

Appendix Table A1. Different Methods of Adjusting Hospital Charges
 Dependent Variable: Uncompensated care costs per capita adjusted in the way specified

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	All Hospitals			Non-Profit Hospitals			For-Profit Hospitals		
	All	with an ED	No ED	All	with an ED	No ED	All	with an ED	No ED
	<u>A. Charges</u>								
Share of population uninsured	1105.76 (269.83) [0.00]	1122.15 (280.00) [0.00]	- 15.84 (20.63) [0.45]	703.73 (141.75) [0.00]	714.21 (144.44) [0.00]	- 8.72 (15.75) [0.58]	- 48.05 (154.73) [0.76]	- 102.15 (154.99) [0.51]	- 3.45 (8.62) [0.69]
R ²	0.894	0.892	0.503	0.889	0.885	0.609	0.692	0.690	0.519
N	1,224	1,224	1,200	1,224	1,224	1,060	1,161	1,049	1,075
	<u>B. Charges times hospital-specific “jackknifed” mean cost-to-charge ratio</u>								
Share of population uninsured	864.46 (308.03) [0.01]	870.93 (316.24) [0.01]	- 6.74 (11.42) [0.56]	547.53 (165.68) [0.00]	547.23 (168.06) [0.00]	2.61 (6.67) [0.70]	- 34.10 (75.55) [0.65]	- 56.75 (74.08) [0.45]	- 2.23 (4.72) [0.64]
R ²	0.872	0.866	0.478	0.874	0.867	0.629	0.733	0.719	0.534
N	1,224	1,224	1,200	1,224	1,224	1,060	1,161	1,049	1,075
	<u>C. Charges times state-year mean cost-to-charge ratio</u>								
Share of population uninsured	787.35 (406.08) [0.06]	785.63 (402.84) [0.06]	1.35 (9.25) [0.88]	621.64 (302.45) [0.05]	609.68 (295.18) [0.04]	15.30 (9.52) [0.11]	- 66.27 (73.67) [0.37]	- 88.59 (73.49) [0.23]	- 4.42 (5.09) [0.39]
R ²	0.832	0.826	0.431	0.839	0.834	0.598	0.741	0.717	0.479
N	1,224	1,224	1,200	1,224	1,224	1,060	1,161	1,049	1,075

Notes: The standard errors in parentheses are robust to auto-correlation between observations from the same state; associated *p*-values in brackets. Year and state fixed effects not shown.

Appendix Table A2. The Effect of The Loss of an ED on Uncompensated Costs

	(1)	(3)	(4)
Hospitals	All	Private, Not-for-Profit	Private, For-Profit
<u>A. Dependent variable is uncompensated costs in millions</u>			
Post ER Loss	- 1.267 (0.360) [0.000]	- 1.887 (1.110) [0.089]	- 0.566 (0.262) [0.031]
R^2	0.723	0.678	0.727
N	179,716	91,921	34,816
<u>B. Dependent variable is logarithm of uncompensated costs</u>			
Post ER Loss	- 0.405 (0.124) [0.001]	- 0.389 (0.310) [0.210]	- 0.274 (0.115) [0.017]
Number of ER Losses in AHA data	75	23	39
R^2	0.873	0.895	0.772
N	164,109	90,978	34,486

Notes: The sample consists of hospital-by-year observations from the AHA survey. Hospital and year fixed effects not shown. The standard errors in parentheses are robust to autocorrelation between observations from the same hospital; associated p -values in brackets.

Appendix Table A3. DSH Receipts and Exposure to Uncompensated Care

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable:	Per-capita uncompensated care				Uncompensated care divided by expenditures			
	<u>A. Hospital Received No DSH Payments</u>							
Share of population uninsured	516.17 (208.34) [0.02]	536.34 (205.54) [0.01]	451.44 (236.26) [0.06]	455.18 (217.30) [0.04]	0.18 (0.04) [0.00]	0.16 (0.04) [0.00]	0.15 (0.04) [0.00]	0.13 (0.04) [0.00]
R ²	0.825	0.825	0.853	0.853	0.744	0.750	0.797	0.806
N	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,224
	<u>B. Hospital Receives Some DSH Payments</u>							
Share of population uninsured	274.26 (172.36) [0.12]	262.94 (173.04) [0.14]	410.53 (180.60) [0.03]	377.30 (170.15) [0.03]	0.14 (0.07) [0.05]	0.12 (0.08) [0.16]	0.14 (0.07) [0.05]	0.12 (0.08) [0.14]
R ²	0.834	0.836	0.864	0.866	0.808	0.811	0.848	0.851
N	1,128	1,128	1,128	1,128	1,128	1,128	1,128	1,128

Notes: The sample consists of means of the dependent variables by state and year from 1988 through 2011 for the given types of hospitals. The standard errors in parentheses are robust to auto-correlation between observations from the same state; associated *p*-values in brackets. Year and state fixed effects not shown. All hospitals in the sample are non-profit hospitals with an emergency room.

Appendix Table A4. The Effect of TennCare Disenrollment on Uncompensated Costs For Different Types of Within-Tennessee Regions
 Dependent Variable: The logarithm of uncompensated costs in each region and year

	(1)	(2)	(3)	(4)
Type of Region	14 Health Department Regions	9 Tennessee Development Districts	8 Hospital Referral Region	82 Hospital Service Areas
2004-2005 disenrollment in region / 2004 population \times Post 2005	- 7.172 (3.124) [0.039]	- 9.002 (4.201) [0.065]	- 9.350 (6.028) [0.165]	- 4.604 (2.335) [0.052]
Estimates scaled by statewide de-enrollment per capita (compare to state-year results)	0.185	0.233	0.242	0.119
R^2	0.971	0.975	0.983	0.986
N	112	72	64	641

Notes: The sample consists of region-by-year total uncompensated care. The standard errors in paranthesis are robust to autocorellation between observations from the same region; associated p -values in brackets. We restrict the sample to 2000 through 2007. The regression presented in column 3 is weighted by each HSA's population, because there exists substantial variation in HSA population.

