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1-2018

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### Repository Citation

Borders, Tyrone F. and Wen, Hefei, "Perceived Treatment Need and Utilization for Illicit Drug and Opioid Use Disorders in Non-Metropolitan Areas" (2018). *Rural & Underserved Health Research Center Publications*. 2.

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## Perceived Treatment Need and Utilization for Illicit Drug and Opioid Use Disorders in Non-Metropolitan Areas

Tyrone F. Borders, PhD; Hefei Wen, PhD

### Overview of Key Findings

The policy brief provides nationally representative estimates of perceived treatment need and utilization for illicit drug and prescription pain reliever use disorders among non-metropolitan and metropolitan adults ages 18-64. Rates of perceived treatment need and utilization were low among non-metropolitan (rural) residents with past year drug use disorders in 2014-2015 as highlighted below:

Drug Use Disorder	Perceived Need	Treatment Use
▪ Any drug	6.7%	13.7%
▪ Opioid	11.5%	24.1%
▪ Heroin	25.7%	25.7%
▪ Rx pain reliever	13.2%	20.6%

Perceived treatment need and utilization changed little from 2008-2010 to 2014-2015 despite the implementation of policies intended to increase treatment access over this time period.

### Background and Purpose

An accompanying brief indicates that illicit drug use disorders are no longer a strictly metropolitan phenomenon and that heroin use disorder prevalence rates have risen among non-metropolitan adults ages 18-64 in recent years.<sup>1</sup> Yet, a dearth of research has investigated treatment access among rural illicit drug users. A review of past studies on rural treatment access found that most lacked national generalizability because they relied on treatment-based samples, noting that most persons with an illicit drug use disorder never seek treatment, or relied on small cohorts.<sup>2</sup>

Perceived need for treatment represents recognition of a drug use problem and thinking that obtaining formal services could be beneficial, and it has been shown to be a strong precursor to actual treatment utilization.<sup>3-5</sup> In a study of 2008-2012 data from the National Survey on Drug Use and Health (NSDUH), perceived treatment need was found to be strongly associated with substance use treatment utilization among persons with private insurance relative to those who did not feel a need for treatment and had no insurance.<sup>6</sup> Its authors and other investigators have argued for further development of programs and policies to elevate public perceptions of the benefits of treatment to facilitate perceptions of treatment need and eventual treatment use.<sup>6,7</sup>

This report examines metropolitan versus non-metropolitan differences and temporal changes in prevalence rates for past year perceived need for treatment and treatment utilization among adults ages 18-64 with a past year illicit drug use disorder (any type of illicit drug, opioid, heroin, and prescription pain reliever use disorders).

## Methods

**Data.** We conducted analyses of nationally representative data from the National Survey on Drug Use and Health (NSDUH) for the years 2008-2015. The NSDUH is a series of nationally and state-representative surveys administered in-person and the primary source of information on substance use behaviors by the U.S. household population. Metropolitan and non-metropolitan status was defined according to U.S. Office of Management and Budget definitions.

We combined several years of data (2008-2010, 2011-2013, and 2014-2015) to achieve adequate sample sizes to compare and contrast temporal changes amongst metropolitan and non-metropolitan adults 18-64 years of age. These combined years correspond to major substance use treatment policies (implementation of initial parity laws in 2008-2010, early insurance expansion in 2011-2013, and clarification of parity laws and further insurance expansions in 2014-2015).

The NSDUH includes structured interviews to illicit Diagnostic and Statistical Manual-IV (DSM-IV) diagnoses of illicit drug use disorders. In this study, we focused on 4 types of past year illicit drug use disorders: 1) any type of illicit drug use disorder (illicit refers to the use of illegal drugs, such as heroin, and the misuse of legal drugs, such as prescription opioid pain relievers), 2) opioid use disorder (which includes heroin and other types of opioid use), 3) heroin use disorder, and 4) prescription pain reliever use disorder (the NSDUH queries about prescription pain reliever use, of which the vast majority are opioids).

