



Population Health

How does the economy affect wellness?

Research Questions

Do economic conditions/events affect the number of hospital (ER and inpatient) visits?

- Is there an association between unemployment rate and hospital visits?
- How did the Great Recession impact hospital visits?
- Do we see an impact of the Affordable Care Act on hospital visits?
- Are these associations/effects different by payor type (Medicare, Medicaid, Private, Indigent Care)?
- Did differences between states in adoption of Medicaid expansion under ACA influence population migration between-states ?

Team

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Population Health Economy & Wellness – Challenges and Data Sources

National Study of States

Challenges

- Cleansing data/aligning columns

Data Sources

- Census.gov
- Bureau of Labor Statistics
- Agency for Healthcare Research and Quality

California Study of Cities

Challenges

- Cleansing data/aligning columns
- Reading tab delimited data

Data Sources

- Bureau of Labor Statistics
- Office of Statewide Health Planning and Development (CA)

Tools

- SAS
- R
- C#
- Tableau

Population Health Economy & Wellness National Study

Data

Census.gov

- Migration numbers between states

Bureau of Labor Statistics

- Unemployment rate by state

Agency for Healthcare Research & Quality

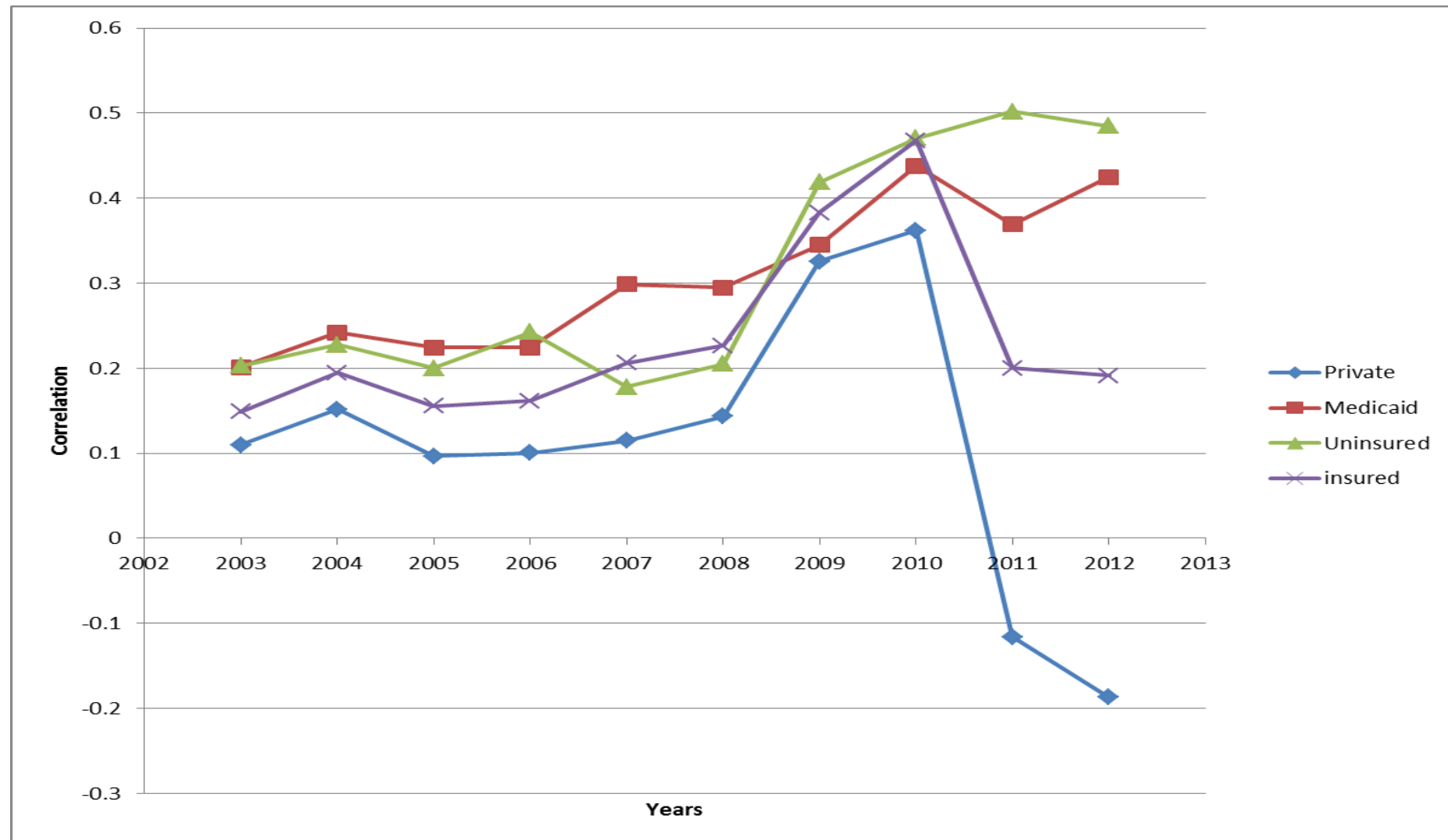
- Hospital Visit Stats by State

Assembly

Limited hospital data to patients under age 65

Divided hospital visit numbers by size of workforce in state

Correlations Between State Unemployment Rate and State Hospital Visits Over Time (Cross-sectional Analyses; National Study)



Link to Live Charts (Tableau)

pophealth.meteor.com

National Study of States, Longitudinal Analysis

Adjusted Effects of 1% increase in Unemployment Rate

	Hospital Stays per 10,000 in workforce
Medicaid	- 032
Indigent	+ 131 (p<.0001)
Private	+ 109

Adjusted for state fixed effects

Population Health Economy & Wellness California Study

Data

Bureau of Labor Statistics

- Local Area unemployment rate for CA cities and towns with population >25 K

Office of Statewide Health Planning and Development (CA)

- Hospital Visit Numbers per year by Hospital
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Assembly

Divided hospital visit numbers by number of available beds

Combine hospital data within cities/townships; neighborhoods mistakenly coded as cities in data

Harmonize different city names in data sets: San Buenaventura vs. Ventura

Averaged monthly unemployment rates (seasonally unadjusted) into unemployment rate for the year

Link to Live Charts (Tableau)

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California Study of Cities & Towns

Adjusted Effects of 1% Increase in Unemployment Rate

	ER Visit Numbers per available bed	Inpatient Numbers per available bed
Total	8.42 (p < .0001)	0.106 (p = .10)
Medicare	3.95 (p < .0001)	0.140 (p < .0001)
Medicaid	3.26 (p < .0001)	0.153 (p < .0001)
Indigent	1.50 (p < .0001)	0.083 (p < .0001)
Private	-0.29 (p < .0001)	-0.271 (p < .0001)

Longitudinal Analyses
Adjusted for city fixed effects