Treatment Barrier in Overdose Crisis: A Critical Participatory Action Study of an Inpatient Smoking Ban

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ABSTRACT

Objective: Amidst a national overdose epidemic some have expressed concerns that smoking bans in substance use treatment facilities could be a barrier to treatment. After the enactment of a smoking ban on treatment facilities in Philadelphia, university researchers partnered with a local syringe exchange to examine the impact of the ban on people with substance use disorders who were cigarette smokers. **Method:** Utilizing a Critical Participatory Action Research approach, researchers used a convenience sample to access this hard-to-reach population through the syringe exchange and the organization's Facebook page. A sample of 112 individuals, including eighty men and thirty-two women completed an online survey asking about their utilization of inpatient treatment and the role of the smoking ban on entering treatment as well as leaving treatment early. **Results:** 44% of respondents said that smoking had been a factor in past decisions about entering treatment and 50% said it would be a factor in future decisions. Of those who left inpatient treatment early, 85% said that smoking was a factor. University and community researchers used this data to help overturn the smoking ban at inpatient substance use treatment facilities. **Conclusion:** Smoking bans in inpatient facilities may serve as a deterrent to entering treatment and may contribute to individuals leaving treatment early. Results from this study suggest that people with substance use disorders need to be included in policy development regarding smoking restrictions.

KEYWORDS: Community health partnerships, Community-Based Participatory Research, Health Services Accessibility, Urban Population, Poverty, Substance-Related Disorders

Introduction

Over the last twenty years, almost one million people have died from drug overdoses in the United States.[1] Cities, states, and the federal government have been working to expand access to treatment and implement policies that reduce the harms associated with substance use disorders.[2,3] Despite these efforts to expand access, barriers such as stigma, care coordination, and structural barriers such as affordability, convenience, and wait times persist. In addition to these barriers, people may not seek treatment because they do not believe their use is severe enough to warrant treatment. In fact, of those who qualify for, but do not receive substance use treatment, 97% believe that they do not need treatment.[4]

Not only are there challenges getting people to enter treatment, but there are also barriers for staying in treatment. Individuals may leave because of untreated withdrawal and mismanaged acute pain, stigma and discrimination from providers, and the restrictions placed on individuals.[5] Smoking bans are one such restriction that may play a role in creating barriers to entering and staying in treatment.[6] While the only study on this topic, done on a single facility, found that initiation of a tobacco-free policy did not impact admission,[7] there is a need for further research. Ling and colleagues' scoping review of reasons people left inpatient recovery programs early found that the most cited reasons were family concerns and treatment dissatisfaction.[8] Opioid use and tobacco use were the only two individual factors that predicted leaving treatment early. The authors suspected that tobacco use was correlated with leaving early due to restrictive tobacco use policies but suggested that more research on the topic was necessary.

Smoking Bans in Treatment Facilities

Restrictions on cigarette smoking vary widely by facility but have been growing over time with the persistently high rates of smoking among those with other substance use

disorders.[9-11] Smoking bans are typically part of smoking cessation efforts within facilities that did not historically see nicotine dependence as part of substance use disorder treatment.[12,13] Smoking bans vary from smoking being permitted in restricted areas to complete bans on smoking near the facility.[14] In outpatient treatment, the impact of these smoking ban policies is less far-reaching given that people have the option to walk several hundred yards away to smoke.[15]However, when smoking is banned in an inpatient treatment facility, a participant might not have the option to smoke for two weeks or more. While this period of extended abstinence might be beneficial, not all individuals interested in treatment for alcohol and other drugs are interested in also stopping their cigarette use.[16]

According to the 2020 National Survey of Substance Abuse Treatment Services, which includes outpatient, residential and hospital-based services, 57% of U.S. treatment facilities restricted smoking to designated outdoor areas and 36% had total bans on smoking.[17] While these policies have clear effects on reducing exposure to secondhand smoke, the researchers are still exploring the impact on smokers.[7,18.19] Some research indicates that these bans may reduce the prevalence of smoking and increase the intent to not return to smoking.[7,19] However, the one study that compared facilities that implemented and did not implement the ban found there was no difference of overall prevalence of smoking between the two types of facilities.[18]

