76, 3.40)	46.8%
> $500 out-of-pocket spending in past year	1.00	Ref	38.3%	0.26***	(0.16, 0.43)	15.7%	0.41***	(0.28, 0.60)	22.1%	0.81	(0.59, 1.12)	34.2%
> $1,000 out-of-pocket spending in past year	1.00	Ref	24.7%	0.28***	(0.16, 0.52)	9.2%	0.48***	(0.32, 0.73)	14.3%	1.04	(0.74, 1.47)	25.3%
Delayed paying bills due to medical costs	1.00	Ref	35.4%	0.79	(0.52, 1.22)	31.0%	0.87	(0.60, 1.26)	32.7%	1.90***	(1.39, 2.58)	48.4%
Self-Reported Quality of Care												
Fair or poor quality of care	1.00	Ref	40.7%	1.18	(0.79, 1.76)	44.5%	0.75	(0.51, 1.10)	34.5%	2.28***	(1.67, 3.12)	59.7%

Notes: *p<0.10, **p<0.05, ***p<0.01

AOR = Odds ratios from multivariate logistical regression. Private insurance was the reference group for all odds ratios; CI = 95% confidence interval

PP = Predicted probability, calculated predicted probabilities from the logistic regression estimates using Stata's "margins" command with default settings, which holds all covariates at their actual values.

N = 2,765.

Models controlled for insurance type, age, gender, marital status, education level, race/ethnicity, income, rural versus urban residence, cell phone use, political affiliation, self-reported fair or poor health, presence of chronic conditions, and state of residence.

Figure 1. Adjusted Comparisons of Access to Care and Quality of Care for Medicaid vs. Private Insurance

Adjusted Odds Ratio (Medicaid vs. Private Insurance)

Favors Medicaid   Favors Private Insurance
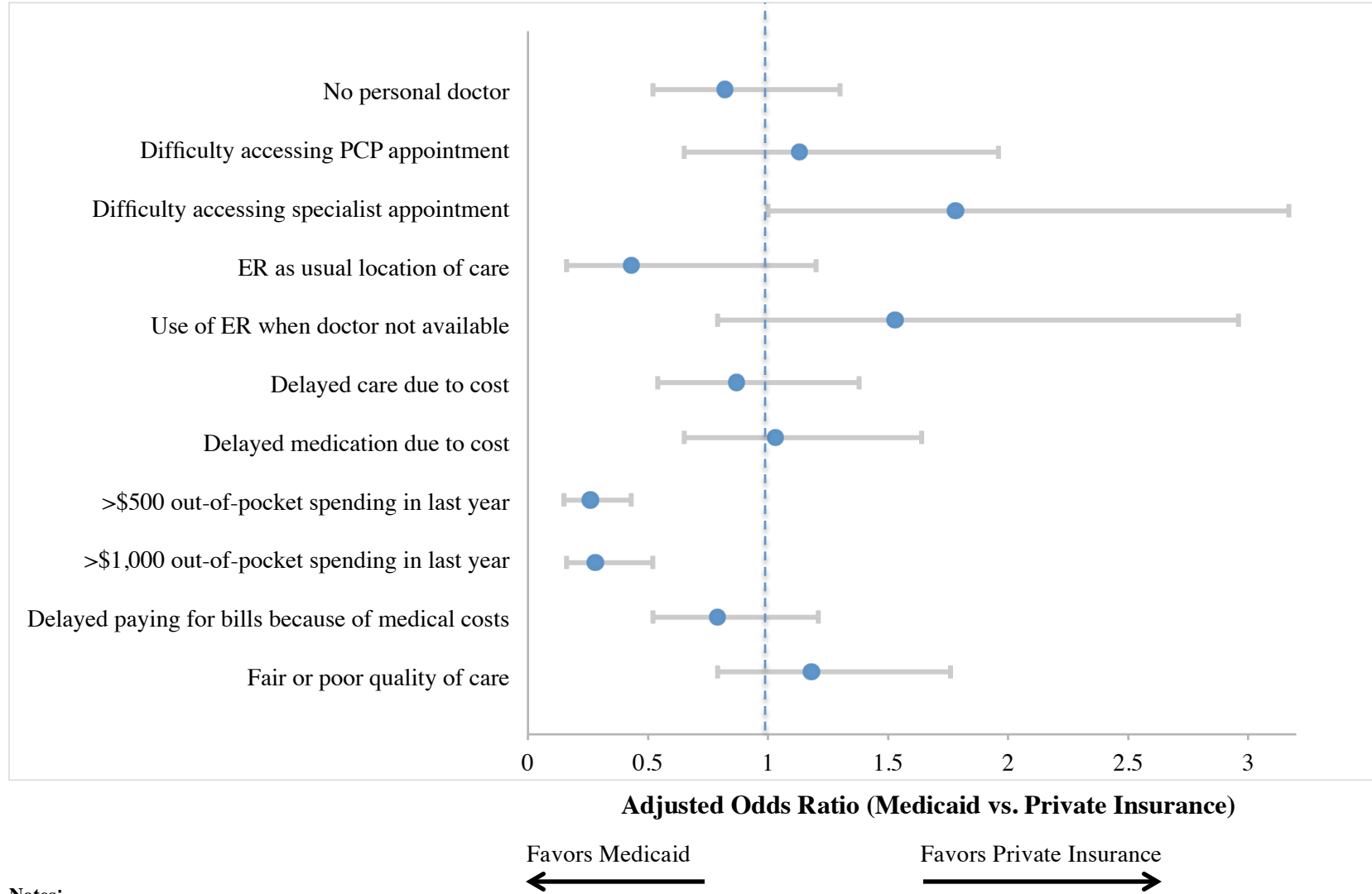
Notes:
Adjusted odds ratios for Medicaid from multivariate logistical regression. Private insurance was the reference group for all odds ratios.
N = 2,765.
Models controlled for insurance type, age, gender, marital status, education level, race/ethnicity, income, rural versus urban residence, cell phone use, political affiliation, self-reported fair or poor health, presence of chronic conditions, and state of residence.

