

# Rural Health Research

May 10, 2018

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Federal Office of Rural Health Policy (FORHP)  
Health Resources and Services Administration (HRSA)



## *Why is there a Federal Office of Rural Health Policy?*

### Quick Background

- Part of Health Resources and Services Administration (HRSA) & Department of Health and Human Services (DHHS/HHS)
- “Voice for Rural”
- Policy and Research Role
- Review HHS Regulations
- Administer Grant Programs
- Technical Assistance

### Organizational Set-Up

- Community-Based Division (CBD)
- Hospital-State Division (HSD)
- Policy Research Division (PRD)
- Office for the Advancement of Telehealth (OAT)



## Federal Office of Rural Health Policy Authorizing Legislation



### OFFICE OF RURAL HEALTH POLICY

SEC. 711. [42 U.S.C. 912] (a) There shall be established in the Department of Health and Human Services (in this section referred to as the "Department") an Office of Rural Health Policy (in this section referred to as the "Office"). The Office shall be headed by a Director, who shall advise the Secretary on the effects of current policies and proposed statutory, regulatory, administrative, and budgetary changes in the programs established under titles XVIII and XIX on the financial viability of small rural hospitals, the ability of rural areas (and rural hospitals in particular) to attract and retain physicians and other health professionals, and access to (and the quality of) health care in rural areas.



## HHS and Rural Health

-  Agency for Health Research and Quality
-  Administration for Children and Families
-  Centers for Medicare and Medicaid Services
-  National Institutes of Health
-  Substance Abuse and Mental Health Services Administration
-  Centers for Disease Control and Prevention
-  Health Resources and Services Administration
-  Indian Health Service
-  Administration for Community Living



## Focus Areas for FORHP



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## HHS Secretarial Priorities

- Giving consumers greater control over health information through interoperable and accessible health information technology;
- Encouraging transparency from providers and payers;
- Using experimental models in Medicare and Medicaid to drive value and quality throughout the entire system; and
- Removing government burdens that impede this value-based transformation.

• Source: Alex M Azar II, Remarks on Value-Based Transformation to the Federation of American Hospitals, March 5, 2018. <https://www.hhs.gov/about/leadership/secretary/speeches/2018-speeches/remarks-on-value-based-transformation-to-the-federation-of-american-hospitals.html>



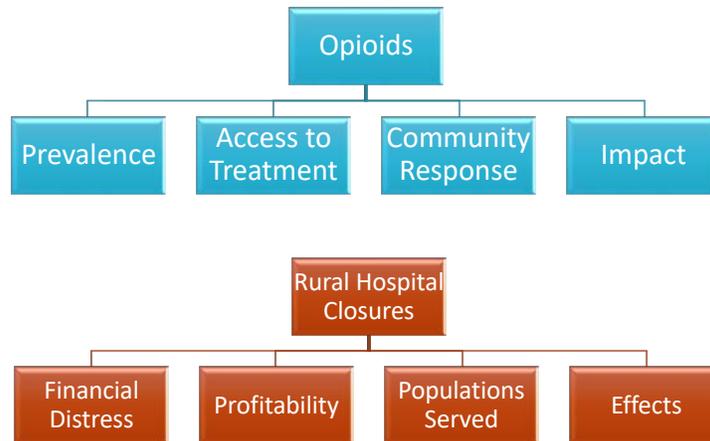
6

## Rural Realities and Challenges

- Growing life expectancy disparities
- Ongoing opioid epidemic
- Rural hospital closures



## Multifaceted Issues



## What's new?

- Be sure to check the Gateway every fall to see what new research projects the RHRCs are investigating!



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## What else?

- [Do Rural Communities Have a Higher Rate of Avoidable Deaths?](#)
- [Access and Quality of Care for Rural Patients with Chronic Obstructive Pulmonary Disease](#)
- [The Rural/Urban Impact of Insurance Coverage Changes](#)
- [Rates of Telemental Health Use among Rural Medicaid Enrollees: Associations with Telehealth Policy and Mental Health Access](#)
- [Rural/Urban Differences in Chronic Diseases and Delay of Needed Care](#)
- [Substance Use, Depression, and Suicide: What Are the Individual and Policy-Modifiable Correlates amongst Metropolitan and Non-metropolitan Adults?](#)
- [Understanding Differences in Rural and Urban Adolescent and Young Adult Substance Use](#)
- [What Are Best Practices for Providing Buprenorphine Maintenance Treatment in Rural Primary Care?](#)



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## #30YearsofRuralResearch

For 30 years, the Rural Health Research Centers have been conducting policy-relevant research on healthcare in rural areas and *providing a voice for rural communities in the policy process.*



The Rural Health Research Gateway ensures this research lands in the hands of our rural leaders.  
[www.ruralhealthresearch.org](http://www.ruralhealthresearch.org)



The Rural Health Research Center Program and Gateway are funded by the Federal Office of Rural Health Policy, Health Resources & Services Administration



## Coming this Spring: Rural Communities Opioid Response (Planning) Funding Opportunity

Funding	Focus	Eligibility
<p>\$200,000 for one year</p> <p>Up to 75 grants will be awarded</p> <p>Awardees are encouraged to leverage other federal, state, and local opioid use disorder funding and initiatives</p>	<p>Awardees will develop plans for implementing opioid use disorder prevention, treatment, and recovery interventions in their communities</p> <p>Emphasis on the 220 counties identified by the CDC as being at risk, and other high risk rural communities</p>	<p>All domestic public and private entities, non-profit and for-profit</p> <p>Lead applicant must be part of consortium of at least four entities</p> <p>All services must be provided in rural areas</p>

