

September 2018 Update from the Field: Rural Opioids

The Opioid Crisis in Rural and Small Town America. Monnat SM, Rigg KK. *Carsey School of Public Policy National Issue Brief*. 2018;135.

Over the last two decades, opioid overdose deaths have increased over 400 percent, reaching 45,838 in 2016. Although the crisis is not disproportionately worse in rural than in urban America, opioid mortality rates have grown faster in rural areas, particularly in the Northeast and Midwest. Rural areas also face unique challenges in dealing with the crisis, including a smaller health care infrastructure than is available in more densely populated areas, community and family factors, and labor market stressors. **Key Findings:** In 2016, opioid mortality rates were higher in urban than in rural counties, particularly in the Midwest, but rates have increased more in rural than in urban counties over the past two decades. Since 2010, the share of drug overdose deaths involving prescription opioids has declined, but the share of deaths involving heroin and synthetic opioids has spiked in both rural and urban areas. The most dramatic increases in opioid deaths were in the rural Midwest, where they were 16 times higher in 2016 than in 1999, and in the rural Northeast, where they were 11.4 times higher. Prescription opioids are involved in a larger share of rural than urban drug overdose deaths, whereas heroin and synthetic opioids (such as fentanyl) account for a larger share of urban deaths. Over half of drug overdoses involve multiple drugs.

A Scoping Review of Opioid Misuse in the Rural United States. Palombi LC, St Hill CA, Lipsky MS, Swanoski MT, Lutfiyya MN. *Annals of Epidemiology*. <https://doi.org/10.1016/j.annepidem.2018.05.008>

Introduction: This study is a scoping review of the original research literature on the misuse of opioids in the rural United States (US) and maps the literature of interest to address the question: What does the original research evidence reveal about the misuse of opioids in rural US communities? **Methods:** This study used a modified preferred reporting items for systematic reviews and meta-analyses (PRISMA) approach which is organized by five distinct elements or steps: beginning with a clearly formulated question, using the question to develop clear inclusion criteria to identify relevant studies, using an approach to appraise the studies or a subset of the studies, summarizing the evidence using an explicit methodology, and interpreting the findings of the review. **Results:** The initial search yielded 119 peer reviewed articles and after coding, 41 papers met the inclusion criteria. Researcher generated surveys constituted the most frequent source of data. Most studies had a significant quantitative dimension to them. All the studies were observational or cross-sectional by design. **Conclusions:** This analysis found an emerging research literature that has generated evidence supporting the claim that rural US residents and communities suffer a disproportionate burden from the misuse of opioids compared to their urban or metropolitan counterparts.

Prescription Opioid Poisoning Across Urban and Rural Areas: Identifying Vulnerable Groups and Geographic Areas. Cerda M, Gaidus A, Keyes K, Ponicki W, Martins S, Galea S, Gruenewald P.

Addiction. Jan 2017;112:103-112.

Aims: To determine (1) whether prescription opioid poisoning (PO) hospital discharges spread across space over time, (2) the locations of 'hot-spots' of PO-related hospital discharges, (3) how features of the local environment contribute to the growth in PO-related hospital discharges and (4) where each environmental feature makes the strongest contribution. **Design:** Hierarchical Bayesian Poisson space-time analysis to relate annual discharges from community hospitals to postal code characteristics over 10 years. **Setting:** California, USA. **Participants:** Residents of 18 517 postal codes in California, 2001–11. **Measurements:** Annual postal code-level counts of hospital discharges due to PO poisoning were related to postal code pharmacy density, measures of medical need for POs (i.e. rates of cancer and arthritis-

related hospital discharges), economic stressors (i.e. median household income, percentage of families in poverty and the unemployment rate) and concentration of manual labor industries. **Findings:** PO-related hospital discharges spread from rural and suburban/exurban 'hot-spots' to urban areas. They increased more in postal codes with greater pharmacy density [rate ratio (RR) = 1.03; 95% credible interval (CI) = 1.01, 1.05], more arthritis-related hospital discharges (RR = 1.08; 95% CI = 1.06, 1.11), lower income (RR = 0.85; 95% CI = 0.83, 0.87) and more manual labor industries (RR = 1.15; 95% CI = 1.10, 1.19 for construction; RR = 1.12; 95% CI = 1.04, 1.20 for manufacturing industries). Changes in pharmacy density primarily affected PO-related discharges in urban areas, while changes in income and manual labor industries especially affected PO-related discharges in suburban/exurban and rural areas.

Conclusions: Hospital discharge rates for prescription opioid (PO) poisoning spread from rural and suburban/exurban hot-spots to urban areas, suggesting spatial contagion. The distribution of age-related and work-place-related sources of medical need for POs in rural areas and, to a lesser extent, the availability of POs through pharmacies in urban areas, partly explain the growth of PO poisoning across California, USA.