Addressing Prescription Opioid Misuse/Overdose Issues in Rural Areas

Mountain Plains ATTC
Addiction Technology Transfer Center Network

Presentation Outline

I. Rural Definition and Statistics

II. Rural Culture-Rurality

III. Rural Issues/Barriers Related to Health

IV. Substance Use and Opioid Use

V. Substance Use and Opioid Use in Rural Areas

VI. Four Factors Explaining Opioid Use Rates in Rural Areas

VIII. Training Workforce in Rurality

Rural/Frontier Definitions

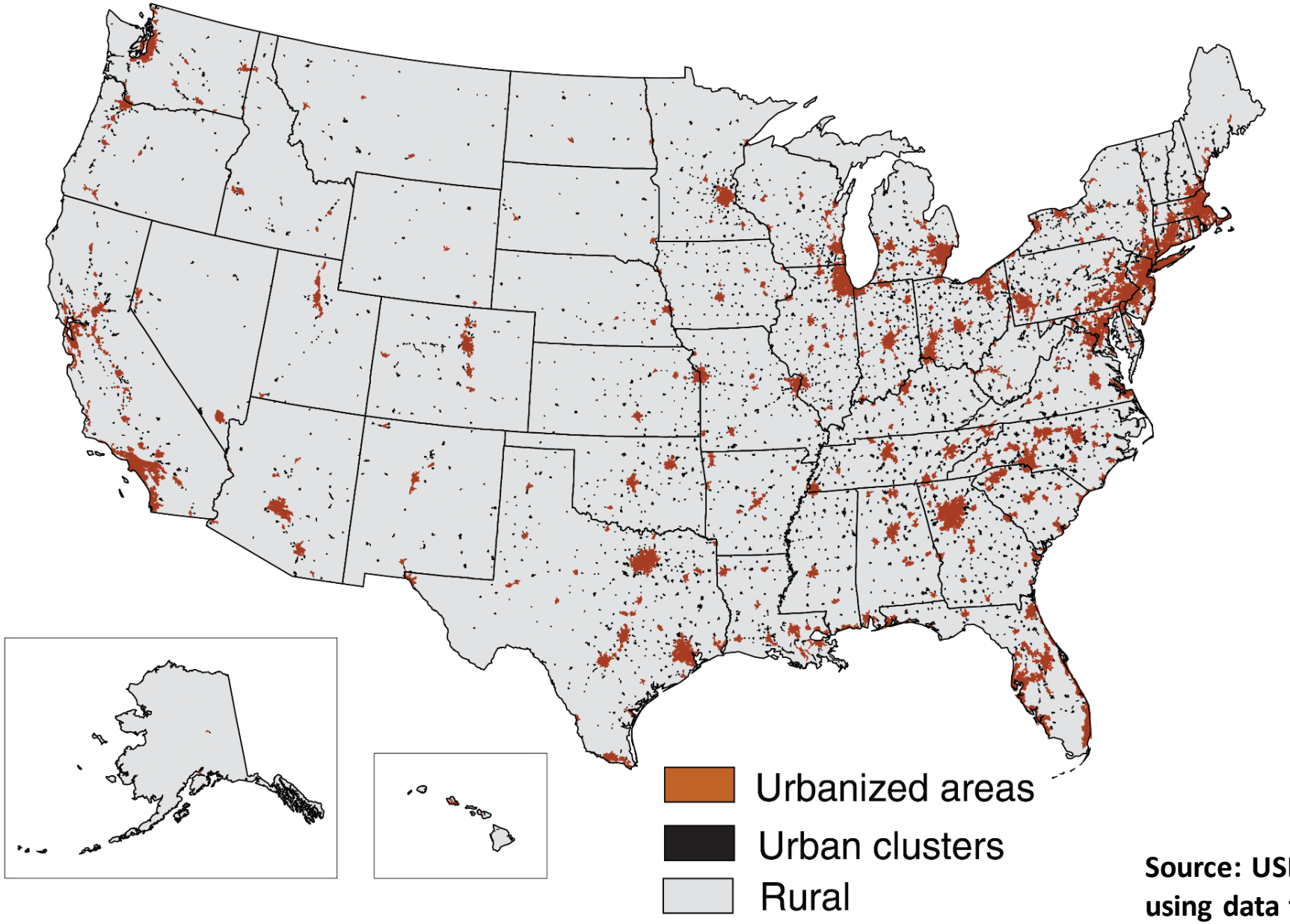
- Rural- Population Density 6.1 and 99.9 persons per square mile
- US Census Bureau- Rural is defined as what is not urban… everything leftover after defining urban is rural
    - 15 different definitions for Rural
    - 3 Definitions Used Most Frequently

https://www.ruralhealthinfo.org/topics/what-is-rural
https://www2.census.gov/geo/pdfs/reference/ua/Defining_Rural.pdf

- Frontier
    - Population Density fewer than 6 people per square miles

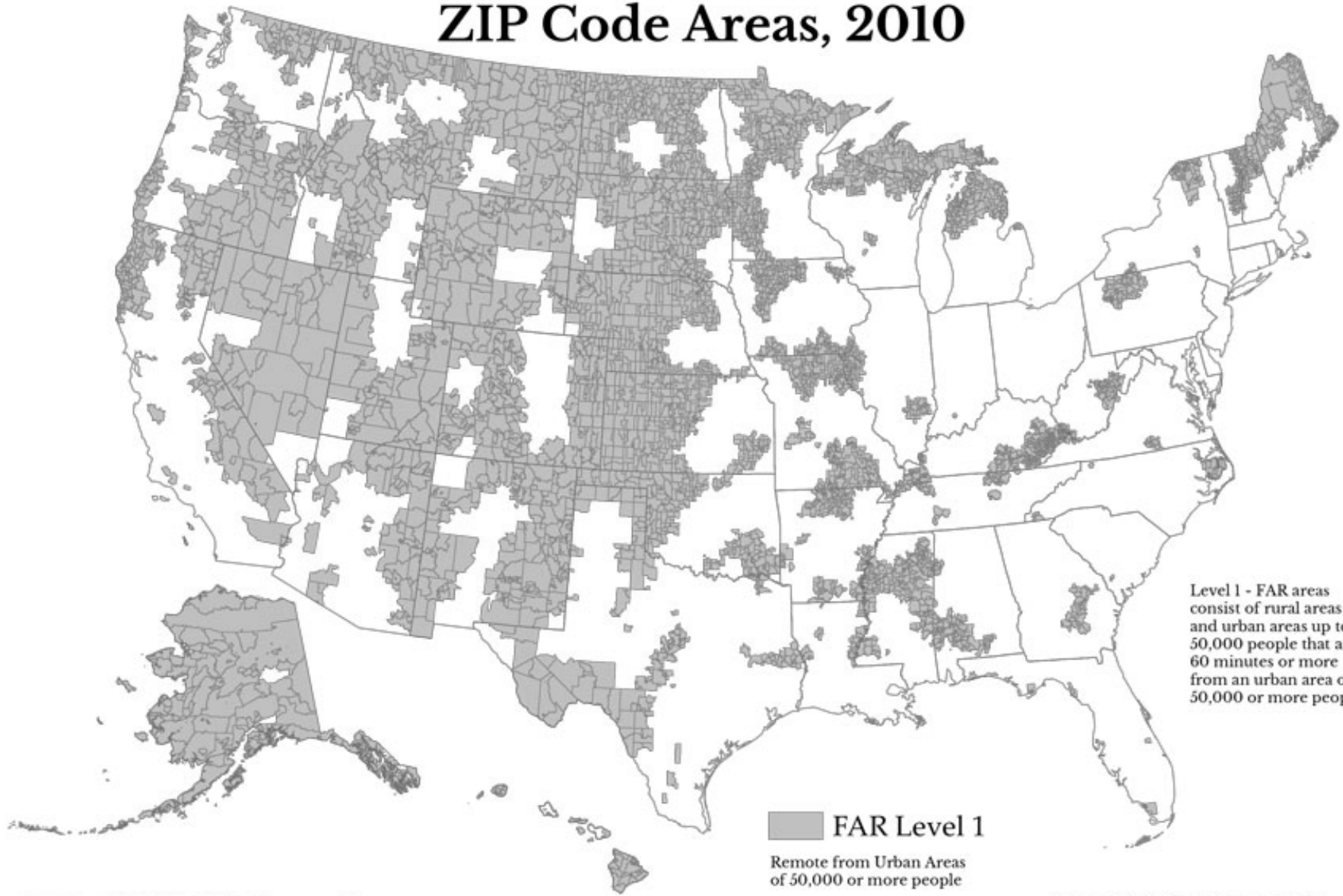
https://www.ruralhealthinfo.org/topics/frontier#definition

U.S. Census Bureau's urban and rural areas, 2012



Source: USDA, Economic Research Service using data from U.S. Census Bureau

Frontier and Remote (FAR) Level 1
ZIP Code Areas, 2010

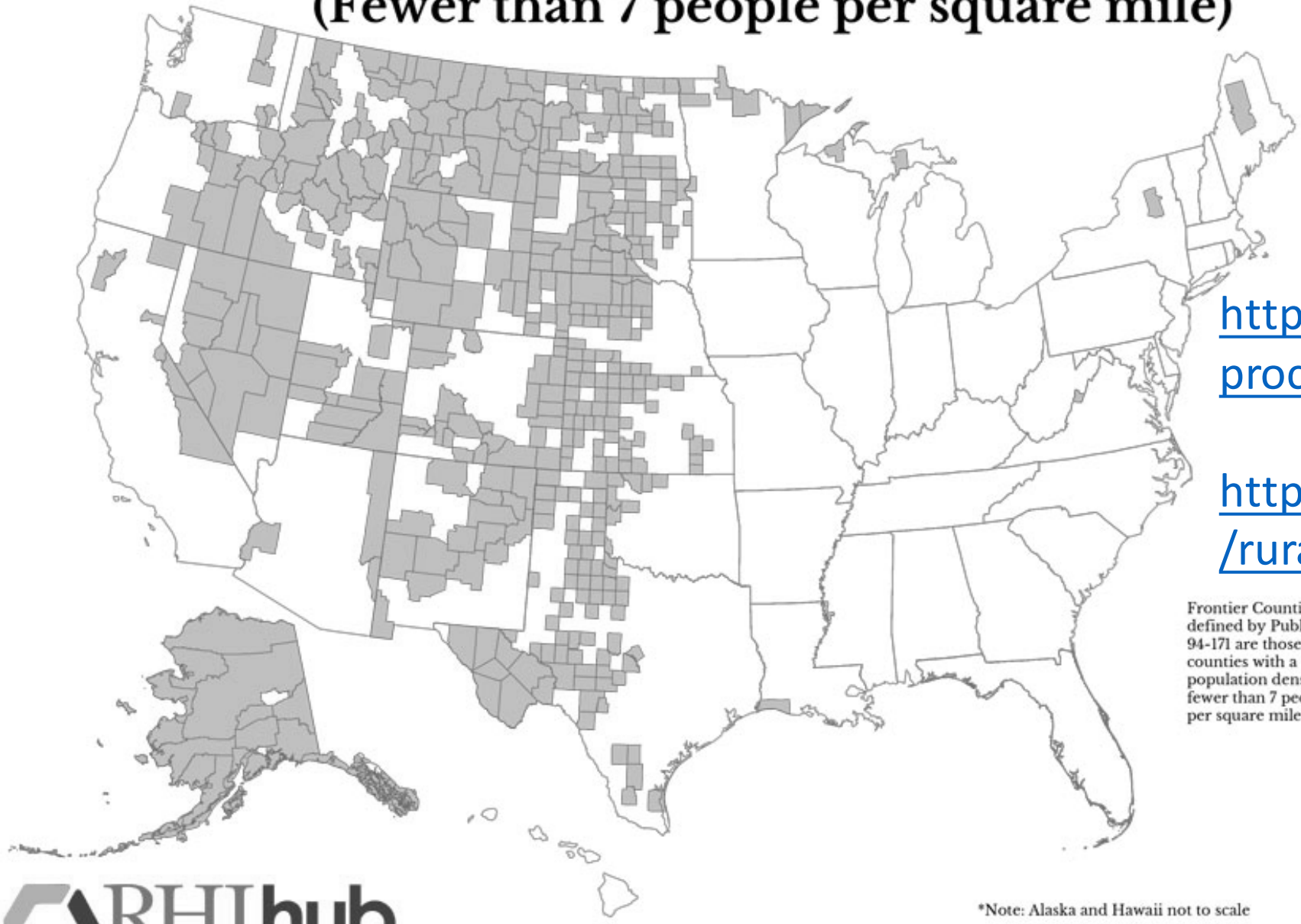


RHIhub
Rural Health Information Hub

*Note: Alaska and Hawaii not to scale

Source(s): Economic Research Service, United States Department of Agriculture, April 2015
Based on Census 2010 data.

Frontier Counties
(Fewer than 7 people per square mile)



http://frontierus.org/mapping-process-and-data/

https://www.ruralhealthinfo.org/ruralmaps/mapfiles/frontier.jpg

Frontier Counties as defined by Public Law 94-171 are those counties with a population density of fewer than 7 people per square mile.