**More about this funding opportunity**

<https://www.hrsa.gov/about/news/press-releases/hrsa-rural-communities-opioid-response-initiative-fy2018>

**Tip: Register early with grants.gov, DUNS, and SAM**

<https://www.hrsa.gov/grants/apply/register/index.html>

**Learn how HRSA is addressing the opioid crisis**

<https://www.hrsa.gov/opioids>





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## Identifying and Discussing Key Rural Health Topics

*National Rural Health Association  
Annual Meeting  
May, 2018*

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## Rural Health Research Gateway

*Provide access to research publications and projects funded through FORHP*

- Aim to reach diverse audiences
- Make Gateway a resource for:
  - Rural health providers
  - Students
  - Policy makers
  - Other health researchers
  - Rural health professionals/organizations/associations



<https://www.ruralhealthresearch.org>

## Using Gateway

This online resource of rural health research connects you to:

- Research and policy centers
- Reports and journal publications
- Fact sheets
- Policy briefs
- Research projects
- Email alerts
- Experts
- Dissemination toolkit



**Rural Health Research Gateway**

The Rural Health Research Gateway provides easy and timely access to research conducted by the Rural Health Research Centers, funded by the [Federal Office of Rural Health Policy](#). Gateway efficiently puts new findings and information in the hands of our subscribers, including policymakers, educators, public health employees, hospital staff, and more.

- [Gateway Flyer](#)
- [Learn more](#)

**Research Centers**

- Learn about the Rural Health Research Centers Program
- View list of currently funded research centers
- Learn about their areas of expertise

**Research Alerts**

- Email notifications when new research products are completed
- See five most recent alerts

**Rural Health Research Recaps**

- Access brief summaries on key rural health issues
- Key findings from the work of the Rural Health Research Centers

**Research Products**

- Access free policy briefs, chartbooks, full reports, and more
- Browse peer-reviewed journal articles by date

**Dissemination Toolkit**

- Learn how to create health research products
- Tips for developing policy briefs, fact sheets, journal articles and more

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The Rural Health Research Gateway is a project of the University of North Dakota Center for Rural Health and funded by HRSA's Federal Office of Rural Health Policy.

**2018 Rural Health Research Products**

- **Residential Settings and Healthcare Use of the Rural "Oldest-Old" Medicare Population**  
Policy Brief  
Maine Rural Health Research Center  
This study used Medicare Current Beneficiary Survey data to profile rural/urban Medicare beneficiaries ages 85 & older. Rural adults in this age group are more likely to be disabled and live alone in the community or in nursing homes and less likely to live in assisted living facilities. Findings highlight rural needs for community-based services.
- **Medicare Accountable Care Organization Growth in Rural America, 2014-2016**  
Policy Brief  
RUPRI Center for Rural Health Policy Analysis  
This RUPRI Center data report describes Medicare accountable care organization (ACO) growth in non-metropolitan U.S. counties from 2014 to 2016. ACOs are the most widespread of the Centers for Medicare & Medicaid Services (CMS) value-based payment programs and demonstrations.
- **Distance and Networks: A Regional Analysis of Health Insurance Marketplaces**  
Policy Brief  
RUPRI Center for Rural Health Policy Analysis  
Using 2015-16 data on 15 Midwestern states, we examine the possibility that geographic distance to care plays a role in insurance issuer participation, premiums, and enrollment success through its effect on network adequacy and assess the moderating role that state-level policies on network adequacy standards and Rating Area design may have.
- **Challenges Related to Pregnancy and Returning to Work after Childbirth in a Rural, Tourism-Dependent Community**  
University of Minnesota Rural Health Research Center  
This case study highlights challenges related to pregnancy and returning to work after childbirth in a rural, tourism-dependent community in Minnesota.
- **Rural-Urban Disparities in Pneumococcal Vaccine Service Delivery Among the Fee-for-Service Medicare Population**  
Policy Brief  
Rural and Underserved Health Research Center  
Using 2014 Medicare data, we found a significant disparity in

**Research Products**

- By Date
  - 2018
  - 2017
  - 2016
  - 2015
  - 2014
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**Browse Journal Articles**

A list of journal articles appearing in peer-reviewed publications is also available. (Access may be restricted.)  
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**Topics**

Projects

Products & Publications

Rural Health Research Recaps

## Rural Health Research by Topic

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

**A**

- Abuse, see [Violence and abuse](#)
- Adolescents, see [Children and adolescents](#)
- Adverse childhood experiences (ACE), see [Children and adolescents](#)
- [Aging](#)
- Agricultural health, see [Environmental and agricultural health](#)
- AIDS and HIV, see [Chronic diseases and conditions](#)
- [Allied health professionals](#)
- [American Indians and Alaska Natives](#)

**B**

- Behavioral health, see [Mental and behavioral health](#)

**C**

- [Cancer](#)
- [Care management](#)
- [Children and adolescents](#)
- [Chronic diseases and conditions](#)
- Collaboration, see [Networking and collaboration](#)
- [Critical Access Hospitals](#)

**D**

- [Diabetes](#)

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Topics

Projects

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Rural Health Research Recaps

## Critical Access Hospitals

**Projects on this Topic**

The Centers have [3 research projects](#) currently underway to explore this issue. In the past, [39 research projects](#) have been completed on this topic.