When considering the impact of smoking bans, it is important to highlight that the choice or availability of inpatient treatment varies by an individual's income and insurance status. Individuals depending on government insurance, including those who are on Medicaid or are veterans, have fewer options for choosing a facility without a smoking ban. According to the Substance Abuse and Mental Health Service Administration rates of total smoking bans vary drastically by funding source with only 22% of for-profits having total bans and the Department

of Veteran's Affairs having the greatest number of total bans at 83%.[20] Other government funded programs, except for those by Tribal governments, have higher rates of total smoking bans than privately funded programs. Those individuals reliant on government funding who are ready to seek inpatient treatment for opioid or alcohol related substance use disorders but may not be ready to quit smoking are faced with a difficult choice: quit smoking or give up access to inpatient treatment.

Current Study

In 2019, Philadelphia, Pennsylvania instituted a ban on smoking in 80 inpatient drug and alcohol facilities including detox centers, inpatient rehabilitation units and hospitals, long term rehabs, and halfway houses.[14,21] The ban pertained to individuals and facilities receiving funding through Community Behavioral Health (CBH), the city's behavioral health Medicaid provider. CBH covers low-income individuals, with over half of the insurance members self-identifying as Black.[22] Individuals who could afford private insurance could choose other facilities outside of Philadelphia.

When the smoking ban was announced, opponents expressed concerns that the smoking ban would deter people from seeking treatment. Additionally, there was concern that not having access to cigarettes while being inpatient could increase rates of individuals leaving treatment early. Despite these concerns, the city continued to back the policy and reported that both admissions and rates of people leaving against medical advice had not been impacted by the smoking ban. They were unwilling to release the data supporting the claims.[23] With the Covid-19 pandemic, which began about a year after the institution of this policy, overdose numbers only increased.[24] Concern about the unintended consequences of the smoking ban, prompted

advocates to partner with a local university to conduct an exploratory study examining the following research questions:

1) To what extent is the smoking ban impacting people's decisions to go into inpatient treatment for substance use?
2) To what extent is the smoking ban impacting people's decisions to leave inpatient treatment programs early?
3) For people who have a substance use disorder and smoke cigarettes, what are their general thoughts on the smoking ban?

Methods

Study Context

The study occurred in Philadelphia, Pennsylvania, a city of slightly more than 1.5 million people (with about a third of the population identifying as white).[36,37] Philadelphia is the largest poorest city in the U.S. with almost one quarter of the population living at or below the poverty line. Rates of smoking in Philadelphia are higher than the national average and tend to vary throughout the city based on local poverty rates. The rates ranged from 9.4 to 38.8% of residents smoking.[38] While there is no recent data concerning rates of smoking among people with substance use disorders in Philadelphia, national data indicates approximately 45% of people with substance use disorders also smoke cigarettes.[39] Given that Philadelphia's smoking rates are higher than the national average, it is likely that rates of smoking among people with substance use disorders in Philadelphia are at least 45%.

The smoking ban occurred amidst Pennsylvania having recently declared a statewide disaster emergency due to the opioid epidemic and just months after the mayor of Philadelphia

declared an opioid emergency response executive order.[40,41] In the year prior to the ban, 1,116 people died of overdoses, nearly three times the number who died in Philadelphia in 2010. During 2021, the year the survey took place, white identified individuals made up 42% of fatal overdoses, Black individuals made up 43% of fatal overdoses and the other 15% of overdoses occurred among people of other races.[24]

Research collaboration

This research emerged from a partnership between a local university researcher and a volunteer-run non-profit, Angels in Motion (AIM), who provide basic supplies such as toiletries as well as clean needles and other supplies for people currently using drugs (https://aimangelsinmotion.org). AIM also coordinates a Facebook page with over 12,000 members where people provide peer support and mutual aid. AIM board members have lived experiences with substance use treatment whether they have a close family member struggling with SUDs and/or are someone who identifies as someone living with a SUD disorder. When the smoking ban went into place, AIM attempted to gather data on the impact of the ban, but volunteers had little research experience and limited access to data collection tools.