Appendix Table A5. Hospital Religious Affiliation and Exposure to Uncompensated Care

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable:	Per-capita uncompensated care				Uncompensated care divided by expenditures			
	<u>A. Hospital has no religious affiliation</u>							
Share of population uninsured	333.73 (106.41) [0.00]	327.68 (91.97) [0.00]	434.78 (130.73) [0.00]	424.16 (114.68) [0.00]	0.20 (0.05) [0.00]	0.19 (0.06) [0.00]	0.20 (0.05) [0.00]	0.17 (0.05) [0.00]
R ²	0.873	0.875	0.899	0.899	0.787	0.790	0.824	0.829
N	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,224
	<u>B. Hospital has a religious affiliation</u>							
Share of population uninsured	158.80 (50.05) [0.00]	181.18 (53.32) [0.00]	152.11 (48.20) [0.00]	171.00 (50.10) [0.00]	0.16 (0.05) [0.00]	0.15 (0.04) [0.00]	0.15 (0.05) [0.00]	0.14 (0.04) [0.00]
R ²	0.739	0.745	0.828	0.833	0.752	0.754	0.804	0.808
N	1,133	1,133	1,133	1,133	1,133	1,133	1,133	1,133

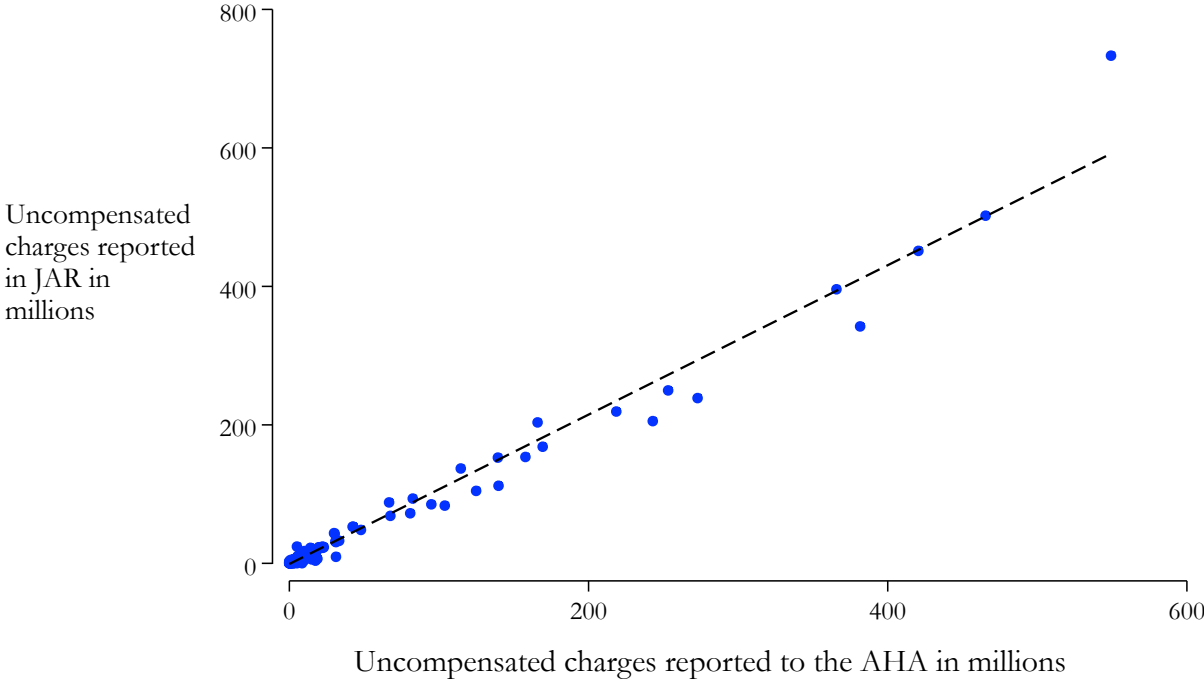
Notes: The sample consists of means of the dependent variables by state and year from 1988 through 2011 for the given types of hospitals. The standard errors in parentheses are robust to auto-correlation between observations from the same state; associated *p*-values in brackets. Year and state fixed effects not shown. All hospitals in the sample are non-profit hospitals with an emergency room.

Appendix Table A6. Effect of Uninsured Population on Other Profit Margins
 Dependent Variable: The given profit margin

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	All Hospitals				Non-Profit Hospitals				For-Profit Hospitals			
	<u>A. Total margin</u>											
Share of population uninsured	- 0.05 (0.03) [0.16]	- 0.04 (0.03) [0.22]	- 0.08 (0.03) [0.02]	- 0.08 (0.03) [0.02]	- 0.08 (0.03) [0.02]	- 0.08 (0.03) [0.03]	- 0.11 (0.03) [0.00]	- 0.11 (0.04) [0.00]	- 0.04 (0.16) [0.82]	0.01 (0.16) [0.94]	0.01 (0.19) [0.97]	0.05 (0.18) [0.80]
R ²	0.628	0.630	0.685	0.685	0.557	0.557	0.626	0.627	0.600	0.609	0.659	0.668
N	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,049	1,049	1,049	1,049
	<u>B. Operating margin</u>											
Share of population uninsured	- 0.07 (0.03) [0.03]	- 0.07 (0.03) [0.04]	- 0.09 (0.03) [0.01]	- 0.08 (0.03) [0.01]	- 0.10 (0.03) [0.00]	- 0.10 (0.03) [0.00]	- 0.11 (0.03) [0.00]	- 0.11 (0.03) [0.00]	- 0.05 (0.16) [0.74]	- 0.01 (0.16) [0.97]	- 0.01 (0.18) [0.96]	0.03 (0.18) [0.87]
R ²	0.634	0.635	0.684	0.684	0.540	0.540	0.607	0.609	0.606	0.613	0.664	0.672
N	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,224	1,049	1,049	1,049	1,049
State-year controls		✓		✓		✓		✓		✓		✓
Region-year fixed effects			✓	✓			✓	✓			✓	✓