**Research Findings**

View publications, including policy briefs, working papers, and final reports, on this topic:

- [Research Products](#) - (61)
- [Journal Articles](#) - (11)

**Related Topics**

- [Hospitals and clinics](#)

**Additional Resources**

Access other FORHP-funded resources on this topic.

From the Flex Monitoring Team:

- [Flex Program Publications](#)
- [Health Care Services Publications](#)
- [Hospital Compare Publications](#)
- [MRQP Publications](#)
- [Patient Safety Publications](#)
- [Quality Publications](#)

From the Rural Health Information Hub:

- [Critical Access Hospitals \(CAHs\) Topic Guide](#)
- [Recruitment and Retention for Rural Health Facilities Topic Guide](#)
- [Telehealth Use in Rural Healthcare Topic Guide](#)

## Key Rural Health Issues

How can you identify current key rural health topics?

- Current projects
- Recent products/publications
- Upcoming webinars
- Social media trends
- Recent research alerts
- Rural health recaps

- [Caring for Caregivers: Available Support for Unpaid Caregivers in Rural Areas](#)  
University of Minnesota Rural Health Research Center  
This project aims to describe rural-urban differences in the prevalence and intensity of informal caregiving for older adults and associated socio-demographic correlates and to identify potential policy interventions to improve the quality of life and health outcomes of rural caregivers.
- [Collecting and Analyzing Data from the Evidence-Based Telehealth Network Grant Program Grantees Using the Revised Tele-Emergency Performance Assessment Report Tool](#)  
Rural Telehealth Research Center  
This project's main purpose is to collect and analyze data from the Evidence-Based Telehealth Network Grant Program grantees using the revised Tele-emergency Performance Assessment Report Tool on their tele-ED cases and a matched sample of non-tele-ED cases to analyze comparative effectiveness to help establish the evidence base for tele-ED.
- [Creating County- and Census Tract-Level Estimates of Childhood Obesity in the U.S.: A Spatial Multilevel Modeling Approach](#)  
South Carolina Rural Health Research Center  
Using the 2016 National Survey of Children's Health, spatial multilevel models will be constructed to estimate county- and Census tract-level rates of childhood obesity in the U.S. Particular emphasis will be placed on rural areas, for which direct estimates are often unavailable because of small sample sizes in population-based surveys.
- [Do Rural Breast and Colorectal Cancer Patients Present at More Advanced Disease Stages than Their Urban Counterparts?](#)  
WVAMI Rural Health Research Center  
Access to recommended cancer screening is more difficult for rural residents than their urban counterparts. This study uses the Surveillance,

## Key Rural Health Issues

Most accessed on our "Topics" page

- Mental health
- Health disparities
- Substance abuse
- Rural health clinics
- Rural statistics and demographics

## Key Rural Health Issues

### Top five products on Gateway

- Supply and Distribution of the Behavioral Health Workforce in Rural America
- Discharge to Swing Bed or Skilled Nursing Facility: Who Goes Where?
- A Comparison of Closed Rural Hospitals and Perceived Impact
- Why Use Swing Beds? Conversations with Hospital Administrators and Staff
- Prediction of Financial Distress among Rural Hospitals

The screenshot displays the Rural Health Research Gateway website. The header includes the logo, navigation links (About Us, Browse Research, Webinars, Research Alerts, Other Rural Research), and social media icons (YouTube, Facebook, LinkedIn, Email). A search bar is located in the top right. The main content area features a sidebar with 'Browse Research' categories (Topics, Projects, Products & Publications, Rural Health Research Recaps) and a central section titled 'Rural Health Research Recaps'. This section contains a list of research recaps with titles, dates, and brief descriptions. On the right, there are sections for 'Products & Publications' and 'Subscribe to Research Alerts' with a sign-up form.

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**Rural Health Research Recaps**

The Rural Health Research Centers are committed to providing timely, quality national research on the most pressing rural health issues, often exploring the same topics from various perspectives. Gateway has developed Rural Health Research Recaps to identify the key findings from all of the research centers on specific rural health topics.

- [Opioid Use and Treatment Availability](#)  
Rural Health Research Gateway  
Date: 01/2018  
This resource examines opioid use in rural communities, as well as the perceived need for and utilization of treatment for opioid use disorder, based on a summary of the Rural Health Research Centers' most recent research.
- [Effects of Rural Hospital Closures](#)  
Rural Health Research Gateway  
Date: 12/2017  
From January 2005 through early November 2017, 124 rural hospitals closed in the U.S. This Recap, two of two, provides a summary of the Rural Health Research Centers' most recent research on the effects of these closures.
- [Rural Hospital Closures](#)  
Rural Health Research Gateway  
Date: 12/2017  
From January 2005 through early November 2017, 124 rural hospitals closed in the U.S. This Recap, one of two, provides a summary of the Rural Health Research Centers' most recent research on hospital closures.
- [Rural Behavioral Health](#)  
Rural Health Research Gateway  
Date: 11/2017  
Rural behavioral health issues are compounded by a lack of access to care, workforce shortages, reimbursement issues, and high rates of uninsured or under-insurance. This resource provides a summary of the Rural Health Research Centers' most recent research on behavioral health.

**Products & Publications**

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**Opioid Use and Treatment Availability**

[Link](#) | [View Research Recap](#)

**Date:** 01/2018

**Description:** This resource examines opioid use in rural communities, as well as the perceived need for and utilization of treatment for opioid use disorder, based on a summary of the Rural Health Research Centers' most recent research.

