Certificate of Need Laws and Acute Care Utilization Rates:
An Investigation of Kentucky & Pennsylvania

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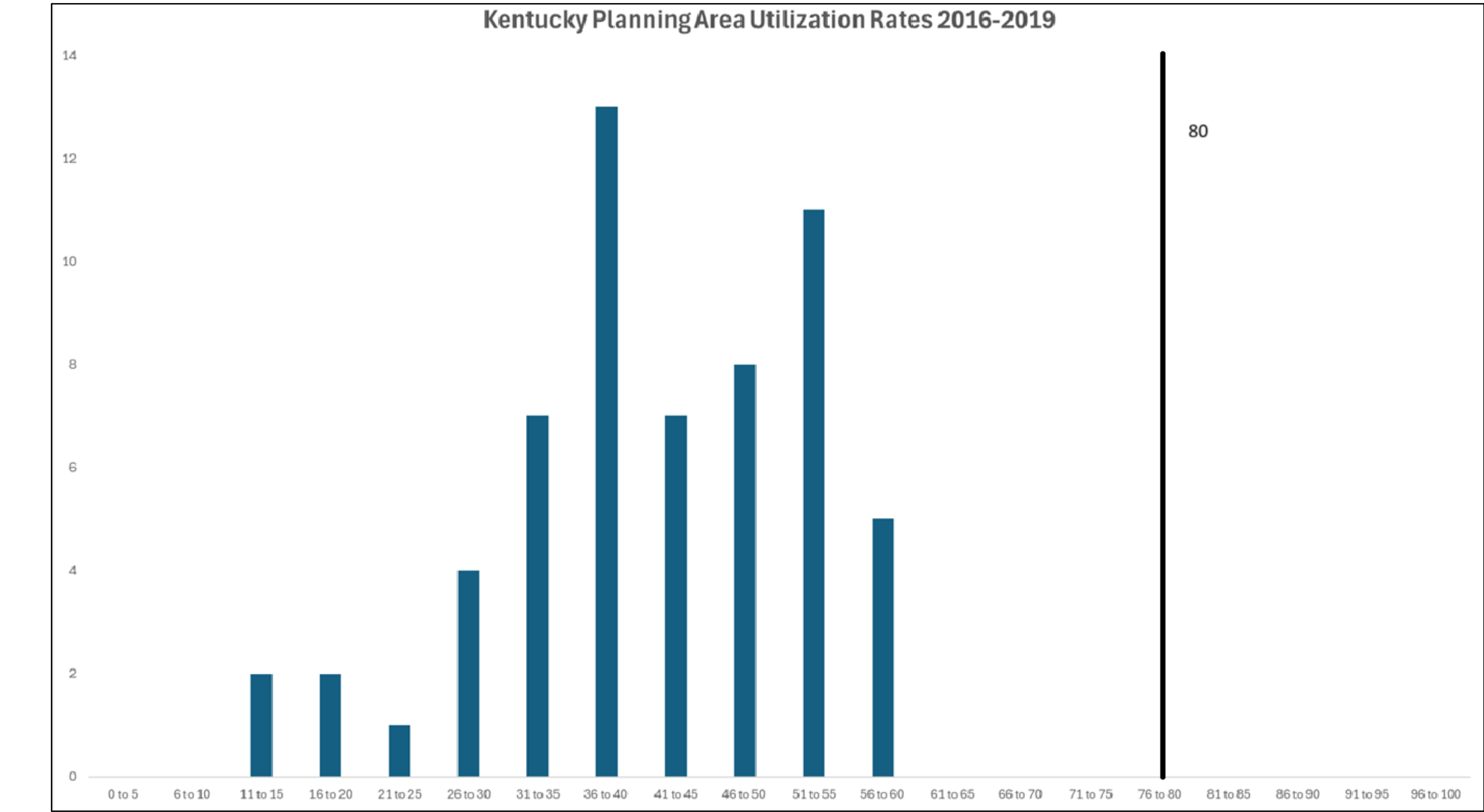**Florida State University, Honors in the Major**
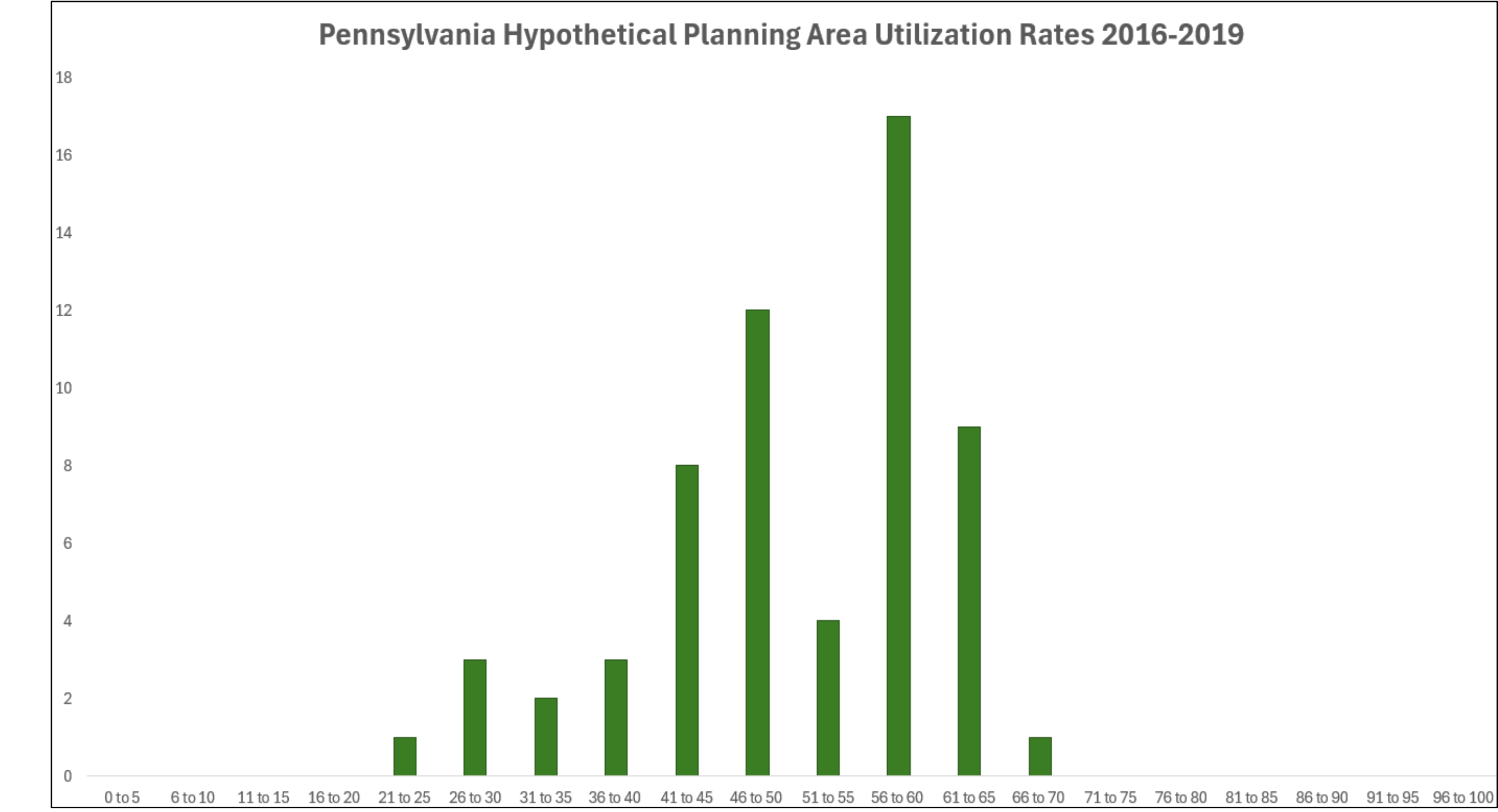
Question and Background