One of the AIM board members, the third author, was a former student of the lead author. This board member identifies as a person in recovery with strong ties to people in recovery as well as those currently using a range of substances. The two of them had previously presented together at a social work conference about using social media in the classroom and its connection to activism online. They had known each other for about five years by being connected through social media. This is how the lead author learned about the smoking ban and the resultant concerns expressed by AIM and people using drugs in the city. Upon learning about AIM's

challenges in researching the issue, the lead author reached out to her former student to see if AIM might be interested in partnering on a research study to examine the smoking ban.

At the end of 2019, the lead author had several meetings with the board to learn about the work they had been doing and for them to learn about her background in harm reduction, motivational interviewing, advocacy work and a practice background in community behavioral health. The AIM board took several weeks to decide if they wanted to work with the lead researcher. The collaboration lasted about three years. AIM board members served as co-researchers involved in designing the study, creating the survey, providing guidance on dissemination of the survey, and designing slides that could be used to meet with city representatives to explain the study. One AIM board member, the third author, was involved in the article conceptualization and in providing feedback on drafts of the article.

Critical Participatory Action Research

This research was approached from a Critical Participatory Action Research (CPAR) framework. CPAR is a research epistemology particularly apt for studying institutions that impose their power on individuals with marginalized identities, such as those living with SUDs.[25] CPAR involves those with lived experience working as co-researchers, serving as key decision-makers in the process.[26] Co-researchers have insider connections to others in their community that may not otherwise be willing to participate in research and have insider knowledge that can increase the construct validity of research measures.[27,28]

CPAR's unique focus on impact validity,[25] "the extent to which research has the potential to play an effective role in some form of social and political change or is useful as a tool for advocacy or activism"[29(p516)] is crucial for equity and social justice research. Researchers using CPAR are not merely accountable to institutional review boards and peer-reviewers, they

are accountable to a wide range of audiences such as those experiencing social problems and the general public.[30,31] While some may be concerned that a commitment to using research as a tool for advocacy interferes with the validity of the research process, Warren and colleagues argue that the stakes for engaging in credible research are perhaps even higher in these situations.[31] Rigorous approaches can assure that advocacy is truly responding to concerns that emerge from the research.

CPAR has been increasingly used for research to explore the lived experiences of people with substance use disorders (SUDs) and to reflect on their community and recovery support.[32.33] When working with an especially under-resourced and stigmatized population such as individuals living with SUDs, some researchers may consider this approach to research as the only ethical process for intervention creation since it encourages empowerment and individual effectiveness. CPAR also helps to enable transformative experiences across participants when used with individuals with SUDs through being part of research aimed at social change.[34]

Study Design

Together the university-researcher and members of the AIM board developed a fourteen item-survey to learn about individuals' interest in receiving inpatient treatment, as well as their experiences with the smoking cessation program if they did enter treatment. There were thirteen closed-ended questions and one open-ended question, to ascertain any other feedback study participants had about the smoking ban. We used an online survey platform, Qualtrics, to create the survey. Based on guidance from AIM, we had initially designed the study to be a brief interview format to increase responsiveness and minimize literacy challenges. However, university imposed COVID-19 restrictions prohibited us from using this format. Therefore, we

had to change to an online survey format. An IRB Ethics Committee from the first and second author's academic institution approved this study.

Using a non-probability sampling technique, convenience sampling was utilized to create a sample of participants nearby. We also used respondent driven sampling (a technique from the social network which is a variation to the snowball sampling) to make contact with harder to reach individuals by social media.[35] We recruited from the AIM Facebook page as well as people coming to the mobile needle exchange, a minibus that provided clean needles, disposed of used syringes, and provided resources regarding substance use treatment as well as snacks and toiletries. To protect the privacy of study participants and in accordance with IRB guidelines, informed consent was anonymous. Prior to participants completing the survey, they were screened for being English speaking, eighteen years of age and older, currently experiencing a substance use disorder, currently smoking cigarettes, and currently being a resident of the city where the smoking ban was occurring. After they consented, they were able to continue with the survey from their home computer, cell phone, or from a tablet provided by the mobile syringe exchange. Qualtrics tabulated frequencies for demographic survey information.