We restricted our analyses to persons who satisfied DSM-IV criteria for an illicit drug use disorder in the same survey year. For example, when analyzing perceived need for treatment for any illicit drug use, we limited the sample to persons with any past year illicit drug use disorder; when analyzing perceived need for treatment for opioid use disorder, we limited the sample to persons with a past year opioid use disorder specifically. For the analyses of persons with heroin and prescription pain reliever use disorders, we combined all years of data because of small sample sizes and thus we were not able to conduct analyses of changes over time.

**Dependent Variables.** Perceived need for drug use treatment was defined as self-reported need for the treatment of illicit drug use in the past 12 months as measured by answering “yes” to at least one of the following questions: "During the past 12 months, did you feel the need for treatment for your use of (detailed drug type)?" and "During the past 12 months, did you feel additional need for treatment for your use of (detailed drug type)?" Drug use treatment utilization was defined as whether the respondent reported receiving treatment for any type of illicit drug use in any of the following settings: hospital inpatient setting, rehabilitation inpatient setting, rehabilitation outpatient clinic, and outpatient mental health center. We also included whether the respondent received treatment at a physician clinic for opioid use disorder treatment (both heroin and prescription pain medications) as a proxy for buprenorphine medication-assisted treatment (MAT) that is usually provided by office-based physicians under the Drug Addiction Treatment Act (DATA) waiver mechanism. We excluded services at an emergency department or self-help group as they would not involve intensive treatment; and we excluded services at jail/prison as they could be mandated by the legal system.

**Independent Variables.** Time periods were categorized as 2008-2010, 2011-2013, and 2014-2015. Metropolitan and non-metropolitan residence was defined according to U.S. Office of Management and Budget definitions. Demographics included age (18-25, 26-34, 35-49, and 50-64 years), gender, and race/ethnicity (Hispanic, black/African American, Asian, other, and non-Hispanic white). Social characteristics were marital status (never married, divorced, widowed, and married) and educational status (< high school graduate, high school graduate, some college, and college graduate). Economic characteristics included employment

(unemployed, part-time, other, and full-time employment), household income (< 100%, 100%-200%, and > 200% of the Federal poverty level), and health insurance (Medicaid, private insurance, other, and none).

**Statistical Analysis.** We conducted descriptive analyses to compare and contrast prevalence rates of perceived treatment need and utilization between non-metropolitan and metropolitan adults ages 18-64 who satisfied criteria for an illicit drug use disorder. We then conducted logistic regression analyses to test for metropolitan versus non-metropolitan differences in the odds of perceived treatment need and utilization after adjusting for 1) demographic characteristics and 2) demographic, social, and economic characteristics. All analyses accounted for NSDUH’s sampling scheme and weights.

**Findings**

**Any Illicit Drug and Opioid Use Disorders: Perceived Treatment Need and Utilization**

As shown in Figure 1, perceived treatment need ranged from a low of 6.7% in 2014-2015 to a high of 11.3% in 2011-2013 among non-metropolitan residents with any illicit drug use disorder. These rates did not significantly differ by metropolitan status or change over time in unadjusted or adjusted analyses.

Rates of perceived treatment need did not differ significantly between metropolitan and non-metropolitan residents with an opioid use disorder in unadjusted and adjusted analyses. However, perceived treatment need increased significantly ( $P < .05$ ) between 2008-2010 and 2011-2013 among non-metropolitan adults.

