

Effect of Critical Access Hospital Conversion on Patient Safety: Appendix

Table S5. Sensitivity Analyses of Tobit Models of Continuous PSIs (Lower PSI value is better performance): Coefficients of CAH, and CAHmv⁺

Models		PSI-2	PSI-3	PSI-5	PSI-6	PSI-7	PSI-15	Composite score of 4PSIs [†]	Composite score of 6PSIs [‡]
Random-effects Tobit model of risk-adjusted rate PSI indicators (89 hospitals, 1997 to 2004) [¶]	CAH	-5.14 [‡]	-1.82 [‡]	-0.91	-2.00**	-2.91**	-1.61*	-1.00* [‡]	-0.84 [‡]
	CAHmv	-6.85 [‡]	-4.18 [‡]	-0.54	-2.10**	-4.34**	-2.04	-1.29* [‡]	-2.42** [‡]
Random-effects Tobit model of observed rate of PSI indicators (89 hospitals, 1997 to 2004) [†]	CAH	-5.14 [‡]	-1.01 [‡]	-0.91	-1.39**	-2.45**	-0.85* [‡]	-0.53* [‡]	0.47 [‡]
	CAHmv	-6.85 [‡]	-3.04 [‡]	-0.54	-1.48*	-3.65**	-1.18* [‡]	-0.73* [‡]	-2.14 [‡]
Unconditional fixed-effects Tobit models ⁺⁺⁺ (89 hospitals, 1997 to 2004)	CAH	0.9	-2.79	NA ⁺⁺	-0.91	-2.02**	-1.63*	-0.96*	-0.75
	CAHmv	2.3	-5.02*	NA ⁺⁺	-0.70	-3.21**	-2.41*	-1.46*	-2.54**

* Statistically significant at 0.1 level.

** Statistically significant at 0.05 level.

+ Unit of analysis is hospital per year. Y1998 to y2004 were dummy variable for year 1998 to 2004. The year of 1997 is the reference category. Coefficients based on Tobit models with the following control variables: CAH/CAHmv, % Medicare days, % Medicaid days, % of surgical discharges, Charlson Index, Market concentration (HHI), Per capita income (\$1,000), Population density, and year dummy variables.

++ Convergence was not achieved.

+++ Add hospital dummy variables in cross-sectional Tobit model

† Composite scores for observed rates are numerator weighted summation of observed rates for PSI-5, PSI-6, PSI-7 and PSI-15 (Composite score of 4PSIs) and numerator weighted summation of observed rates for PSI-2, PSI-3, PSI-5, PSI-6, PSI-7 and PSI-15 (Composite score of 6PSIs)

‡ The results should be interpreted with caution, given that estimations for some coefficients were not stable under quadchk

¶ PSI-2 and PSI-5 are observed rate.