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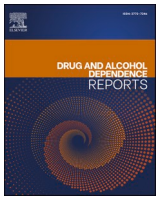

# Assessing access to smoking cessation services in Southern California HIV safety nets: A secret shopper study

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Globally, cigarette smoking is one of the leading preventable risk factors for premature death (World Health Organization, 2022). An estimated 6 million people die each year due to smoking-related illnesses (World Health Organization, 2022). In the United States, cigarette smoking prevalence is disproportionately high among people living with HIV (PLWH) (National Cancer Institute, 2022; Burkhalter et al., 2005; Tesoriero et al., 2010). Although improved access to antiretroviral therapy (ART) has led to significant declines in HIV/AIDS-related mortality, cigarette smoking prevalence among people living with HIV (PLWH) is estimated to be at least two times higher than in the general population (34%–47% vs. 12.5%, respectively) (Centers for Disease Control and Prevention, 2022; National Cancer Institute, 2022; Burkhalter et al., 2005; Tesoriero et al., 2010). Cigarette smoking among PLWH is associated with lower adherence to ART, which can influence HIV outcomes at each stage of the HIV care continuum (Shuter and Bernstein, 2008; O'Cleirigh et al., 2015; Feldman et al., 2006). Additionally, most PLWH who smoke cigarettes are members of marginalized populations (e.g., non-Hispanic Black/African Americans, men who have sex with men, and low-income) (Pool et al., 2016; Humfleet et al., 2009). Furthermore, past studies have shown that smoking is often not addressed in the context of HIV care, and few PLWH are offered smoking cessation services, including evidence-based pharmacotherapy approaches (e.g., varenicline) and behavioral interventions (e.g., counseling) (Shuter et al., 2012; Horvath et al., 2012; Robinson et al., 2012). Thus, the intersection between cigarette smoking and HIV presents an opportunity to ensure access to smoking cessation services in clinical settings for PLWH.

HIV safety nets are key settings for delivery of smoking cessation services to PLWH. As the largest federal program focused on HIV, the Health Resources and Services Administration's (HRSA) Ryan White HIV/AIDS Program (RWHAP) was developed as a safety-net for people who could not afford to access HIV care and treatment (Health Resources and Services Administration, 2022). RWHAP serves predominately low-income PLWH (Health Resources and Services Administration, 2022). HRSA data show that 60% of RWHAP clients have a family income less than 100% of the federal poverty level (Health Resources and Services Administration, 2020). Additionally, nearly 50% of clients are non-Hispanic Black, and more than 20% of clients are Hispanic—racial/ethnic populations disproportionately affected by cigarette smoking (Health Resources and Services Administration, 2020; Centers for Disease Control and Prevention, 2022, 2022).

A nuanced characterization of access to smoking cessation in HIV safety nets is needed in order to gain a better understanding of gaps and barriers to HIV care and treatment. This study documented methods and results of analyses to characterize current access to smoking cessation services in Southern California HIV safety nets and identify potential strategies for increasing access. We used an audit or "secret shopper" design. The San Diego State University Institutional Review Board did not deem this study to be human subjects research. In October 2022, we compiled, from HRSA's Ryan White HIV/AIDS Program Medical Provider Locator (https://findhivcare.hrsa.gov/), a list of all providers in Southern California and their contact information, including phone number and website. We updated this list in December 2022 to include providers that had been added to the Locator since our initial compilation. In total, we identified 161 providers distributed across 10 urban and suburban counties (i.e., Imperial, Kern, Los Angeles, Orange, Santa Barbara, San Bernardino, San Diego, San Luis Obispo, Riverside, Ventura).

A research assistant attempted to contact providers by telephone during weekday working hours. If the research assistant was unable to reach a provider, they called back a second and third time to secure information on each provider. The final disposition for each provider was coded as (a.) answered – direct interview and (b.) no answer. When the research assistant successfully contacted a provider, they posed as a potential client seeking to quit smoking, specifically asking about the availability of smoking cessation services ("I want to quit smoking. Do you offer smoking cessation services?"; "What types of smoking

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cessation services are offered?"; "Would I be able to get smoking cessation medications like varenicline during my visit, or would I receive a prescription?"). We coded the availability of smoking cessation services as: "Yes," and "No," and when a provider stated they do not offer smoking cessation services, but they do offer referrals, we coded "No, but referral offered". We recorded additional information about which services were offered.