RHIhub
Rural Health Information Hub

*Note: Alaska and Hawaii not to scale

Source(s): U.S. Census Bureau, 2010 Decennial Census, Summary File 1

Rurality as a …

More than 1 in 5 Americans live within a rural area … where *economic, religious, historical, and geographic factors* combine to create a unique culture that influences mental health outcomes, physical health conditions, and health behaviors.

Smalley & Warren, 2012; U.S. Census Bureau, 2010

Are there more rural residents than any racial, ethnic, or sexual orientation minority group in the US?

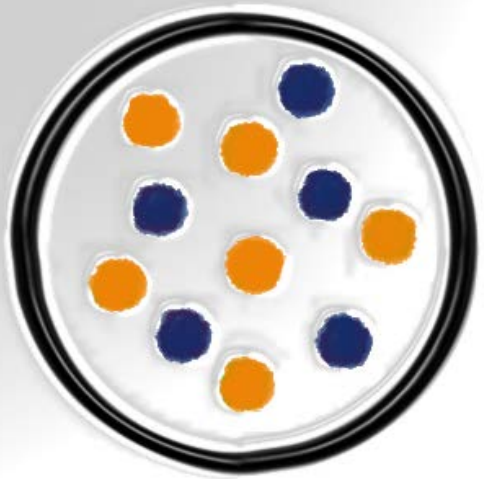
(Smalley & Warren, 2012)

2010 Census on Race

- African American – 14.6%
- Hispanic Latino – 16%
- American Indian and Alaskan Native – 0.9%
- Asian – 5.6%
- Native Hawaiian and Other Pacific Islander – 0.2%

2010 Census Brief Overview of Race and Hispanic Origin- Issued March 2011

INCLUSION



It is surprising that **rurality** (the state or quality of being from a rural area) has traditionally not been viewed as a diversity issue worthy of inclusion with other recognized multicultural groups.

Rurality is a unique diversity issue that can have an adverse effect on:

- ★ access to resources and services
- ★ health-related attitudes/beliefs, behaviors

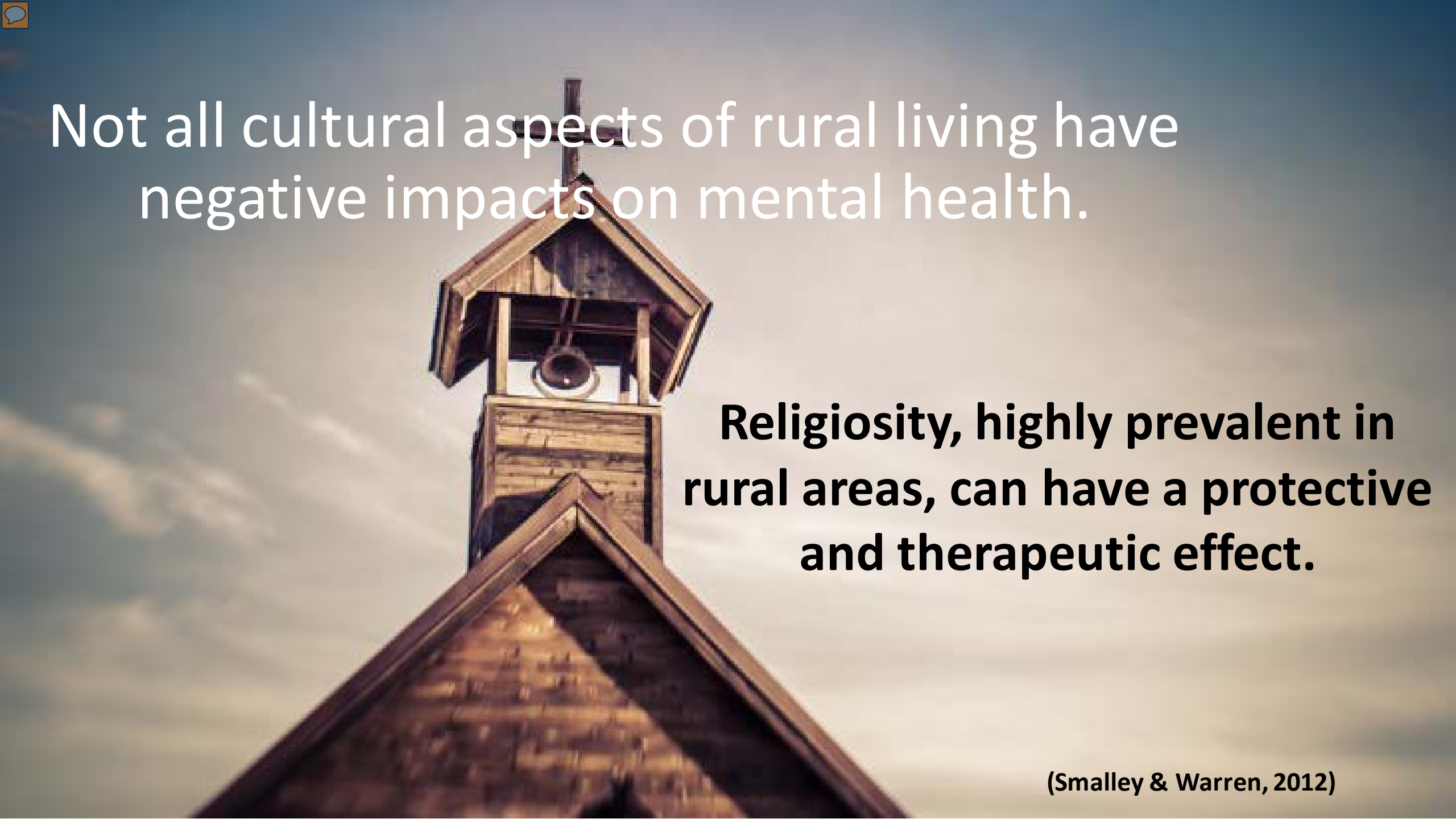
AND

- ★ is often associated with a multitude of health disparities

(Smalley & Warren, 2012; Barefoot, et al., 2015; Hartley, 2014; & Warren & Smalley, 2014)

- Not all rural cultures are the same
- Be aware of the potential effects of rural living on personality characteristics, including self-reliance and avoidance of help-seeking behaviors
- Explore religion as appropriate with rural clients
  - Do not assume clients are or are not religious, but be mindful of the fact that religious beliefs may enter in the therapeutic discussion
- Don’t make assumptions about a patient’s SES just because they live in a rural area and poverty rates are higher
- Rural areas have more stigma about receiving mental health SUD services

(Smalley & Warren, 2012)



Not all cultural aspects of rural living have negative impacts on mental health.

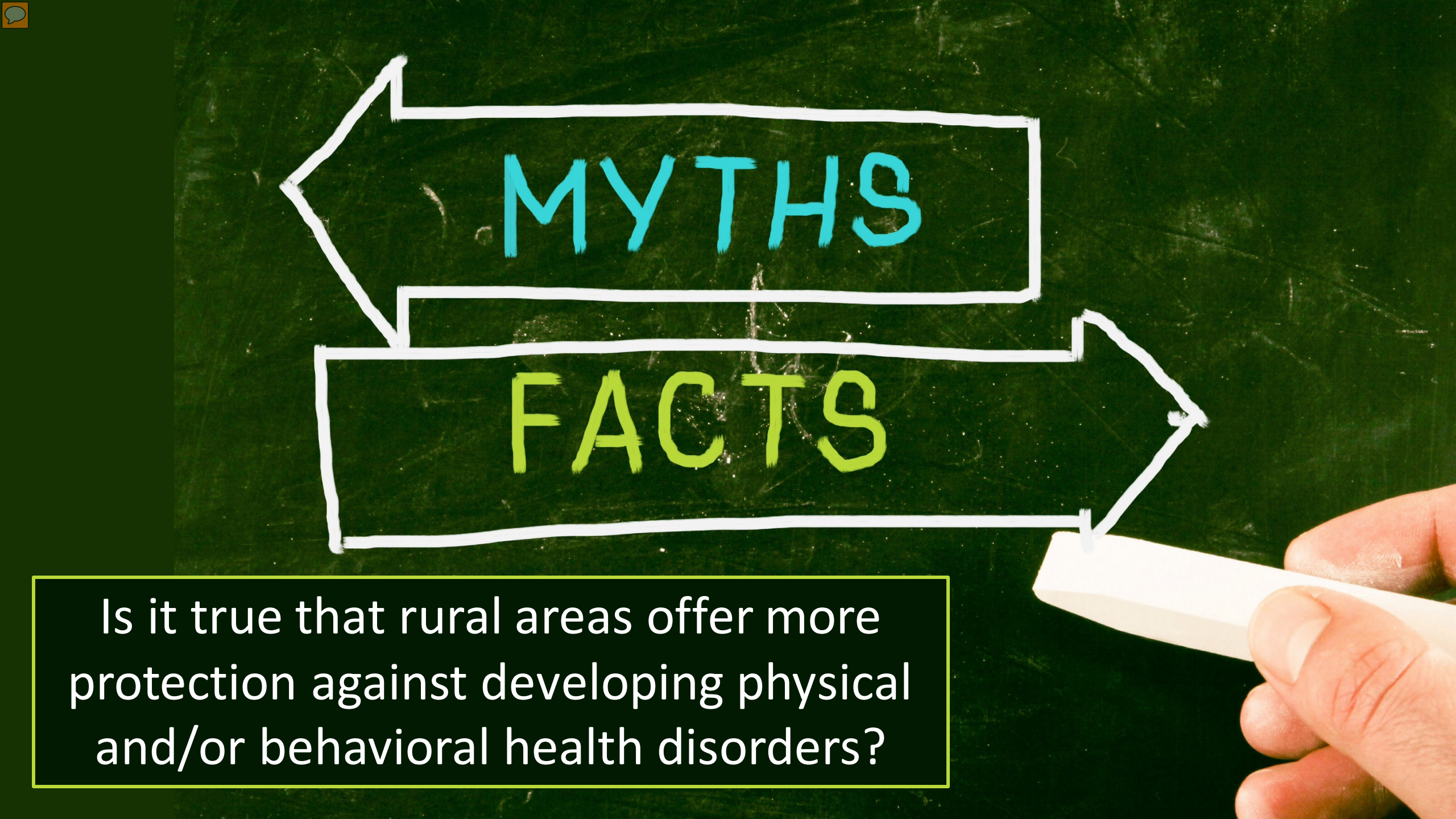
Religiosity, highly prevalent in rural areas, can have a protective and therapeutic effect.

(Smalley & Warren, 2012)

Resistance to therapeutic techniques and revealing to friends/families the presence of a mental illness will be amplified in rural settings. Clinicians must understand that the reasons behind such **resistance may well be based in cultural** rather than cognitive decision-making processes.

(Smalley & Warren, 2012)

Rural Issues and Barriers Related to Health



Is it true that rural areas offer more protection against developing physical and/or behavioral health disorders?

For many years, an assumption persisted that rural communities were more nurturing than urban areas and offered more protection against behavioral health disorders.

Our findings reinforce prior research that health care disparities correspond to the degree of rurality… with residents in more remote areas facing the greatest challenges in access to care as compared to rural areas that are closer to urban centers.

(Chan et al., 2015)

Historical rates of serious mental illness (SMI) in rural areas have been comparable with those found in urban areas; however, accessibility, acceptability, and utilization of prevention and treatment services in rural areas is quite different.

