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## A Qualitative Analysis of Provider Barriers and Solutions to HIV Testing for Substance Users in a Small, Largely Rural Southern State

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### Abstract

**Purpose**—Integrating HIV testing programs into substance use treatment is a promising avenue to help increase access to HIV testing for rural drug users. Yet few outpatient substance abuse treatment facilities in the United States provide HIV testing. The purpose of this study was to identify barriers to incorporating HIV testing with substance use treatment from the perspectives of treatment and testing providers in Arkansas.

**Methods**—We used purposive sampling from state directories to recruit providers at state, organization, and individual levels to participate in this exploratory study. Using an interview guide, the first and second authors conducted semi-structured individual interviews in each provider's office or by telephone. All interviews were recorded, transcribed verbatim, and entered into ATLAS.ti software (ATLAS.ti Scientific Software Development GmbH, Berlin, Germany). We used constant comparison and content analysis techniques to identify codes, categories, and primary patterns in the data.

**Findings**—The sample consisted of 28 providers throughout the state, 18 from the substance use system and 10 from the public/ community health system. We identified 7 categories of barriers: environmental constraints, policy constraints, funding constraints, organizational structure, limited inter- and intra-agency communication, burden of responsibility, and client fragility.

**Conclusions**—This study presents the practice-based realities of barriers to integrating HIV testing with substance use treatment in a small, largely rural state. Some system and/or organization leaders were either unaware of or not actively pursuing external funds available to

them specifically for engaging substance users in HIV testing. However, funding does not address the system-level need for coordination of resources and services at the state level.

## Keywords

drug abuse; health services research; HIV; qualitative research; rural

Testing is an important strategy for reducing the spread of HIV for several reasons. First, the CDC estimates that about 20% of persons with HIV in the U.S. do not know they have it so may continue to unknowingly infect others.<sup>1-3</sup> An estimated 50% of new HIV infections are transmitted by the 20% of persons who do not know they have HIV.<sup>2,3</sup> Second, persons who are unaware of having the disease cannot benefit from antiretroviral treatment. Third, persons who are aware of being infected are less likely to engage in HIV risk behaviors than those who are not aware.<sup>2,3</sup> Despite the many reasons testing can be beneficial, testing rates remain low; in fact, only 55% of adults in U.S. have ever been tested,<sup>4</sup> and the reasons for non-testing remain unclear.

Integrating HIV testing programs into substance use treatment is a promising avenue to help increase access to HIV testing services for rural drug users.<sup>5-7</sup> Yet as recently as 2009, only 36% of urban and 11% of rural outpatient substance use treatment facilities in the U.S. provided HIV testing.<sup>8</sup> Insufficient resources and reimbursement, complex funding requirements, and differences in program philosophy or treatment paradigm are some of the barriers to incorporating routine screening for HIV into substance abuse treatment programs that have been identified in other studies.<sup>9-19</sup> However, we do not fully understand the barriers that rural substance use treatment providers and system administrators perceive to integrating HIV testing into their programs. Existing research sheds little light on the crucially important contextual and specific processes that may inhibit or facilitate integration of HIV testing with community substance abuse treatment, especially in the rural South, where HIV is spreading rapidly.<sup>20,21</sup> The primary purpose of this qualitative study was to identify barriers to HIV testing for substance users as described by substance use treatment and HIV testing service administrators and providers in Arkansas.

## METHODS

### Setting

Arkansas is a southern state with a large percentage of rural residents and no large metropolitan statistical area. The total population of Arkansas is 2.6 million, and according to the U.S. Office of Management and Budget (OMB) definition of rural, 48% of the population of Arkansas live in rural areas.<sup>22</sup> Farming/agriculture is a major component of the Arkansas economy, accounting for 1 out of 6 jobs and 15% of state labor income.<sup>23</sup>

### Design

For this qualitative study, we used a diagnostic formative evaluation, multilevel approach.<sup>24-26</sup> Diagnostic formative evaluation is a necessary pre-intervention process to understand the extent of current practices, the determinants of current practices, potential barriers and facilitators to practice change, and the feasibility and utility of potential

implementation intervention strategies to change practice.<sup>24</sup> Substance abuse treatment and public health administrators and providers at the state, program, local, and individual levels were invited to engage in semi-structured qualitative interviews. This approach allowed us to better uncover and understand barriers and facilitators at various levels and to describe how each level interacts with and influences others in affecting HIV testing of substance users.<sup>26,27</sup>

### **Inclusion Criteria for Service Providers**

Eligibility requirements for service administrators/providers included: (1) involved at the state, program, or front-line level with delivering substance abuse treatment services or HIV testing services (including faith-based organization and community-based organizations); (2) willingness to participate.

### **Recruiting Plan for Service Administrators/Providers**

We used a sampling approach that we characterize as “assisted purposive sampling (APS),” a combination or mixed approach of stratified purposeful sampling and the referral element of chain sampling.<sup>28</sup> Using state organizational charts, the investigative team identified persons who held key positions in the behavioral health and health delivery systems in Arkansas. These persons were contacted by a member of the investigative team by phone or in person and invited to participate, and they were asked for referrals to intermediate-level program managers and staff members. Program managers and local front-line service providers were then contacted by phone or email by the investigators and invited to participate. From state-level administrators and providers, we collected information about structural characteristics of their service delivery systems that could be potential barriers and facilitators to expansion of HIV testing such as federal/state regulations, policies, revenue and funding, resource allocation, scope of services, and priorities, as well as their perceptions of the extent and importance of undiagnosed HIV. From the program managers, we collected information about scope of services, HIV prevention education programs, work-force and client characteristics, and perceived barriers and facilitators to including HIV testing in substance use treatment programs. From front-line providers such as clinicians at local health departments and substance abuse clinics, we collected information about their practice, clients, staff, funding, their perceptions of the extent of undiagnosed HIV in the community, and need for expanded HIV testing.

### **Data Collection**

All interviews were conducted by the same 2 members of the investigative team between May and December of 2010 in the provider’s office or, in a small number of cases, by telephone. Both interviewers are faculty with considerable expertise in social and systems research, qualitative methods, and the contextual aspects of substance use treatment delivery. Although some of our questions inquired about specific potential barriers to HIV testing, we began each interview with open-ended and non-specific questions concerning how HIV prevention is handled by their program (see Table 1). The University of Arkansas for Medical Sciences IRB granted a waiver of written consent and HIPAA authorization for service providers participating in the study. A complete description of the study was given to

providers prior to beginning the interview, and verbal assent to participate was obtained. No monetary incentives were provided.

### **Data Integrity**

Based on recommendations by Lincoln and Guba, we took several steps to maximize the trustworthiness of our qualitative data.<sup>29</sup> An interview guide was used in conducting all interviews to ensure consistent inquiries without precluding the possibility of discovery of other relevant issues. The interview guides were informed by organizational and implementation science literature.<sup>24,25,27</sup> All participants were told that with their permission the interviews would be digitally recorded and notes taken. Personal identifiers were removed from all notes and recordings. The interviews were transcribed verbatim, verified for accuracy, then entered into Atlas.ti software for data management.<sup>30</sup>

### **Data Analysis**

The data were first read without coding to achieve an overall understanding of interview content.<sup>31</sup> Constant comparison and content analysis techniques<sup>32</sup> were then used to identify, code, categorize, classify, and label primary patterns in the data.<sup>33</sup> Each investigator reviewed the same 5 interviews to identify top-level codes, then met to discuss and review each other's work until consensus was reached on top-level codes and definitions. The same process was used to develop sub-codes. A codebook with definitions was developed by 4 members of the research team based on the first 5 interviews, and that codebook was then used to code all interview data.

## **RESULTS**

### **Characteristics of Sample**

We recruited a total of 28 providers, representative of major stakeholders in the delivery of substance use treatment and HIV prevention services for central, south, and east Arkansas as shown in Table 2. Thirteen providers were female and 11 were African American; no providers were Hispanic. Services offered by substance use treatment programs from which providers were recruited varied, including residential, medical detoxification, nonmedical detoxification, outpatient, intensive outpatient, and opiate substitution. These programs served clients from both rural and urban areas. One community substance use treatment center was faith-based; all were nonprofit. All providers contacted agreed to participate. However, after repeated attempts by phone, we were unable to make contact with administrators in one regional rural community health program that offers HIV testing and treatment services for northern and western areas of the state. Therefore, program managers or clinicians for that program could not be invited to participate.

### **Barriers**

We identified 7 categories of barriers to providing HIV testing to substance users as well as solutions found by a few. Initial coding looked separately at the 2 delivery systems, substance use treatment and HIV testing, but we ultimately combined them due to the similarity of the types of barriers and facilitators/solutions. Separate tables were developed for the substance abuse treatment system and the HIV testing system that reflected data

themes and categories by organizational level. Level 1 refers to the state/system-level barriers, level 2 refers to program/structural barriers, and level 3 to individual-level barriers. From these tables, 7 categories were identified that crossed delivery systems. The 7 barrier categories are: (1) environmental constraints, (2) policy constraints, (3) funding constraints, (4) organizational structure, (5) limited intra- and inter-agency communication, (6) burden of responsibility, and (7) client fragility. A full account of the barriers/facilitators by delivery system is available upon request from the first author. The 7 barriers were then combined and classified by provider level (see Table 3). We used the same process to identify solutions used by some providers to overcome these barriers.

### Level 1: State/System Barriers

**Environmental constraints**—This barrier alludes to features of the larger environment of the state in which the substance use treatment and HIV testing delivery systems exist and was alluded to by all 6 state-level administrators. We were told by top-level substance abuse and health services administrators that because Arkansas is a part of the Bible belt with conservative moral values and politics, HIV is still stigmatized, and that both HIV and substance abuse are associated with moral weakness and shameful behavior. Other managers and administrators spoke of the need for a strong, committed advocate or spokesperson at the top levels of state government to heighten awareness of HIV as a public health problem and to garner political support for funding HIV prevention, testing, and treatment services. In the words of 1 state-level administrator, “unless we get out there and gin up the business, it’s just going to stay dormant.” Consequently, he said that the state missed opportunities to obtain additional or external funding available at the federal level for the specific purpose of developing or expanding HIV programs that target drug users.

For both substance abuse and public health delivery systems, the need for services is far greater than the supply of funding, thus, these systems must prioritize needs in distributing available resources. The priority for substance use treatment providers participating in the study at all levels is treating addiction and facilitating recovery as indicated by the words of one state-level administrator:

We’re treating approximately 67% of the population that’s in need of substance abuse treatment right now. I’m in a dilemma. In order to treat the number of people we’re treating, we have to skimp, mainly on other types of stuff because those funds are not there.

HIV competes with several other priorities in public health in this state, which has high morbidity and mortality rates for other chronic diseases affecting more people in the general population. Because Arkansas has historically had few injecting drug users and because it has relatively low HIV/AIDS prevalence and incidence rates in the general population, the perceived need for prioritizing HIV testing is low. When asked specifically about drug injectors, all treatment providers in the study said they saw few injectors in their programs. However, this may be changing according to one administrator, “I would think it’s on the rise with the opiates...about 5 years ago they (injectors) were like 2.5% but now they’re over 5%. Opiate use and addiction is on the rise in Arkansas; it’s pharmaceuticals, not heroin.” This was confirmed by a methadone clinic provider, “Around 80% of our clients

need methadone for prescription drug addiction (oxycontin, hydrocodone, oxydone). We have very few injectors and they are usually older.” Lack of awareness is also a barrier, according to 2 health services managers. For example, one manager adds, “We have not seen that message in our community and have become complacent and think it’s out there in Africa, not HIV in Arkansas.” Therefore, low awareness, high stigma, and low rates of HIV result in low priority and low funding for HIV testing.

**Policy constraints**—There is no legislative regulation or policy addressing HIV testing in substance use treatment programs in Arkansas. Neither the Arkansas Department of Health (ADH) nor the Office of the Arkansas Division of Drug and Alcohol Prevention (OADAP) has written policies or requirements regarding providing testing in substance abuse programs. For example, HIV testing is not a state or national outcome measure for substance abuse treatment providers. However, programs must follow rules to remain licensed, such as providing HIV education and referring clients who request testing to the local public health unit or other organization. We were told, “As far as direct HIV education, we do what we call reproductive health education. And then we give them a list, in these outlined clinics, a list of addresses for local health departments.” However, providers said that they are not required to provide testing or transport their clients to a testing facility. Providers at one site said transporting substance use clients

...could become a barrier here anyway because if they’ve tested positive (with rapid test) and they need a blood test, then we got to make arrangements for them to go and be tested because, at that point, you don’t want to wait 21 days later to be tested...and that adds more cost because you have to have a guard with them to go there and all that kind of stuff.

A few programs do provide transportation to testing, and some programs have arrangements with outside agencies to provide testing on site.

**Funding constraints**—Different funding streams with different requirements and restrictions for HIV testing and HIV treatment also limit use of available funds. ADH is the recipient of federal funds from the Centers for Disease Control and Prevention (CDC) to provide HIV education and testing for Arkansas. ADH distributes some of these funds as grants to community-based organizations. ADH also receives Ryan White funds from the Health Resources and Services Administration (HRSA) to provide HIV/AIDS treatment and fund the AIDS Drug Assistance Program (ADAP) in Arkansas. ADH does not provide treatment or medication but contracts with other health care organizations to do so. Allotment of federal funds to states is based on number of persons living with HIV and AIDS in the state.<sup>34</sup> Thus, Arkansas receives a relatively small amount of funds. Arkansas received \$12,787,373 in federal funds in 2009.<sup>35</sup> Few state dollars, \$5,968 in 2009, augment federal funds for HIV prevention, testing, and treatment.<sup>35</sup> We were told by one provider, “There are no state dollars. Well the legislature’s push back was, ‘Well, there’s some people on Medicaid, right, so if they’re HIV positive on Medicaid they’re getting their drugs paid for by state dollars.’”

## Level 2: Program Barriers

**Organizational structure**—In this small rural state, the state public health system is autonomous, answering directly only to the governor and legislature. The state substance use system is administered through the state’s Division of Behavioral Health Services, which is one division of a separate entity, the Arkansas Department of Human Services. This results in institutional silos. There is no significant infrastructure in place to facilitate collaboration between substance use treatment and public health programs for providing HIV testing to substance use clients. No central referral system or network exists. Rather, in the words of one state-level administrator, “the local unit director there has made that decision” in setting up its own schedule for days and times HIV testing is conducted for the general public and for referrals from substance use programs.

The limited capacity of local health units to provide testing has resulted in access problems for substance use programs. One residential substance use program director reported that he was instructed by his local health unit to send only 2 clients per week to the health unit to be tested, and that HIV testing in that unit was limited to one day of the week. Because they could only send 2 per week, many who wanted the test were unable to get it. The director also told us that some clients were out of treatment before receiving their test results. The director explained the reasons for restricted access to testing for his clients:

...but you’ve got to remember that most health departments are short-staffed or barely, you know, they just get by. And then they’ve got appointments that are set up, and if you take 10 people for STDs, they’re basically shutting your clinic down.

**Limited intra- or inter-system communication**—Poor inter- and intra-agency communication was a barrier reported both within and across systems. Only 2 or 3 of 28 providers we interviewed in either system were cognizant of state regulations. Regional managers did not seem to communicate with state administrators or local managers, and local managers did not communicate with one another about referral barriers and possible solutions to testing for substance use treatment clients. All local treatment providers knew the address and phone number of the local health unit, but only 2 could provide information about the days and times the local health unit offered testing. Few knew anything about rapid testing. In 1 treatment program, managers did not know how their clinical staff handled HIV testing.

## Level 3: Individual Barriers

**Burden of responsibility**—Substance use program managers and clinicians expressed concern and uncertainty about the extent of their responsibilities if they were to provide HIV testing internally. Such concerns included responsibility for obtaining confirmatory testing, providing linkage to services for those who test positive, reporting requirements for infectious disease, protecting client confidentiality, obtaining treatment medicines, and providing clients with psychological support. Both substance use and HIV program staff voiced concern that substance use disease (SUD) treatment staff members may not feel adequately trained to manage the process of giving substance use clients positive results. For example, one counselor said, “We don’t do medical here. We’re behavioral health. We don’t

do medical. So if they have a medical concern, we refer them.” A public health manager told us, “Some have said they had rather tell a person that their child had died than tell them that they themselves have HIV.”

**Client fragility**—Some treatment clinicians expressed concerns about client fragility, saying persons in treatment were too angry, anxious, or confused to deal with the possibility of having HIV. Some program managers said they feared introducing HIV testing could push clients “over the edge” and/or jeopardize their recovery. Others said because some clients in treatment were under duress, they were already dealing with too many other stressful issues to face the possibility of having HIV. Clinicians and managers also expressed concern that some clients do not have sufficient coping abilities or inner resources to manage a positive result. This concern was expressed by one provider who said:

If you end up with a positive result, you effectively have a mental case on your hand. And you have no idea how that person is going to react. It can be anything from sobbing, destitute, suicidal to ‘well at least I don’t have AIDS.’

This concern was also voiced by a provider at another facility, “I’m the client, I’m trying to get well and I’m almost suicidal anyway just because of life issues and now you fling on me this other thing (HIV test). I mean if I wasn’t suicidal, I would become suicidal.”

## Solutions and Facilitators

One of the organizations in our sample was a federally qualified health center (FQHC) that provided on-site HIV education, testing, and counseling services for substance use programs in 10 counties through a special program that was funded by a Substance Abuse and Mental Health Services Administration (SAMHSA) grant for the specific purpose of providing outreach and testing services to substance users and other high-risk populations. They estimate they conducted 2000 HIV tests in the past year through this program, not only to substance users in treatment but through outreach activities to out-of-treatment substance users as well. Below, we describe solutions used by this FQHC to overcome barriers to testing at various organizational levels.