Appendix Table A. Sensitivity Analysis: Adjusted Logistic Regression Models of Access to Care and Quality of Care, Reclassifying Dual Eligible Respondents

OUTCOME	Private (n=792)		Medicaid (n=699)		Medicare (n=291)		Uninsured (n=983)	
Access to Outpatient Care	AOR	CI	AOR	CI	AOR	CI	AOR	CI
No personal doctor	1.00	Ref	0.79	(0.53, 1.17)	0.94	(0.56, 1.56)	3.06***	(2.24, 4.19)
Difficulty accessing PCP appointment	1.00	Ref	0.87	(0.53, 1.45)	0.92	(0.44, 1.93)	2.09***	(1.40, 3.13)
Difficulty accessing specialist appointment	1.00	Ref	1.45	(0.84, 2.47)	1.71	(0.87, 3.36)	1.99***	(1.29, 3.08)
Emergency Room Utilization								
ER as usual location of care	1.00	Ref	0.58	(0.27, 1.67)	1.60	(0.57, 4.52)	4.56***	(2.47, 8.41)
Use of ER when doctor not available	1.00	Ref	1.50	(0.83, 2.70)	0.95	(0.45, 1.99)	2.31***	(1.41, 3.82)
Affordability and Cost of Care								
Delayed care due to cost	1.00	Ref	0.67*	(0.44, 1.03)	1.14	(0.70, 1.84)	3.76***	(2.70, 5.24)
Delayed medication due to cost	1.00	Ref	0.77	(0.51, 1.16)	1.19	(0.74, 1.90)	2.42***	(1.74, 3.36)
> $500 out-of-pocket spending in past year	1.00	Ref	0.24***	(0.15, 0.36)	0.73	(0.47, 1.14)	0.81	(0.59, 1.11)
> $1,000 out-of-pocket spending in past year	1.00	Ref	0.24***	(0.14, 0.41)	0.89	(0.57, 1.41)	1.03	(0.73, 1.45)
Delayed paying bills due to medical costs	1.00	Ref	0.64**	(0.43, 0.94)	1.71**	(1.12, 2.61)	1.88***	(1.37, 2.56)
Self-Reported Quality of Care								
Fair or poor quality of care	1.00	Ref	0.94	(0.66, 1.36)	0.90	(0.57, 1.42)	2.27***	(1.66, 3.11)

