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## EXECUTIVE SUMMARY

Detoxification (detox) services are an important component in the treatment of substance abuse, serving as a gateway to longer term treatment. Detox includes a set of interventions designed to manage acute intoxication and withdrawal while minimizing the medical complications and/or physical harm caused by withdrawals from substance abuse. The national literature has little to say about the availability and delivery of these services in rural areas – defined as living in a non-metropolitan county as designated by the Office of Management and Budget. Using a national inventory of facilities providing substance abuse treatment services, we identified rural detox providers and surveyed them to examine their characteristics, access issues for detox services, and the fit of rural detox services within the substance abuse treatment system. We also examined the geographic distribution of these providers among large rural towns, small rural towns, and isolated rural areas.

The results of the 2008 survey indicate that most rural residents (82%) live in a county without a detox provider and that providers are concentrated in large rural towns. While rural detox providers offer care across a number of substances, the full range of professionally-recommended detox services is incomplete in rural areas. Travel distances to detox services are lengthy and access to specialty programs for patients with specific needs (e.g., adolescents) is limited.

- **The full continuum of detox services is unavailable in rural areas, prohibiting individualized placement.**

Rural detox providers do not offer the full continuum of detox services defined by the American Society of Addiction Medicine.[1] This may result in a single treatment model or level of care imposed on patients, despite the recognition that care should be tailored to individual needs. Rural providers typically offer more intensive inpatient and residential service compared to less intensive ambulatory services. The majority of rural providers offer a medical detox model with some social aspects; however, among more isolated areas, providers are more likely to offer a social only or primarily social model with some medical aspects. Isolated rural areas are often unable to admit patients due to medical instability. These areas may be unable to provide the full range of services for the most complex patients.

- **Few facilities in rural areas offer special detox programming for adolescents and other subpopulations.**

In general, programming for specific populations is uncommon in all rural areas; however, providers in isolated rural areas offer even fewer specialized programs. The lack of available programs for special populations (e.g., seniors, pregnant/postpartum women, adolescents) may inhibit access to detoxification services for these populations, or may limit the effectiveness of detoxification services. This may be an especially critical omission given the high rate of substance abuse among rural youth.

- **Limited payment options may inhibit access to rural detox services.**

We found limited acceptance of public coverage and infrequent use of sliding fee scales among rural detox providers and this may deter access to services by individuals with limited economic means.

- **Use of wait lists, admission denials, and lack of referral options for excess patients suggest inadequate capacity for detox services across rural areas, with the most urgent needs apparent in isolated areas.**

Approximately one-third of rural detox providers have a formal waiting list for patients wishing to access services and one-third have been unable to admit one or more patients within the last 60 days. Rarely do facilities in the most rural areas have the option of referring these patients to other local detox providers. Most often, the patients they are unable to admit are referred to the hospital emergency department or a provider outside their community, indicating lack of adequate local capacity.

- **Isolated rural areas more heavily rely on informal community resources for treatment services following detox.**

Detox providers in large rural towns receive more referrals from the medical community such as hospital emergency departments, primary care and medical services, the mental health system, and the substance abuse system. In contrast, small rural towns and isolated areas have more referral sources among community providers, such as the social services system, criminal justice system, and schools. When patients are discharged from detox programs, they are commonly referred to outpatient programs across all rural areas; however, in isolated rural areas, they are also referred to counseling and self-help groups, implying a greater reliance on less intensive treatment settings.

Policymakers should expand the array of services in rural areas to meet individualized treatment needs. Our research suggests that rural detox providers may need to consider factors such as distance from treatment facility when determining the appropriate level of care for rural patients. It is important to facilitate access to detox services despite transportation issues or a lack of adequate capacity because detox facilitates access to further substance abuse treatment. Substance abuse has real social and economic costs, and treatment may result in savings based on improvements in health and functioning and reductions in crime.[2,3,4] This suggests that consideration of the potential payoffs—in both social and economic terms—is appropriate when deciding how much to invest in detox services in rural areas.

## INTRODUCTION

Detoxification (detox) services are an important component in the treatment of substance abuse, serving as a gateway to longer-term treatment. Detox includes a set of interventions designed to manage acute intoxication and withdrawal while minimizing the medical complications and/or physical harm caused by withdrawals from substance abuse. This process consists of three components: evaluation, stabilization, and fostering patient entry into substance abuse treatment. A successful detoxification program can be partly measured by the progression from detox to entry into and compliance with substance abuse treatment.[5]

Detoxification, especially when supervised by medical professionals, can prevent life-threatening complications and symptoms associated with withdrawal. The signs and symptoms of alcohol and sedative withdrawal, for example, may include seizures, hyperthermia, and delirium. Medical complications associated with opioid withdrawal, while usually not life-threatening, can include gastrointestinal issues and exacerbation of pre-existing cardiac issues. Withdrawal from other substances, such as stimulants, does not generally lead to life-threatening complications, although supervised detox may be warranted given the risk of seizures and cardiac problems in some patients. While alcohol, sedative, and opioid withdrawal may be treated with medications, medication is generally not required to treat withdrawal from stimulants, inhalants, marijuana, and other drugs.[5] Detoxification is more than simply the treatment of withdrawal symptoms, however. Aside from managing the medical aspects of withdrawal, detoxification is intended to prepare patients for treatment and recovery. This requires engaging patients in the transition to longer-term treatment. The Substance Abuse and Mental Health Services Administration identifies seven strategies for engaging and retaining patients in detoxification:

- Educate the patient on the withdrawal process;
- Use support systems;
- Maintain a drug-free environment;
- Consider alternative approaches;
- Enhance motivation;
- Tailor motivational intervention to stage of change; and
- Foster a therapeutic alliance.[5]

Among these strategies, one of the most important is the development of a therapeutic alliance, which can contribute to successful outcomes by ensuring that patients feel themselves part of a healthy support network in which they receive empathy in a non-judgmental environment. Establishing a therapeutic alliance during detox may aid in successful transition to treatment and recovery, highlighting the importance of available and appropriate detox services. The availability of substance abuse treatment and intensive services, such as inpatient and opioid treatment programs, is limited in rural areas, especially among counties not adjacent to urban areas.[6]

The national literature has little to say about the availability and delivery of rural detox services. Anecdotal evidence suggests that patients in rural areas face limited access to detox services, particularly for drugs such as opiates and methamphetamines.[7,8] For our purposes, rural is defined as living in a non-metropolitan county as designated by the Office of Management and Budget (OMB). Within rural areas, we used the Rural Urban Commuting Area Codes to categorize large rural towns, small rural towns, and isolated rural areas (see the Appendix). We identified large rural towns as micropolitan areas (e.g., non-metropolitan towns) with a population of 10,000-49,999 or micropolitan areas with a primary commuting pattern to another micropolitan area and only low secondary commuting patterns to densely settled areas. Small rural towns are non-metropolitan (e.g., small towns) with a population of 2,500-9,999 or small towns with a primary commuting flow to another small town and only low secondary commuting patterns to densely settled areas or large rural towns. Isolated rural areas are non-metropolitan areas with a population of less than 2,500 with secondary commuting patterns to large or small rural towns and only low secondary commuting patterns to a densely settled area.

The Substance Abuse and Mental Health Administration has compiled a Treatment Facility Locator, a continuously updated, comprehensive listing of all known substance abuse treatment facilities in the United States.[9] Through this source, we identified 2,442 facilities that provide detox services.[*] Of these facilities, the vast majority (83%) are located in urban and suburban areas. Among the remaining facilities, 10% are located in large rural towns and 7% in small rural towns or isolated rural areas.[†] Detoxification services for certain substances may be even more unevenly distributed; for example, 95% of facilities providing methadone detox services are located in urban and suburban areas.

Historically, substance abuse prevalence has been similar or lower in rural areas compared to urban. In contrast, recent work suggests growing rates of substance abuse among rural youth (ages 12-17 years) and within the smallest rural towns. Rural youth had higher rates of past year use of alcohol, cocaine, inhalants, and methamphetamine compared to urban youth. Young adults (ages 18-25 years) in the most sparsely populated rural areas had twice the rate of methamphetamine and OxyContin® use as that of young adults in urban areas. Youth from small rural areas were more likely to engage in binge drinking, heavy drinking, and driving under the influence than urban youth.[10,11] Additionally, treatment admissions for narcotic painkiller abuse and methamphetamine/amphetamine abuse have grown substantially in rural counties.[12,13] These analyses suggest a growing prevalence of substance abuse problems in rural areas.

Given the limited information on the availability of detox services in rural areas, this exploratory study provides valuable information for national and state-level policymakers (including those within state mental health and substance abuse agencies) and community-level stakeholders. This project sought to answer the following research questions:

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[*] Substance Abuse and Mental Health Services Administration. Substance Abuse Treatment Facility Locator. [Online]. Available: http://dasis3.samhsa.gov/. [November 14, 2005].

[†] Identified through the use of a four-tiered consolidation of the 2000 Rural Urban Commuting Area codes zip code approximation file.

- What are the organizational, practice, staffing, and clinical characteristics of rural detoxification providers?
- What are the access issues related to detoxification services in rural communities?
- What are the issues related to referral of patients once their course of detoxification is complete?
- How do rural detoxification services fit within the substance abuse treatment system?
- What are the major challenges facing rural detoxification providers? What policy incentives and support might help to overcome these challenges?

Much past substance abuse work has compared all urban areas to all rural areas, regardless of population size or adjacency to more populated areas. Given the differences in substance abuse prevalence by different types of rural areas, this study includes analysis of detox facility location in rural areas by population size and adjacency to urban areas.

## METHODS

The Treatment Facility Locator, maintained by SAMHSA, is a national inventory of facilities providing substance abuse treatment services. It is maintained on SAMHSA's website to assist individuals in finding appropriate treatment services in their area. The Locator draws data from the annual National Survey of Substance Abuse Treatment Services. The Locator includes:

- Private and public facilities that are licensed, certified, or otherwise approved for inclusion by their State substance abuse agency and
- Treatment facilities administered by the Department of Veterans Affairs, the Indian Health Service, and the Department of Defense.

It includes facilities and agencies providing the following substance abuse treatment services: inpatient hospital services, residential treatment and rehabilitation services, outpatient treatment and rehabilitation services, detoxification services, opioid treatment programs, DUI/DWI programs that include treatment, and halfway house programs that include treatment. Contained within the Locator is information on the types of services offered at each facility.