Participants

Our process for obtaining a final sample is depicted in figure 1. A total of 145 people completed the screening survey, with 124 participants qualifying for the study. Those who did not qualify did not meet the screening criteria such as living in Philadelphia and currently smoking cigarettes. There were 12 incomplete surveys, resulting in a final sample size of 112 respondents (n=112). We asked participants for their age, race, Latine (gender neutral term for Latino) ethnicity, gender, and housing status.

Smoking Ban Survey

The survey included open and close-ended questions. We asked about how many times they had been to inpatient treatment since the smoking ban was enacted and whether they left treatment early. For those who left treatment early, we asked about the role of smoking in their decision to leave treatment. Finally, we asked an open-ended question about their thoughts on the smoking ban.

Analysis

We analyzed the quantitative data using descriptive statistics, specifically using Qualtrics to run the frequencies for each response. We analyzed the open-ended questions by categorizing responses as being supportive of the smoking ban, being against the smoking ban or being a mixed response. The first author and second author independently coded the responses and compared their codes. When there were discrepancies, the researchers provided their logic for coding and together they arrived at an agreed upon code. The third researcher was working multiple jobs in addition to her involvement with the AIM board and thus was not available to participate in the coding. Other AIM members were struggling with Covid and the loss of several volunteers on the syringe exchange during the period of this research. They also declined to participate in the analysis.

Results

Demographics

The final sample (Table 1) was predominately white men. Almost three quarters of the sample were between 30-49 years of age. It is important to note that more than half of the sample 52% identified as currently unhoused. (Table 1 should be placed here)

Smoking ban study survey results

Substance Use Treatment: In response to Question 1, Table 1 also explored entrance into substance use treatment. Most individuals (84%) expressed interest in inpatient treatment. Of the eighteen individuals who had no interest in treatment, 44% expressed that the ban on smoking factored into their decision. Slightly less than half of participants (47.5%) had no inpatient substance use treatment since 2019, while a quarter of participants had one treatment episode and 23% of participants had two or more treatment episodes. Access to smoking was a major factor in seeking future substance use treatment for almost half of the respondents (45%). (Table 2 should be placed here).

Leaving Substance Use Treatment: In response to Question 2, Table 2 focuses on the experiences of participants leaving substance use treatment. The participants were almost evenly split, 55% of respondents left treatment early while 45% of respondents did not leave treatment early. When participants were asked why they left treatment early, 7% of participants had an administrative discharge (i.e., participants were asked to leave) and 93% participants left treatment by choice (Against Medical Advice AMA). Most participants (85%) shared that not having access to smoking was a part of their reason for leaving.

The Smoking Ban: In response to Question 3 regarding participants overall thoughts on the smoking ban, we found 3 categories of responses: "mixed support," "support," and "opposition." We have selected quotes that are representative of the overall responses in each category. Seven respondents had mixed support for the smoking ban and shared responses such as this participant who said, "not for it but I understand." Twelve participants were in favor of the smoking ban and shared different responses such as, "I am okay with it" or "smoking is bad for your health." These responses contrasted with the largest number of participants, forty-eight individuals, who were against the smoking ban. One individual shared if they were unable to

smoke "I am afraid I am going to leave AMA." Another person talked about how hard it was to stop using multiple substances at the same time "it's hard enough that you have to stop fentanyl, then they want you to stop using cigarettes." Others felt like it impacted their treatment outcome such as the respondent who shared, "the stress of quitting something else is holding me back."

Impact Validity

When we finished the analysis, we met to discuss dissemination of the research. Because AIM had already met with the city's behavioral health insurance provider several times regarding the smoking ban, they initially contemplated first going to the media. They decided to make one more effort to meet with leaders from the insurance company and the city's behavioral health department. The lead author and third author on this paper met with the head of the city's behavioral health department as well as the head of the city's behavioral health insurance provider to discuss the results of their research. They presented the study, including the results and urged the administrators to consider pausing the smoking bans to gather more data on the impacts of the ban.