Notes: *p<0.10, **p<0.05, ***p<0.01

Model reclassified dual eligible respondents as having Medicaid. The primary model categorized dual eligible respondents as having Medicare.

AOR = Odds ratios from multivariate logistical regression. Private insurance was the reference group for all odds ratios; CI = 95% confidence interval

N = 2,765.

Models controlled for insurance type, age, gender, marital status, education level, race/ethnicity, income, rural versus urban residence, cell phone use, political affiliation, self-reported fair or poor health, presence of chronic conditions, and state of residence.

Appendix Table B. Sensitivity Analysis: Adjusted Logistic Regression Models of Access to Care and Quality of Care, Controlling for Clinical Factors

OUTCOME	Private (n=792)		Medicaid (n=396)		Medicare (n=594)		Uninsured (n=983)	
Access to Outpatient Care	AOR	CI	AOR	CI	AOR	CI	AOR	CI
No personal doctor	1.00	Ref	0.99	(0.64, 1.51)	0.90	(0.61, 1.35)	3.25***	(2.40, 4.40)
Difficulty accessing PCP appointment	1.00	Ref	1.30	(0.77, 2.21)	0.65	(0.37, 1.17)	2.23***	(1.51, 3.30)
Difficulty accessing specialist appointment	1.00	Ref	1.66*	(0.98, 2.80)	1.10	(0.64, 1.89)	1.90***	(1.25, 2.88)
Emergency Room Utilization								
ER as usual location of care	1.00	Ref	0.51	(0.18, 1.39)	1.45	(0.59, 3.55)	4.64***	(2.43, 8.84)
Use of ER when doctor not available	1.00	Ref	1.56	(0.85, 2.85)	1.16	(0.67, 2.00)	2.29***	(1.43, 3.69)
Affordability and Cost of Care								
Delayed care due to cost	1.00	Ref	0.78	(0.50, 1.21)	0.63**	(0.42, 0.95)	3.47***	(2.54, 4.74)
Delayed medication due to cost	1.00	Ref	0.86	(0.55, 1.32)	0.64**	(0.44, 0.93)	2.17***	(1.58, 2.99)
> $500 out-of-pocket spending in past year	1.00	Ref	0.20***	(0.12, 0.32)	0.34***	(0.24, 0.48)	0.67**	(0.50, 0.91)
> $1,000 out-of-pocket spending in past year	1.00	Ref	0.22***	(0.12, 0.39)	0.39***	(0.26, 0.58)	0.87	(0.62, 1.20)
Delayed paying bills due to medical costs	1.00	Ref	0.76	(0.50, 1.16)	0.83	(0.58, 1.19)	1.85***	(1.38, 2.49)
Self-Reported Quality of Care								
Fair or poor quality of care	1.00	Ref	1.34	(0.92, 1.94)	0.82	(0.57, 1.18)	2.41***	(1.79, 3.22)

Notes: *p<0.10, **p<0.05, ***p<0.01

AOR = Odds ratios from multivariate logistical regression. Private insurance was the reference group for all odds ratios; CI = 95% confidence interval

N = 2,765.

Models controlled for insurance type, age, gender, self-reported fair or poor health, and presence of chronic conditions. The primary model controlled for insurance type, age, gender, marital status, education level, race/ethnicity, income, rural versus urban residence, cell phone use, political affiliation, self-reported fair or poor health, presence of chronic conditions, and state of residence.