**Topics:** [Healthcare access](#), [Substance use and treatment](#)

**Rural Health Research Products Included in this Recap**

- Barriers Rural Physicians Face Prescribing Buprenorphine for Opioid Use Disorder**  
 WWAMI Rural Health Research Center  
 Date: 07/2017  
 Opioid use disorder is a serious public health problem. Management with buprenorphine is an effective medication-assisted treatment, but 60.1% of rural counties lack a physician with a Drug Enforcement Agency waiver to prescribe buprenorphine. This national study surveyed all rural physicians who have received a waiver in the United States.
- Changes in the Supply of Physicians with a DEA DATA Waiver to Prescribe Buprenorphine for Opioid Use Disorder**  
 Policy Brief  
 WWAMI Rural Health Research Center  
 Date: 05/2017  
 This project mapped the location of physicians with a DEA DATA 2000 waiver to prescribe buprenorphine for opioid use disorder in July 2012 and April 2016. The number of counties without a waived physician and the ratio of waived physicians per 100,000 population is reported by the rural/urban status of the county.
- Geographic and Specialty Distribution of US Physicians Trained to Treat Opioid Use Disorder**  
 WWAMI Rural Health Research Center

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**Rural Health Research RECAP** | **Rural Health Research Gateway**

**Opioid Use and Treatment Availability** | January 2018

*Edited by the Federal Office of Rural Health Policy (FORHP), under the Health Resources and Services Administration, the Rural Health Research Gateway serves to disseminate the work of the FORHP-funded Rural Health Research Centers (RHRC) to diverse audiences. The RHRCs are committed to providing timely, quality, national research into the most pressing rural health issues. This resource provides a summary of their most recent research on opioid use and treatment, all of which may be found on Gateway's website at ruralhealthresearch.org.*

**Opioid Use in Rural Communities**  
 Opioids are prescribed for pain relief, most recognizable are morphine, hydrocodone, oxycodone, and fentanyl. Opioids also include the illegal drug heroin. Opioid use disorder (OUD) (to include prescription drugs and heroin) is the fastest growing substance use problem in the nation. During 2008-13, 4.7% of U.S. residents ages 12 and older reported using non-medical opioids in the past year. Mean age at first use was 23.<sup>1</sup> This did not vary between rural and urban communities.<sup>2</sup> Among those who initiated prescription opioids, 73% admitted to obtaining the pain relievers from someone who held a prescription for the drug.<sup>3</sup> Despite implementation of treatment and prevention programs, rates of OUDs continue to rise in rural (non-metropolitan) and urban (metropolitan) communities alike (see Figure 1).<sup>4</sup>

**Figure 1. Prevalence of Past-year Drug Use Disorders over Time, by Geography?**

Disorder	Year	Rural (%)	Urban (%)
Opioid Use Disorder	2008-10	~4.5	~4.5
	2014-15	~4.7	~4.7
Heroin Use Disorder	2008-10	~0.5	~0.5
	2014-15	~0.5	~0.5
Prescription Pain Reliever Use Disorder	2008-10	~1.5	~1.5
	2014-15	~1.5	~1.5

There has been little to no variation in the overall prevalence of OUDs between rural and urban populations. However, particular groups of rural residents have reported a greater prevalence of past-year use.<sup>5</sup> Specifically, 4% of all rural residents ages 12-19 and 9.5% of those 20-29 had used opioids in the past year.<sup>6</sup> Among those who had used opioids, rural were more likely than urban to be uninsured, low income, in poor health, and between ages 12-19 (see Figure 2).<sup>7</sup>

**Figure 2. Rural and Urban Opioid Users, 2008-13?**

Characteristic	Rural (%)	Urban (%)
Age 12-19	~4.5	~4.5
Age 20-29	~9.5	~9.5
Age 30-39	~4.5	~4.5
Age 40-49	~4.5	~4.5
Age 50-59	~4.5	~4.5
Age 60-69	~4.5	~4.5
Age 70-79	~4.5	~4.5
Age 80-89	~4.5	~4.5
Age 90-99	~4.5	~4.5
Less than high school	~15	~15
High school	~15	~15
Some college	~15	~15
BSc	~15	~15
Uninsured	~15	~15
Good health	~15	~15
Fair health	~15	~15
Poor health	~15	~15

Rural opioid users were also more likely than urban to have ever been arrested (22.3% compared to 16.1%) and more likely to have been on probation in the past year (10.0% compared to 8.2%).<sup>8</sup>

**Figure 3. Rural Opioid and Non-opioid Users, 2008-13?**

Characteristic	Opioid Users (%)	Non-opioid Users (%)
Age 12-19	~4.5	~4.5
Age 20-29	~9.5	~9.5
Age 30-39	~4.5	~4.5
Age 40-49	~4.5	~4.5
Age 50-59	~4.5	~4.5
Age 60-69	~4.5	~4.5
Age 70-79	~4.5	~4.5
Age 80-89	~4.5	~4.5
Age 90-99	~4.5	~4.5
Less than high school	~15	~15
High school	~15	~15
Some college	~15	~15
BSc	~15	~15
Uninsured	~15	~15
Good health	~15	~15
Fair health	~15	~15
Poor health	~15	~15

Among rural residents, those who had used opioids in the past year were more likely than those who had not use opioids to be under the age of 19, not married, low-income, and uninsured (see Figure 3).<sup>9</sup>