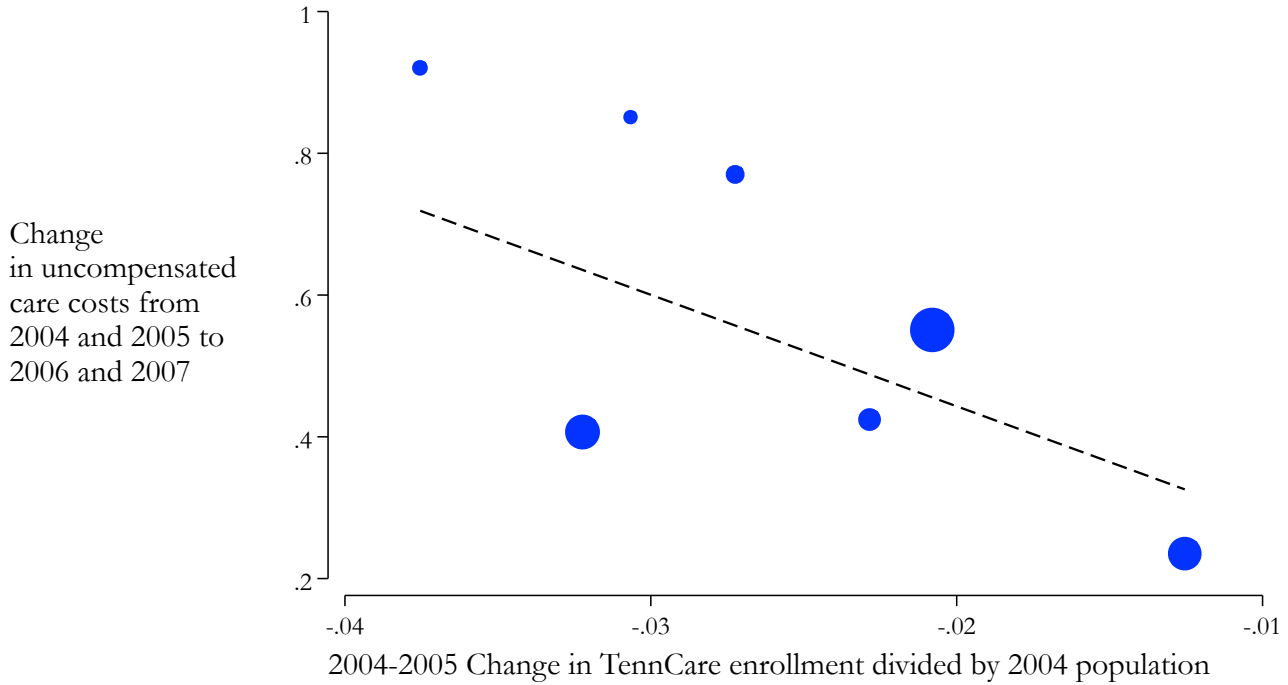
Notes: The sample consists of means of the dependent variables by state and year from 1988 through 2011. The standard errors in parentheses are robust to auto-correlation between observations from the same state; associated *p*-values in brackets. Year and state fixed effects not shown. Only hospitals with an ER are included in the sample for this table.

Appendix Figure A1. Comparison of JAR and AHA Uncompensated Care Numbers



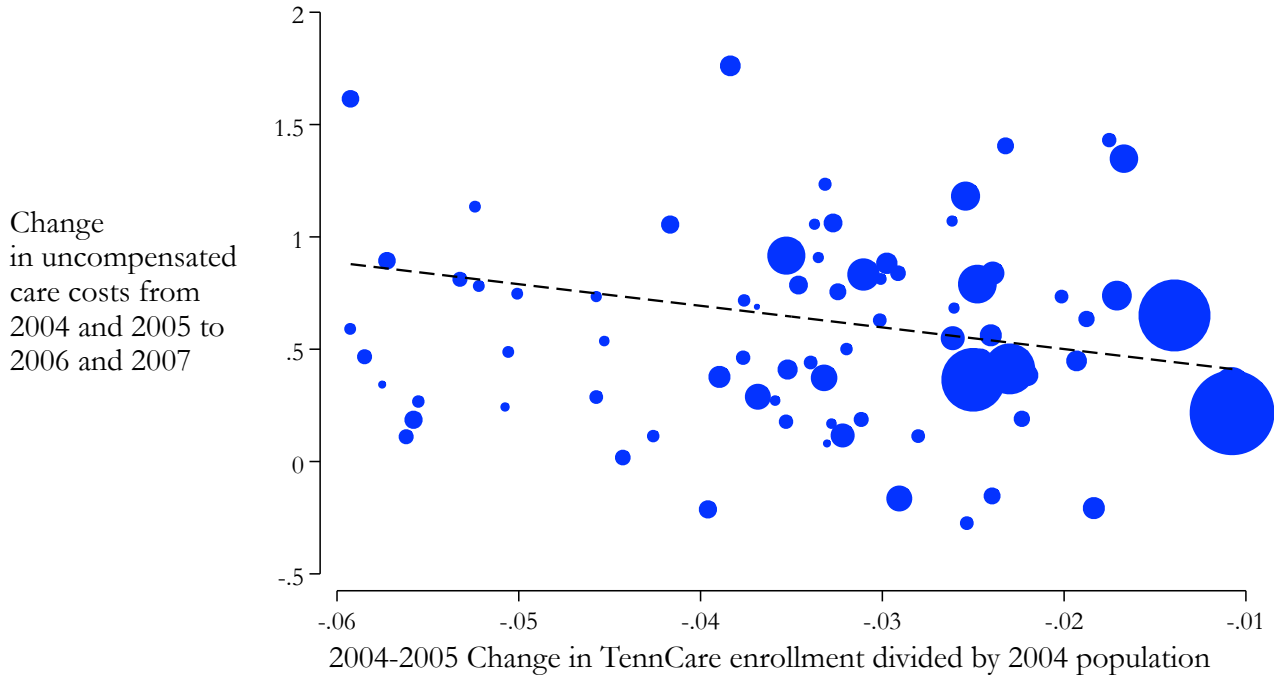
Note: The data for this figure come from both the AHA survey and the JAR data. See text for details.