What effect, if any, does the presence of CON Laws have on the utilization rates of acute care beds?

Certificate of Need (CON) Laws were designed to limit healthcare spending. In 1974 the federal government mandated states create CON programs to qualify for healthcare funding. These programs required prospective providers to **demonstrate sufficient need** in their area to receive a license to operate. CON has been associated with worse health outcomes and higher spending. In 1982 the federal mandate was repealed. Today, 35 states and Washington DC maintain CON programs.

In Kentucky, one criterion to demonstrate sufficient need is that the Area Development District (ADD) of the prospective facility has a utilization rate of over **80%**. This is a preliminary inquiry into whether this threshold is associated with different acute care utilization patterns from states without CON laws.

Kentucky Planning Area Utilization Rates 2016-2019

Average Utilization Rate (2016-2019): 41%

Pennsylvania Hypothetical Planning Area Utilization Rates 2016-2019

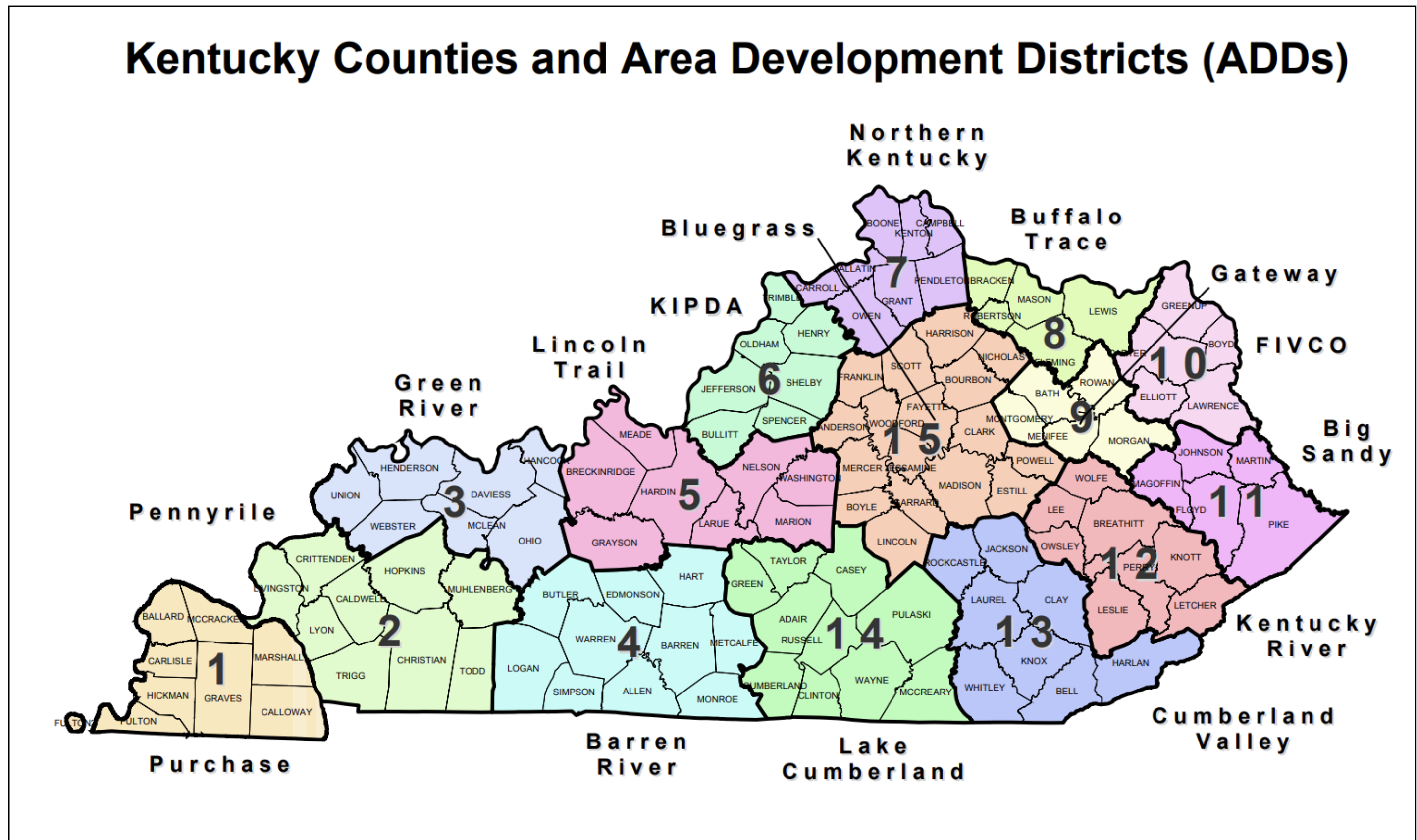**Average Utilization Rate (2016-2019): 51%**

Model & Preliminary Results

$$UR_{it} = \beta_0 + \beta_1 CON_i + \beta_2 \text{med.age}_{it} + \beta_3 \text{med.income}_{it} + \beta_4 OR_{it} + \beta_5 SR_{it} + \beta_6 \text{year}_t + \beta_7 \text{population}_{it} + \beta_8 \%\text{Female}_{it} + \beta_9 \%\text{White}_{it} + \delta_t + \varepsilon_i$$
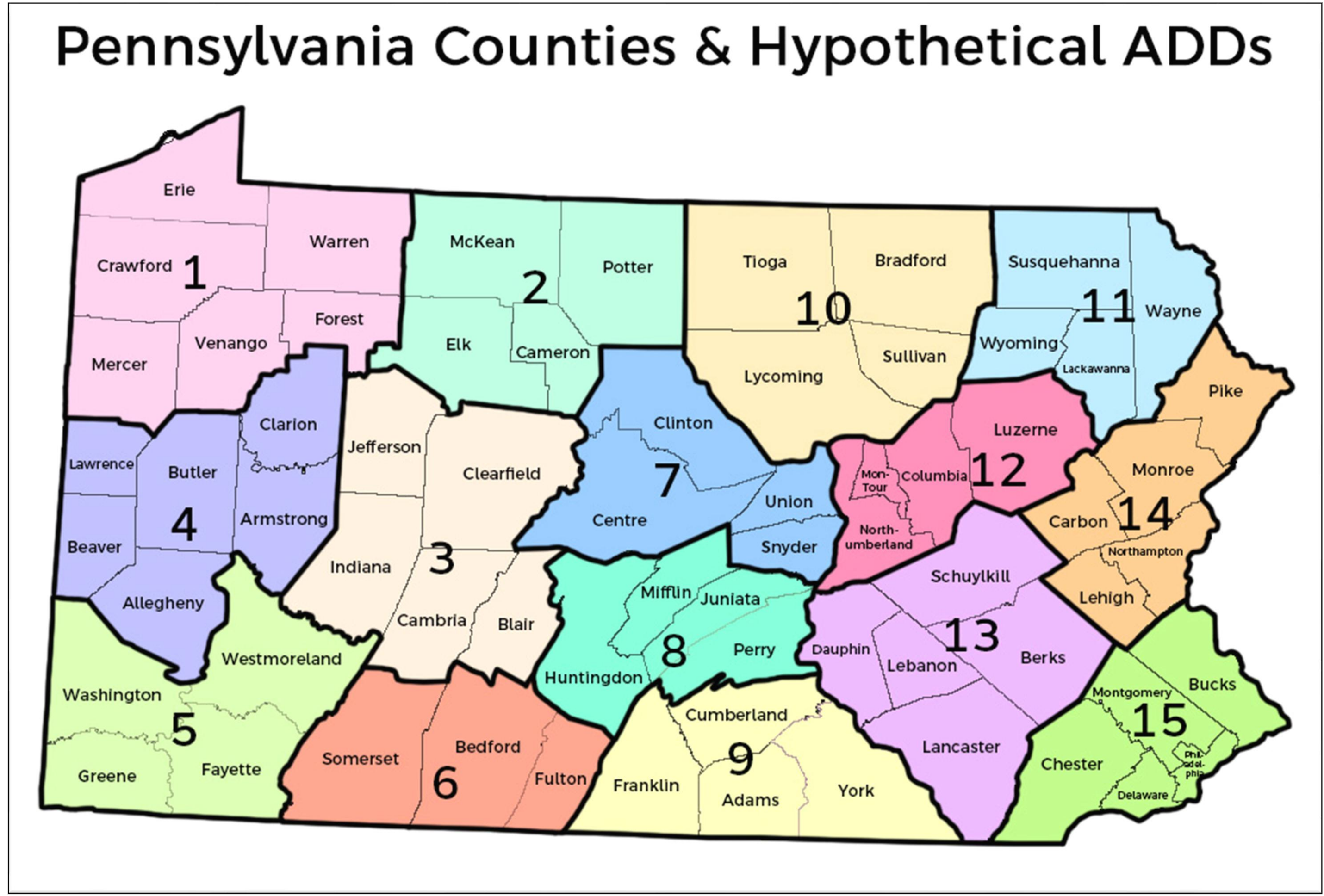
· 30 ADDs (15 in KY, 15 in PA) over 4 years (2016-2019)
· Includes a fixed-effect for the year variable to smooth out time variation
· Utilization Rates are calculated via the following formula:

$$\text{Utilization Rate} = \frac{\left[\text{Inpatient Days}\right]}{\left(\left[\text{Licensed Beds}\right] \cdot \text{Days in Reporting Period}\right)}$$

Area Development Districts

Kentucky Counties and Area Development Districts (ADDs)

Source: Kentucky Cabinet for Health & Family Services

Pennsylvania Counties & Hypothetical ADDs

I would like to thank Dr. Rodgers and Dr. Coleman for their guidance

Results

Table 1: Results

Variable	Coefficient (Std. Error)
CON	-7.706 (3.761)*
Obesity Rate (BMI > 30)	0.5997 (0.3513)
Smoking Rate	-0.4597 (0.356)
Median Age	-1.199 (0.5301)*
Median Income	0.0002477 (0.0001831)
Resident Population Estimate	0.000003012 (0.000002451)
Percent Female	2.658 (0.9209)**
Percent White	0.08753 (0.3811)
Factor (Year) 2017	-0.9033 (2.395)
Factor (Year) 2018	-2.682 (2.521)
Factor (Year) 2019	-4.508 (2.912)
Constant	-62.9 (55.57)
R^2	0.4504

*N = 120. Note: standard errors are not robust. * P < .05. ** P < .01.*

· Statistically significant negative relationship between the presence of CON laws and acute care bed utilization rates

Future Research and Policy Implications

· Future research should
  · Explore the procedural mechanisms in CON hospitals which may influence utilization rates
  · Expand this analysis to more states, hypothetical ADD variations, and procedures
· Dependent on findings, policymakers should continue to evaluate the efficacy of CON laws

Limitations

· Limited data on utilization rates for other non-CON states
· Both COVID-19 and data availability limited the time range for which data could be collected
· ADDs for Pennsylvania created by hand and only one variation used

References