**Treatment for Opioid Use Disorder**  
 Medication assisted treatment (MAT) is the use of medications in combination with counseling and behavioral therapies for the treatment of OUD. Buprenorphine-naloxone is one of the effective OUD treatment medications that may be provided in a primary care setting. The Drug Addiction Treatment Act (DATA) was passed in 2000 to expand OUD treatment options. DATA allows a physician to prescribe buprenorphine after he/she receives a waiver from the Drug Enforcement Agency (DEA).<sup>10</sup> From 2012 through 2016, the percentage of counties with at least one waived physician increased from 36.0% to 32.3%. However, while only 26.2% of urban counties were without a waived provider in 2016, 60.1% of rural counties were still without one.<sup>11</sup> The percentage of rural counties with a waived provider has slightly increased since 2012; however, a majority of waived providers (91.2%) are still disproportionately located in urban counties.<sup>12</sup>

Of the 1,121 rural physicians with DEA DATA waivers who were surveyed in 2016, only 69% were current providers accepting new patients. Overall, the most significant barriers of waived prescribers providing MAT were diversion or misuse of medication (indicated by 48.4% of rural waived providers), lack of available mental health support services (41.4%), and time constraints (40.2%).<sup>13</sup> Nonprescribers (new and former prescribers) were significantly more likely than current prescribers to identify the following barriers: time constraints, lack of patient need, resistance from practice partners, lack of specialty backup for complex problems, lack of confidence in their ability to manage OUD, concerns about DEA intrusion on their practices, and attraction of drug users to their practices.<sup>14</sup>

**Perceived Need and Use of Treatment**  
 Beyond the need for prescribers in concern with identified need for, and utilization of, treatment. The rate of perceived OUD treatment need among those with past year use did not vary significantly between rural (non-metro) and urban (metro) adults during 2014-15.<sup>15</sup> However, the perceived need for treatment did increase significantly among rural users from 2008-10 to 2014-15.<sup>16</sup> Most recently, treatment use for OUD did not vary between rural and urban adults, though rural adults reported a more significant increase in treatment from 2011-13 to 2014-15 (see Figure 4).<sup>17</sup>

**Figure 4. Perceived Need for Treatment and Treatment Use over Time for OUD, by Geography?**

Category	Year	Rural (%)	Urban (%)
Perceived Need for Treatment	2008-10	~15	~15
	2014-15	~25	~25
Treatment Use	2008-10	~10	~10
	2014-15	~20	~20

**Rural Community Response**  
 Rural community-based strategies are imperative for the prevention and treatment of and recovery from OUD and must expand beyond the availability of waived prescribers. Specific rural challenges to the prevention/treatment of OUD include workforce concerns, timely access to prevention and/or treatment, stigma, lack of community provider collaborations, and providers not using current protocols for prescribing opioids.<sup>18</sup> Community models for OUD treatment have included the use of telehealth, coalition, evidence-based prescribing protocols, emergency department protocols, and harm-reduction strategies through public health.<sup>19</sup> Rural, *Rural Opioid Abuse Prevention and Treatment Strategies for more information on these programs.*

**Resources**

1. Moore Rural Health Research Center (2016). Rural opioid abuse: Prevalence and use. *Issue Briefs*. Available at: [http://pubs.ruralhealthresearch.org/](#)
2. Rural and Urban Health Research Center (2017). *Who drug opioid use disorder among non-metropolitan residents*. Available at: [http://pubs.ruralhealthresearch.org/](#)
3. WWAMI Rural Health Research Center (2017). *Changes in the supply of physicians with a DEA DATA waiver to prescribe buprenorphine for opioid use disorder*. Available at: [http://pubs.ruralhealthresearch.org/](#)
4. WWAMI Rural Health Research Center (2015). *Geographic and specialty distribution of US physicians trained to treat opioid use disorder*. Available at: [http://pubs.ruralhealthresearch.org/](#)
5. WWAMI Rural Health Research Center (2017). *Barriers and physician use providing buprenorphine for opioid use disorder*. Available at: [http://pubs.ruralhealthresearch.org/](#)
6. Rural and Urban Health Research Center (2017). *Perceived treatment need and impact on barriers for drug use and prescription pain reliever use among non-metropolitan residents*. Available at: [http://pubs.ruralhealthresearch.org/](#)
7. Moore Rural Health Research Center (2017). *Rural opioid abuse prevention and treatment strategies: The opportunity to take action*. Available at: [http://pubs.ruralhealthresearch.org/](#)

For more information, visit the Rural Health Research Gateway website, [ruralhealthresearch.org](#).  
 Shaowda Schroeder, PhD  
 202.727.0282 • [shaowda.schroeder@med.msu.edu](#)

## Hospital Closures

- January, 2005 – November, 2017: 124 rural hospitals closed.
- Communities have reported that rural hospital closures resulted in: a rise in emergency medical services costs; increased time and cost of transportation to healthcare services for patients; heightened transportation issues and barriers to care for vulnerable groups; loss of jobs for hospital staff, and creating concerns about unemployment and outward migration of community members.
- 2004-2014, 179 rural counties experienced closures/loss of hospital obstetric services.
- The sharp decline in OB access raises concern around the quality of, and distance to, maternity care.