**Figure 1. Perceived Treatment Need: Any Illicit Drug and Opioid Use Disorders**

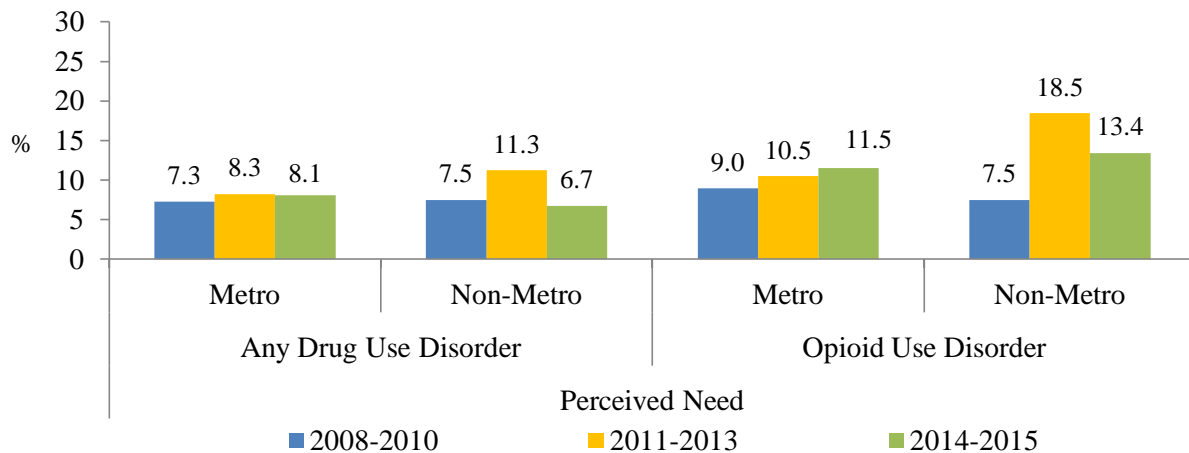
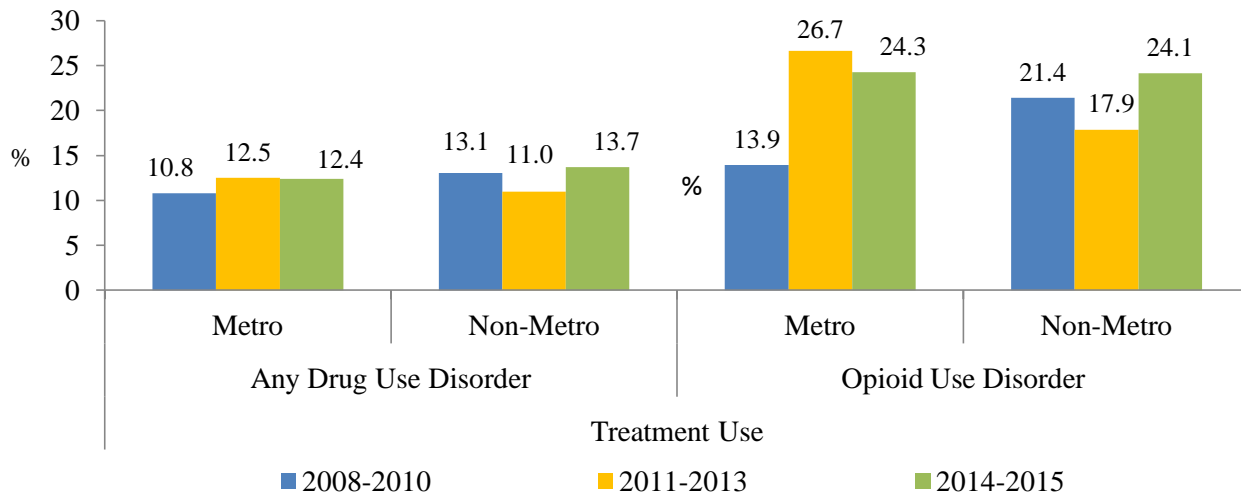


Figure 2 shows that treatment use ranged between a low of 11.0% in 2011-2013 to a high of 13.7% in 2014-2015 among non-metropolitan residents with any illicit drug use disorder. Past year treatment rates for any illicit drug use disorder did not significantly differ by metropolitan status in unadjusted or adjusted analyses. Treatment use increased significantly from 2008-2010 to 2011-2013 among metropolitan residents when adjusting for other factors.

