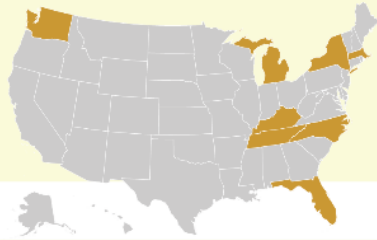


Mental Health Clinician Shortage, Long-Term Unemployment associated with Neonatal Abstinence Syndrome*

*Neonatal Abstinence Syndrome (NAS) is a withdrawal syndrome experienced by some opioid-exposed infants after birth.



Based on county-level data from **8 states**



Rates of NAS increased from **3.2 to 14.5** per 1000 hospital births from 2009-2015

MENTAL HEALTH



78% of metropolitan counties



86% of metro-adjacent rural counties



91% of rural remote counties

IN OUR STUDY had a shortage of mental health providers

Counties with a shortage of mental health providers were associated with higher rates of NAS

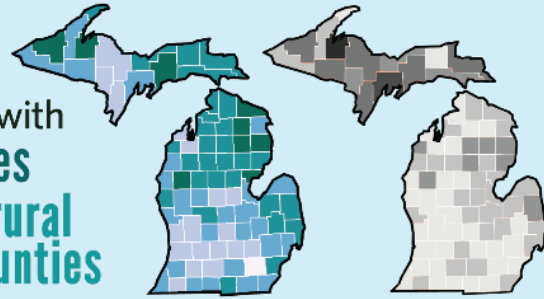


Adjusted IRR, 1.17

ECONOMIC FACTORS

From 2009-2015 the 10-year unemployment rate increased from **6.5%** to **8.2%**

and was associated with higher rates of NAS in rural remote counties



UNEMPLOYMENT RATE 10-year moving average
4% >12%

RATE OF NAS per 1000 hospital births
0 >100

Adjusted IRR, 1.34



In rural remote counties, a higher proportion of manufacturing jobs WAS ASSOCIATED WITH higher rates of NAS

Adjusted IRR, 1.06



County macroeconomic conditions affect rates of NAS, especially in rural counties

POLICYMAKERS should recognize a healthy economy can contribute to a HEALTHY POPULATION

Patrick SW, Faherty LJ, Dick AW, Scott TA, Dudley J, Stein BD. Association Among County-Level Economic Factors, Clinician Supply, Metropolitan or Rural Location, and Neonatal Abstinence Syndrome. *Journal of the American Medical Association*. 2019; 321(4): 385-393. doi:10.1001/jama.2018.20851

@VUMChildPolicy • To explore NAS in your county, visit : www.childpolicy.org/nas
For more opioid policy research, visit : www.rand.org/health-care/centers/optic.html

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