(US Department of Health and Human Services, Health Resources and Services Administration, Office of Rural Health Policy, 2005)

Barriers

Individuals in rural communities have unique barriers to behavioral health treatment and recovery services

(Fortney & Booth, 2001; Fortney, 2011; Browne, et al., 2015)

Barriers include:

- **Travel Costs and Burden**
  (Rheuban, 2012)
- **Time Away From Work**
  (Berwick, 2008)
- **Child Care**
  (Berwick, 2008)
- **Service Provider Shortages**
  (Perle et al., 2011; Swinton et al., 2009)

Barriers include:

- lower utilization and treatment completion rates which causes conditions to get worse (Fortney & Booth, 2001)
- limited behavioral health services availability due to costs and workforce shortages (Pullman & Heflinger, 2009; Gordon et al., 2001)
- higher financial burden to pay for services due to higher service delivery costs or less health insurance coverage (Fortney et al., 2004)
- exacerbated stigma – rurality culture values self-reliance (Robertson & Donnermeyer, 1997)
- privacy concerns – everyone know everyone's business in rural communities (Fortney et al., 2004)

(Browne et al., 2015)

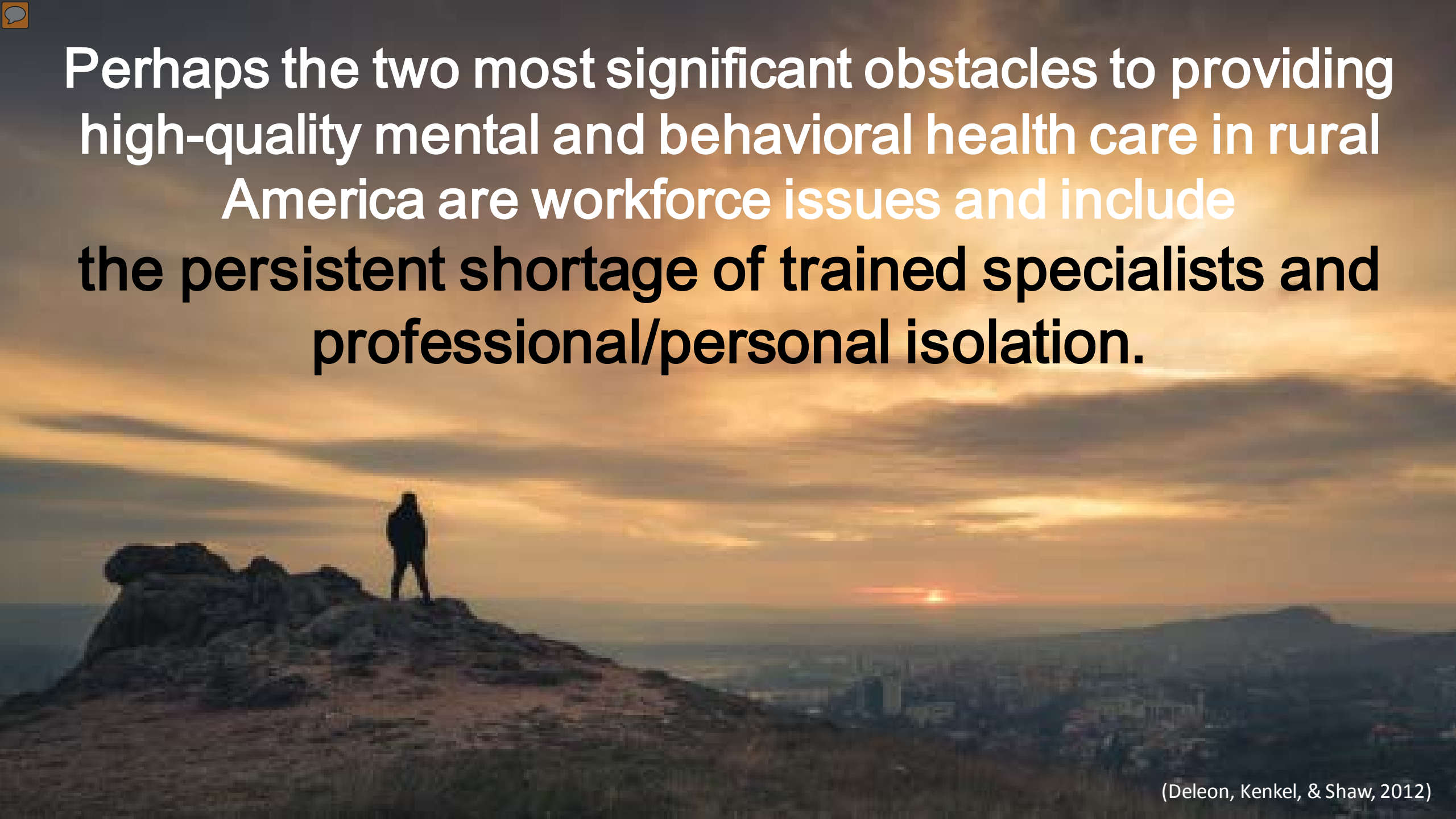
The 4 A's that Challenge Rural Services

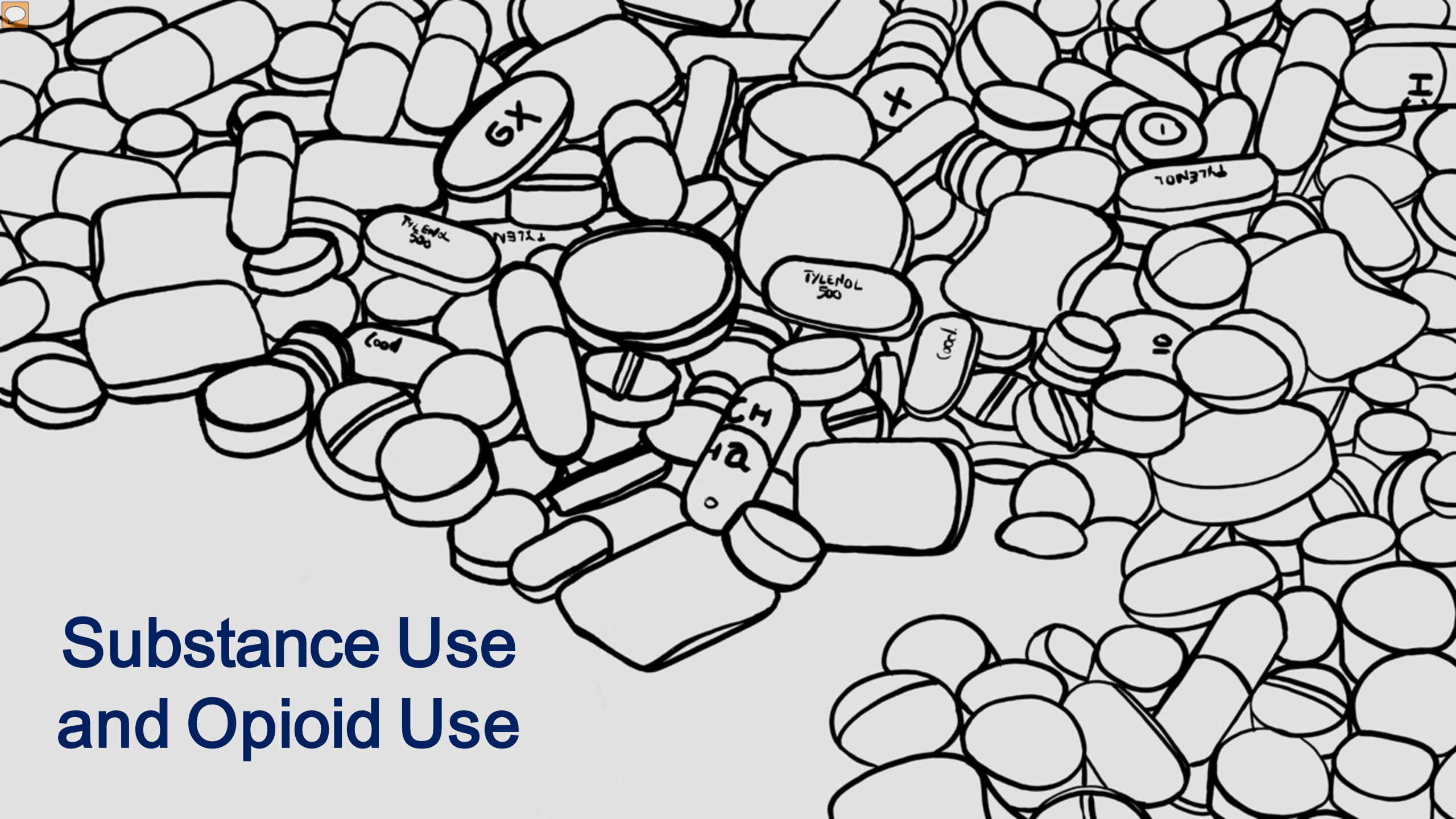
- **Availability**. Chronic shortages of mental health/SUD professionals exist, as members of the behavioral health workforce are more likely to live in urban centers-service shortages or lack of services limit the receipt of services.
- **Accessibility**. Rural residents often travel long distances to receive services, are less likely to be insured for mental health services, and less likely to recognize the illness.
- **Affordability** involves the costs associated with receiving care and availability of benefits/insurance to offer services
- **Acceptability** is related to the stigma associated with needing or receiving mental health and SUD treatment/recovery services and raises resistance to seeking help.

(National Rural Health Association https://www.ruralhealthweb.org/about-nrha/about-rural-health-care; Smalley & Warren, 2012)

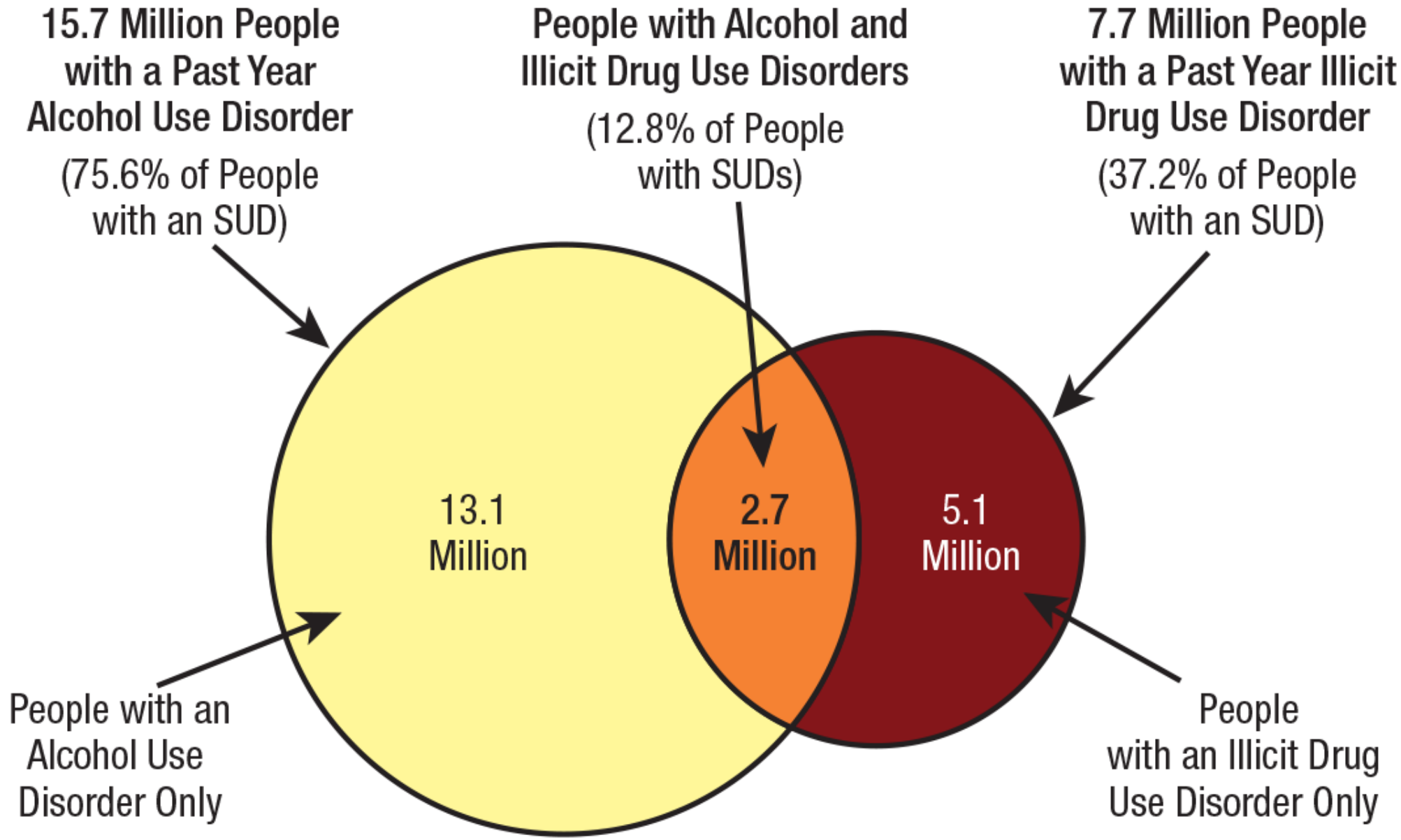
Access to healthcare is the number one issue that has the most negative impact or effect …

(Bolin, 2015; Rural Healthy People, 2020)


Perhaps the two most significant obstacles to providing high-quality mental and behavioral health care in rural America are workforce issues and include
the persistent shortage of trained specialists and professional/personal isolation.
(Deleon, Kenkel, & Shaw, 2012)