Appendix Figure A2. Changes in Uncompensated Care Costs within Tennessee, Before and After TennCare Disenrollment, By Hospital Referral Region



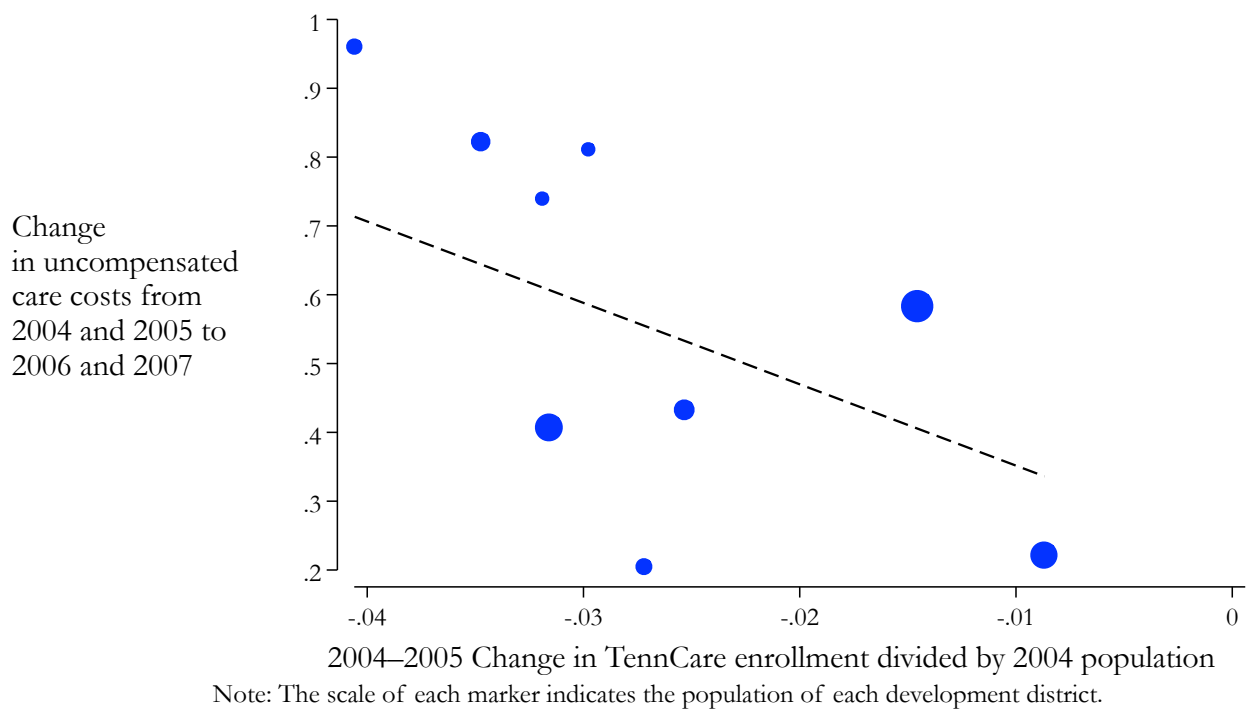
Note: The scale of each marker indicates the population of each HRR. We drop one HRR from the figure to improve visibility, but it is included in the regression line and in the associated appendix table.

Appendix Figure A3. Changes in Uncompensated Care Costs within Tennessee, Before and After TennCare Disenrollment, By Health Service Area