From the Locator, we identified 2,442 facilities that reported offering detoxification services. To identify facilities offering detox services in rural areas, we linked these data to the Version 2.0 Rural Urban Commuting Area (RUCA) codes developed by the WWAMI Rural Health Research Center and the Department of Agriculture's Economic Research Service.[‡] As described above, we consolidated the non-metropolitan RUCAs

[‡] Additional information on the RUCAs, including downloadable files, is available at this website: http://depts.washington.edu/uwruca/.

into three categories based on their population size and major commuting patterns: large rural towns, small rural towns, and isolated rural areas (see Appendix for more details). This process identified 419 rural facilities providing detoxification.

Because of the small population of rural detox providers, our sampling frame of 419 rural detox facilities also became the population for our telephone survey.[§] We completed telephone surveys with 374 of the 419 rural facilities for a response rate of 89%. Among the 45 non-respondents, 13 facilities refused to participate in the survey, we were unable to schedule appointments to conduct the survey with 31 facilities, and one facility was closed. Of the 374 respondents, 235 facilities confirmed that they offered detox services. These facilities were asked a series of questions about the organizational, practice, staffing, and clinical characteristics of the detoxification services offered as well as the challenges of providing detoxification services. Using the resulting data and data from the Locator, we conducted a descriptive analysis of detox facilities across our three categories of rural towns and areas (Table 1).

**Table 1: Number and Percent of Detox Providers by Level of Rurality**

| | Large Rural Town | Small Rural Town | Isolated Rural Area |
|---|---|---|---|
| Number | 149 | 67 | 19 |
| Percent | 39.8% | 17.9% | 5.1% |

Of the 374 respondents asked if they offered detox surveyed, 139 said they had ended their detox program within the previous two years (n=19), never had a detox program (n=113), or did not know whether they offered detox (n=7). In consulting with the data collection agents, it is unclear why the data included so many facilities that did not now or ever offer detox. Data guidelines available through SAMHSA note that these data require constant updating and careful coordination between the states and the data collection agencies because facility information changes frequently and updates vary in their accuracy and timeliness.[14] It may be that our analysis reveals gaps in facility information updates as well as problems in accurately identifying detox providers within the Locator. We report on these 132 respondents in the findings section.

## FINDINGS

Findings are presented below describing the characteristics of rural detoxification providers, access issues for rural detoxification services, and the fit of rural detoxification services within the substance abuse treatment system. Findings are also presented on the 139 facilities that do not provide detox services.

[§] To obtain a copy of the survey, please contact Melanie Race at mrace@usm.maine.edu.

## Characteristics of Rural Detoxification Providers

An extensive literature review uncovered little information on the characteristics and role of detox services in rural areas of the United States. Our survey provided information on the organizational and clinical characteristics of rural detox providers, including distribution of rural detox providers across types of rural areas, the usual service area, inpatient and residential bed capacity and ambulatory treatment capacity, models of detox services used (e.g., medical and social models of detox), the continuum of detox services in rural areas, and employment of addictionologists by rural detox services. We also conducted a supplemental analysis of rural counties with and without detox providers using our survey data linked to zip code and county data from the University of Missouri.

***Results:***

- In summing population across counties, we found that over 40 million (82%) people live in a rural county without a detox provider.[±]

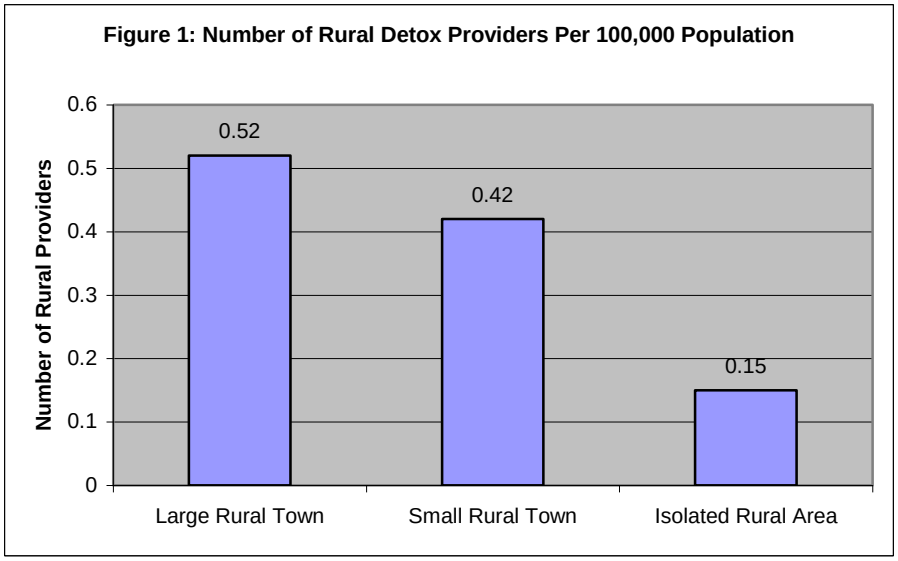
- Rural detox providers are concentrated in large rural towns (63%; n=149), with a much smaller concentration in small rural towns (29%; n=67) and very few in isolated rural areas (8%; n=19).

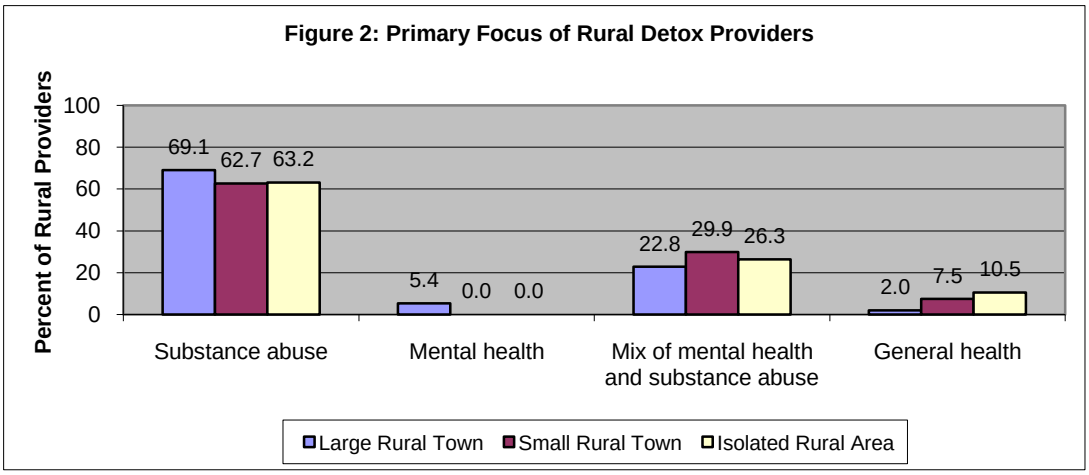
- Relative to population, the number of rural detox providers is greater in large and small rural towns (0.5 providers and 0.4 providers respectively per 100,000 population) than in isolated rural areas (0.2 providers per 100,000 population) (Figure 1).

- Almost two-thirds of rural detox providers have a primary focus on substance abuse treatment (Figure 2). Respondents in large rural towns are slightly more likely to provide services in a substance abuse–only setting (69% vs. 63% for small rural towns and isolated rural areas). Respondents in small rural towns and isolated rural areas are slightly more likely than those in large rural towns to provide services in a mixed mental health/substance abuse setting (30% and 26% vs. 23% for large rural towns).

- General health facilities play a larger role in detox services in isolated rural areas (10.5%) and small rural towns (7.5%) compared to large rural towns (2%).

[±] Because we had provider zip codes and zip codes do not perfectly align with counties, our estimate of counties without a detox provider included only those we could definitively identify as having no detox provider. As a result, our 40 million figure likely underestimates rural residents living in counties without a detox provider. Additional information on zip codes and counties, including downloadable files, is available from Blodgett J., Missouri Census Data Center, Office of Social and Economic Data Analysis, University of Missouri, at: http://mcdc2.missouri.edu/webrepts/geography/ZIP.resources.html.




## Usual Service Radius

The limited supply of rural specialty mental health and substance abuse services creates access barriers for rural residents including greater travel distances and limited choice of providers.[15] For alcohol abuse treatment, less than half of adults with alcohol dependence in the most rural counties have a choice of two or more facilities within 15 miles.[16] Patient choice is an important factor in meeting the varied needs of individuals seeking substance abuse treatment. Lack of patient choice may exacerbate any disconnect between available services and local norms and beliefs, resulting in treatment avoidance.[17] When the Department of Veterans Affairs limited patient choice by regionalizing inpatient addiction services, the number of rural veterans receiving substance abuse services declined. While outpatient services may be viewed as substitutes for inpatient services, they were found to be inadequate for rural residents because of distance and transportation issues.[18] As one way of assessing travel distances,

we asked facilities to describe their usual service radius in miles. Additionally, we looked at the frequency of multiple providers within the same zip code.

***Results:***

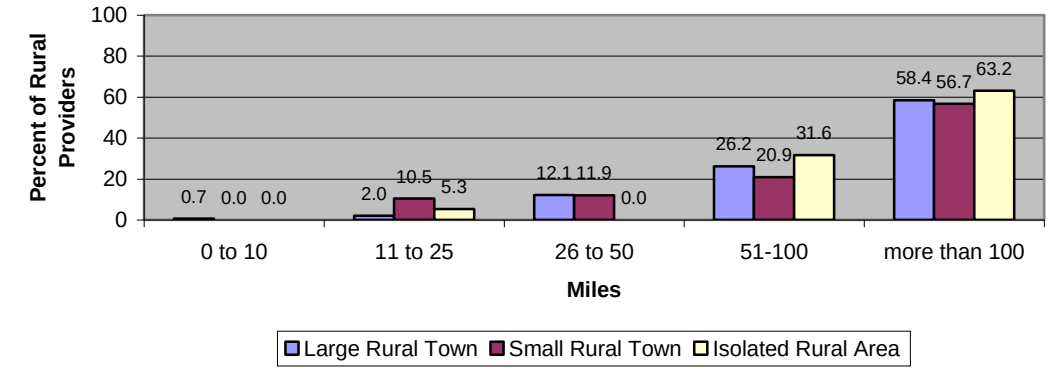
- Over half (58%) of rural detox providers have a usual service area radius greater than 100 miles (Figure 3).