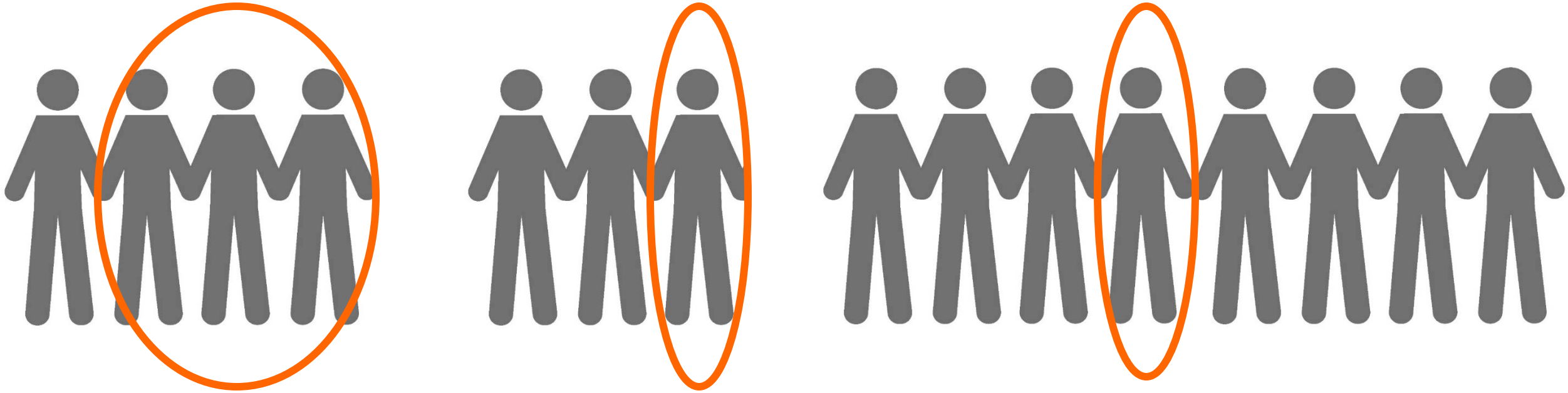


Substance Use and Opioid Use



(National Drug Use & Health Survey, 2015)

2015 National Drug Use and Health Survey



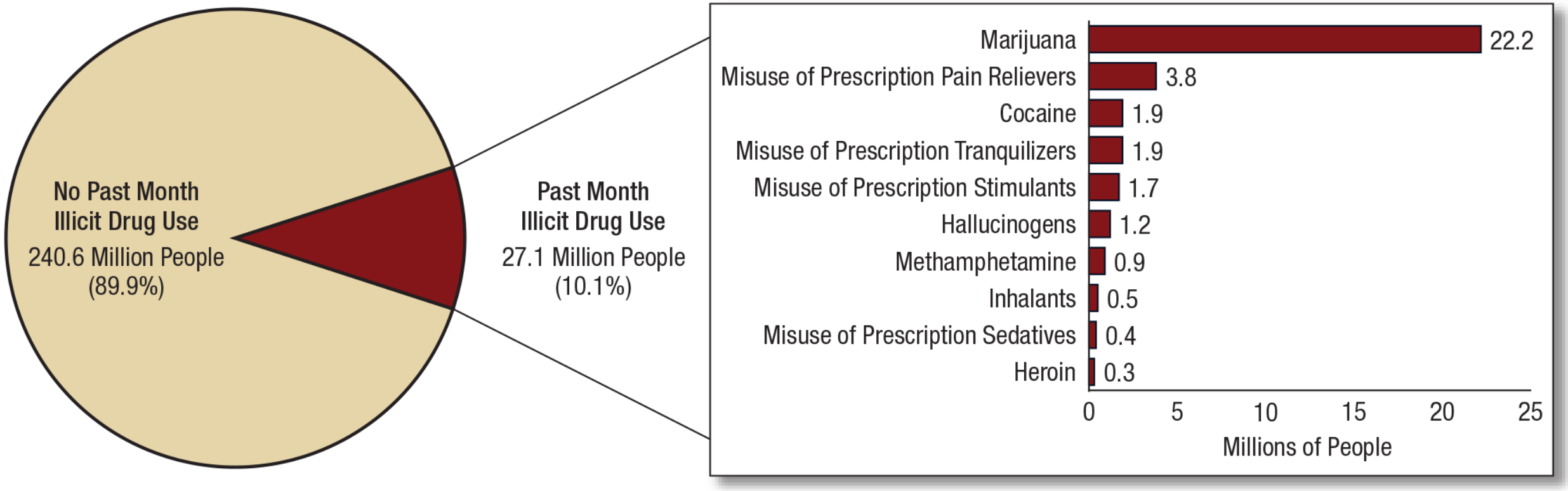
3 out of 4 had an alcohol use disorder

1 out of 3 had an Illicit drug use disorder

1 in 8 had both an alcohol and illicit drug disorder

Individuals with SUDs in the Past Year

1 in 10 individuals, age 12 or older, had used an illicit drug in the past month in 2015



National Drug Use and Health Survey 2015

In 2015, an estimated 2.1 million people had an opioid use disorder, which includes 2 million people with a prescription pain reliever use disorder and 0.6 million people with a heroin use disorder.

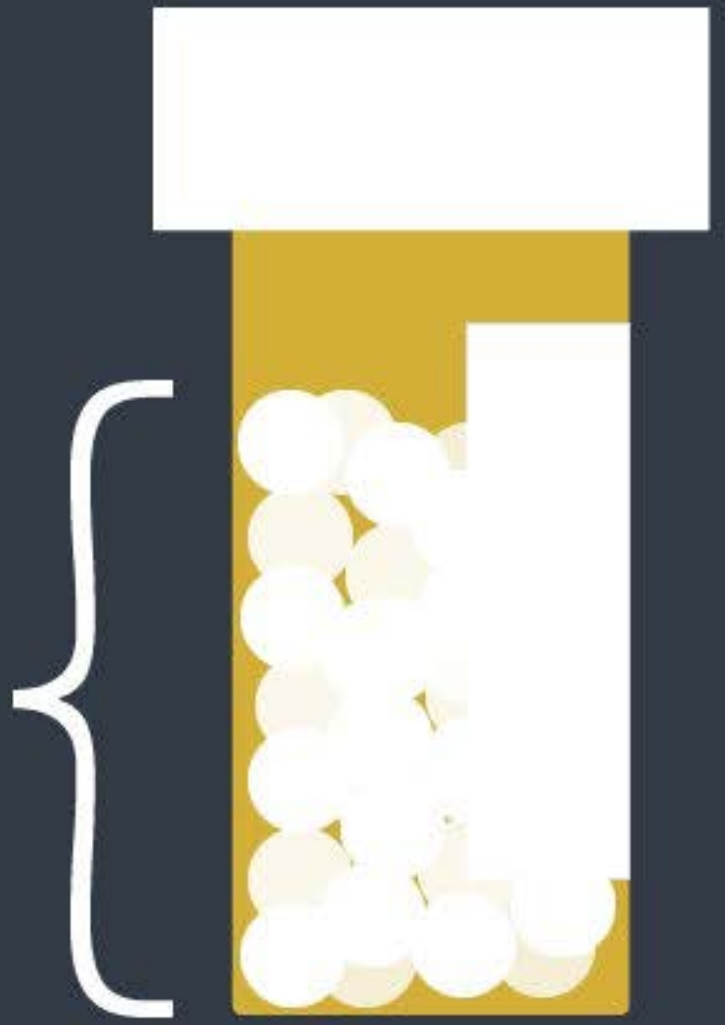
(National Drug Use and Health Survey 2015)

‘Of the 30 leading diseases and injuries in the United States, drug use disorders have accounted for the greatest increase in deaths and years of life lost between 1990 and 2010 (US Burden of Disease Collaborators, 2013)

The largest portion of these deaths results from the ingestion of prescription and illicit opioids (CDC, 2011) exceeding the number of people dying in car accidents’ (Paulozzi, 2012)

(Rosenblatt, Andrilla, Catlin, & Larson, 2015)

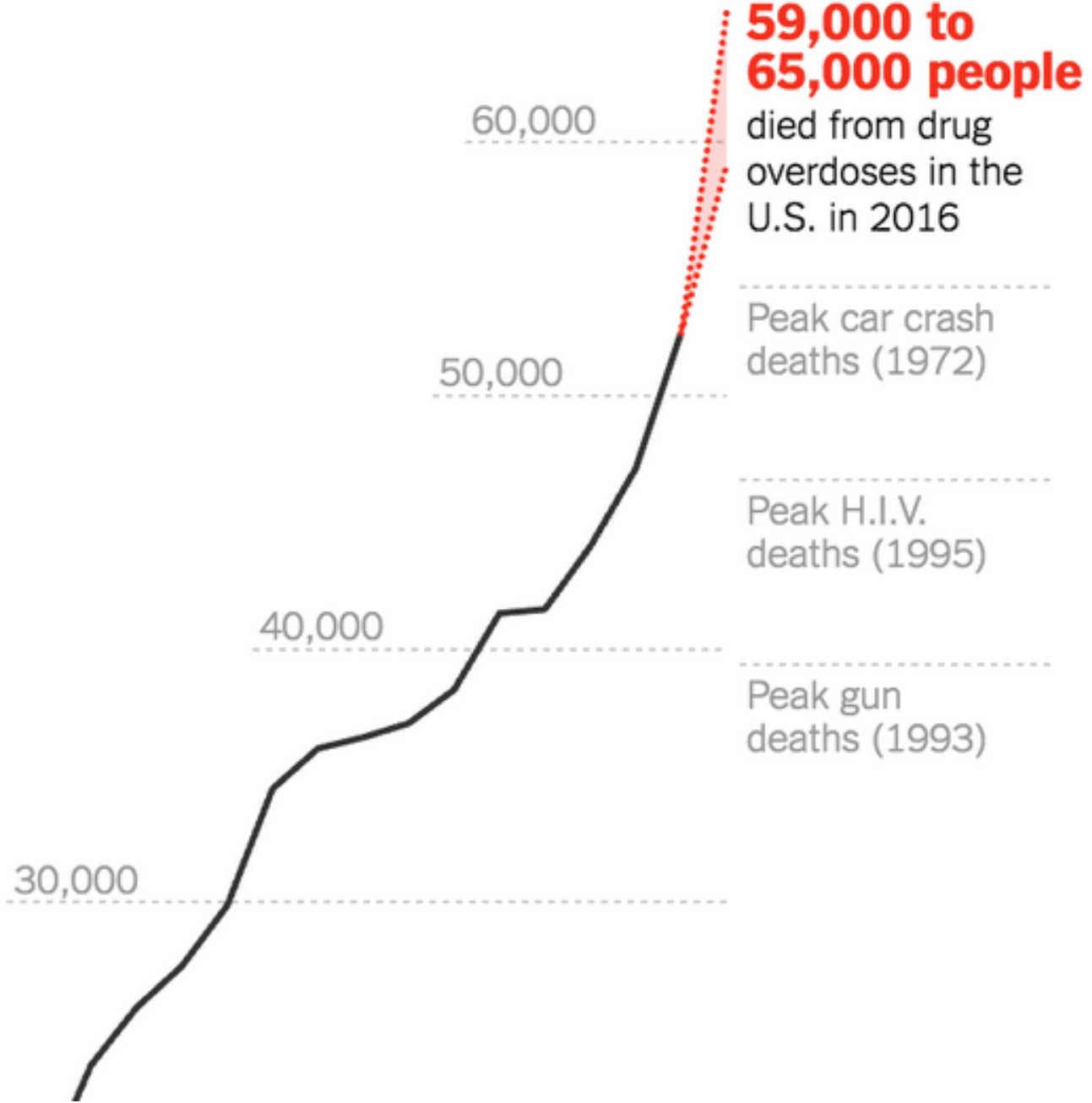
During 2015, drug overdoses accounted for 52,404 U.S. deaths



2/3

OF DRUG **OVERDOSE DEATHS** IN 2015
INVOLVED THE USE OF **OPIOIDS**

Drug overdose deaths, 1980 to 2016



Opioid Overdose Deaths (63,600) in 2016 were HIGHER than the number of people:

- killed in Vietnam (US Military) **58,220** [1]
- that died from HIV/AIDS at the height of the epidemic (1995) **48,371** [2]
- killed in motor vehicle accidents **37,574** [3]
- with alcohol-induced deaths **33,171** [3]
- murdered **17,793** [3]

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[1] https://www.archives.gov/research/military/vietnam-war/casualty-statistics.html
[2] http://www.factlv.org/timeline.htm
[3] http://www.drugwarfacts.org/chapter/causes_of_death