Treatment use rates were higher among persons with an opioid use disorder. Metropolitan residents had significantly higher adjusted and unadjusted treatment rates than non-metropolitan residents during 2011-2013 only. Treatment rates increased significantly among metropolitan residents between periods 2008-2010 and 2011-2013 and among non-metropolitan residents between 2011-2013 and 2014-2015.

**Figure 2. Treatment Use: Any Illicit Drug and Opioid Use Disorders**



**Heroin and Prescription Pain Reliever Use Disorders: Perceived Treatment Need and Utilization**

Again, we did not conduct analyses of temporal changes in perceived treatment need and utilization among adults with a heroin or prescription pain reliever use disorder because of small sample size limitations. Therefore, estimates reported in Figures 3 and 4 are from 2008-2015 combined NSDUH data. As shown in Figure 3, perceived treatment need did not differ significantly in unadjusted and adjusted analyses between metropolitan and non-metropolitan residents with a heroin use disorder. However, perceived treatment need was higher among non-metropolitan than metropolitan residents with a prescription pain reliever use disorder in unadjusted and adjusted analyses.

**Figure 3. Perceived Treatment Need: Heroin and Prescription Pain Reliever Use Disorders**

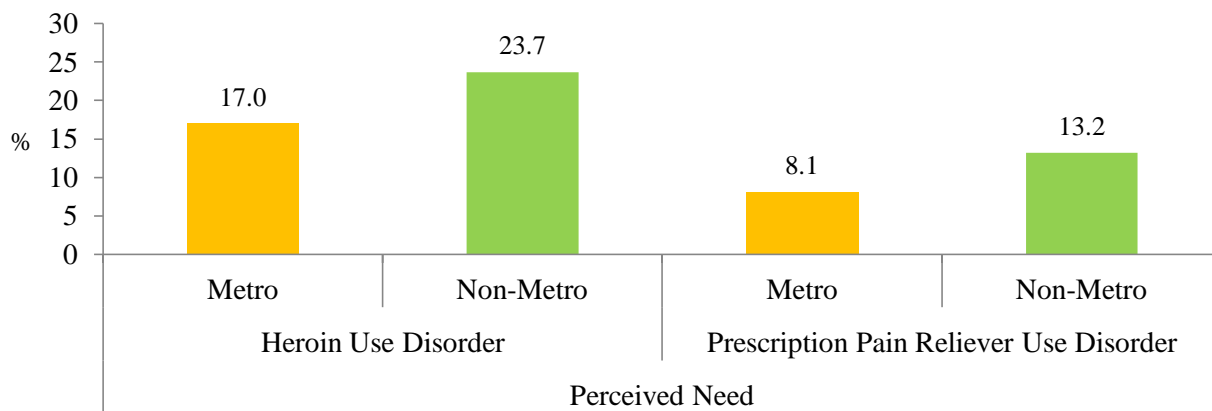
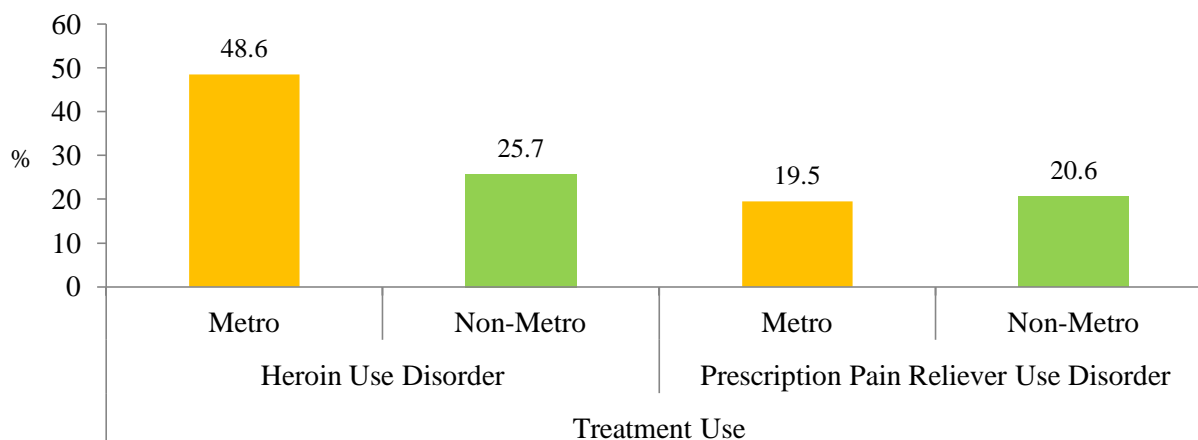


Figure 4 shows population-weighted rates of any treatment use among persons satisfying criteria for heroin and prescription pain reliever use disorders. Treatment rates were significantly higher among metropolitan than non-metropolitan residents with a heroin use disorder in unadjusted and adjusted analyses. Treatment rates were comparably lower among persons with a prescription pain reliever use disorder and did not significantly differ by metropolitan status.

**Figure 4. Treatment Utilization: Heroin and Prescription Pain Reliever Use Disorders**

### Conclusion and Potential Policy Implications

Perceiving a need for treatment is considered an essential first step in the treatment-seeking process and has been shown to be strongly associated with treatment utilization.<sup>3-5</sup> The findings presented in this brief indicate that the vast majority of non-metropolitan adults ages 18-64 who satisfy criteria for an illicit drug use disorder do not perceive that they need treatment and do not receive any formal treatment services. Despite several health policies aimed at increasing access to substance use treatment services over the study period, including implementation of initial parity laws in 2008-2010, early insurance expansion in 2011-2013, and clarification of parity laws and further insurance expansions in 2014-2015, our study found very few changes over time in perceived treatment need and utilization. Potential policy issues emerging from our research include:

- 1) The need to stimulate positive perceptions about treatment need among illicit drug users and their families and friends. Because perceived need is strongly associated with the decision to seek treatment, efforts to promote the benefits of treatment could facilitate actual treatment utilization.<sup>7,8</sup>
- 2) The importance of screening, brief intervention, and referral to treatment (SBIRT) in rural primary care. SBIRT has been shown to be an effective means of identifying persons with drug use problems,<sup>9,10</sup> but many rural primary care providers may need assistance linking patients who screen positive for illicit drug or prescription pain reliever use problems to outpatient or residential drug use treatment.
- 3) Capacity limits of rural-serving outpatient and residential treatment programs. Substance use treatment organizations and providers may need incentives to serve non-metropolitan market areas.
- 4) Limited supply of behavioral health providers serving rural areas, including psychiatrists, clinical psychologists, social workers, and psychiatric nurse practitioners. Prior research has shown that all of these providers are less available in non-metropolitan counties.<sup>11</sup> Increasing the supply of behavioral health counselors could also help assure that persons with opioid use disorders receiving buprenorphine as part of Medication-Assisted Treatment also receive psychosocial treatment (e.g., assessment of psychosocial needs, counseling or cognitive behavioral therapy, and referrals to community social services).<sup>12</sup>
- 5) Providers' caps on the number of buprenorphine-prescribed patients. The Federal government recently raised the cap from 100 to 275 patients, but prior research suggests buprenorphine utilization (for opioid use disorders) is more strongly associated with increases in patient caps than increases in physicians prescribing buprenorphine.<sup>13</sup>

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## Acknowledgments

We thank Julia Cecil, MA, MBA, for her managerial and editorial assistance.

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## Suggested Citation

Borders TF, Wen H. *Perceived Treatment Need and Utilization for Illicit Drug and Opioid Use Disorders in Non-Metropolitan Areas*. Lexington, KY: Rural and Underserved Health Research Center; 2018.