- In isolated rural areas, nearly two-thirds (63%) of providers have a service radius greater than 100 miles. Another 32% of these providers have a radius of 51-100 miles. Taken together, 95% of these providers serve some patients living 51 miles or more from the detox facility.

- Virtually no rural detox providers have a usual service area of 10 miles or less and very few providers have a service area of 25 miles or less.

- In a small proportion of cases (11%; n=25), more than one detox provider was located within the same zip code and this occurred most often in large rural towns (n=16). This confirms that most rural detox providers are the sole providers for their communities.

**Figure 3: Usual Radius of Service Area**




## Service Capacity

To examine capacity for key inpatient and outpatient services, respondents were asked to provide a count of their inpatient and residential beds as well as patient capacity for partial hospitalization/day treatment, intensive outpatient, and regular outpatient services. The American Society of Addiction Medicine (2001) notes that inpatient care emphasizes clinical support while residential care emphasizes peer and social (i.e., nonmedical) support. Partial hospitalization/day treatment, intensive outpatient, and outpatient services can be understood as progressively less intensive and specialized care along the

continuum of detoxification services. We calculated mean beds and patients per 100,000 population when the reported number was greater than zero.

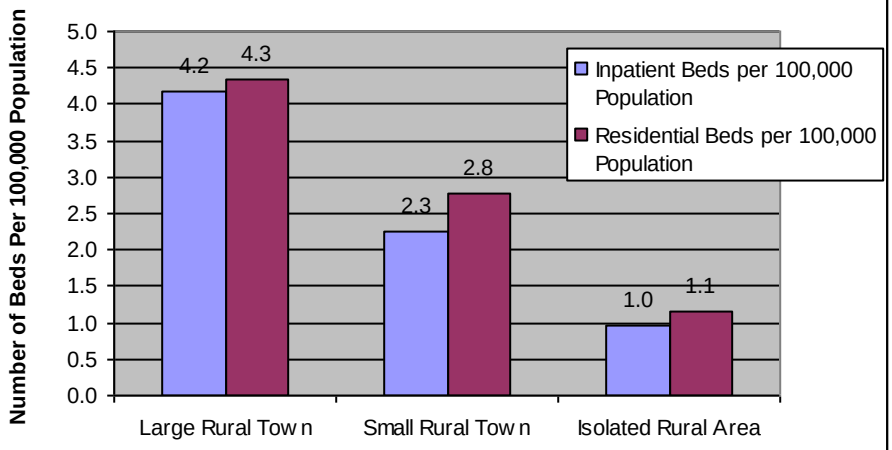
***Results:***

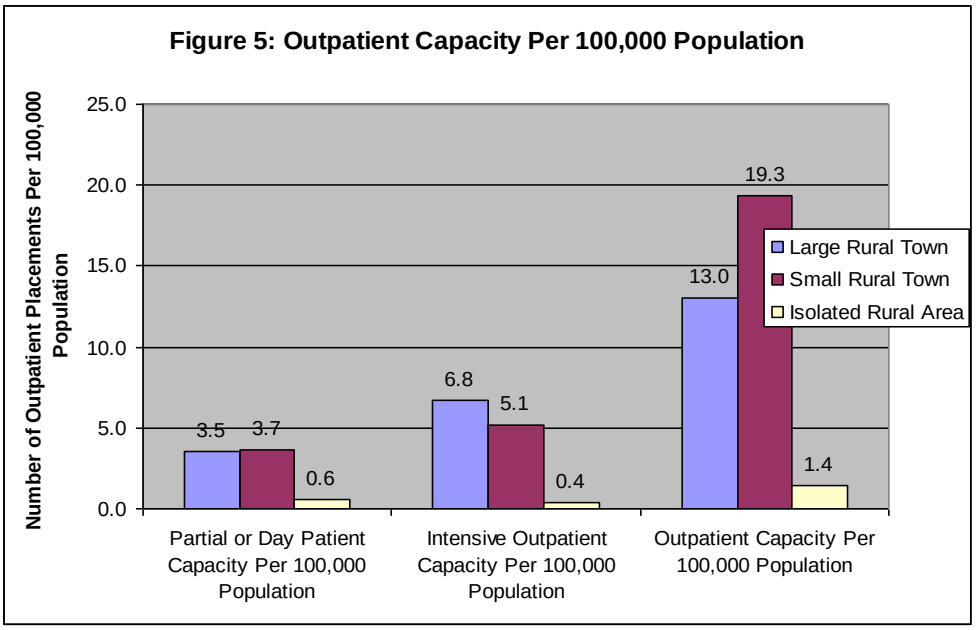
- Detox providers in small rural towns and isolated rural areas have lower numbers of both inpatient and residential beds per 100,000 population compared to large rural towns (Figure 4).

- Small rural town providers can accommodate more outpatients (19.3 patients per 100,000 population), compared to large rural towns (13.0 patients per 100,000 population) and isolated rural areas (1.4 patients per 100,000 population) (Figure 5).

- Across all types of outpatient services, providers in isolated rural areas have a far lower average patient capacity compared to large and small rural towns.

**Figure 4: Inpatient and Residential Beds Per 100,000 Population**






## Medical and Social Models of Detoxification

Detoxification services can follow a medical or social model, though programs infrequently follow purely one model. Medical models are characterized by the use of physician and nursing staff and the use of medication to assist in safe withdrawal. Social models rely on supportive therapy, counseling, and supervision and do not commonly use medication to ease withdrawal symptoms. Medical models are often chosen for patients in poor physical health, patients who have a co-occurring mental disorder, or patients expected to have severe withdrawal symptoms, while social models may be best suited to young individuals in good health with no history of previous withdrawal reactions. Medical models often have a social component, such as peer support, while social model programs may use pharmacotherapy to manage withdrawal.[19] The number of medical and social model programs—and of blended programs—in rural areas warrants examination. While social model programs may work for many patients, and are usually more cost-effective than medical model programs, having both types of programs available may enhance the likelihood of establishing a successful match between patient and program based on the American Society of Addiction Medicine's Patient Placement Criteria. A lack of available services may limit the ability of providers to place patients in the most appropriate level of care.[1] Respondents were asked about the type of model used by their detox program.

***Results:***

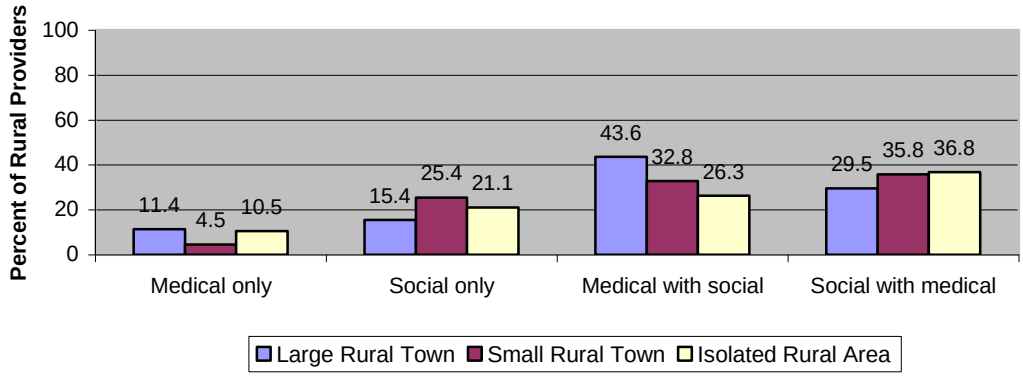
- Over one-third (39%) of all rural detox facilities provide services based on a model that is primarily medical with some social aspects (e.g., general medical setting with a visit from a substance abuse counselor).

- Another third (32%) follow a primarily social model with some medical support (e.g., staffing, use of medications to manage withdrawal). Fewer facilities offer a medical only (9%) or social only (19%) model.

- Looking at the types of models offered, larger rural towns are more likely to offer a combined medical with social aspects model than more rural areas (Figure 6). Small rural towns and isolated rural areas more often offer a combined social model with medical aspects or a social only model. This may indicate that detox providers in the most rural areas are best equipped to deal with patients who require less medically intensive services.

- Only 2 facilities responded that they did not employ a medical or social detox model.

**Figure 6: Detox Model Used**




## Continuum of Detoxification Services in Rural Areas

Although substance abuse treatment has long been recognized as effective, no one level of treatment is appropriate for all individuals.[20,21] As a result, substance abuse treatment has evolved from primarily inpatient and residential services to a continuum of care that encompasses inpatient and residential, intensive outpatient and partial hospitalization, traditional outpatient, and early intervention services. This development is reflected in the American Society of Addiction Medicine's Patient Placement Criteria (ASAM-PPC), based on the underlying principle that treatment should be tailored to the needs of the individual and guided by an individualized treatment plan that is developed in consultation with the patient.[1]

The ASAM-PPC describes five broad levels of care for adults and adolescents ranging from early intervention to medically-managed intensive inpatient treatment. For each level of care, a brief overview of the services available for particular severities of addiction and related problems is presented along with a structured description of the settings, staff and services, and admission criteria based on six assessment dimensions to be evaluated in making placement decisions. These six assessment dimensions include:

acute intoxication and/or withdrawal potential; biomedical conditions and complications; emotional, behavioral or cognitive conditions and complications; readiness to change (e.g., willingness or resistance to accepting treatment); relapse, continued use or continued problem potential; and recovery or living environment. Despite the need for different levels of care tailored to individual patient needs, many programs impose a single treatment model or level of care on all patients.[22]

As part of its PPC, ASAM has identified the following five levels of care for adult detoxification services[23,1]:

1. *Level I-D: Ambulatory detoxification without extended onsite monitoring*
   Level I-D services are outpatient services delivered in a variety of settings that provide medically supervised evaluation, detoxification, and referrals in regularly scheduled sessions. These services are designed to achieve safe and comfortable withdrawal while facilitating transition into ongoing treatment and recovery.
2. *Level II-D: Ambulatory detoxification with extended onsite monitoring*
   Level II-D services provides the same services and goal as Level I-D and includes patient monitoring by nurses over a period of several hours each day of service.
3. *Level III.2-D: Clinically managed residential detoxification*
   Level III 2- D emphasizes peer and social support, providing 24-hour supervision, observation, and support. Some programs are equipped to handle self-administered medications to manage withdrawal. Established protocols exist to identify patients requiring medical services and transfer such patients to an appropriate facility.
4. *Level III.7-D: Medically monitored inpatient detoxification*
   Level III 7-D provides 24-hour medically supervised inpatient evaluation and withdrawal management delivered by medical and nursing professionals using physician-approved and monitored policies and procedures in a permanent facility with inpatient beds.
5. *Level IV-D: Medically managed intensive inpatient detoxification*
   Level IV-D provides 24-hour medically directed evaluation and withdrawal management delivered by medical and nursing professionals using physician-approved and managed policies and procedures in an acute care inpatient setting.