More than 90 Americans die every day after overdosing on opioids

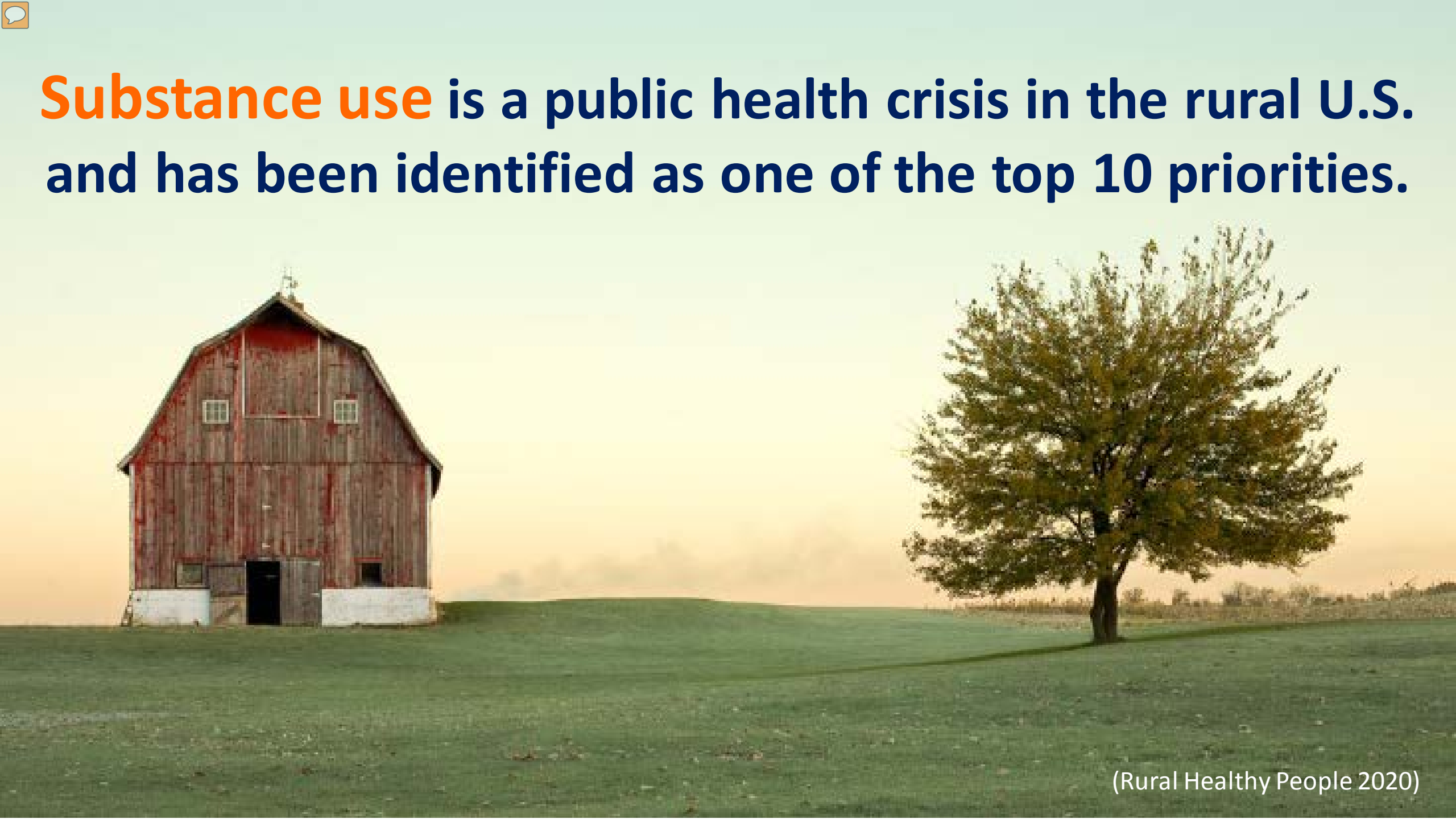
The CDC estimates the total "economic burden" of prescription opioid misuse alone in the United States is

$78.5 billion a year,

including the costs of healthcare, lost productivity, addiction treatment, and criminal justice involvement.

Substance Use and Opioid Use in Rural Areas

Substance use is a public health crisis in the rural U.S. and has been identified as one of the top 10 priorities.



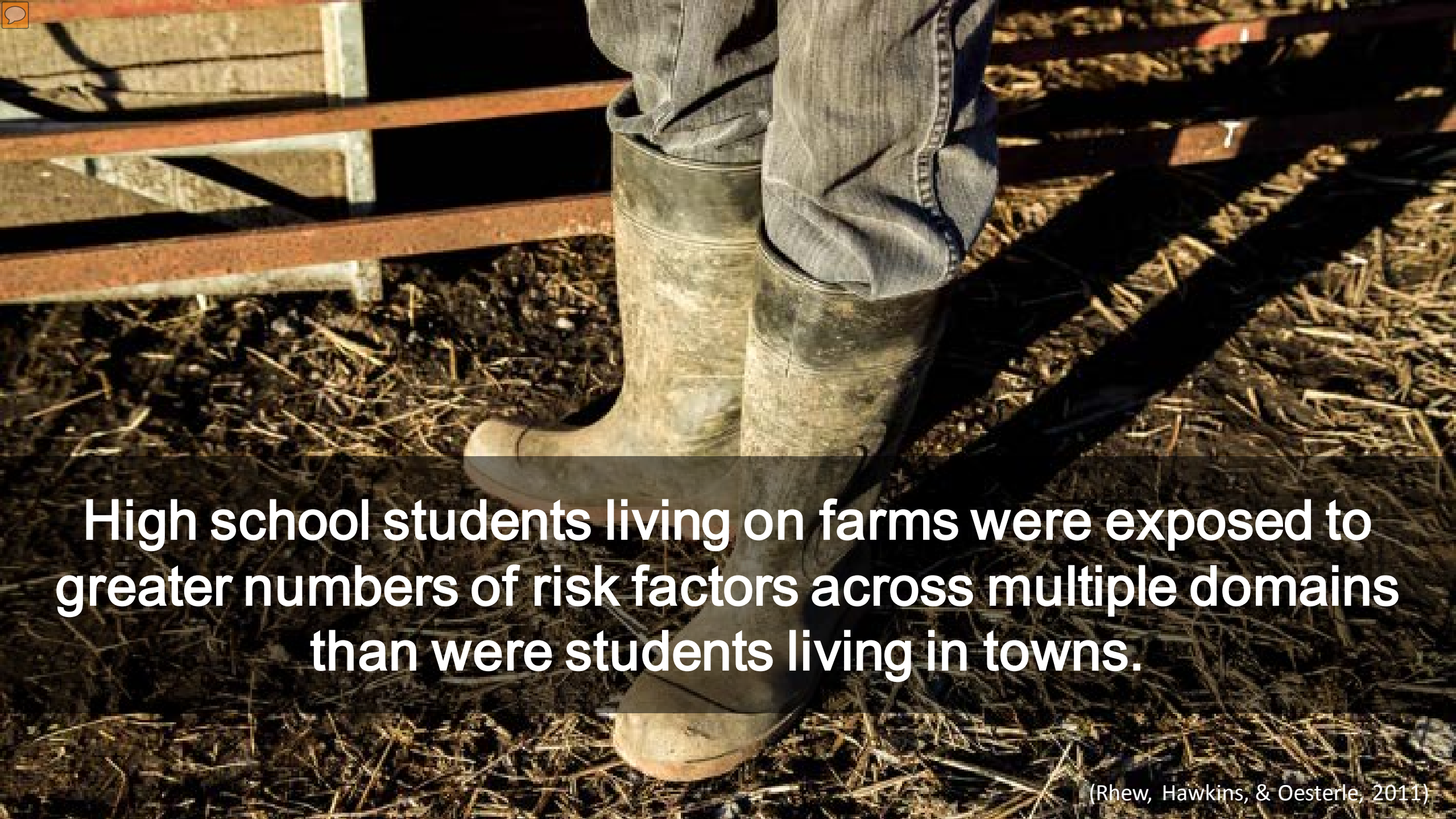
(Rural Healthy People 2020)

10 YEARS

Over the last decade, several major studies and reports have found that rather than being a safe haven, rural areas experience significant rates of substance abuse.

(Van Gundy, 2006; Lambert et al. 2008)

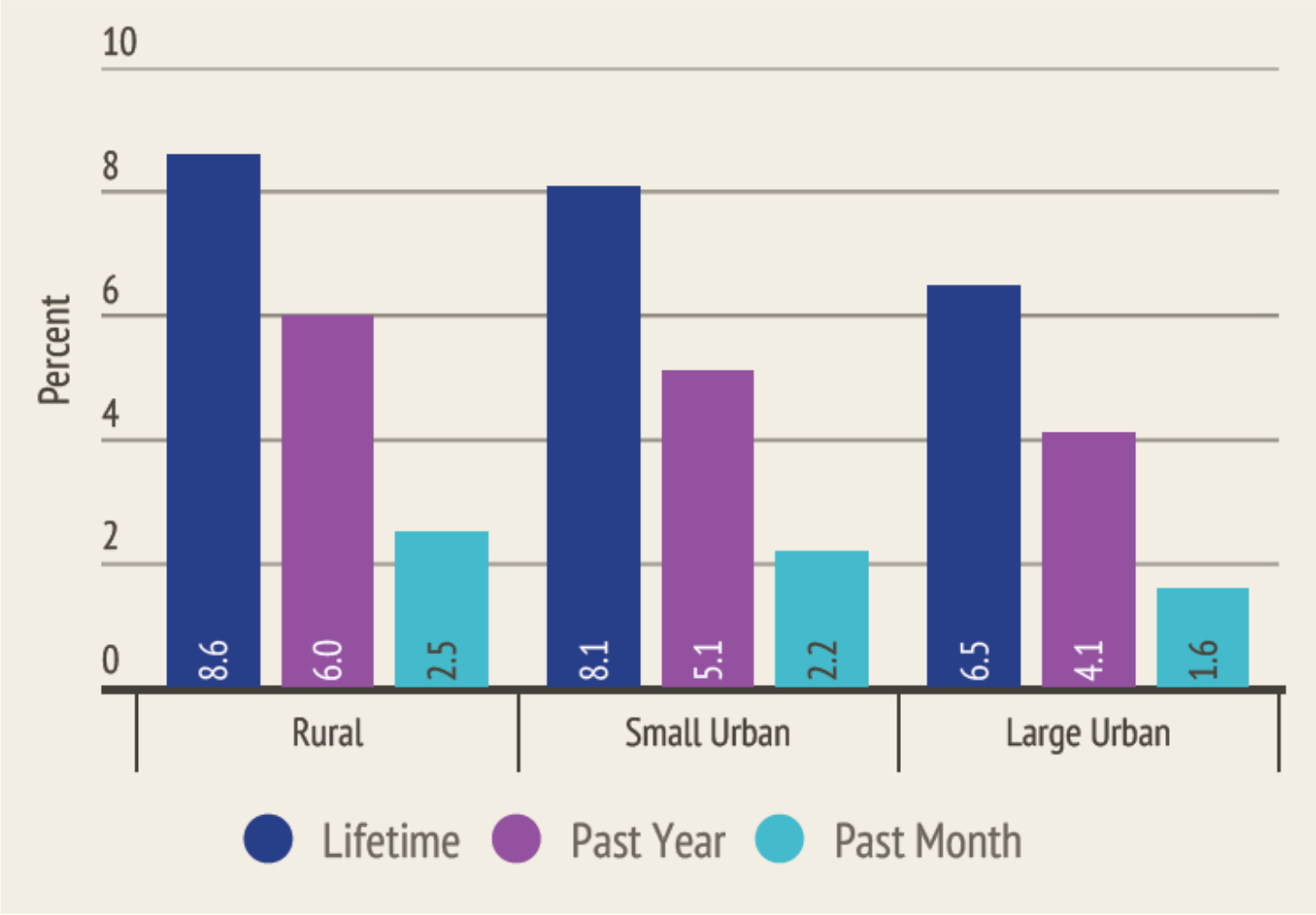
“at least 15 million rural residents” struggle with significant substance dependence, mental illness, and medical-psychiatric comorbid conditions.



High school students living on farms were exposed to greater numbers of risk factors across multiple domains than were students living in towns.

(Rhew, Hawkins, & Oesterle, 2011)

FIGURE 1. PERCENT OF ADOLESCENTS REPORTING LIFETIME, PAST YEAR, AND PAST MONTH ABUSE OF PRESCRIPTION PAINKILLERS, 2014



Source: Substance Abuse and Mental Health Services Administration, 2014[6]