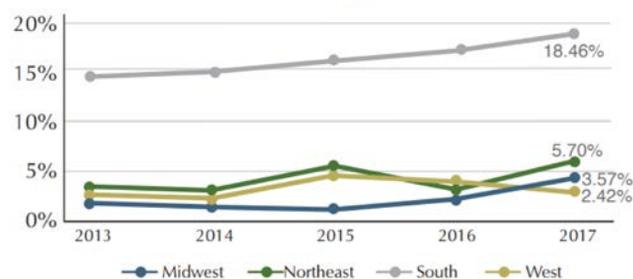
The most current number of rural hospital closures can be found at

[www.shepscenter.unc.edu/programs-projects/ruralhealth/rural-hospital-closures](http://www.shepscenter.unc.edu/programs-projects/ruralhealth/rural-hospital-closures)

## Hospital Closures

- 2006 - 2014, hospitals identified as high risk in the Financial Distress Index (FDI) had closure rates 60x higher than those at low risk.
- Two out of three closed hospitals were identified as high risk the year prior to closure.
- States with the highest percentage of rural hospitals at high risk in 2015: Hawaii, Alabama, Oklahoma, Arkansas, Tennessee.
- States with the highest number: Texas, Oklahoma, Tennessee, Arkansas, Georgia, Alabama.

**Figure 3. Percent of Rural Hospitals at High Risk of Financial Distress, Census Region, 2013-2017<sup>6</sup>**

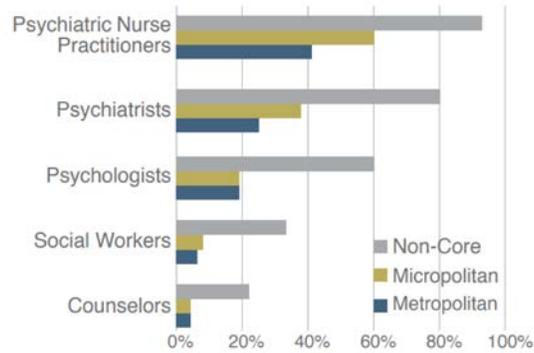


## Behavioral Health

2010-2011, nonmetropolitan (rural) counties reported a higher percentage of residents with any mental illness (19.5%) than metropolitan counties (17.8%).

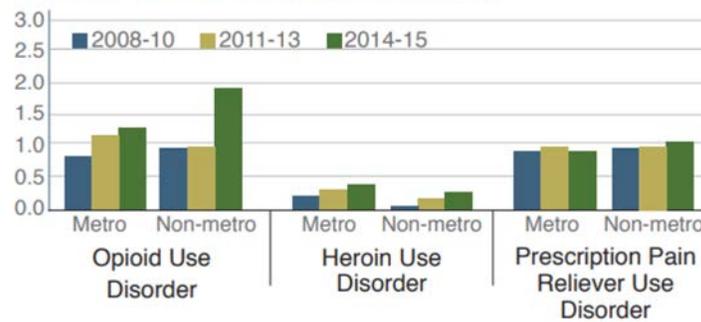
Rural areas report fewer behavioral health providers per 100,000 people than urban areas – specifically for counselors, social workers, psychologists, psychiatrists, and psychiatric nurse practitioners.

**Figure 2. Percent of U.S. Counties Without Behavioral Health Providers<sup>5</sup>**



## Opioids

**Figure 1. Prevalence of Past-year Drug Use Disorders over Time, by Geography<sup>2</sup>**



*Note: Crude prevalence rates are expressed as a % and are population-weighted*

2. Rural and Underserved Health Research Center (2017). Illicit drug opioid use disorder among non-metropolitan residents, [ruralhealthresearch.org/publications/1164](http://ruralhealthresearch.org/publications/1164).

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# Opioid Epidemic and Behavioral Health Workforce Focused Studies

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## Study Topics

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- Opioid epidemic and the workforce trained to address it
- Behavioral health services and utilization

# Opioid Epidemic

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## Background

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The United States is in the midst of a severe opioid abuse epidemic.

In 2015, an estimated 2.0 million people, 12 and older, had a pain reliever use disorder, and 591,000 people had heroin use disorder.

In 2016, an estimated 42,249 people died of opioid overdose.

## Medical Context: Medication Assisted Treatment (MAT)

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Buprenorphine-naloxone is an effective medication-assisted treatment (MAT) for opioid use disorder (OUD) that can be provided in an office-based setting.

This treatment is particularly suitable for the rural primary care setting, because it solves some of the problems that other MAT options have:

- Allows for treatment where there are not Opioid Treatment Programs
- Decreases travel
- Protects confidentiality

## Policy Context: To Expand Treatment Options

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The U.S. Congress passed the Drug Addiction Treatment Act (DATA 2000)

- Allows **physicians** who complete 8 hours of required training to obtain a Drug Enforcement Administration (DEA) waiver to prescribe buprenorphine.

The U.S. Congress passed the Comprehensive Addiction and Recovery Act of 2016 (CARA 2016)

- Extends ability to **nurse practitioners** (NPs) and **physician assistants** (PAs) who complete 24 hours of required training to obtain a DEA waiver to prescribe buprenorphine.

## Studies

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The WWAMI Rural Health Research Center (RHRC) has several completed and ongoing studies aimed at addressing the workforce trained to provide MAT.

## Studies

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1. 2012 geographic distribution of physicians with a DEA waived to prescribe buprenorphine.
2. Prescribing practices of physicians with a DEA waiver to prescribe buprenorphine.
3. Barriers rural physicians face prescribing buprenorphine for opioid use disorder.
4. Update of the geographic distribution of physicians with a DEA waived to prescribe buprenorphine.
5. Estimated potential additional MAT treatment slots provided by NPs and PAs in rural counties.
6. 2017 update of the geographic distribution of providers with a DEA waived to prescribe buprenorphine.
7. Recommendations from waived physicians on how to overcome MAT prescribing barriers.