This framework defines the range and types of services that comprise an appropriate continuum of services to meet individual patient needs. The settings for care at these levels range from a physician's office (Level I-D) or outpatient clinic (Levels I-D or II-D) to a freestanding substance abuse or mental health facility (Level III.7-D) to acute inpatient care (Level IV-D).[19] In an effort to understand the availability of a continuum of detox services in rural communities, we asked respondents to describe their services using the five ASAM-PPC levels of adult detox services. These descriptions were read to the respondents who could select one or more levels to best describe the range of services offered by their facilities or programs.

***Results:***

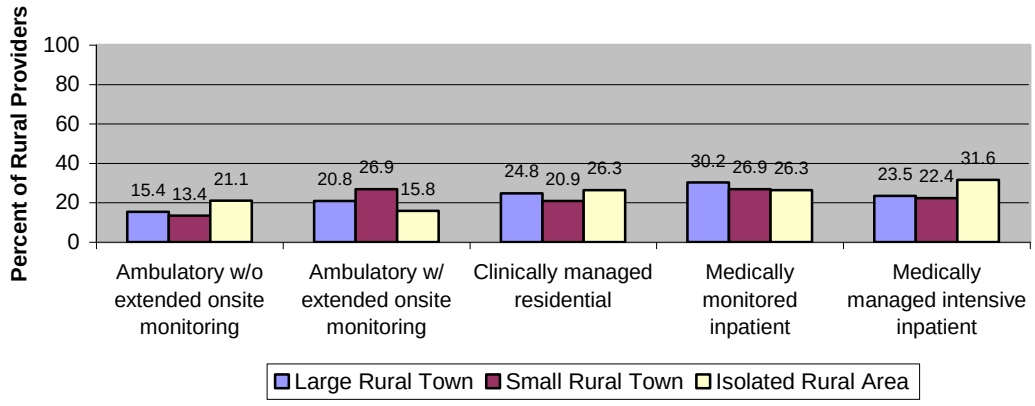
- The majority of overall rural detox providers (85%) offer one level of detox service based on the ASAM-PPC. The level of care offered tends to be either medically monitored inpatient care (25%), clinically managed residential care (23%), or medically managed intensive inpatient care (18%) with fewer respondents reporting ambulatory services.

- Though differences are small among rural areas, more facilities offer intensive inpatient and residential care than ambulatory services even in isolated rural areas (Figure 7).

- Few rural detox providers offer more than one level of care as defined by the ASAM-PPC, with 12% offering two levels of service and 3% offering three or more services. When two levels of care are offered, the most common combination is the most intensive: medically monitored combined with medically managed inpatient care.

- A higher percentage of providers in isolated rural areas (32%) offer two levels of care than providers in large (11%) or small (9%) rural towns.

**Figure 7: Classification of Detox Program**




## Availability of Board-Certified/Eligible Addictionologists to Support Rural Detox Programs

Addictionologists are medical doctors who specialize in chemical dependency and addiction. An addictionologist will assess, diagnose, and treat addiction withdrawal and the complications that may accompany addiction and may be involved in the patient's recovery process and in preventing relapse. Addictionologists certified by ASAM or the American Medical Association are medical doctors that have specific specialized training in the treatment of drug addiction and chemical dependence.[24] Respondents were asked if they had a board-certified or eligible addictionologist on staff at their detox programs.

***Results:***

- Half of all rural facilities (47%) have a board-certified or eligible addictionologist providing services at their detox program.

- As rural areas decrease in size and proximity to urban areas, fewer facilities have an addictionologist on staff. In facilities based in large rural towns, 53% have an addictionologist, compared to 26% of facilities based in isolated rural areas. With fewer addiction specialists available in the most rural areas, some rural detox providers may be ill-equipped to handle the most medically complex withdrawals.

## Access Issues for Rural Detoxification Services

Using both the survey and Locator data, we examined several issues that may affect patients' ability to access appropriate detox services. These issues include: the range and types of services provided by detox facilities; the availability of programs to serve special populations; the ability to provide services in different settings; forms of payment accepted by detox facilities; the availability of detox services for different substances; waiting lists for services; and frequency with which facilities are unable to admit patients.

### Services, Programs, Payment, and Language Services

We supplemented our survey findings with analysis of data from the Locator to examine the full range of substance abuse services offered by providers, the availability of programs for special populations, availability of foreign language services, and forms of payment accepted by the 235 rural detox providers that responded to our survey.

***Results:***

- Nearly 30% of providers in large and small rural towns offer partial hospitalization or day treatment programs among their full range of substance abuse services. Only 11% of providers in isolated rural areas offer these services (Table 2).

- In general, providers in isolated rural areas are less likely than providers in small and large rural towns to offer programs or groups for special populations. One exception is that providers in isolated rural areas are more likely to offer special programs or groups for DUI/DWI offenders (47% vs. 20% and 36% in large and small rural towns) (Figure 8).

- Detox providers in rural areas accept a range of forms of payment for substance abuse services. Self payment and private insurance are the most widely accepted forms of payment (97% and 80% of providers, respectively). Roughly half of rural providers accept public coverage, including Medicaid (40%), military

insurance (48%), Medicare (63%) or other state financing (54%) (Figure 9). This limited acceptance of public insurance may reduce rural individuals' ability to obtain detox services given reliance on public coverage in rural areas.

- Only one-third of rural detox providers offer sliding fee scales for substance abuse services. Providers in isolated rural areas are less likely to offer a sliding fee scale (26%) than providers in large (34%) and small (33%) rural towns (Figure 10). Uninsurance and underinsurance are higher in rural areas, so the absence of sliding fee scales may limit individuals' ability to access services. Less than 10% of all rural detox providers accept Access to Recovery Vouchers (see text box) (Figure 10).

Access to Recovery (ATR) is a presidential initiative that provides vouchers for the purchase of substance abuse clinical treatment and recovery support services. The program aims to expand substance abuse treatment capacity, support client choice, and increase the array of providers for clinical treatment and recovery support services. Beginning in 2004, states and tribal organizations competed for three-year grants based on applications that described a process for screening and determining appropriate services for the individual client and targeted to areas and populations in greatest need. The 2004 round of grants provided treatment and/or recovery support services for more than 170,000 people, exceeding the program target of 125,000 people. Most recently, $98 million were distributed in September 2007 by the Substance Abuse and Mental Health Services Administration. Three-year ATR grants were awarded in 18 states, five tribal organizations, and the District of Columbia. The states included Arizona, California, Colorado, Connecticut, Hawaii, Illinois, Indiana, Iowa, Louisiana, Missouri, New Mexico, Ohio, Oklahoma, Rhode Island, Tennessee, Texas, Washington and Wisconsin. Source: SAMHSA Access to Recovery website: http://atr.samhsa.gov/

- More than one-third (39%) of rural detox providers offer American Sign Language or other services for clients with hearing impairments. Only 16% percent offer Spanish-language services, with providers in more rural areas being less likely to offer Spanish-language services than providers in large rural towns.

**Table 2: Substance Abuse Services Offered by Rural Area**

| Type of Rural Area | Large Rural Towns (n=149) | Small Rural Towns (n=67) | Isolated Rural Areas (n=19) |
|---|---|---|---|
| Hospital inpatient | 28.2% | 25.4% | 26.3% |
| Outpatient | 64.4 | 73.1 | 63.2 |
| Partial hospitalization / day treatment | 28.2 | 29.9 | 10.5 |
| Short-term residential | 55.0 | 52.2 | 47.4 |
| Long-term residential | 32.2 | 31.3 | 31.6 |

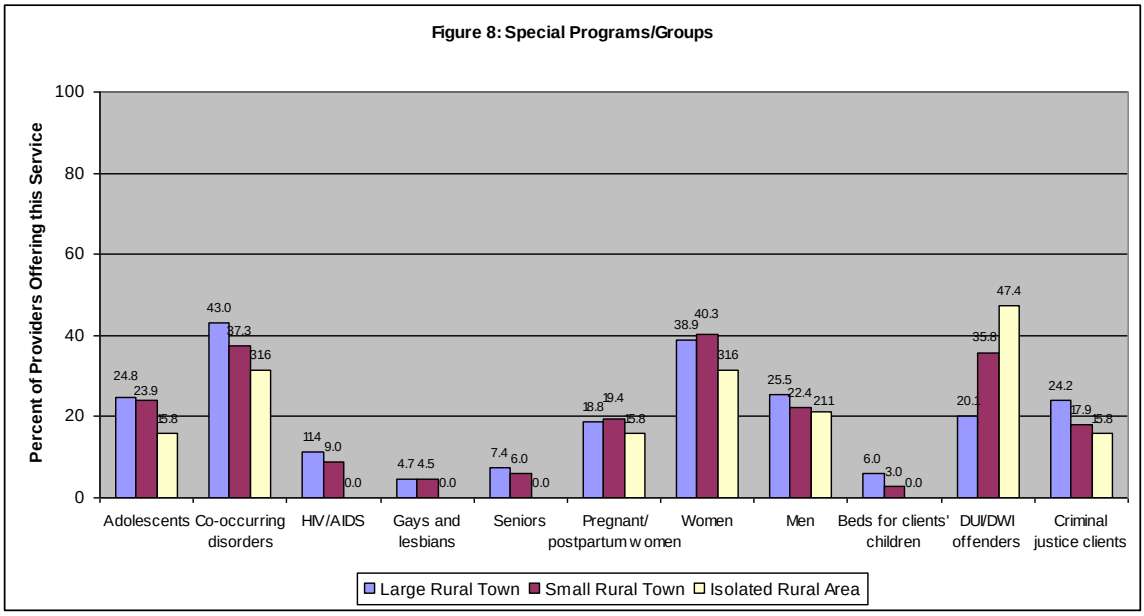


Figure 8: Special Programs/Groups
Percent of Providers Offering this Service
100
80
60
40
20
0
24.8
23.9
15.8
43.0
37.3
31.6
11.4
9.0
0.0
4.7
4.5
0.0
7.4
6.0
0.0
18.8
19.4
15.8
38.9
40.3
31.6
25.5
22.4
21.1
6.0
3.0
0.0
20.1
35.8
47.4
24.2
17.9
15.8
Adolescents
Co-occurring disorders
HIV/AIDS
Gays and lesbians
Seniors
Pregnant/ postpartum women
Women
Men
Beds for clients' children
DUI/DWI offenders
Criminal justice clients
Large Rural Town
Small Rural Town
Isolated Rural Area