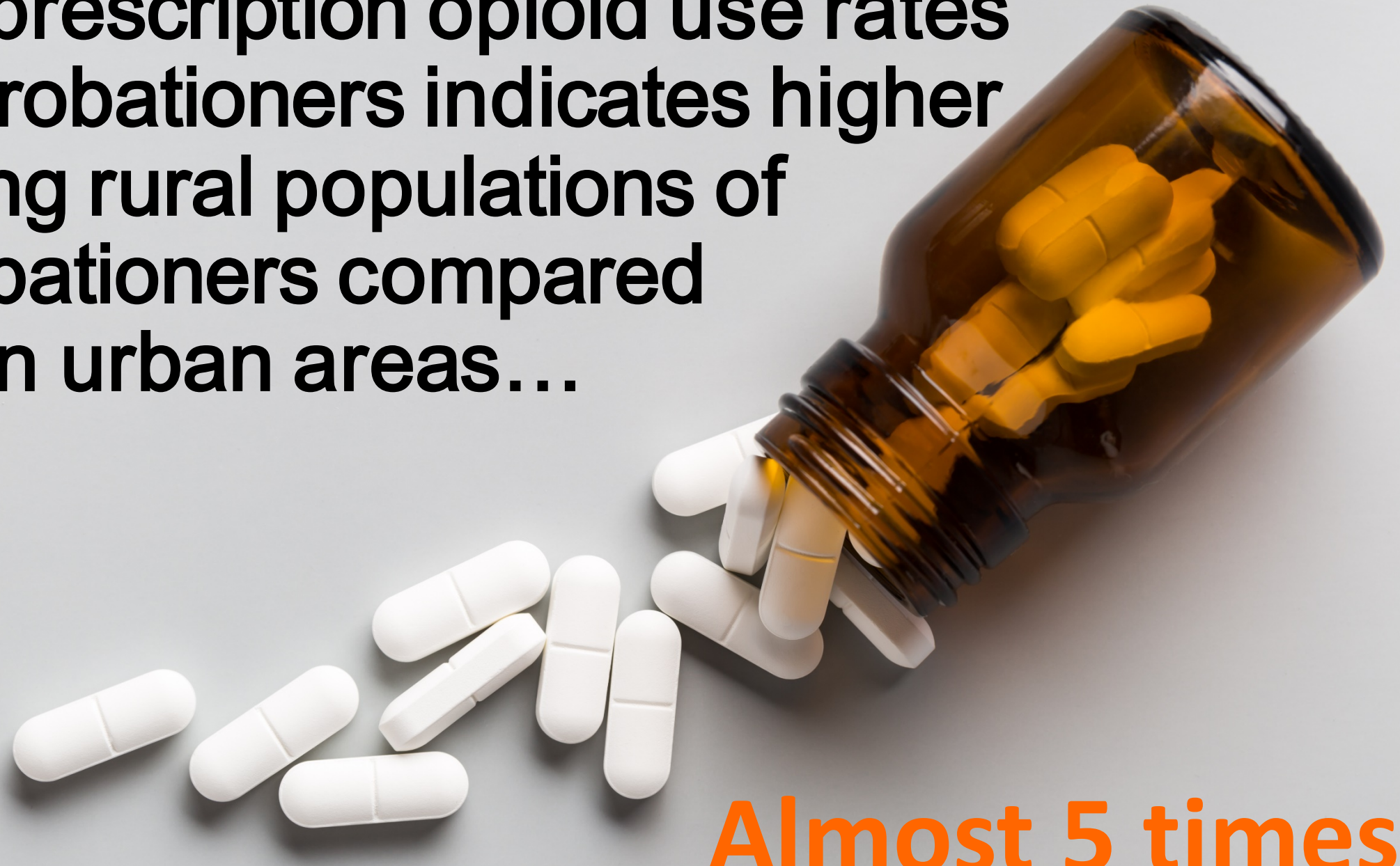
Adolescents from rural areas reported significantly higher rates of prescription painkillers

In fact…

higher rates of substance use in rural communities compared to urban areas are now well-documented given the rise in opioid use.

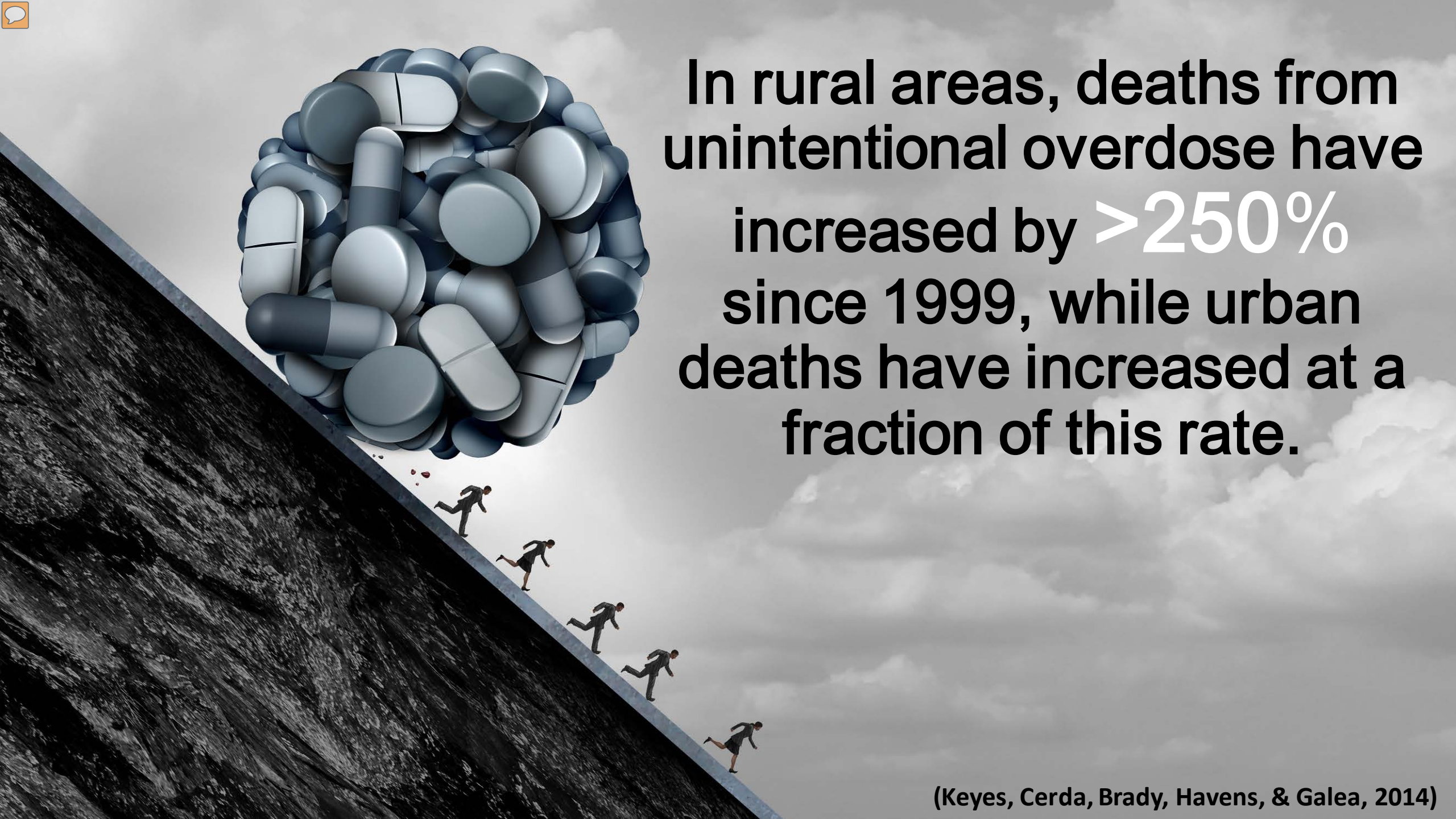
(Camsari & Libertin, 2017; Shannon et al., 2010; Monnat & Riggs, 2016)

Study of prescription opioid use rates in adult probationers indicates higher use among rural populations of adult probationers compared to those in urban areas…



Almost 5 times

(Havens et al., 2007)


In rural areas, deaths from unintentional overdose have increased by >250% since 1999, while urban deaths have increased at a fraction of this rate.
(Keyes, Cerda, Brady, Havens, & Galea, 2014)

In 1999, drug overdose death rates were

6.4 per 100,000 population (urban)

4.0 per 100,000 population (rural)

In 2015 overdose death rates

17.0 per 100,000 (rural)

16.2 per 100,000 (urban)

(Mack et al., 2017)

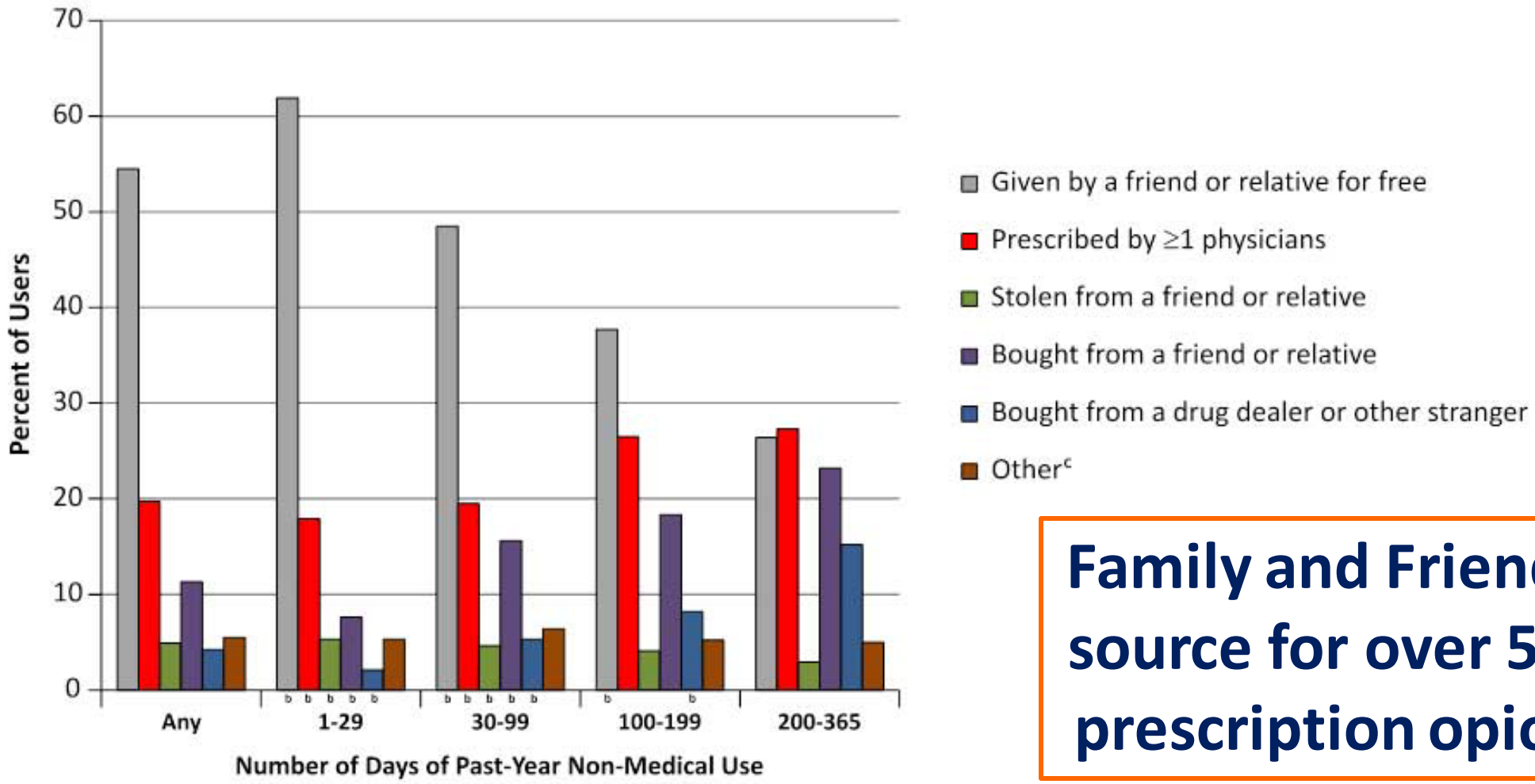
2 main QUALITATIVE DIFFERENCES in the experience of opioid use disorders within RURAL versus URBAN settings

First – opioid users in RURAL SETTINGS are more likely to abuse prescription opioids (versus heroin)

Second – relative to urban settings, RURAL SETTINGS have substantially lower availability for OUD treatment and access to naloxone, which could otherwise serve as protective factors

(Dunn et al., 2016)

Sources of Prescription Opioids Among Past-Year Non-Medical Users[a]



Family and Friends are the source for over 50% of the prescription opioids used.