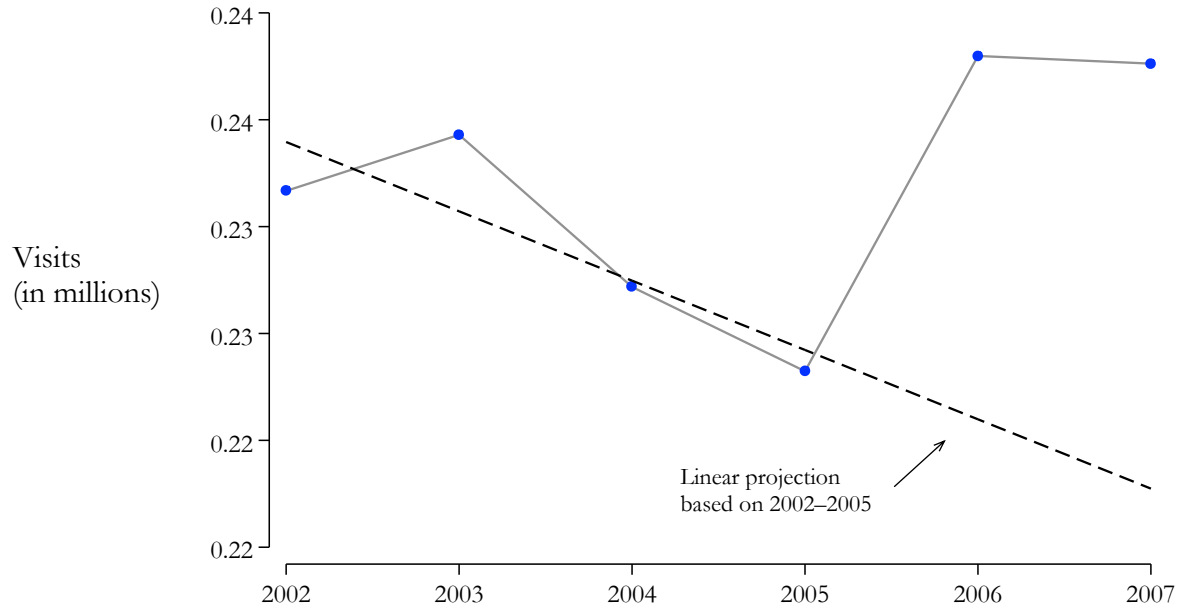


Note: The scale of each marker indicates the population of each HSA. We drop three HSAs from the figure to improve visibility, but they are included in the regression line and in the associated appendix table.

Appendix Figure A4. Changes in Uncompensated Care Costs within Tennessee, Before and After TennCare Disenrollment, By Development District

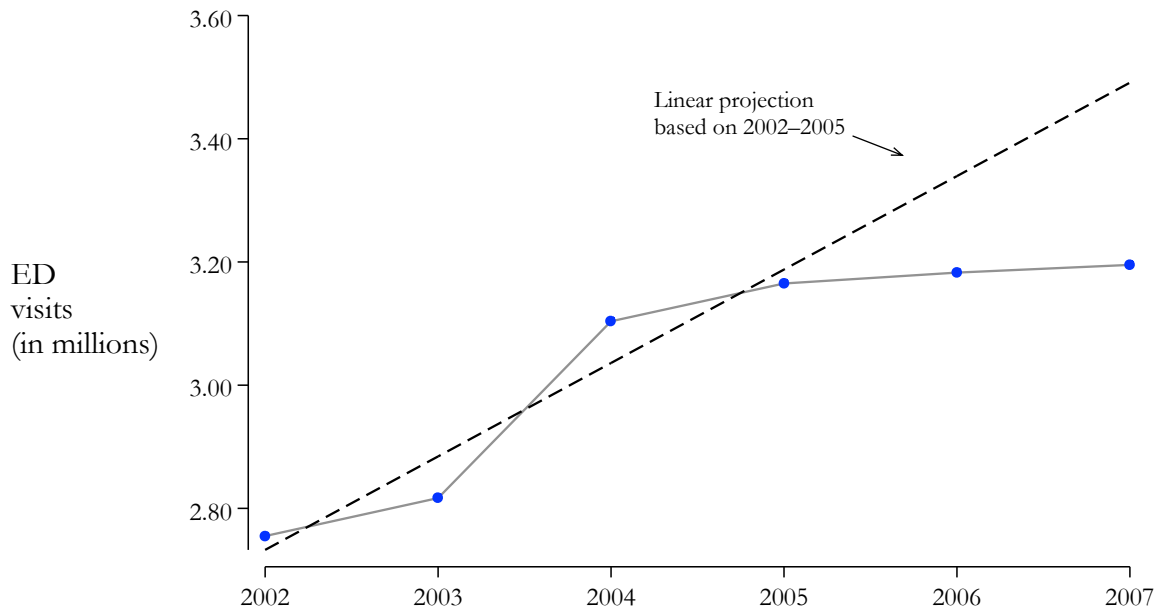


Appendix Figure A5. Tennessee Privately Insured Inpatient Visits, JAR Data



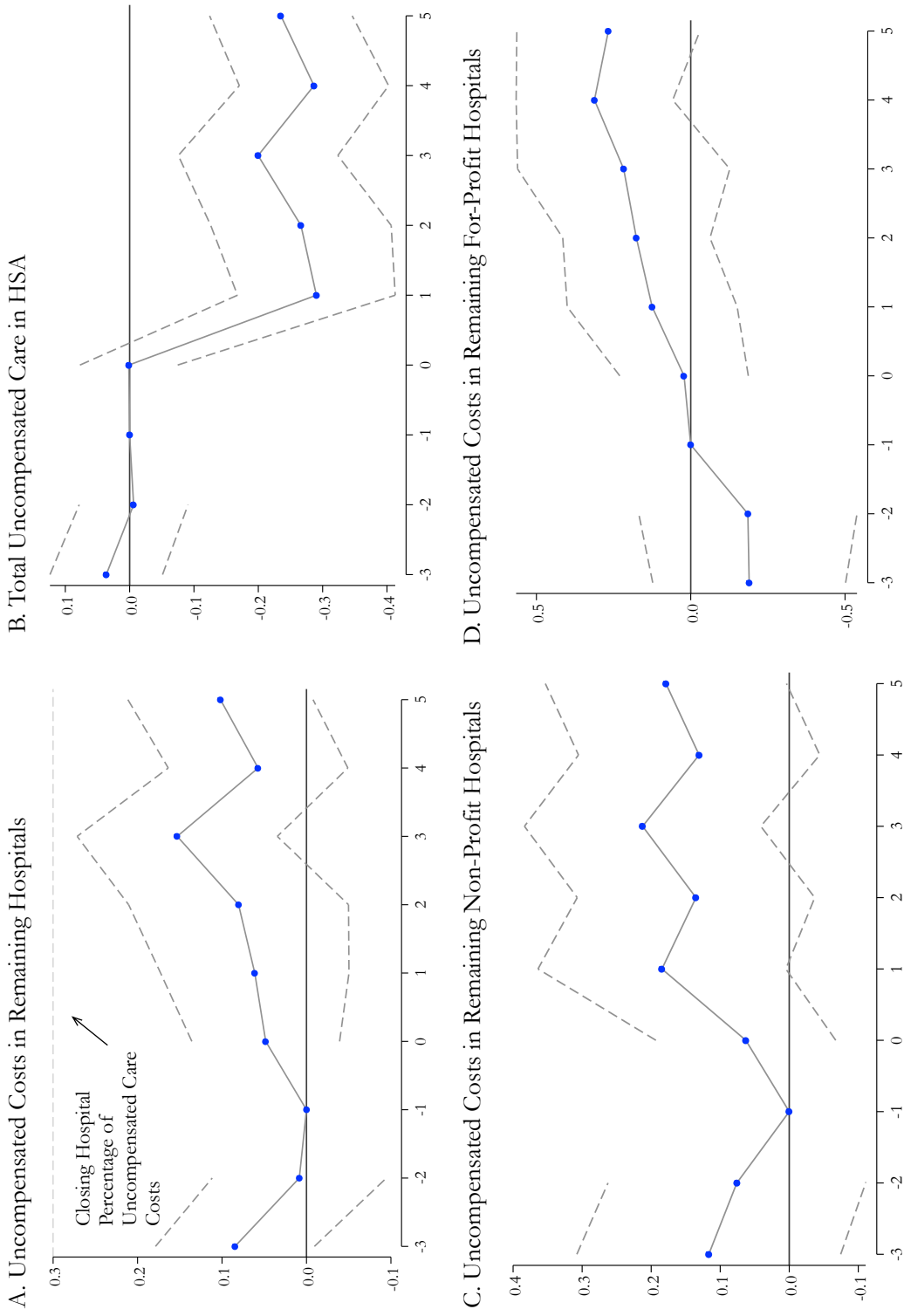
Note: This figure presents the number of privately insured inpatient visits in Tennessee, as recorded in the JAR data. The dashed line plots a linear projection based solely on years 2002 through 2005.