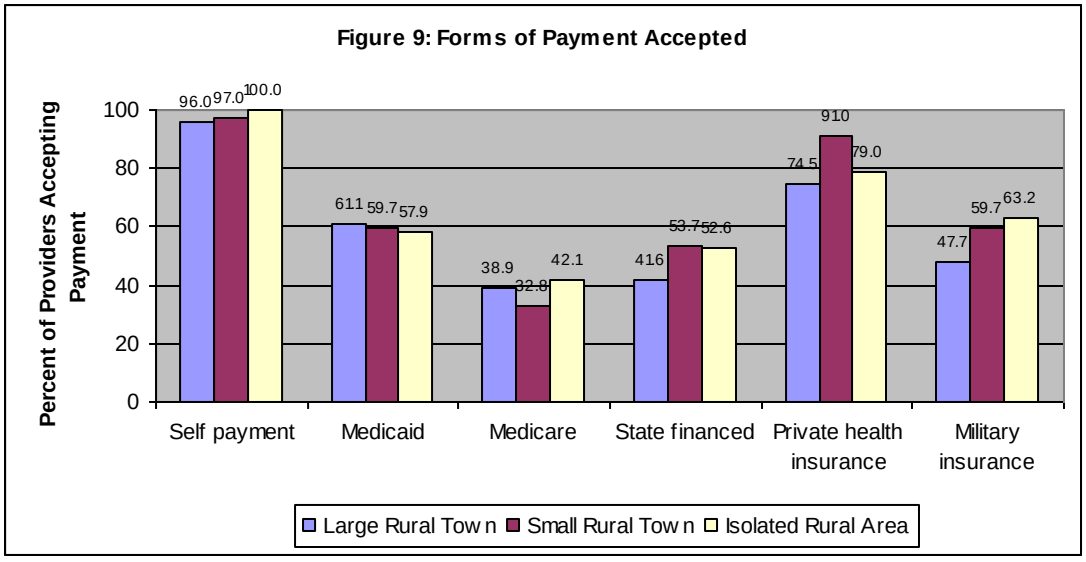
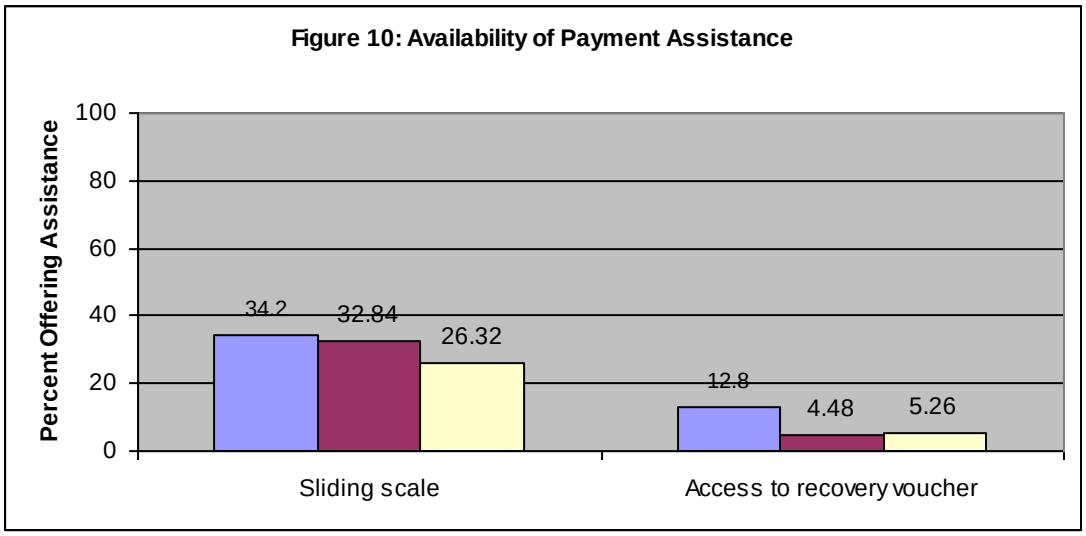


Figure 9: Forms of Payment Accepted
Percent of Providers Accepting Payment
100
80
60
40
20
0
96.0
97.0
100.0
61.1
59.7
57.9
38.9
32.8
42.1
41.6
53.7
52.6
74.5
91.0
79.0
47.7
59.7
63.2
Self payment
Medicaid
Medicare
State financed
Private health insurance
Military insurance
Large Rural Town
Small Rural Town
Isolated Rural Area




## Substances for Which Detoxification Services are Provided

Respondents were asked to identify for which of the following eight substances their facility offers detoxification services: alcohol, marijuana, heroin/opiates, methadone, sedatives, stimulants, amphetamine/methamphetamine, and inhalants.

***Results:***

- Over one-quarter (27%) of respondents offer services for all eight substances, including 42% of respondents in isolated rural areas (Figure 11). An additional 22% of respondents offered services for seven substances. Taken together, this indicates that nearly half of rural providers offer detox services across a full range of substances. Respondents offer detoxification services for a mean and median of six substances.

- The majority of detox providers in isolated rural areas offered treatment services for each substance, often in greater proportion than providers in large rural towns (Figure 12).

- More than two-thirds of all rural detox providers offer services for methadone, stimulants, amphetamines/methamphetamines, sedatives, alcohol, and heroin/opiates. Fewer providers (54.9% and 55.7%, respectively) offer services for marijuana and inhalants (Figure 13); however, this is not surprising given the absence of detoxification protocols for those substances.[19] Interestingly, a greater proportion of providers in isolated rural areas offer services for these substances, compared to larger rural areas.

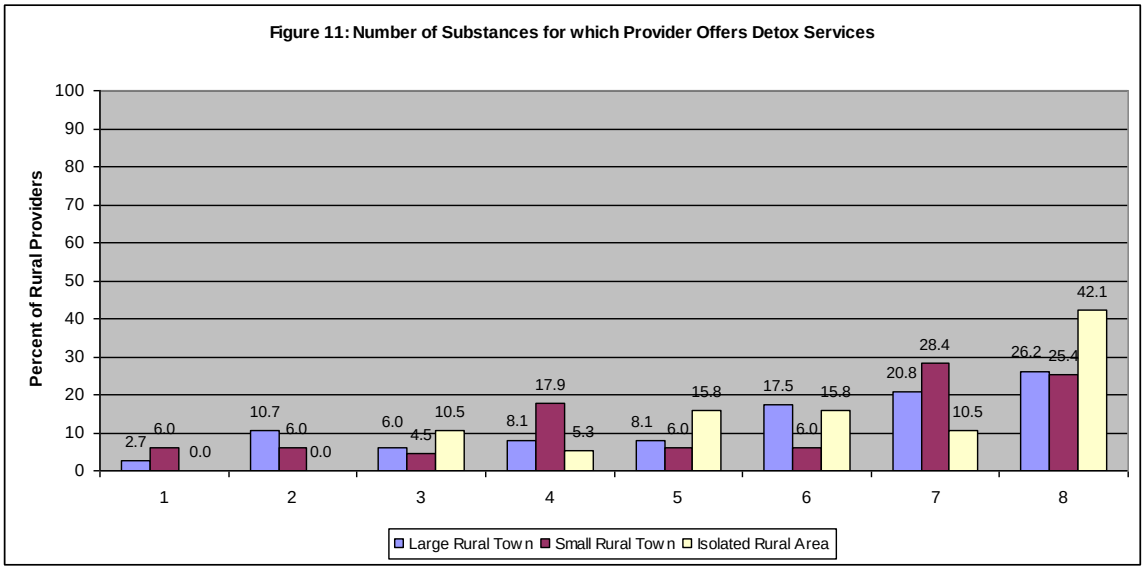


Figure 11: Number of Substances for which Provider Offers Detox Services
Percent of Rural Providers
100
90
80
70
60
50
40
30
20
10
0
2.7
6.0
0.0
10.7
6.0
0.0
6.0
4.5
10.5
8.1
17.9
5.3
8.1
6.0
15.8
17.5
6.0
15.8
20.8
28.4
10.5
26.2
25.4
42.1
1
2
3
4
5
6
7
8
Large Rural Town
Small Rural Town
Isolated Rural Area

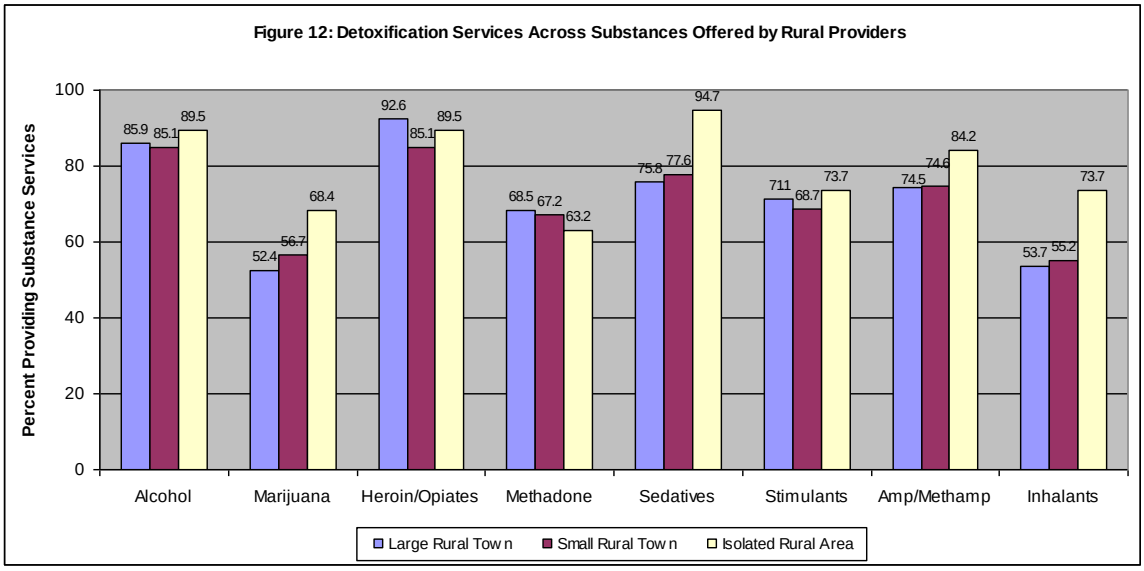


Figure 12: Detoxification Services Across Substances Offered by Rural Providers
Percent Providing Substance Services
100
80
60
40
20
0
85.9
85.1
89.5
52.4
56.7
68.4
92.6
85.1
89.5
68.5
67.2
63.2
75.8
77.6
94.7
71.1
68.7
73.7
74.5
74.6
84.2
53.7
55.2
73.7
Alcohol
Marijuana
Heroin/Opiates
Methadone
Sedatives
Stimulants
Amp/Methamp
Inhalants
Large Rural Town
Small Rural Town
Isolated Rural Area

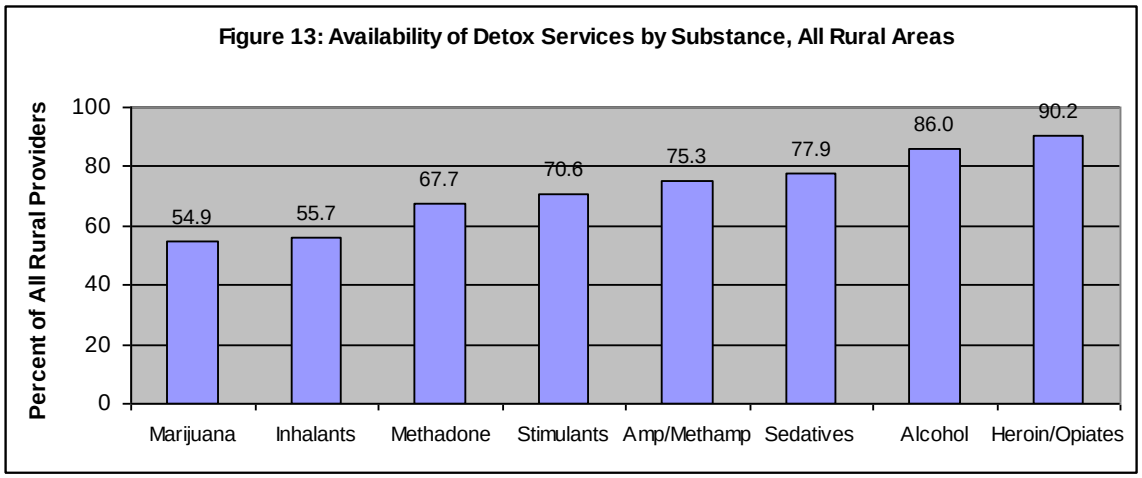


Figure 13: Availability of Detox Services by Substance, All Rural Areas
Percent of All Rural Providers
100
80
60
40
20
0
54.9
55.7
67.7
70.6
75.3
77.9
86.0
90.2
Marijuana
Inhalants
Methadone
Stimulants
Amp/Methamp
Sedatives
Alcohol
Heroin/Opiates

## Access Issues Related to Waiting Lists for Services

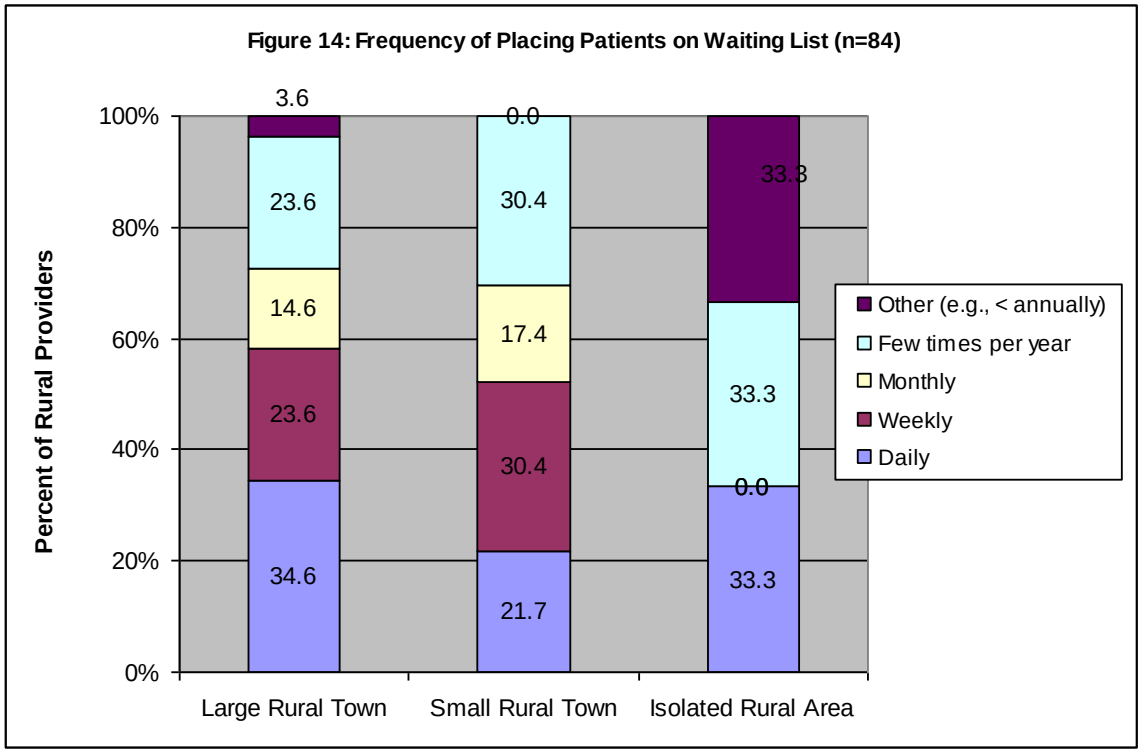
Waiting lists for detox programs suggest problems with timely access to services. It is critical that providers of services be able to respond when patients indicate a willingness and desire to seek help. An inability to admit patients in a timely fashion fails to take advantage of the window of opportunity in which a patient is motivated to seek care. Requiring individuals to wait for detox services may act as a disincentive to entering detox as they deal with the discomfort and medical issues related to withdrawal. Respondents were asked whether their detox program maintains a formal waiting list and the frequency with which they place patients on those lists.

***Results:***

- Approximately one-third (36%) of rural detox providers have a formal waiting list for patients wishing to access services. Somewhat fewer providers in isolated rural areas (32%) keep a waiting list compared to large rural towns (37%) and small rural towns (34%). (The next section examines how providers handle patients they are unable to admit.)

- Among those facilities that keep a waiting list, 31% place patients on this list on a daily basis. Small rural towns are least likely to place patients on a waiting list on a daily basis (Figure 14).

- Among large rural towns, nearly 60% of detox providers place patients on a waiting list either daily or weekly. Over half of small rural town providers place patients on a waiting list either daily or weekly.




## Access Issues Related to an Inability to Admit Patients

Like waiting lists, facilities that are unable to admit patients may indicate poor access to services and lack of capacity. It is important to know what happens to these patients denied entrance given the lack of multiple detox and treatment options typical of rural areas. Respondents were asked if they had been unable to admit a patient for detox services or unable to place them on a waiting list for services within the 60 days preceding the survey. They were asked about the reasons why they were unable to admit and how they handled these patients.

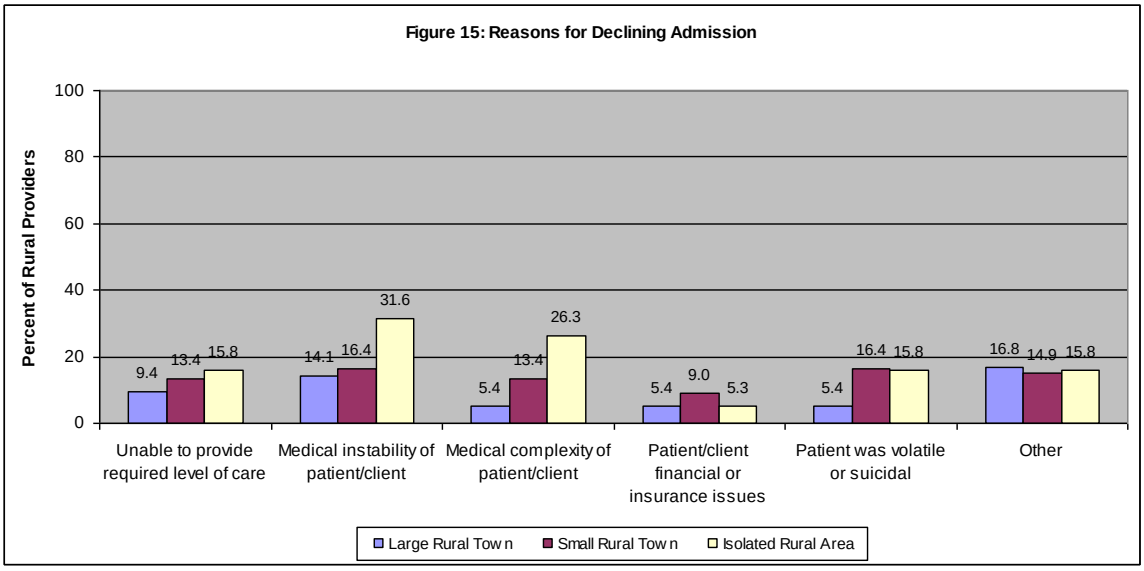
***Results:***

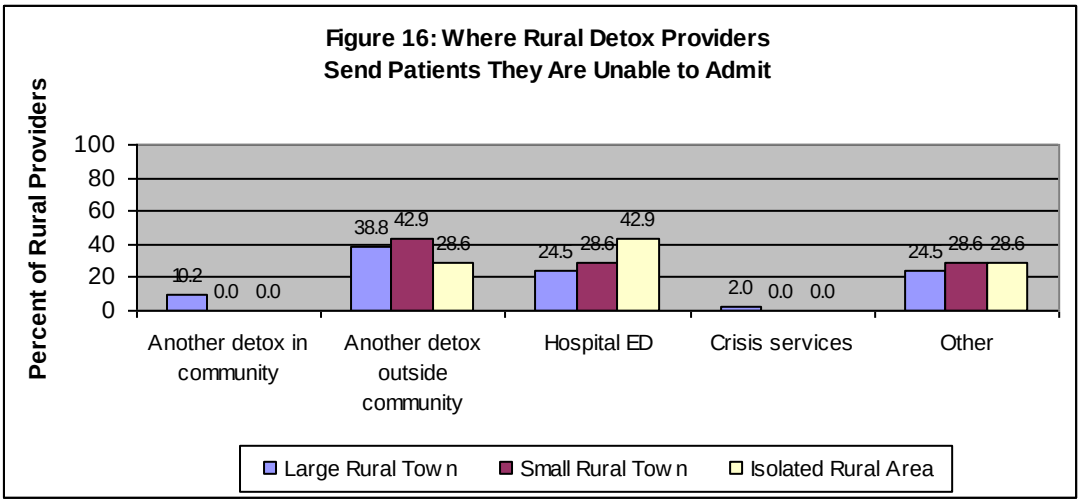
- In contrast to wait lists, isolated rural facilities were most likely to have been unable to admit a patient or unable to place them on a waiting list within the 60 days preceding the survey (37%), compared to large and small rural facilities (32% and 30% respectively). Most often, the reason facilities were unable to admit patients stemmed from patients' complexity or instability (Figure 14). Patients with serious needs may need to be transferred to facilities in larger population centers.

- Sixteen percent of facilities in isolated rural areas and small rural towns are unable to admit volatile or suicidal patients (Figure 15).

- When they are unable to admit patients, facilities in small rural towns make referrals to a detox provider outside their community (43%) or to a hospital emergency department (29%). In contrast, facilities in isolated rural areas primarily refer patients to a hospital emergency department (43%) and secondarily to another detox provider outside their community (29%) (Figure 16).

- Few (10%) detox providers in large rural towns reported referring patients to other detox providers within the same community. Among facilities reporting other ways of handling patients they are unable to admit, several relied on the criminal justice system or county government to find alternative placements for patients. One facility reported that they suggest patients call the facility every day until they can be accepted.



## Rural Detoxification Services within the Substance Abuse Treatment Systems

To examine the role of rural detox services within the substance abuse system, respondents were asked to identify the primary sources of referrals into their programs and the referrals they make for continuing substance abuse treatment outside of their program. Respondents were asked about the challenges they face in providing detox services in their service areas. Among the rural facilities that told us they did not provide detox, respondents were asked when their program ended and why. They were further asked how they handled patients requiring detox services.

### Referral Sources

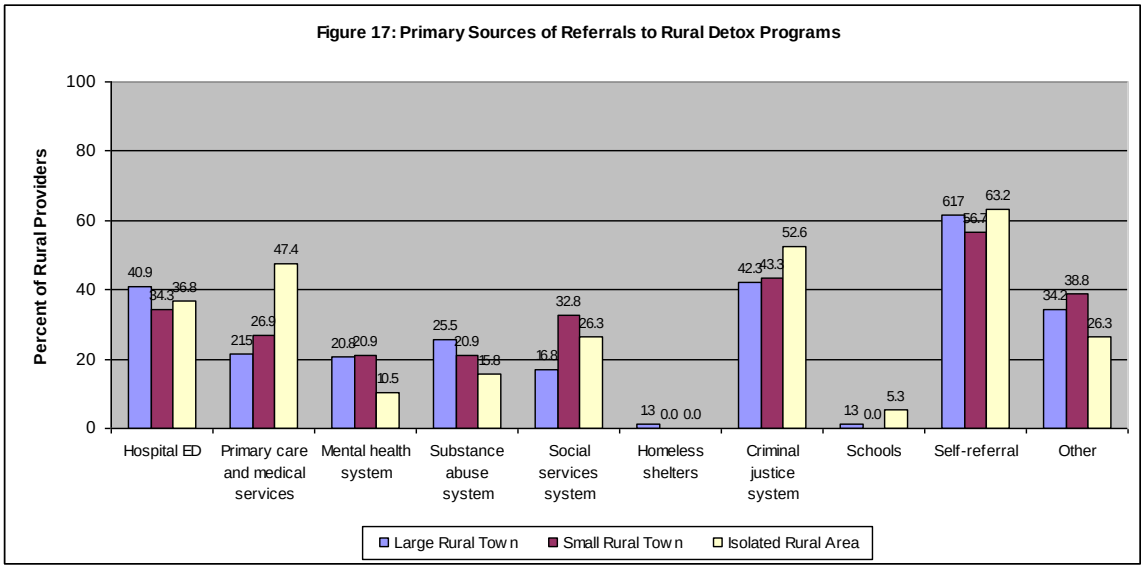
Respondents were asked to identify the primary sources of referrals to their detox programs.

***Results:***

- Referral sources to detox programs vary by type of rural area (Figure 17). In isolated rural areas, common referral sources include primary care and medical services (47%), the criminal justice system (53%), and self-referral (63%). These areas receive a small proportion (5%) of referrals from schools; however, large and small rural towns receive virtually no referrals from schools.

- Like isolated rural areas, rural facilities in large and small rural towns also frequently receive self referrals (62% and 57% respectively).

- Providers in large rural towns receive more referrals from the medical community such as hospital emergency departments (41%), primary care and medical services (21%), the mental health system (21%), and the substance abuse system (26%). In contrast, small rural towns and isolated areas have more referral sources among human service providers, such as the social services system (33% and 26%), criminal justice system (43% and 53%), and schools (5% for isolated rural areas).




## Fostering Patient Entry into Substance Abuse Treatment

The complete detoxification process consists of three components: evaluation, stabilization, and fostering the patient's entry into substance abuse treatment.[19] Follow-up treatment has been shown to decrease the likelihood of readmission, extend time to next admission, and reduce relapse rates.[25] Despite this importance, only 20-50% of patients receive further treatment following detoxification.[26] To examine how rural facilities foster patient entry into treatment and how they understand their role in the substance abuse system, we asked respondents whether they gather data on the post-discharge disposition of patients and the most common referral destinations for patients being discharged from detox services.

***Results:***

- Two-thirds of all rural facilities gather data on their patients' post-discharge disposition, used to track patient outcomes. Providers in large rural towns (64%) are slightly less likely to gather data than facilities in small towns (70%) or isolated areas (68%).

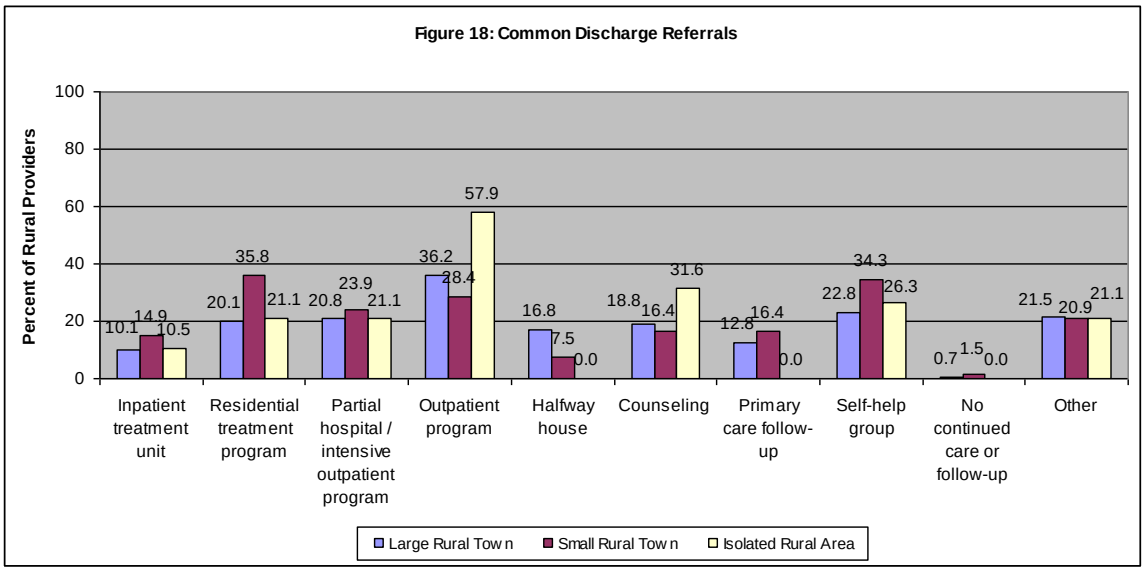
- When patients are discharged from detox programs, 58% of facilities in isolated rural areas refer patients to outpatient substance abuse treatment programs. Outpatient treatment programs are by far the most common source of discharge referrals by these facilities. By contrast, 36% and 28% of facilities in large and small rural towns refer patients to outpatient programs (Figure 18).

- Facilities in isolated rural areas make most of their post-discharge referrals to less intensive services, such as counseling (32%) and self-help groups (26%). Less

frequently, patients from these facilities are referred to residential treatment programs (21%) and partial hospital / intensive outpatient programs (21%).

- Compared to other rural areas, facilities in small rural towns refer more frequently to inpatient treatment units (15% compared to 10% for large towns and 11% for isolated areas), residential treatment programs (36% compared to 20% and 21%), and partial hospital / intensive outpatient programs (24%, compared to 21% in both large towns and isolated areas).

- Compared to other rural areas, facilities in large rural towns refer more often to halfway houses (17% vs. 8% for small towns and 0% in isolated areas).




## Challenges Facing Rural Detoxification Providers

Respondents were asked about the challenges they face in providing detox services in their service areas.

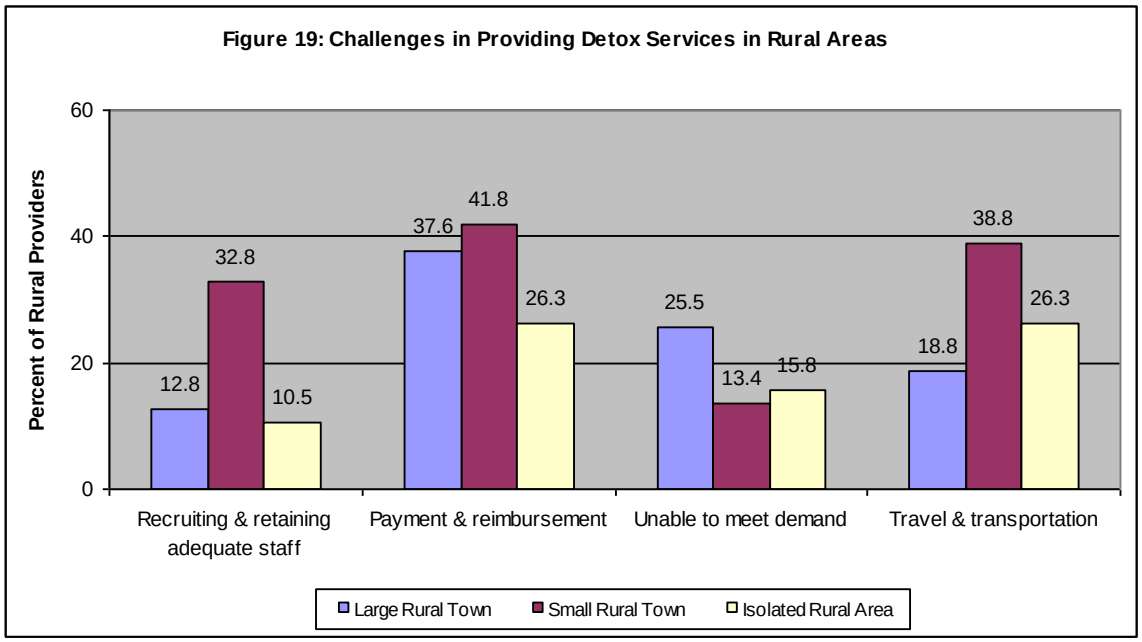
***Results:***

- Recruiting and retaining adequate staff is a problem for 33% of detox facilities in small rural towns, compared to 13% in large rural towns and 11% in isolated areas (Figure 19).

- Payment and reimbursement is a challenge for a larger percent of providers in large (38%) and small rural towns (42%) than isolated areas (26%).

- The ability to keep up with patient demand is more challenging for providers in large rural towns compared to other rural providers.

- In response to an open-ended question, 25% of respondents identified travel distance and/or transportation as barriers to receipt of detox services. Travel and transportation were particularly problematic in small rural towns, where nearly 40% of respondents cited this difficulty.




## Characteristics of Facilities No Longer Providing Detox

During the survey process, a fairly large proportion of the rural providers we identified in the Locator as providing detox services told us they did not provide detox services (37%; n=139). These respondents were asked when their program ended and why and how they handled patients requiring detox.

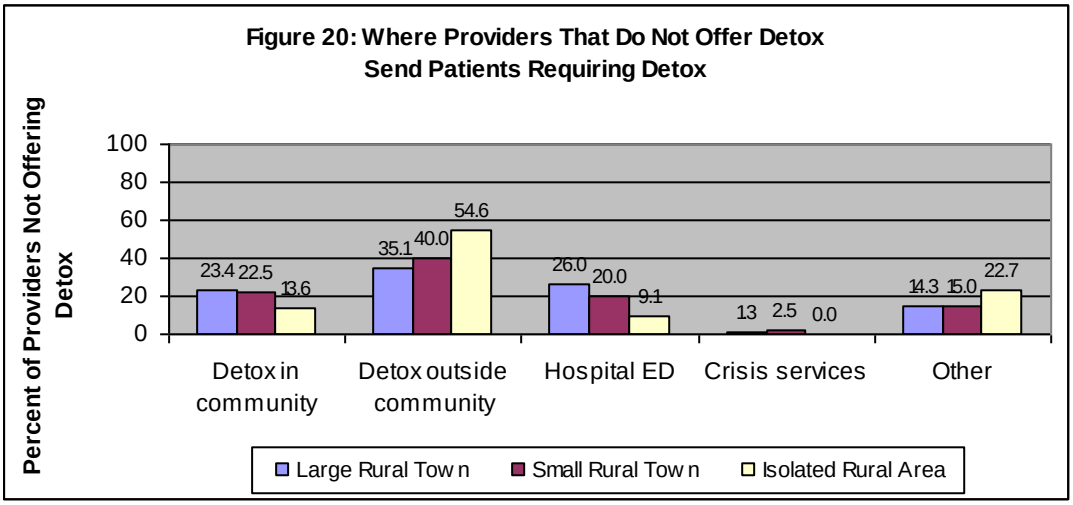
***Results:***

- Among the providers that told us they did not provide detox, 81% said they had never offered detox services.

- A small proportion (14%) of other providers indicated that their detox programs had closed within the past two or more years.

- Facilities that do not provide detox services were asked how they handle patients requiring detox services. Many reported referring patients to a detox provider outside the community (40%), while others reported referring patients to a detox provider in the community (22%) or hospital emergency department (22%) (Figure 20). Providers in the most rural areas were more likely to refer patients to

detox providers outside the community, and less likely to rely on hospital emergency departments or detox providers in the community.




## DISCUSSION

Most rural residents live in a county without a detox provider. The relative scarcity of these providers in rural areas presents access problems for rural residents needing these services. Among less populated rural areas, even fewer detox providers are available. Rural detox providers serve patients from a wide service area and, as the area becomes more rural, service areas become larger, with over half of rural detox providers serving a radius of 100 miles or more. These travel distances are a barrier to accessing both inpatient and outpatient services for those who live at the extremes of a provider's service area. This is likely a greater barrier for those needing outpatient, intensive outpatient, or partial hospital services due to the significant daily travel demands required by these types of services. Isolated rural areas have a slightly lower number of available inpatient and residential beds compared to all rural towns and have a much lower capacity to provide outpatient services, based on the number of available patient slots relative to population.

In many rural areas, detox services are either unavailable or do not provide a range of services tailored to individual needs or special subpopulations. While it may not be financially possible to offer a range of detox services given the small populations in rural areas, it is important to make the most of existing detox and substance abuse treatment services. Because service areas are large and patients requiring outpatient services are responsible for regular commuting, rural inpatient detox facilities could admit patients that would otherwise qualify for outpatient care in an effort to minimize transportation barriers.

In rural areas without a detox provider, most detox care is likely provided by emergency rooms and law enforcement agencies. A referral system should be designed and implemented, establishing links among rural health providers, community agents and detox and substance abuse providers outside the home community when the detox service area is relatively small (e.g., less than 35 miles). This referral system would establish agreements between communities without detox services and detox providers to transfer and serve patients. An informational booklet or website could provide fingertip access to inform providers where to find appropriate services for patients. A telehealth application could be considered for patients requiring less intensive services and could be useful in supporting detox within emergency rooms. Additionally, it is important to know what programs or initiatives currently exist in states and communities for providing detox services when providers are few and far away. Further study should examine what programs exist and how they work, such as a qualitative review, case studies, or a series of discussions with experts.

## CONCLUSIONS

As a gateway to substance abuse treatment, it is important to facilitate access to detox services despite transportation issues or a lack of adequate capacity. Substance abuse has real social and economic costs, and treatment may result in savings based on improvements in health and functioning and reductions in crime.[27] This suggests that consideration of the potential payoffs—in both social and economic terms—is appropriate when deciding how much to invest in detox services in rural areas.

Rural persons have limited access to detox services and, even where detox is available, the full range of professionally-recommended services is incomplete in rural areas. Travel distances to detox services are lengthy and access to specialty programs for patients with specific needs (e.g., adolescents) may be non-existent. Rural detox providers offer services for a wide range of substances, which may accommodate many patients. The challenge now is for policymakers to expand existing services and facilitate links between areas with detox services and areas without.

## APPENDIX: Description of the Rural Urban Commuting Area Codes

To identify facilities in rural areas, we linked facilities to the Version 2.0 Rural Urban Commuting Area (RUCA) codes developed by the WWAMI Rural Health Research Center and the Department of Agriculture's Economic Research Service. The RUCAs categorize census tracts at the sub-county level by urbanization, population density, and commuting patterns. For purposes of this analysis, we consolidated the non-metropolitan (rural) RUCAs into three categories based on their population size and major commuting patterns. These consolidations are summarized in the table below. Large rural towns are micropolitan areas (e.g., non-metropolitan towns) with a population of 10,000-49,999 or micropolitan areas with a primary commuting pattern to another micropolitan area and only low secondary commuting patterns to densely settled areas. Small rural towns are non-metropolitan (e.g., small towns) with a population of 2,500-9,999 or small towns with a primary commuting flow to another small town and only low secondary commuting patterns to densely settled areas or large rural towns. Isolated rural areas are non-metropolitan areas with a population of less than 2,500 with secondary commuting patterns to large or small rural towns and only low secondary commuting patterns to a densely settled area.

**RUCA Consolidation Categories**

| Large Rural Towns | Small Rural Towns | Isolated Rural Areas |
|---|---|---|
| 4 Micropolitan area core: primary flow within an Urban Cluster (UC) of 10,000 to 49,999 (large UC)<br>4.2 Secondary flow 10% to 30% to an urbanized area (UA) | 7 Small town core: primary flow within an Urban Cluster of 2,500 to 9,999 (small UC)<br>7.2 Secondary flow 30% to 50% to a large UC<br>7.3 Secondary flow 10% to 30% to a UA<br>7.4 Secondary flow 10% to 30% to a large UC | 10 Rural areas: primary flow to a tract outside a UA or UC<br>10.2 Secondary flow 30% to 50% to a large UC<br>10.3 Secondary flow 30% to 50% to a small UC<br>10.4 Secondary flow 10% to 30% to a UA<br>10.5 Secondary flow 10% to 30% to a large UC<br>10.6 Secondary flow 10% to 30% to a small UC |
| 5 Micropolitan high commuting: primary flow 30% or more to a large UC<br>5.2 Secondary flow 10% to 30% to a UA | 8 Small town high commuting: primary flow 30% or more to a small UC<br>8.2 Secondary flow 30% to 50% to a large UC<br>8.3 Secondary flow 10% to 30% to a UA<br>8.4 Secondary flow 10% to 30% to a large UC | |
| 6 Micropolitan low commuting: primary flow 10% to 30% to a large UC<br>6.1 Secondary flow 10% to 30% to a UA | 9 Small town low commuting: primary flow 10% to 30% to a small UC<br>9.1 Secondary flow 10% to 30% to a UA<br>9.2 Secondary flow 10% to 30% to a large UC | |

Note: All other RUCA categories were considered urban-focused (including categories 4.1, 5.1, 7.1, 8.1, and 10.1) and were not included in this analysis.

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