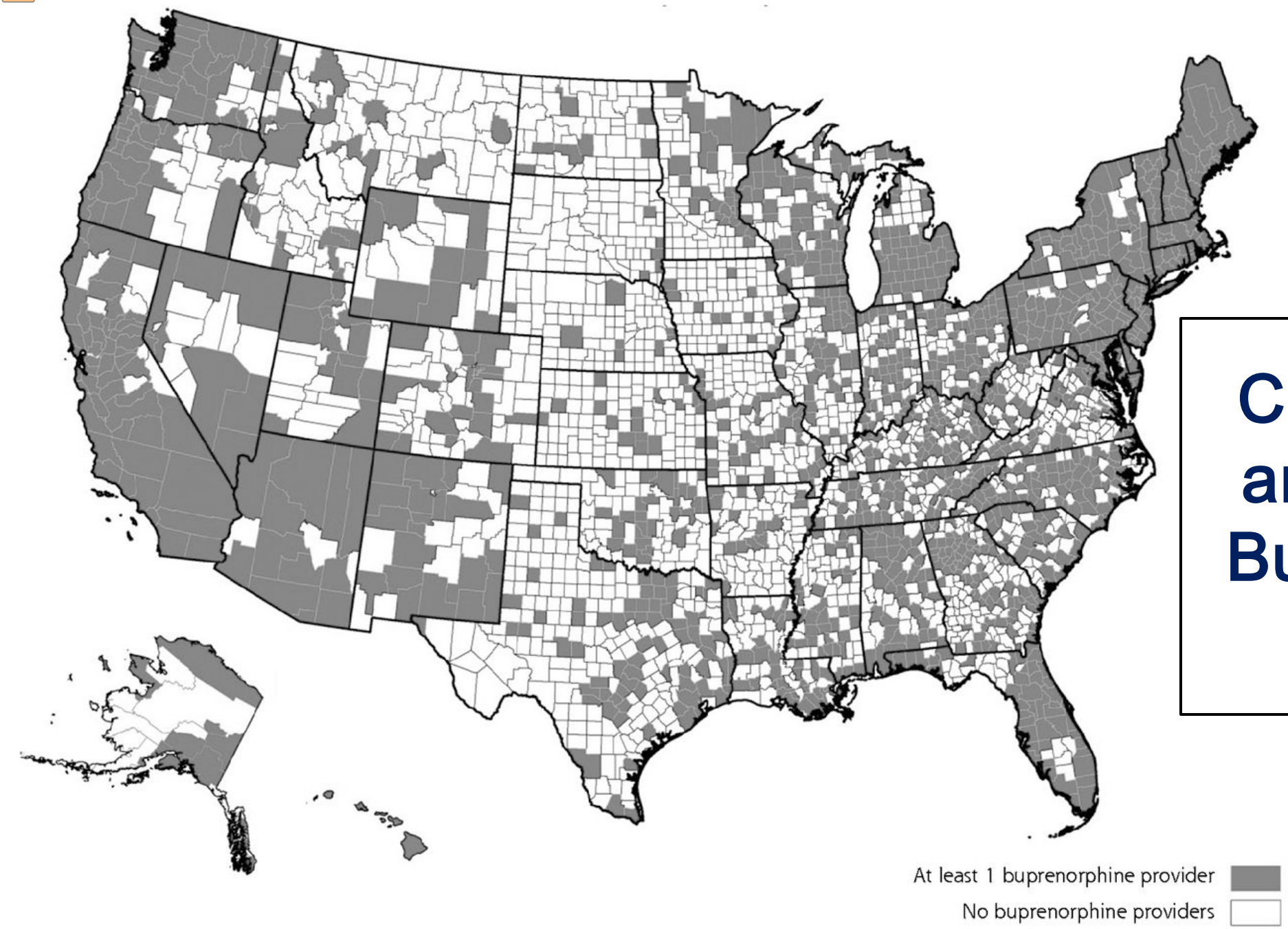
[a] Obtained from the US National Survey on Drug Use and Health, 2008 through 2011.[5]
[b] Estimate is statistically significantly different from that for highest-frequency users (200-365 days) ($P < .05$).
[c] Includes written fake prescriptions and those opioids stolen from a physician's office, clinic, hospital, or pharmacy; purchases on the Internet; and obtained some other way.

SOURCE: Jones C, Paulozzi L, Mack K. Sources of prescription opioid pain relievers by frequency of past-year nonmedical use: United States, 2008–2011. JAMA Int Med 2014; 174(5):802-803.

Data Supporting Increases in Rural Overdoses

- In 2015 82.5% of rural counties in the United States lacked a physician with a Drug Enforcement Agency waiver to prescribe buprenorphine, which severely limited access to medication assisted treatment (MAT).
- Access to naloxone and bystander training was limited or non-existent and many communities did not have timely access to first responders.

Counties With and Without a Buprenorphine Provider



(Rosenblatt et al., 2015, page 25)

4 Factors

Explaining Use Rates in Rural Areas

4 Factors that Explain Greater Increases in Non-medical Prescription Opioid Misuse in Rural versus Urban Areas

1. **Increased sales of opioid analgesics in rural areas lead to greater availability for nonmedical use through diversion.**
2. **Out-migration of upwardly mobile young adults from rural areas increases economic deprivation and creates an aggregation of young adults at high risk for drug use.**
3. **Tight kinship and social networks allow faster diffusion of nonmedical prescription opioids among those at risk.**
4. **Increasing economic deprivation and unemployment create a stressful environment that places individuals at risk.**

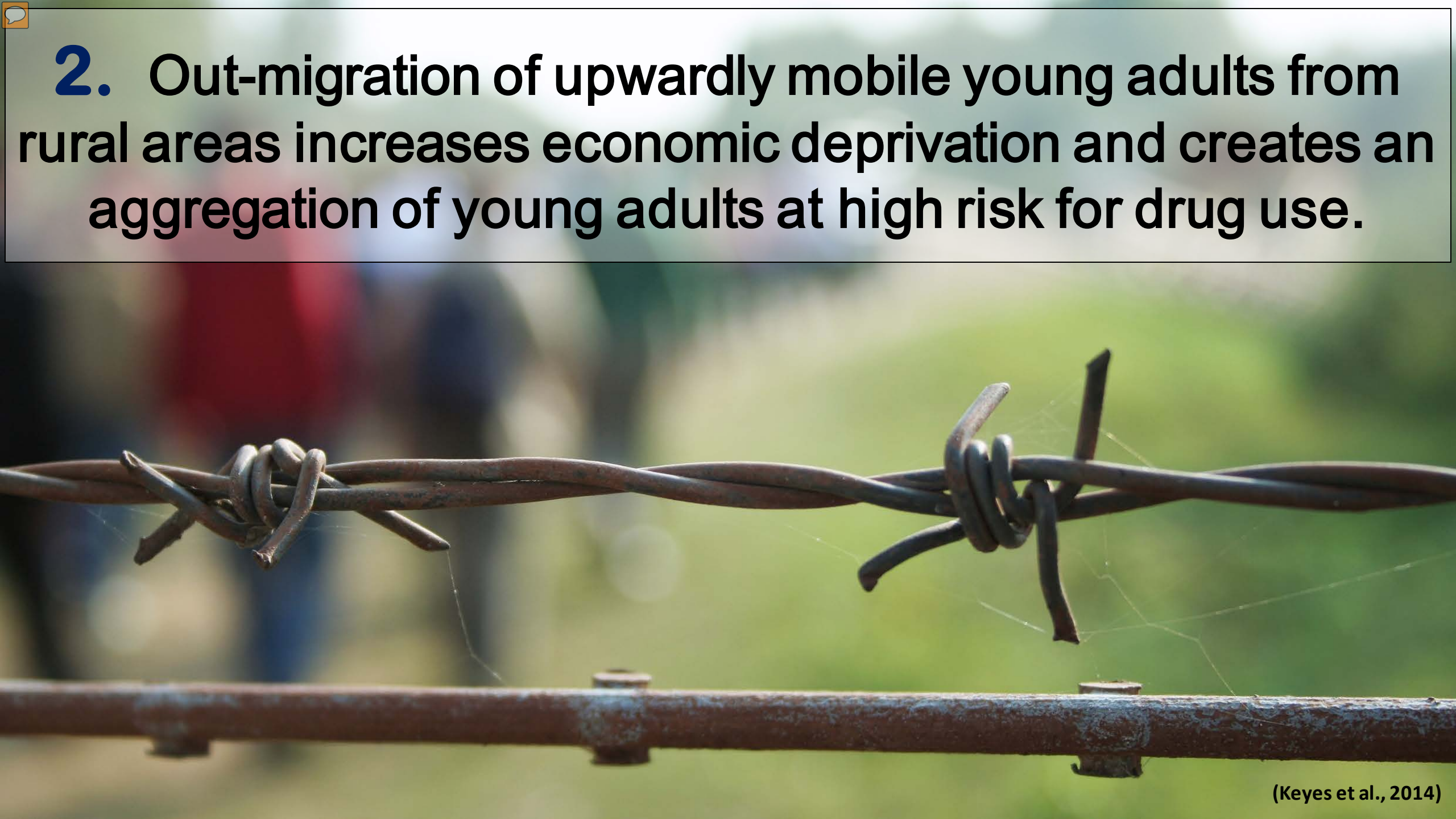
(Keyes et al., 2014)

1. Increased sales of opioid analgesics (high prescription rates) in rural areas lead to greater availability for non-medical use through diversion.

(Keyes et al., 2014)

Reasons Opioids are More Available in Rural Areas…

- **Rural populations are, on average, older than are urban populations… there may be more chronic pain for which management with opioid analgesics is indicated.**
- **Chronic pain and injury are more common in rural than in urban areas.**
- **Qualitative research indicates that prescription drug use in rural areas such as Appalachian Kentucky is an embedded part of the culture of the area, with prescription narcotics often prescribed to maintain a steady workflow in mines and other heavy labor occupations.**



2. Out-migration of upwardly mobile young adults from rural areas increases economic deprivation and creates an aggregation of young adults at high risk for drug use.

(Keyes et al., 2014)

Constrained economic opportunities have contributed to an aging of rural America, with significant out-migration of younger persons.

(Johnson & Cromartie, 2006)

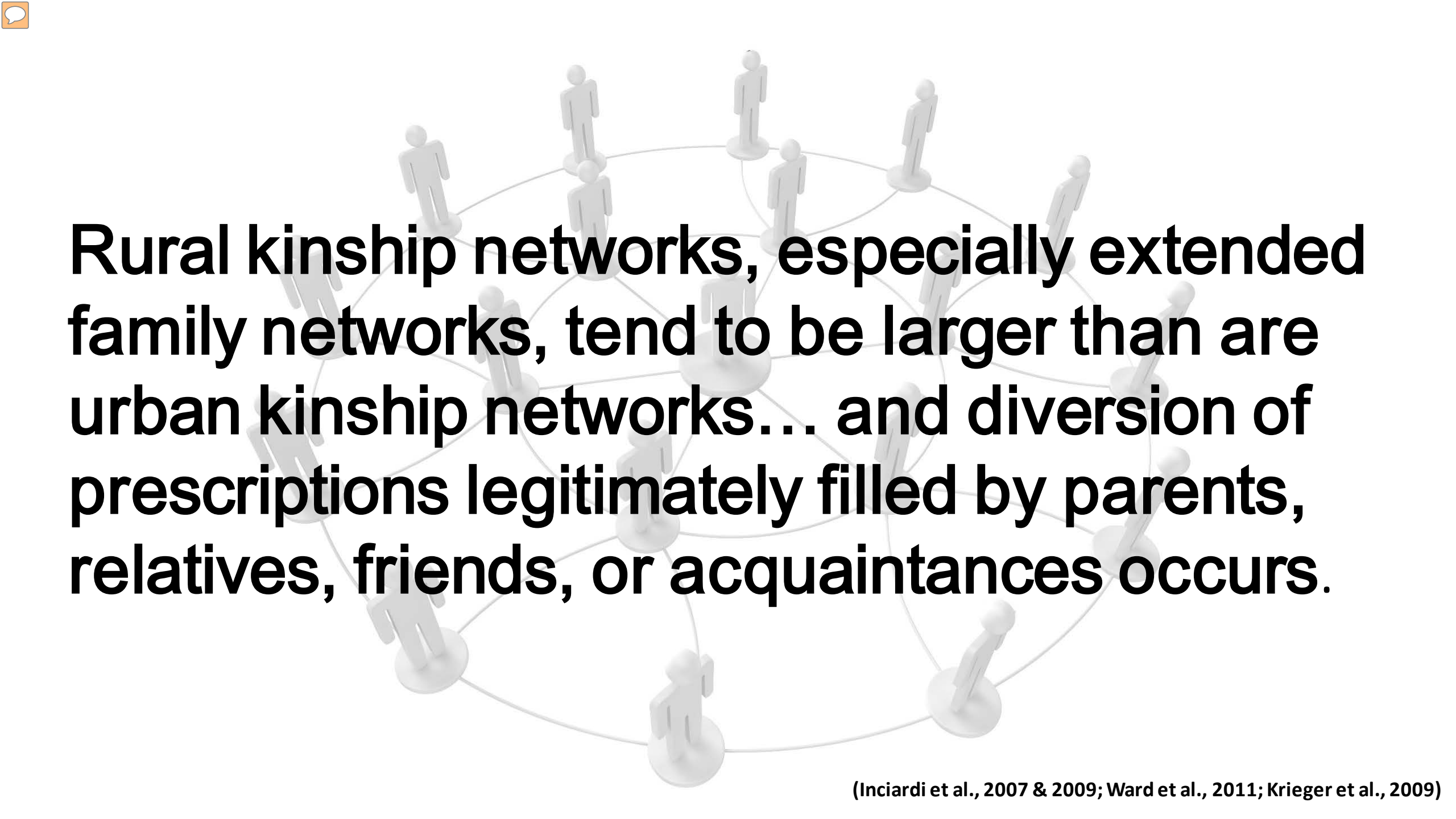
This may result in younger adults remaining in rural areas who are less educated and less likely to be working or earning a living wage than their peers who moved away…

"stay-at-home" group may be at higher risk for substance abuse

(Conger, 1997)