Since our dataset described a complete universe of providers in the HRSA Ryan White HIV/AIDS Program Medical Provider Locator (https://findhivcare.hrsa.gov/) at the time of the survey, we tested no hypotheses, i.e., we did not calculate *p*-values. All results are reported as simple counts and percentages. Some sampling error is introduced when describing the subsample of providers with which we made contact, but this is relatively small due to "sampling" from a finite population. The magnitude of the standard error (generally about +/- 1%) is briefly noted in the appropriate tables.

We were able to obtain partial or complete answers from 78 (48.4%) of the 161 providers. The remaining 83 (51.6%) did not answer our calls after three attempts. Of the 78 providers successfully contacted, 23 offered smoking cessation services directly, 5 said they provide referrals for smoking cessation services, 5 said they did not know if smoking cessation services were offered, and 45 (57.7%) said they did not offer smoking cessation services or referrals, providing a non-availability confirmation. Of the 23 providers offering smoking cessation services directly, 9 (39.1% of respondents) provided both smoking cessation medications (e.g., varenicline) and smoking cessation counseling sessions, 8 (34.8%) provided smoking cessation medications only, and 1 provided a telehealth smoking cessation program. Of the 17 providing smoking cessation medications, 12 said the potential client would receive a prescription, not direct medication.

In this secret shopper study, findings illustrate that PLWH face significant barriers to accessing smoking cessation services in Southern California HIV safety nets. Less than 30% of the RWHAP-funded medical providers we contacted offered smoking cessation services, and more than 50% did not offer smoking cessation services or referrals. An additional 5% were unsure if their practice offered smoking cessation services. Furthermore, 5% of the providers contacted offered to refer our caller to an outside agency for smoking cessation services.

The availability of effective ART has reduced mortality and increased life expectancy for PLWH (Centers for Disease Control and Prevention, 2022). However, excess mortality associated with cigarette smoking increases significantly with age (Helleberg et al., 2015). Increases in smoking-related mortality can be expected as PLWH age, therefore, it is critical to prioritize smoking cessation in HIV safety nets. Our findings suggest that within this sample of safety net providers, smoking is not addressed in the context of HIV care and treatment, and that few RWHAP clients served in Southern California are offered smoking cessation services. Given the benefit of smoking cessation, access to smoking cessation medications (nicotine replacement therapy, varenicline, bupropion) during a client's visit, and not just a prescription, may support treatment uptake. Provider-level training on smoking cessation through the RWHAP's AIDS Education and Training Centers and listing types of services on providers' websites may also be cost-effective investments. Qualitative research is needed to understand the barriers and facilitators to accessing smoking cessation into HIV safety nets. Specifically, understanding provider-level knowledge, attitudes, and practices, and system-level readiness, responsiveness and challenges to integration is important. Furthermore, collecting information on smoking and cessation behaviors among PLWH in conjunction with assessing the capacity of HIV safety nets to deliver cessation supports will help to track access to, facilitate the assessment of, and inform future use of evidence-based smoking cessation services.

This study has limitations. The first-contact respondent may not have known which smoking cessation services were available at their organization. Yet, as we were attempting to simulate the real-world experience of PLWH who smoke cigarettes, this limitation does not impact the accuracy of our characterization of smoking cessation services availability. Additionally, we note that we did not obtain responses from 51.6% of providers in Southern California; however, three call attempts were made to contact each organization during working hours, and the inability to contact a provider likely mirrors the experience of PLWHA who smoke cigarettes—further indicating the need for qualitative research to understand access to smoking cessation services in this HIV safety net sample. Repeated failed attempts to contact a provider with questions about smoking cessation services may result in PLWH who smoke avoiding cessation even when they are motivated to quit, thus, adversely affecting health and well-being. PLWH who smoke cigarettes are twice as likely to die prematurely as non-smoking PLWH even when receiving effective ART (Helleberg et al., 2015).

The current study employed a secret shopper method to characterize the lived experience of PLWH attempting to access smoking cessation services in Southern California HIV safety nets. Our findings suggest that failure to address the barriers that hinder PLWH from accessing smoking cessation services may result in more preventable combustible tobacco-related deaths and morbidity. Access to smoking cessation in HIV safety nets should be a high priority for HRSA's RWHAP. We urge HRSA's RWHAP to evaluate current smoking cessation services and to integrate smoking cessation services in *all* HIV safety nets in light of the barriers that we found.

## Declaration of Competing Interest

None declared.

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