When the city departments did not take any action after several weeks, the lead and third author worked with City Council and the media to release information to the public. Shortly after speaking with the media, two years after the smoking ban went into effect, the city's smoking ban was officially revoked, and the city's internal data was released showing that the numbers of individuals leaving treatment prematurely had increased as a result.[14,42] Treatment facilities were permitted to have their own bans on smoking, but it was no longer mandated by the insurance company.

Discussion

There is little dispute that high rates of cigarette smoking among people with substance use disorders is a concerning public health issue and that providers are still trying to figure how to address nicotine dependence within the fields of behavioral health.[43] The results from our research questions suggest that some individuals with substance use disorders understood and even welcomed the idea of a smoking ban coupled with access to a smoking cessation program during inpatient treatment. However, these findings also indicate that the prospect of entering a facility where smoking is prohibited is enough to deter others from seeking inpatient treatment.

A small group of our participants were undaunted by the smoking ban, which aligns with previous research that suggests that quitting smoking along with other drugs can be a viable strategy for some people.[7,19] Our findings are also in line with literature that suggests that many individuals find the prospect of stopping nicotine use at the same time as alcohol and other drugs to be daunting.[44,45] In response to concerns about the challenges of stopping cigarettes and other drugs at the same time, research has focused on the importance of education efforts for both clinicians and clients around the benefits and means of quitting smoking.[44, 47,48] However, if we do not meet clients where they are currently at in their nicotine use, findings from our study highlight the real possibilities of people refraining from seeking inpatient treatment due to smoking bans.

Additionally our results suggest that cigarette smokers who are not initially deterred by the ban, may leave treatment early, in part due to their restricted access to cigarettes. This research is also supported by other studies that show that those who smoke cigarettes are more likely to leave treatment early.[8] Our work and previous research suggests that the relationship between quitting smoking along with other drugs is a complex relationship that may not be served by a blanket ban on smoking. Future programs considering smoking bans need to fully

listen to the voices of their participants. Engaging individuals across the spectrum of recovery in their treatment process and with the policies that directly influence them can encourage treatment-seeking and retention.

Though this exploratory study was limited in its scope, it highlights the ways that meaningful engagement of potential service users can pre-empt unintended consequences. The biggest limitation of the study was the small predominantly white sample. It is conceivable that the results may have been different had the study been able to recruit more participants identifying as Black and Latine. Black individuals may have been under-represented because most of our sample came from a syringe exchange, and Black individuals are less likely than white individuals to use this type of service.[48.49] In addition, structural racism is prevalent among many organizations and could have been perpetuated in the predominately white run AIM organization.[50] There were some plans to work with outpatient treatment facilities to recruit more participants, but in-person limitations due to the pandemic and concern on the part of providers of upsetting their funders prevented us from using these venues for recruitment. The survey was initially translated into Spanish, but the study lost their Spanish speaking research assistant due to Covid-related delays in the research, so the study was limited to English-speakers, potentially excluding some Latine individuals. Throughout the course of the study, we were constantly having to balance university and safety-related restrictions due to Covid, inconsistent access to internet among the study sample, and the need to engage in research as quickly as possible because of the potentially profound impacts of the smoking ban.

Overall, the limitations of this exploratory study may raise questions about whether these results should have informed policy. Risk and benefit analysis played a key role. There was potential that those who were forced to quit smoking because of the ban would start smoking

again after the ban was lifted. Alternatively, not changing the policy risked the ban continuing to serve as a possible barrier to treatment during a state-declared overdose crisis. The findings from this study can only be generalized to this city. Policy-making in other cities/states should consider their local context when making decisions about smoking bans."

Conclusion

Due to numerous urgent and sometimes controversial policy issues (e.g., access to safe consumption sites) nicotine dependence during inpatient treatment is often overlooked. This research illustrates how some individuals in substance use treatment facilities were both deterred from entering treatment and from staying in treatment due in part to the smoking ban. While findings from this study suggest that more research is needed before proceeding with blanket bans on smoking, it is vital to have meaningful input from both treatment providers and people who may be seeking treatment in the policy development process. The pandemic has exemplified that treatment needs to be more accessible and less restrictive to save lives. This study further showed that one policy for all does not support individuals across the recovery journey spectrum from contemplating treatment, to seeking treatment, to entering treatment, to staying in the treatment spectrum. Because smoking cessation continues to be a major challenge for those with other substance use disorders, a wide array of approaches, some of which may not have been created yet, are needed to aid in the change.

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Figure 1

Flowchart of Sample Size

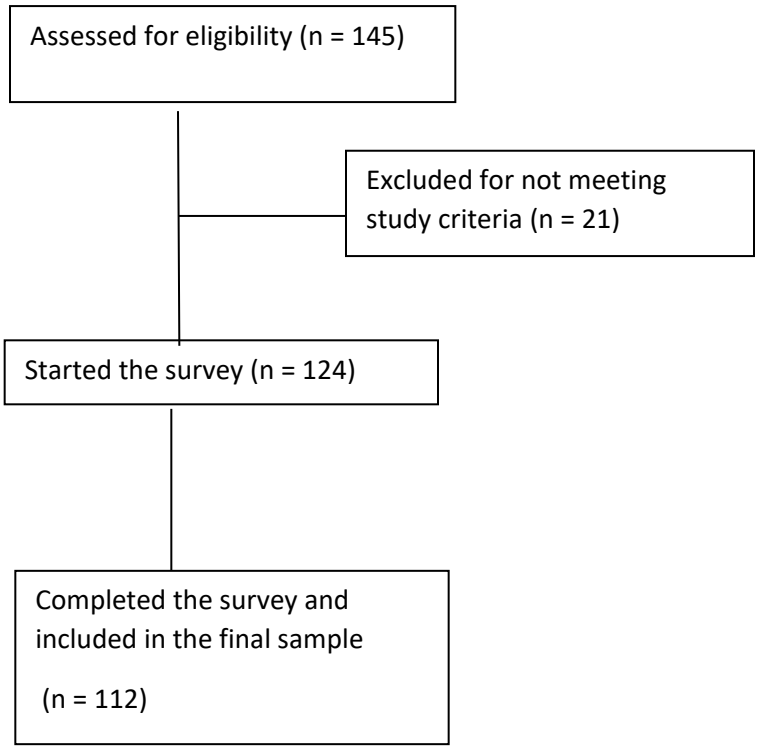

Table 1

Participant's Demographics and Substance Use Treatment

Demographics	N (%)
Gender	
Male	80 (71)
Female	32 (29)
Race	
White	76 (68)
Black	22 (20)
All other races	14 (12)
Housing status	
Unhoused	58 (52)
Housed	54 (48)
Inpatient Substance Use Treatment Interest Since 2019	
Yes	94 (84)
No	18(16)
Smoking as Decision Making Factor For Those Who Did Not Seek Treatment (N=18)	8 (44)
Yes	10 (55.5)
No	
Inpatient Substance Use Treatment History Since 2019	
None	45 (47.5)
One	24 (25)
Two	8 (8.5)
Three+	17 (18)
Smoking as Factor in Future Treatment Seeking	
Yes	50
Maybe	8
No	54

Table 2

Leaving Substance Use Treatment

Variable	N (%)
Left Treatment Early	
Yes	27 (55)
No	22 (45)
Reason for Leaving	
Administrative Discharge (i.e., asked to leave)	2 (7)
Left by Choice	25 (93)
Smoking Part of Reason for Leaving	
Yes	23 (85)
No	4 (15)

Table 3

Addressing additional information related to participant's experiences with the smoking ban

Variable	N (%)	Comments
In Support of Smoking Ban	12 (18)	"It's needed" "Smoking is bad for your health" "I'm ok with it"
Mixed Support for Smoking Ban	7 (10.5)	"I get it, but you should still be able to smoke outside" "Not for it, but I understand"
Against Smoking Ban	48 (71.5)	"If I can't smoke, I'm afraid I will leave against medical advice (AMA)" "Huge step backwards for recovery; it sucks" "Bad enough you have to stop fentanyl, then they want you to stop cigarettes" "The stress of quitting something else is holding me back" "It's unfair, one thing at a time, options for everyone'

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