3. Tight kinship and social networks allow faster diffusion of non-medical prescription opioids among those at risk.

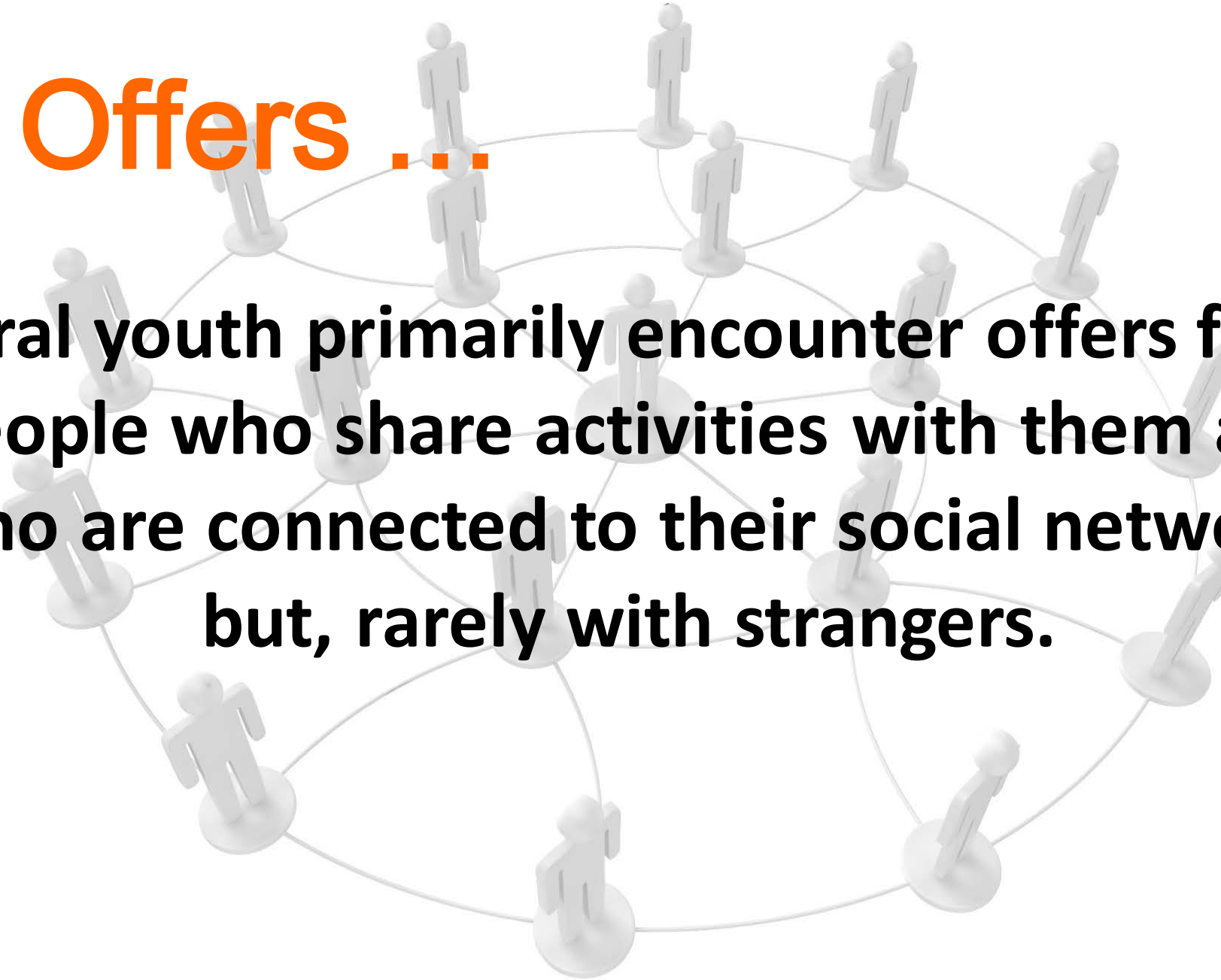
(Keyes et al., 2014)



Rural kinship networks, especially extended family networks, tend to be larger than are urban kinship networks… and diversion of prescriptions legitimately filled by parents, relatives, friends, or acquaintances occurs.

(Inciardi et al., 2007 & 2009; Ward et al., 2011; Krieger et al., 2009)

AOD Offers …



Rural youth primarily encounter offers from people who share activities with them and who are connected to their social network; but, rarely with strangers.

(Pettigrew et al., 2012)

Most common offer-ers included cousins or relatives of the same age or slightly older

(Pettigrew et al., 2012)

4. Increasing economic deprivation and unemployment create a stressful environment that places individuals at risk.

(Keyes et al., 2014)

Poverty

- Poverty rate for children living in rural areas (23.5%) is somewhat higher than for children living in poor inner city urban areas (20.2%)
- Overall poverty rates are also higher in rural areas (16.6%) compared to urban (13.9%) areas.
- Nationally, two-thirds of rural counties have poverty rates at or above the national average of 14.4%.

(Bishop, 2010)

Poverty

- Unemployment rates in 2015 were higher for rural residents than urban residents (5.7% versus 5.2%) **(Economic Research Service, 2016)**
- Poverty rates are even higher for minority rural residents: **32%** of rural African Americans and **28%** of rural Hispanics live below the poverty line **(ERS, 2016)**
- Rural residents have been shown to go longer periods of time without health insurance, and are less likely to seek care when they cannot pay because of pride and the lack of reduced-price medical care services in rural areas **(Mueller 1997)**

(Bryant-Smalley & Warren, 2012)

Poverty also diminishes clients' ability to self-manage their substance use treatment regimes.

(Browne et al., 2015)

‘The crisis of nonmedical use of prescription opioids is an important public health priority and the greatest threat remains concentrated in rural, low-income areas of the United States.’

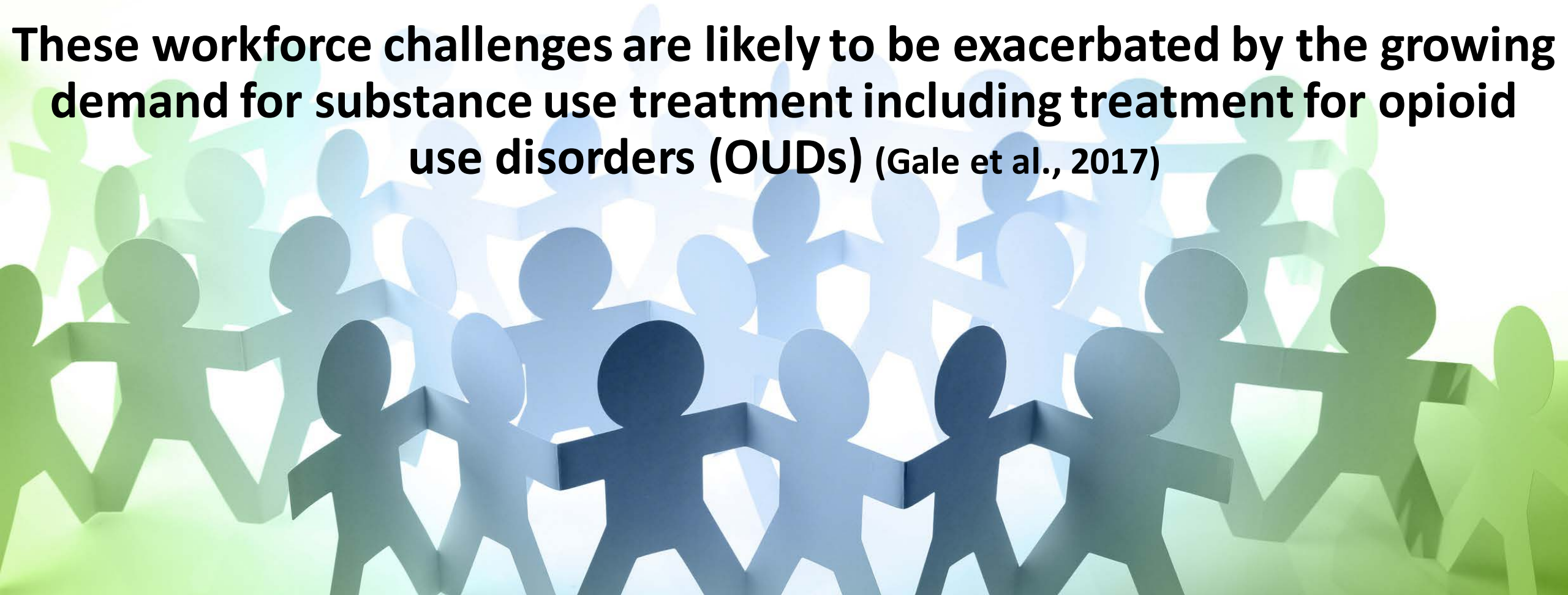
Social norms, cultural traditions, attitudes, availability, and policies are all critical to understanding broad differences in prevalence of substance use…’

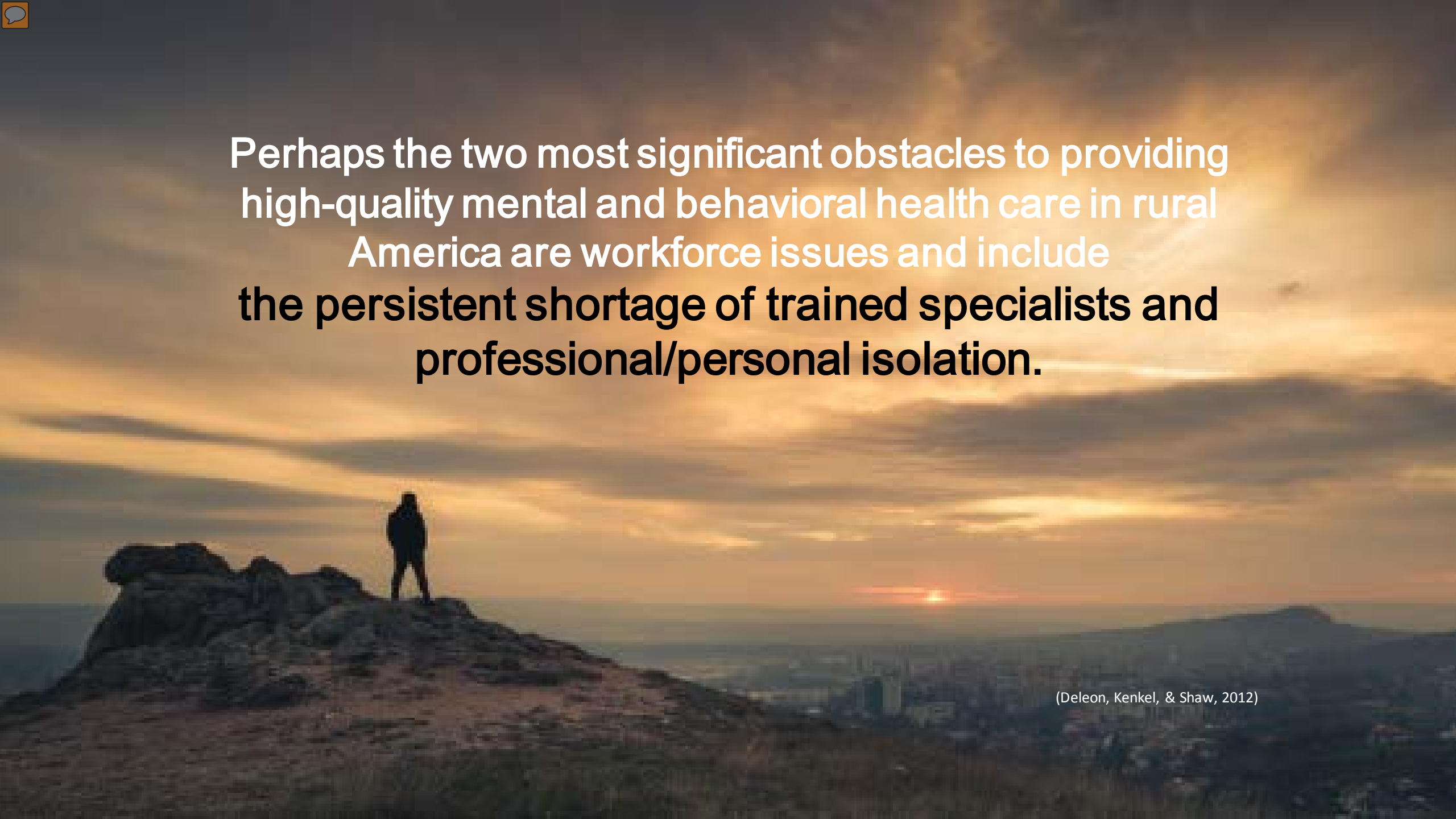
(Keyes et al., 2014)

Training the Workforce in Rurality

Approximately 55 percent of United States (U.S.) counties, all of which are rural, have no specialty mental health professionals (Hoge et al., 2007)

These workforce challenges are likely to be exacerbated by the growing demand for substance use treatment including treatment for opioid use disorders (OUDs) (Gale et al., 2017)




Perhaps the two most significant obstacles to providing high-quality mental and behavioral health care in rural America are workforce issues and include
the persistent shortage of trained specialists and professional/personal isolation.
(Deleon, Kenkel, & Shaw, 2012)

‘With **20%** of the

U.S. population

being rural, and even more than that coming from a rural background, every clinician/prevention specialist will face the influence of rural culture…’

(Smalley & Warren, 2012)

Equipping clinicians and prevention specialists-in-training with an understanding of rural culture can help them ensure that they deliver the best possible care/services

(Smalley & Warren, 2012)

Rural is different not less

Justin Maxson

‘It is time to decrease health disparities, improve health equity, and advance public health because the bottom line is this: