

The Opioid Prescribing Rate and Grandparents Raising Grandchildren: State and County Level Analysis

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THE OPIOID EPIDEMIC AND GRANDPARENTS RAISING GRANDCHILDREN

- The opioid epidemic was declared a public health emergency in 2017.
- In 2017 there were six times as many overdose deaths involving opioids as in 1999 (Centers for Disease Control and Prevention 2017).
- There has been growing concern on who raises the children of parents with substance abuse disorders, who may be incarcerated, in treatment programs, or otherwise unable to care for their children.
- In 2016, 34 percent of children who entered the foster care system were removed from their homes due to parental substance abuse (US Department of Health and Human Services 2017)
- Many children who live with relatives are not in the foster system – there are 20 times more children living with relatives outside of the foster system than those living with relatives who are in the foster system (Generations United 2016).
- The percentage of children living in a grandparent-headed household increased from 3 percent in 1970 to 6 percent in 2012 (Ellis and Simmons 2014).
- In 2016, there were 7.2 million grandparents living with their grandchildren, and over 2.5 million were responsible for their grandchildren’s basic needs (US Census Bureau 2017).

RESEARCH QUESTION

Is the prescription opioid rate associated with the percentage of grandparents raising grandchildren at the state and county levels, net of demographic and socioeconomic characteristics of the area?

DATA AND METHODS

- Opioid Prescribing Rate: Centers for Disease Control and Prevention, 2016 Prescribing Data (<https://www.cdc.gov/drugoverdose/maps/rxrate-maps.html>)
 - The Opioid Prescribing Rate is per 100 persons and includes both new and refill prescriptions.
- Grandparents Raising Grandchildren, Socioeconomic and Demographic Variables: 2012-2016 American Community Survey, 5-year estimates (<https://www.census.gov/programs-surveys/acs/>)
 - Only counties with at least 100 weighted grandparents living with grandchildren were included in the county-level analysis (N=2,633).
 - Rural and urban county classifications come from the United States Department of Agriculture 2013 Rural-Urban Continuum Codes.
 - Based on this classification, 1,121 counties are metropolitan counties and 1,512 are nonmetropolitan counties.
- Analyses use OLS Regression to predict the percent of the population aged 30 and over raising grandchildren at the state and county levels. Separate analyses present the results for metropolitan and nonmetropolitan counties.
- The population aged 30 and over will be referred to as “adults” throughout the poster.

RESULTS

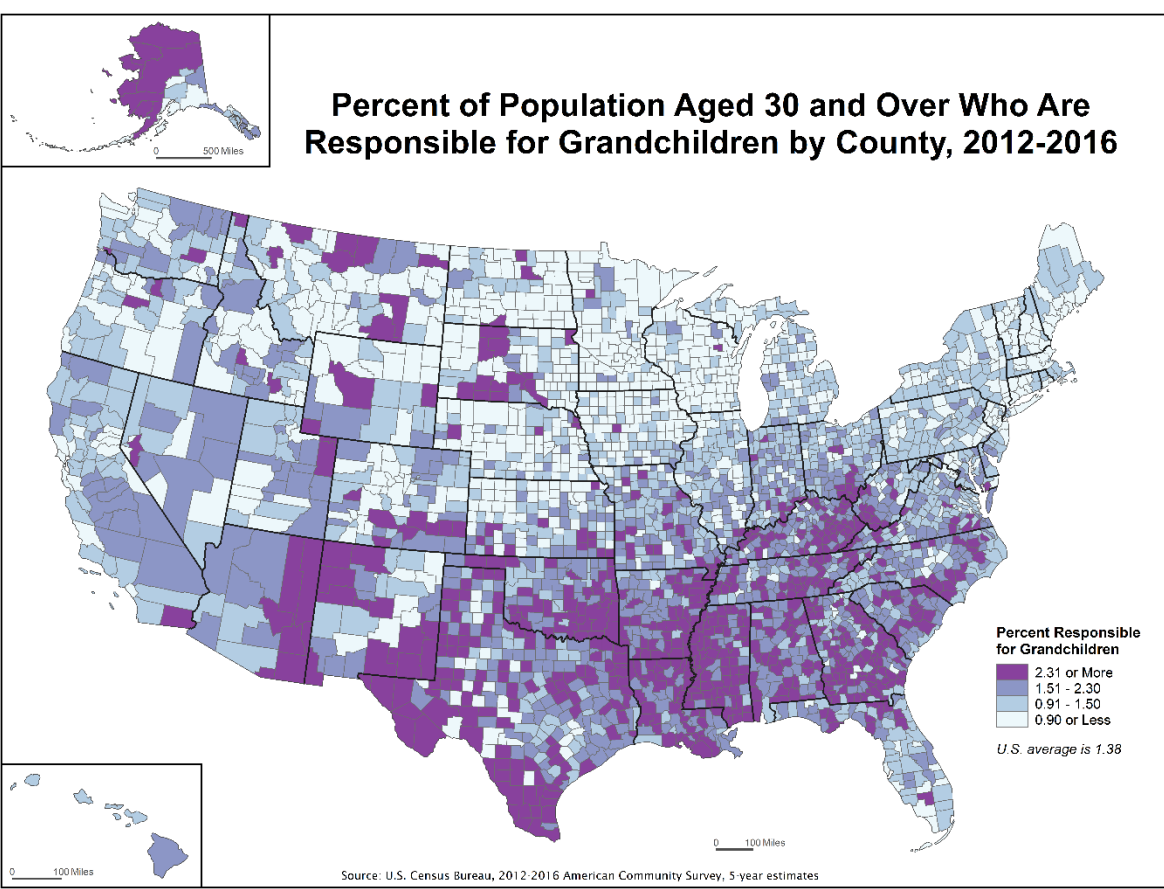
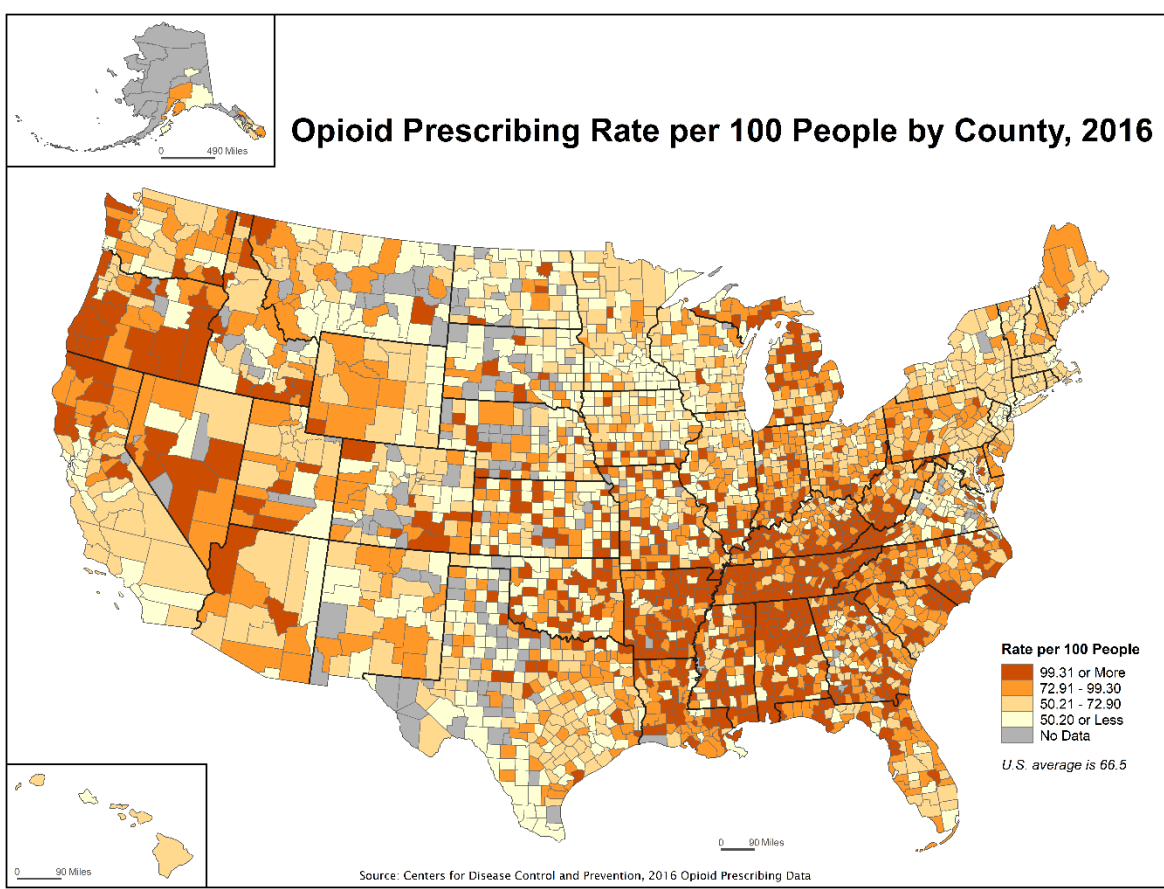
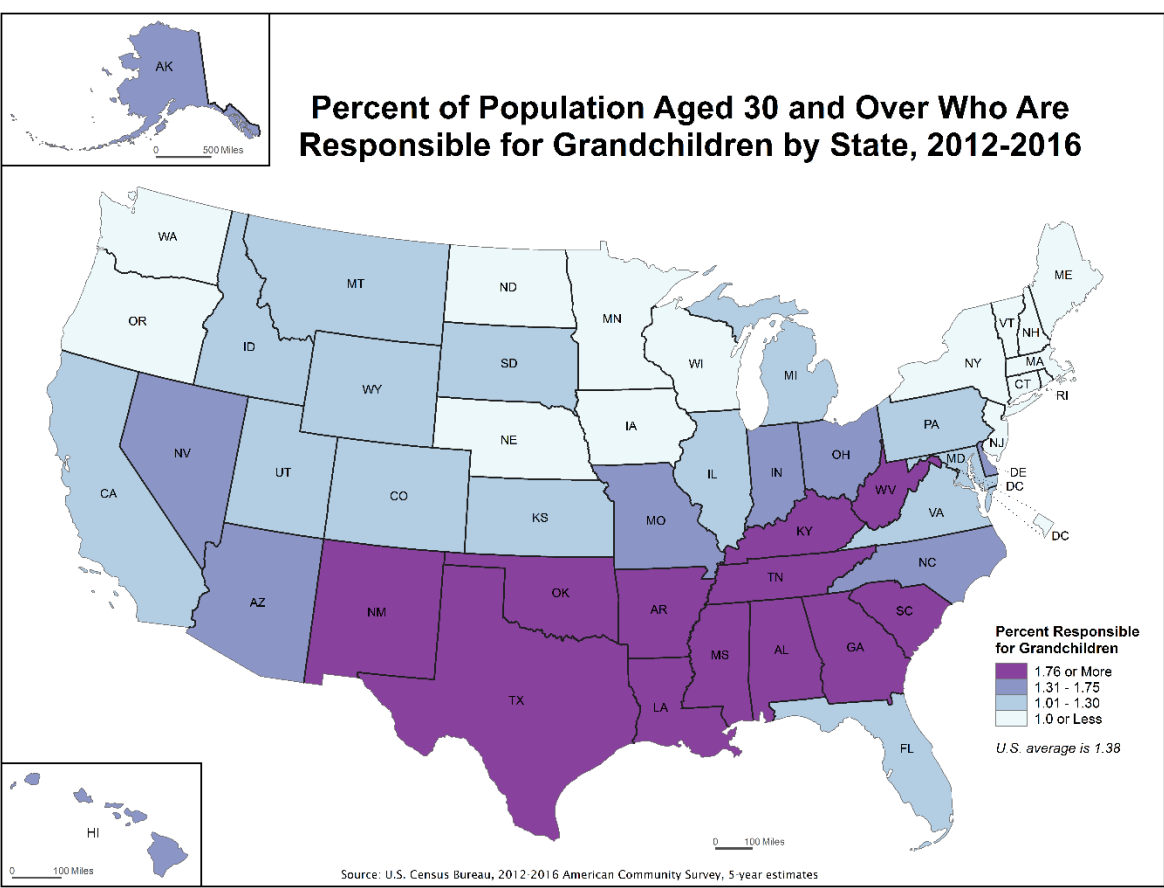
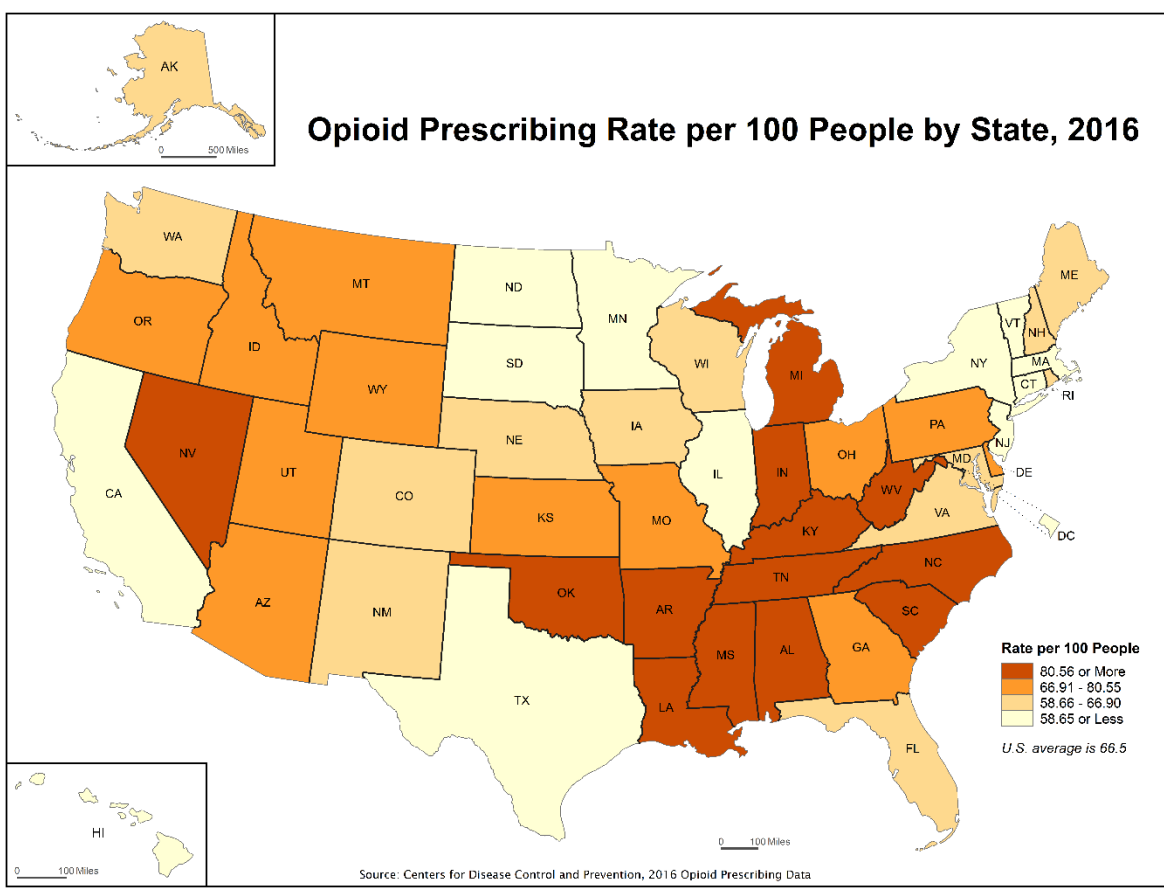
Significance of Coefficients in OLS Regression Analyses Predicting Percent of the Population Aged 30 and Over Raising Grandchildren	State	County	Nonmetro Counties	Metro Counties
Opioid Prescriptions per 100 People	↑	N.S.	N.S.	↑
Percent of Households in Poverty	N.S.	↑	↑	N.S.
Percent Disabled	N.S.	↑	↑	↑
Median Age	N.S.	↓	↓	↓
Percent Female of Population Aged 30 and Over	N.S.	↑	↑	N.S.
Race and Ethnicity of Population Aged 30 and Over (non-Hispanic White is Reference)				
Percent non-Hispanic Black	↑	↑	↑	↑
Percent non-Hispanic Asian	N.S.	↓	↓	↓
Percent non-Hispanic Other Race	↑	↑	↑	↑
Percent Hispanic	↑	↑	↑	↑

Significant at p<0.05; N.S. = Not significant
↑: Positively associated
↓: Negatively associated
Source: U.S. Census Bureau, 2012-2016 American Community Survey, 5-year estimates and Centers for Disease Control and Prevention 2016 Opioid Prescribing Data

- The relationship between the opioid prescribing rate and the percentage of adults raising grandchildren varies by geographic level of analysis and proximity of counties to a metro area.
- At the state level, the opioid prescribing rate is positively associated with adults raising grandchildren, but this relationship is not significant at the county level.
- When counties are grouped into metropolitan and nonmetropolitan counties, this relationship is significant and positive for metropolitan counties, but not nonmetropolitan counties.
- Percent disabled and the percent of adults that are female are both positively associated with adults raising grandchildren, while the median age is negatively associated with this measure. The associations of racial and ethnic groups follow previously established patterns of grandparents raising grandchildren by race/origin (Ellis and Simmons 2014).

POVERTY AND GRANDPARENTS RAISING GRANDCHILDREN

- Previous research has shown that children living in grandparent-maintained households are more likely to be in poverty than children living in other types of family living arrangements (Ellis and Simmons 2014; Hayslip and Kaminski 2005).
- In zero order county models (not shown), the opioid prescribing rate is positively associated with grandparents raising grandchildren, but this relationship becomes insignificant once a control for the household poverty rate is added.
- The correlation coefficient between the county-level household poverty rate and percent of adults raising grandchildren is 0.56.



Five States with Among the Highest and Lowest Percent of the Population Aged 30 and Over Raising Grandchildren	Percent	Five States with the Highest and Lowest Opioid Prescribing Rates per 100 People	Rate
Mississippi	2.9	Alabama	121.0
Arkansas	2.2	Arkansas	114.6
Louisiana	2.2	Tennessee	107.5
Alabama	2.2	Mississippi	105.6
Kentucky	2.1	Louisiana	98.1
US Average	1.4	US Average	66.5
Maine	0.8	Minnesota	46.9
Vermont	0.8	California	44.8
North Dakota	0.8	New York	42.7
Wisconsin	0.8	Hawaii	41.9
Minnesota	0.7	District of Columbia	32.5

Note: Estimates shown in this table may not differ statistically from one another or from estimates for other states.
Source: U.S. Census Bureau, 2012-2016 American Community Survey, 5-year estimates and Centers for Disease Control and Prevention 2016 Opioid Prescribing Data

- Mississippi, Arkansas, Louisiana, and Alabama are among the highest for both the percent of adults raising grandchildren and the opioid prescribing rate.
- Minnesota is among the lowest for both the percent of adults raising grandchildren and the opioid prescribing rate.
- The states with among the highest percent of adults raising grandchildren and opioid prescribing rates are located in the southern United States, while the states with among the lowest percent of adults raising grandchildren and opioid prescribing rates are located in different regions of the United States.

SUMMARY

- At the state level, controlling for socioeconomic and demographic characteristics, the opioid prescription rate is positively associated with adults raising grandchildren.
- At the county level, controlling for socioeconomic and demographic characteristics, the opioid prescription rate is not significantly associated with adults raising grandchildren.
- It is possible that much of the percentage of adults raising grandchildren can be explained by poverty.
- Many of the states with among the highest percent of adults raising grandchildren also have the highest opioid prescribing rates.