### Level 1: State/System Facilitators

**Lack of regulatory barriers**—Unlike some states, Arkansas does not require written consent for HIV testing, except for testing related to occupational exposure.<sup>36</sup> Nor does the state have regulations or restrictions about rapid HIV testing. The lack of these requirements enabled the FQHC to use non-clinical staff, a mobile van, and rapid testing for their outreach program.

**External funding**—This organization has sought and received external funding from SAMHSA for the specific purpose of providing HIV education and testing outreach to substance users. These funds eliminate not only the cost barrier but also the barrier of competing needs and priorities. The SAMHSA grant is for 5 years and FQHC leaders appear confident it will be renewed.



## Level 2: Program Facilitators

**Committed leadership**—Strong support for the HIV testing program comes from the top down in this FQHC. A division of the organization is devoted to a full range of services for persons with HIV and those at risk of acquiring HIV. Leaders actively pursue available funds to test high-risk target groups such as drug users and minorities. They are funded by the federal Ryan White program, CDC, SAMHSA, and ADH for different kinds of services related to HIV.

**Strong internal and external referral network**—The parent organization (FQHC) is an umbrella for wrap-around HIV prevention, testing, and treatment services through separate funding mechanisms and divisions. The FQHC provides central organization, a strong referral network, and actively seeks out contracts and collaboration with treatment centers and other providers in its catchment area. It is also a member of an AIDS Education and Training Center, which facilitates inter-organizational communication and education.

**Dedicated program**—The dedicated program, made possible by external funding, has one purpose and priority: testing substance users and linking them to treatment services. The program provides expertise, staff, incentives for clients (such as t-shirts and gift cards), transportation, and linkage to HIV services at no cost to substance abuse programs and clients. However, most substance abuse programs in the state do not benefit from this program, since the program's catchment area includes only 4 counties.

## Level 3: Individual

**Dedicated staff**—External funding makes it possible for the HIV testing program at the FQHC to have a dedicated staff without competing job responsibilities. The dedicated program staff contacts substance use programs in its service area and contracts with them to provide free HIV education, testing, and counseling to their clients on a monthly basis. Having an outside agency provide testing also alleviates many concerns substance abuse treatment counselors expressed about conducting testing themselves. Substance abuse managers and clinicians who benefited from the dedicated program and staff said they like this approach because they felt the HIV program staff had the expertise and training to answer clients' questions about HIV, offer support to clients who test positive, and provide information about linkage and referrals. One program manager explained, "Because they have the expertise in the area, and that's what they're known to do. I think that partnership works well." Another substance use treatment manager said, "I just like the idea of someone else coming in." It is also important to note that having people from an outside agency involved in providing HIV testing could also be beneficial since clients who want to be tested may be reluctant to reveal their condition to local staff because of privacy concerns. In small rural communities, local service providers and service users are often members of the same kinship and social networks. As one substance use counselor expressed, "I think it's a confidentiality issue. I think that they (clients) are more apt to work with somebody outside that would protect their confidentiality."

**Social marketing**—The HIV program staff use social marketing to increase acceptability among substance abuse clients and reduce stigma associated with HIV testing. Opt-out HIV

testing is routinized in that it is offered to every client. T-shirts printed with “I know, do you?” and gift cards are given to those who are tested, and managers of substance use treatment centers where the FQHC has conducted the testing program report that the t-shirts and the gift cards are both very popular among clients at the centers. As a result, testing has become a more socially accepted norm in these programs, and stigma is lessened. One program manager described how her clients responded this way, “While I’m here I’m going to get tested like everybody else and I’m going to get a t-shirt and I may get a gift card. So it’s not a stigma.” All 4 substance abuse managers and clinicians with treatment programs contracting with the HIV program said most of their clients participated and liked the program.

## DISCUSSION

Effective structural intervention requires a locally contextualized approach based on a thorough assessment of existing individual and institutional norms and practices, relationships and interrelationships across multiple levels, and potential barriers and facilitators to intervention adoption and implementation.<sup>24,37-42</sup> Interventions to increase HIV testing for substance users are highly dependent on specific contextual factors, such as capacities, expertise, funding, and socio-political climate.<sup>40</sup>

Routine testing for HIV has been successfully integrated with substance use treatment programs and diverse primary care settings in other rural states. Rapid testing for HIV was integrated with detoxification and outpatient substance abuse treatment programs participating in the National Institute on Drug Abuse (NIDA) Clinical Trials Network (CTN) in 2 counties in South Carolina.<sup>43</sup> The CTNs provide support and research funding to foster academic/community collaboration for the development and transfer of new treatment options to providers and clients of community treatment centers. Arkansas does not participate in the NIDA CTN. The National Association of Community Health Centers, Inc. has developed a protocol for implementing routine HIV testing in their clinics that has been successful in community health centers in Mississippi, North Carolina, and South Carolina.<sup>44</sup> Routine testing has also been successfully integrated in emergency departments and other primary care settings in Alabama, Georgia, Kentucky, North Carolina, South Carolina, and Tennessee with support of the federally funded AIDS Education and Training Centers (AETCs) program.<sup>45</sup> The common factor in the success of all of the above examples is collaboration and support from outside agencies/organizations.

HIV testing was not provided by substance abuse treatment staff by any of the programs in this study. However, HIV testing was provided as part of regular services offered by local public health units and community health centers; at special testing outreach events and programs sponsored by the state health department in partnership with community-based organizations; and by one program funded directly by SAMHSA to provide pre-intervention HIV services to high-risk populations, including drug users. The Arkansas Department of Health (ADH) does not use rapid tests for most HIV tests but uses the enzyme-linked immunosorbent assay test (ELISA), also known as the standard test, because a blood specimen allows testing not only for HIV but also for syphilis and hepatitis. Rapid testing

was used by other organizations in clinical and non-clinical settings. According to a recent report, ADH conducted 66,971 HIV tests in 2010.<sup>46</sup>

The barriers we identified are similar to those reported in National Drug Abuse Treatment Clinical Trials Network programs and by providers in other settings such as emergency rooms, prenatal clinics, and community-based organizations.<sup>10-13,17</sup> However, characteristics that distinguished programs offering testing from those who do not in national studies differed in some respects in our study. For example, unlike reports from other studies, testing in Arkansas was not provided by programs offering opiate substitution, medical detoxification, or programs with licensed medical staff.<sup>10-13</sup> We speculate this is likely in Arkansas because only 13.7% of HIV/AIDS cases cumulative through 2008 are attributed to injection drug use.<sup>1</sup>

Some programs have found solutions that could transfer to other states and systems facing similar barriers. Two solutions stand out and are linked: (1) leadership/vision/commitment at the top level of an organization, and (2) external funding. Leadership is required for organizational change to occur. Integration of HIV testing with other health services requires formation of partnerships at the city, county, and state levels between local health departments, community-based organizations, and providers.<sup>37</sup> Some system and/or organization leaders were either unaware of or not actively pursuing external funds that are available to them specifically for engaging substance users in HIV testing.

Arkansas is not alone in not taking advantage of available funds. In a national survey of substance abuse programs that participate in the National Drug Abuse Treatment Clinical Trials Network, Brown and colleagues reported that HIV-related services were absent in many programs even though funding was available to provide such services.<sup>13</sup> Kritiz et al<sup>38</sup> also reported a significant discrepancy in funding availability and funds received by substance abuse treatment programs for providing HIV-related services. At the very least, these findings indicate the strong need for better communication between federal and state substance abuse administrators about funding opportunities for delivering these services. State leaders could also better educate program leaders about special funds and how to obtain them.

On the other hand, one organization in Arkansas used external funds to develop a highly successful program targeting substance users. Such funding could be a solution for other organizations and other states facing similar resource barriers. Leadership can result in external funding; external funding results in dedicated programs and dedicated staff; dedicated programs and staff alleviate barriers of competing priorities, provider burden, and provider concerns about clients. It is also possible that if more tests were conducted, more persons with HIV would be identified, thus affecting state-reported HIV/AIDS incidence and prevalence rates. This, in turn, could result in the state becoming eligible for increased federal funding for HIV testing and treatment.

However, external funding does not address the systems-level need for coordination of services. Lack of coordination results in fragmentation or duplication of services and decreased access for those in need of services.<sup>41</sup> System silos create barriers that limit

coordination of resources and services, especially in rural states with limited access to HIV testing and services. In Arkansas, formal coordination of substance use treatment and HIV prevention and testing services would increase sharing of information and improve efficiency and access to services.

Written guidelines foster formal interactions between organizations. Studies have shown that state guidance (policies, guidelines, regulations) is positively related to the provision of HIV-risk assessment, counseling, testing, and other infection-related services by substance use programs.<sup>13,38</sup> Even though Arkansas' organization of services may not provide written guidelines or formalize interactions between substance use and HIV testing delivery systems, inter-departmental and agency outreach is possible and can be an effective strategy for increasing awareness and collaboration. The success of inter-organization outreach was demonstrated by the FQHC example in our study, which had established strong collaborative arrangements with substance use programs in its catchment area to provide HIV testing services.

One of our key findings is the preference of substance use program managers and providers for having external program staff come in to conduct HIV counseling and testing. They felt external providers had the expertise and experience needed to test and, more importantly to them, give test results to their clients. Expertise appeared to be even more important to substance abuse treatment providers than relief from the additional work conducting testing themselves would entail.

Limitations of our study include the possibility that our results cannot be generalized to other states or delivery systems due to our small sample size and unique setting. Providers we could not reach after repeated attempts to contact are not included in this study. Thus, our findings may not be representative of all substance abuse and HIV testing providers in Arkansas. This being said, other states may be similar to Arkansas in that they are predominantly rural, have small populations, and have low state funding for HIV and substance use treatment. Our findings will be more relevant to such states and less relevant to more urban states and states with more state and federal funding for programs given their higher rates of HIV. A major strength of this study is that our sample was comprehensive overall in representing key stakeholders from all organizational levels across the state.

## CONCLUSION

This paper presents the practice realities of integrating HIV testing with substance abuse treatment in a small rural state with limited resources and capacity. Given the comparatively low rates of HIV/AIDS as compared to the extent of other chronic diseases in Arkansas, it is not surprising that HIV-related services do not have higher priority. In a state with limited resources, allocation of resources is determined by need and need is not considered greatest for HIV prevention and treatment at the moment. However, funding barriers are not immutable if providers are aware of and utilize all funds available to them.

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**Table 1**

**SUD Treatment Provider Interview Guide**

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<b>1</b>	<p><b>a.</b> Grand Tour Question for <u>state-level administrators</u>: “Tell me about how HIV prevention is handled by substance abuse treatment programs in Arkansas.”</p> <p>(Make sure that injection risks, and sex risks as well as other types of prevention programs or sessions are addressed)</p> <p><b>b.</b> Grand Tour Question for <u>program managers/front-line staff</u>: “Tell me about how HIV prevention is handled by your program(s).”</p> <p>(Make sure that injection risks, and sex risks as well as other types of prevention programs or sessions are addressed)</p> <p style="padding-left: 20px;"><b>a.</b> If HIV prevention is not addressed, ask</p> <ul style="list-style-type: none"> <li>• What are the main reasons you think it is not?</li> <li>• What do you see as the barriers to this?</li> </ul> <p style="padding-left: 20px;"><b>b.</b> If HIV prevention is addressed, ask <i>what kinds of HIV prevention services are provided?</i></p> <p style="padding-left: 40px;"><b>I.</b> Who delivers HIV prevention services?</p> <ul style="list-style-type: none"> <li>• staff members (medical staff, counselors, clerical, admission/discharge staff members)?</li> <li>• Or is it provided by outside agencies/persons (such as ADH)?</li> </ul> <p style="padding-left: 40px;"><b>II.</b> At what point during the treatment process is HIV prevention addressed?</p> <p style="padding-left: 40px;"><b>III.</b> What content is included in the prevention program?</p> <p style="padding-left: 40px;"><b>IV.</b> How is prevention delivered? (one-on-one, groups, pamphlets, videos)</p> <p style="padding-left: 40px;"><b>V.</b> Do the services differ by type of SUD program (e.g., residential, outpatient, detoxification)?</p>
<b>2</b>	<p>What about testing for HIV?</p> <p style="padding-left: 20px;"><b>a.</b> If not provided, what are the main reasons why not?</p> <p style="padding-left: 20px;"><b>b.</b> If provided, what is the process? (also check by type of SUD program)</p> <p style="padding-left: 40px;"><b>I.</b> Who is tested? At what point in treatment is testing done? What kind of test is done (standard or rapid)? How often is testing done? Who conducts the tests (internal/external)? Who pays for tests? How are initial positive tests confirmed? Who gives the client test results? How are referrals handled?</p> <p style="padding-left: 40px;"><b>II.</b> How many are tested? How many are positive?</p> <p style="padding-left: 40px;"><b>III.</b> How is mandatory reporting handled?</p> <p style="padding-left: 40px;"><b>IV.</b> How is confidentiality managed?</p> <p style="padding-left: 40px;"><b>V.</b> How is the test documented in patient chart?</p>
<b>3</b>	<p>What do you see as barriers to routine rapid testing for HIV in SUD treatment programs overall? In your program (or types of programs your organization offers)?</p>
<b>4</b>	<p>What would make it easier to incorporate HIV testing in SUD treatment programs?</p>
<b>5</b>	<p>What are your thoughts about opt-in versus opt-out testing?</p>
<b>6</b>	<p>Are there counseling staff in your program (or other program administrators) that you would recommend I talk to about these issues? It is really important that I talk to people who have lots of divergent opinions.</p>

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Thank you

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**TABLE 2**

## Characteristics of Sample

System Level	Role	Substance Abuse Treatment (N)	HIV Prevention and Testing (N)
I.	State-level administrators	3	3
II.	Senior organization/program managers	8	2
III.	Team leaders or unit managers	5	2
IV.	Individual Provider	2	3
	TOTALS	18	10

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**TABLE 3**

Major Provider Barriers to HIV Testing

Organization Level	Barrier	Description
<b>State/System</b>		
	1) Environmental constraints	<p>Larger environment in which substance use treatment and HIV testing delivery systems exist</p> <ul style="list-style-type: none"> <li>• Conservative moral values and politics</li> <li>• Lack of strong advocate to heighten awareness and garner political support</li> <li>• Competing health needs and priorities</li> <li>• Few injecting drug users and low HIV/AIDS incidence and prevalence rates compared to other states</li> </ul>
	2) Policy constraints	<p>State regulations and requirements</p> <ul style="list-style-type: none"> <li>• No state legislative regulation or policy addressing HIV testing in substance use treatment programs</li> </ul>
	3) Funding constraints	<p>Limited revenues and resources to pay for expanding HIV testing</p> <ul style="list-style-type: none"> <li>• Complexity and limitations of separate federal funding streams for testing and treatment</li> <li>• Very limited overall funding for substance use treatment and HIV testing programs as allotment and distribution of federal dollars is based on number of persons living with AIDS in the state</li> <li>• Little state funding for substance use or HIV testing programs to supplement federal funds</li> <li>• Competing health needs and priorities in state for distribution of available funds</li> <li>• Few programs receive special funding available for testing high-risk populations                             <ul style="list-style-type: none"> <li>– lack of awareness,</li> <li>– lack of knowledge about how to obtain these funds</li> <li>– do not meet eligibility requirements</li> </ul> </li> </ul>
<b>Program</b>		
	4) Organizational structure	<p>Program culture, internal processes and decision-making, and external partnerships</p> <ul style="list-style-type: none"> <li>• Health services system silos                             <ul style="list-style-type: none"> <li>– No infrastructure for coordinating services</li> <li>– No incentive for coordinating services</li> <li>– No central referral system</li> </ul> </li> <li>• Scattershot approach: up to each local program to make referral arrangements for HIV testing for substance abuse program clients</li> <li>• Inefficient and ineffective use of limited resources</li> <li>• Limits access to testing for substance users</li> </ul>
	5) Limited intra-and inter-agency communication	<ul style="list-style-type: none"> <li>• No shared goals or leadership</li> <li>• No shared responsibility</li> <li>• No shared patient information</li> <li>• No shared data collection</li> </ul>

Organization Level	Barrier	Description
		<ul style="list-style-type: none"> <li>• Little shared knowledge and training</li> </ul>
<b>Individual</b>		
	6) Burden of responsibility	<p>Provider concerns and uncertainty about extent of their responsibility if HIV testing was provided by their program or agency</p> <ul style="list-style-type: none"> <li>• Process concerns                             <ul style="list-style-type: none"> <li>– Obtaining confirmatory testing</li> <li>– Providing linkage to services for clients who test positive</li> <li>– Reporting requirements</li> <li>– Protecting client confidentiality</li> <li>– Obtaining treatment medicines</li> <li>– Providing clients necessary psychological support</li> </ul> </li> <li>• Self-efficacy concerns                             <ul style="list-style-type: none"> <li>– Feel inadequately trained to give clients positive test results</li> </ul> </li> </ul>
	7) Client fragility	<p>Providers fear introducing HIV testing could threaten clients recovery or be too much for them to handle</p> <ul style="list-style-type: none"> <li>• Too anxious, too angry, too confused</li> <li>• May jeopardize sobriety</li> <li>• Involuntary commitment to treatment</li> <li>• Short-stay treatment; discharged before obtaining test results</li> </ul>

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