Appendix Figure A6. Tennessee ED Visits, JAR Data



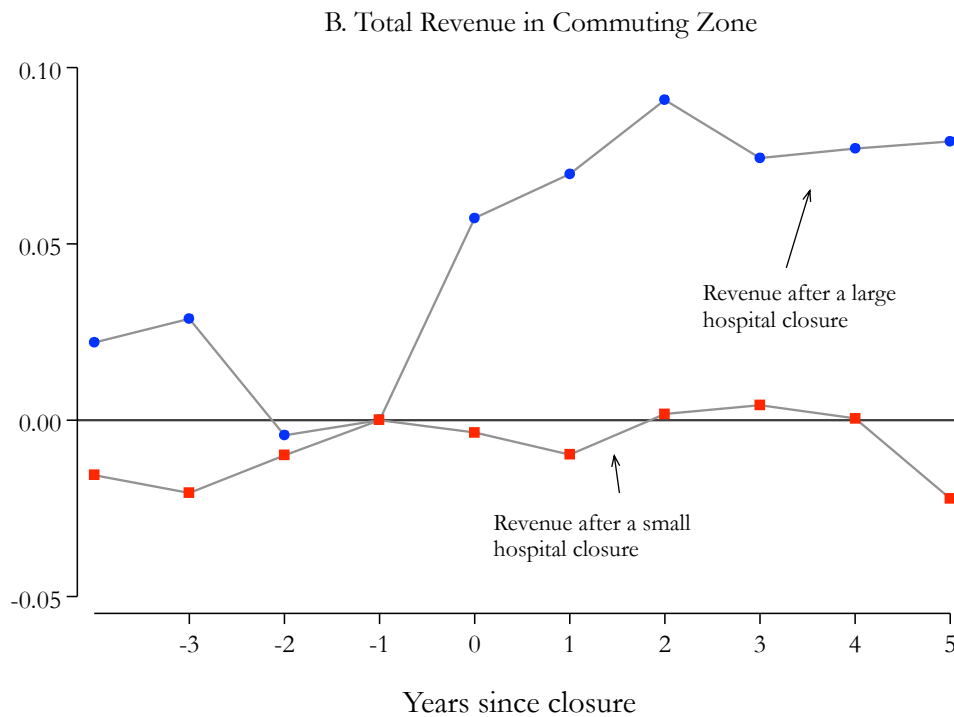
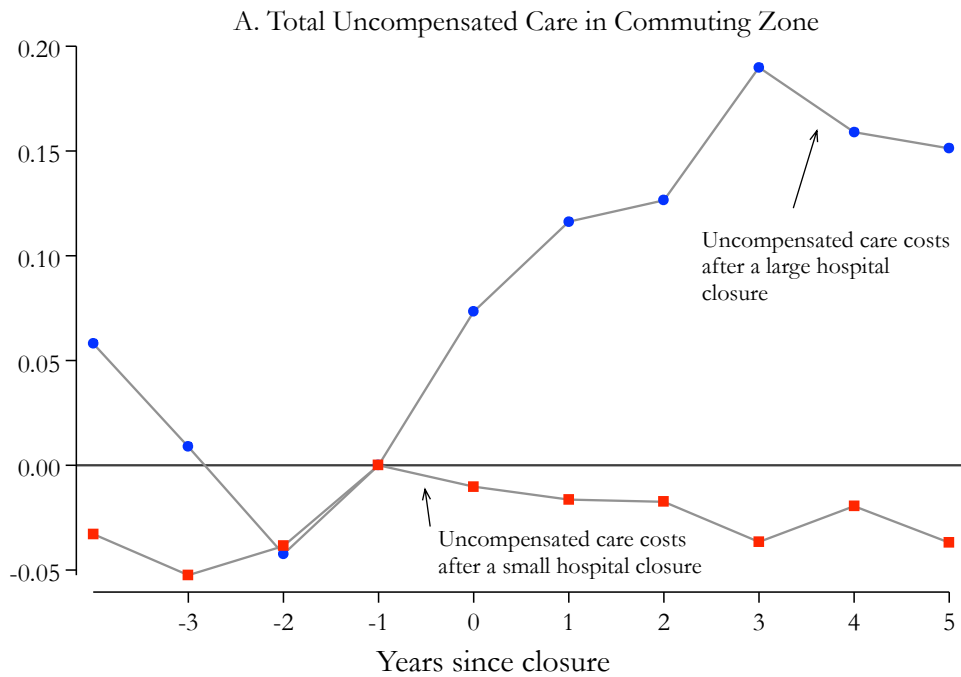
Note: This figure presents the number of ED visits in Tennessee, as recorded in the JAR data. The dashed line plots a linear projection based solely on years 2002 through 2005.

Appendix Figure A7. Change in Uncompensated Care in an HSA After a Hospital Closure



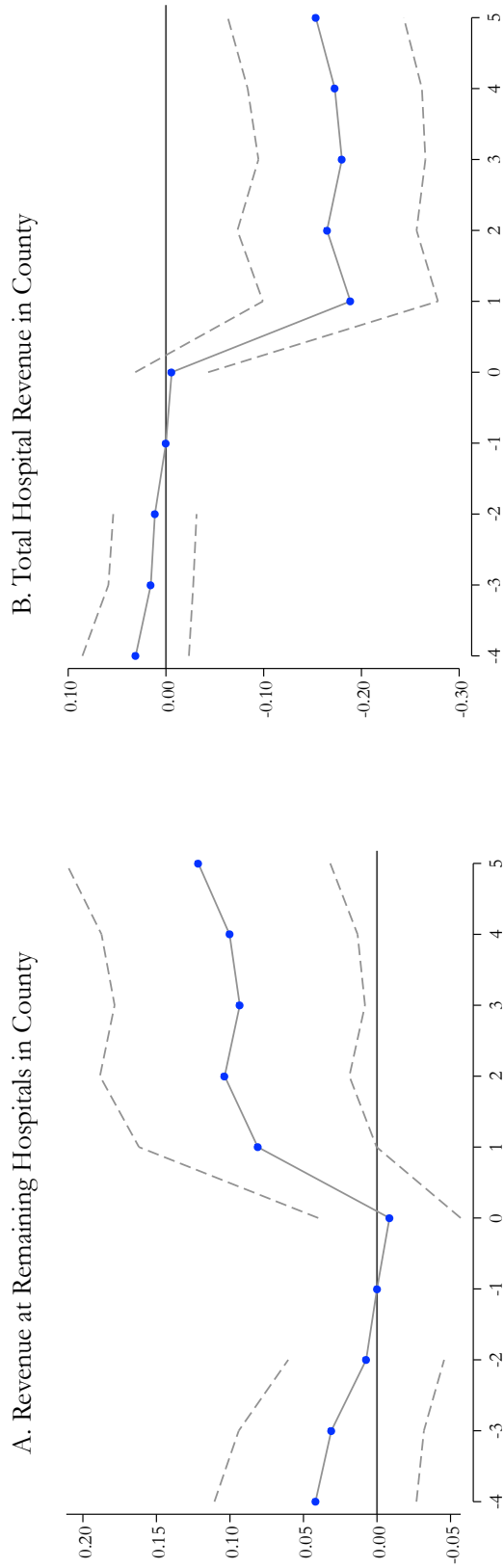
Note: This figure plots point estimates from a regression of hospital uncompensated care in each HSA on a series of exhaustive indicator variables for the years since the closure of a large hospital. The year before the closure is the omitted category. The data consist of GAO records of hospital closures combined with the AHA survey. See text for details. The dashed lines connect 95-percent confidence intervals.

Appendix Figure A8. Effect of Hospital Closures in Commuting Zones
By Size of Closure



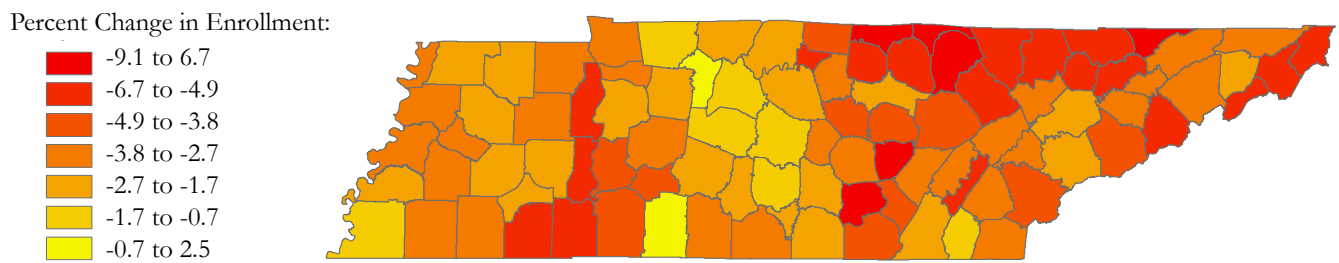
Note: This figure plots point estimates from a regression of uncompensated care costs on a series of exhaustive indicator variables for the years since the closure of a hospital. We categorize hospital closures as large if the hospital provided greater than 7 percent of the region's uncompensated care before closure, given that 7 percent is the median share. The year before the closure is the omitted category. The data consist of GAO records of hospital closures combined with the AHA survey. See text for details.

Appendix Figure A9. Change in Hospital Revenue in a County After a Hospital Closure



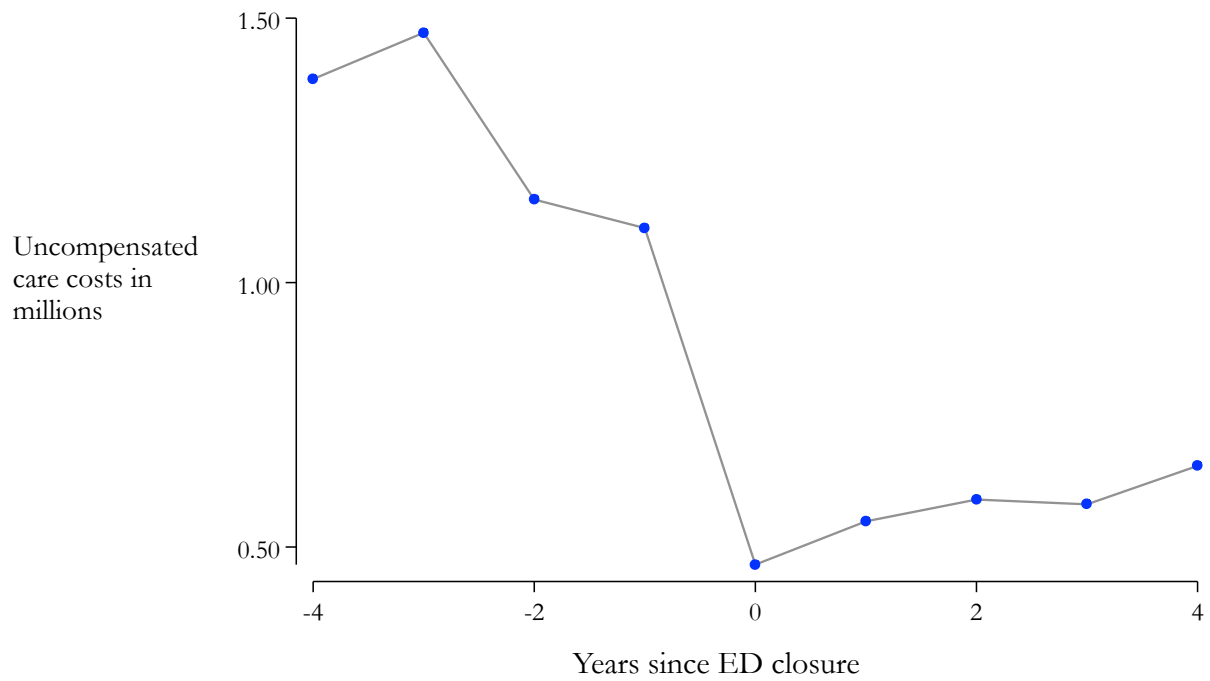
Note: This figure plots point estimates from a regression of hospital revenue in each county on a series of exhaustive indicator variables for the years since the closure of a large hospital. The year before the closure is the omitted category. The data consist of GAO records of hospital closures combined with the AHA survey. See text for details. The dashed lines connect 95-percent confidence intervals.

Appendix Figure A10. Changes in TennCare Enrollment by Tennessee Counties



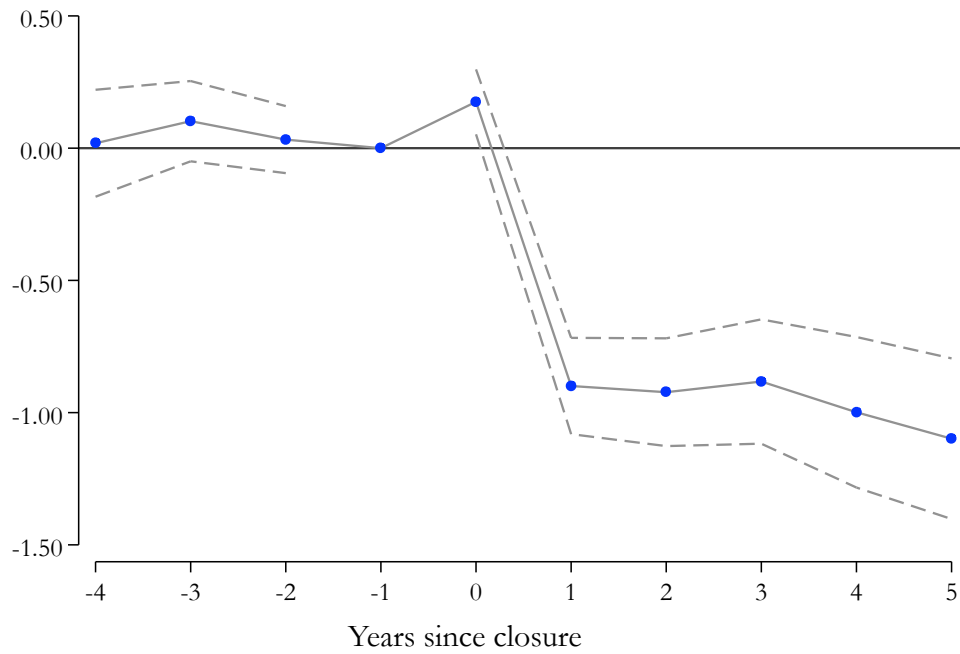
Note: This map indicates changes in Medicaid enrollment for each county in Tennessee as reported in the 2004–2005 and 2005–2006 annual reports for TennCare.

Appendix Figure A11. Uncompensated Care Costs in a Hospital Before and After ED Closure



Note: This figure presents a re-centered time series with average uncompensated care costs in the years before and after a hospital closes its ED.

Appendix Figure A12. Change in Number of Hospitals in Commuting Zone After a Hospital Closure



Note: This figure plots point estimates from a regression of number of hospitals in each commuting zone on a series of exhaustive indicator variables for the years since the closure of a large hospital. The year before the closure is the omitted category. The data consist of GAO records of hospital closures combined with the AHA survey. See text for details. The dashed lines connect 95-percent confidence intervals.