## 2012 Geographic Distribution of Waivered Physicians

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**Study goal:** describe the geographic distribution and specialties of physicians obtaining waivers from the Drug Enforcement Administration (DEA) to prescribe buprenorphine-naloxone to treat opioid use disorder and to identify potential shortages of physicians.

**Key findings:**

- Only 46.6% of US counties (1,465 of 3,143) had a physician who could prescribe buprenorphine.
- Physicians with waivers are concentrated on the east and west coasts, leaving wide swaths of contiguous counties in the middle of the country without any such physicians.

## Prescribing Practices of Physicians with a DEA Waiver to Prescribe Buprenorphine

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**Study goal:** quantify and describe the availability and prescribing practices of physicians with a waiver in the rural U.S.

**Key findings:**

- Significant practice variations were found throughout the U.S. by Census Division.
- 53% of physicians with the initial 30-patient waiver were not treating any patients.

## Barriers Rural Physicians Face Prescribing Buprenorphine for Opioid Use Disorder

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**Study goal:** Understand the barriers physicians with waivers face in providing buprenorphine maintenance treatment.

**Key findings:**

- Top 3 most commonly reported barriers:
  - Time constraints
  - Lack of available mental health or psychosocial support services
  - Concerns about diversion or misuse of medication
- Solutions must be found that address these prescribing barriers and encourage physicians to get and actively use their waivers.

## Update of the Geographic Distribution of Waivered Physicians

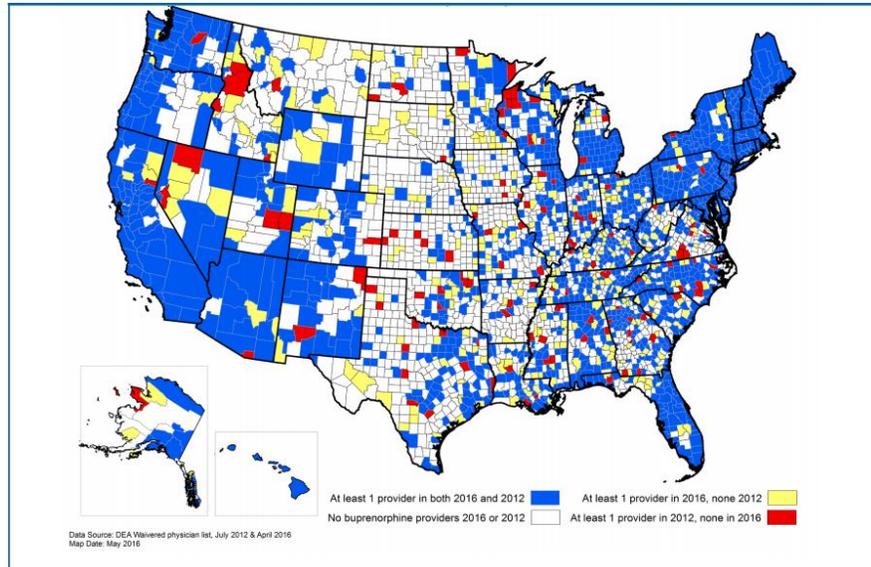
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**Study goal:** Compare the changes in the supply of physicians waived to provide MAT from 2012 to 2016.

**Key findings:**

- 1,648 counties (52.5%) nationally had at least 1 waived provider in 2016, up from 1,465 (46.6%) in 2012.
- 1,188 rural counties (60.1%) had no waived providers in 2016, down from 1,377 (67.1%) of rural counties in 2012.

## U.S. Counties with Buprenorphine Providers



## Potential Additional MAT Treatment Slots Provided by NPs and PAs in Rural Counties

**Study goal:** quantify the potential increase in the number of rural MAT providers and treatment slots as NPs and PAs become DEA waived providers.

### Key findings:

- Allowing NPs and PAs to obtain a DEA waiver and provide buprenorphine treatment for OUD, increases the national estimated number of rural treatment slots by 10,777 (15.2%).
- NPs and PAs with a DEA waiver have the potential to substantially increase the accessibility of MAT for many patients.

## 2017 Update of the Geographic Distribution of Waivered Providers

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**Study goal:** summarize the geographic distribution of waivered physicians, NPs and PAs at the end of 2017 and compare it to the distribution of waivered physicians 5 years earlier.

**Key findings:**

- The availability of a physician with a DEA waiver to provide office-based MAT has increased across all geographic categories since 2012.
- NPs and PAs add otherwise lacking treatment availability in 56 counties (43 rural).

## Waivered Physician Recommendations on How to Overcome MAT Prescribing Barriers

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**Study goal:** report results from interviews with rurally located physicians who have identified strategies to overcome barriers to prescribing buprenorphine for the treatment of opioid use disorder (OUD).

**Key findings:**

- 43 high-prescribing, rural physicians have been interviewed.
- Interviews are being analyzed for key strategies and recommendations from these successfully prescribing physicians.

# Behavioral Health

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## Background

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1 in 5 US adults experience some kind of mental illness in a given year.

Rural populations, both children and adults, experience an even greater burden from mental illness than their urban counterparts.

Older rural residents are less likely to acknowledge need for care, less likely to report recent mental disorders, and more likely to have an unmet need for mental health treatment compared to their non-rural counterparts.

## Studies

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The WWAMI Rural Health Research Center (RHRC) has several studies aimed at analyzing behavioral health services and utilization.

## Studies

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1. Supply and distribution of behavioral health providers at the national, census division, and state level.
2. The provider workforce that cares for rural elderly patients with depression/anxiety.

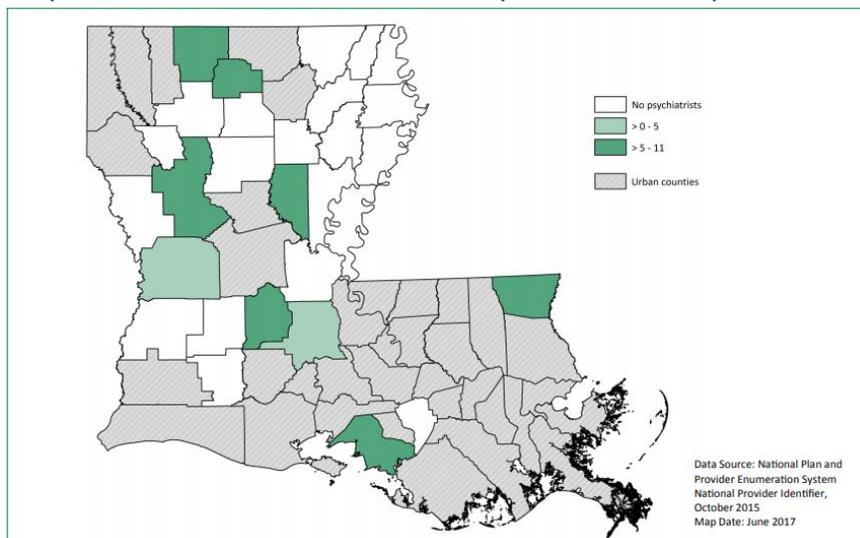
## Supply and Distribution of the Behavioral Health Workforce

**Study goal:** provide estimates and comparisons of the availability of psychiatrists, psychologists, social workers, psychiatric nurse practitioners (NPs), and counselors in rural-urban areas.

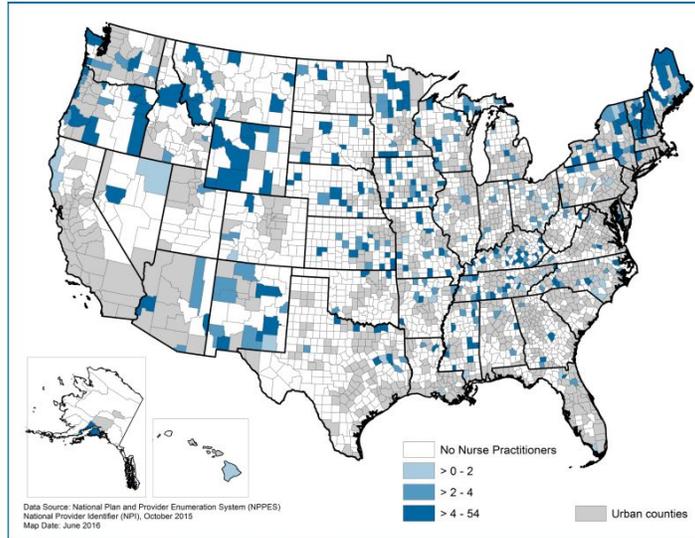
**Key findings:**

- Psychiatrists, psychologists, and psychiatric nurse practitioners are severely mal-distributed throughout the U.S.
- In every Census Division, rural populations have less access to behavioral health services than their urban counterparts.

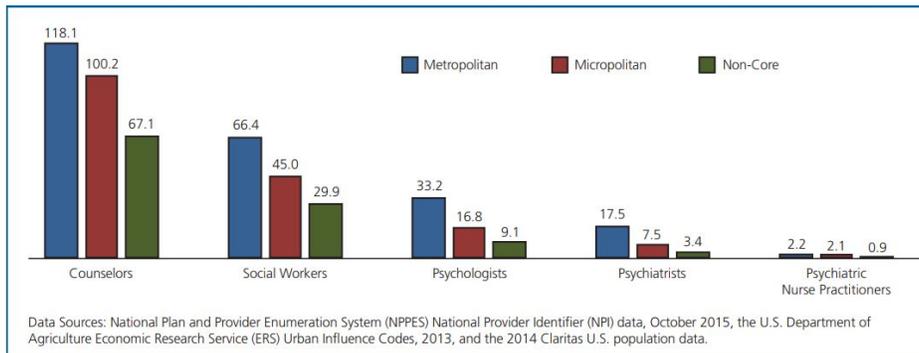
### Psychiatrists in Louisiana Counties per 100,000 Population



### Psychiatric Nurse Practitioners in U.S. Counties per 100,000 Population



### Behavioral Health Providers per 100,000 Population in U.S. Counties by Urban Influence Category



## Provider Workforce that Cares for Rural Elderly Patients with Depression/Anxiety

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**Study goal:** describe who (primary care physicians, psychiatrists etc.) cares for rural elderly patients with depression/anxiety and geographic variation in care provision.

## Takeaways

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**FORHP funding of RHRCs has:**

- Provided timely, objective, policy relevant research results to policy-makers, the rural health community, health educators, and the public for 30 years.
- Fostered the long-term development of rural health services subject matter expertise in centers located across the U.S.



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