EVIDENCE BRIEF: PEOPLE LIVING WITH HIV AND SMOKING

Smoking poses significant health risks to people living with HIV. Tailored and integrated interventions that empower people living with HIV to quit smoking are needed in NSW.

Background

In Australia, while the rates of smoking tobacco have been falling across the population for many years, people living with HIV (PLHIV) are still more likely to smoke than those in the general population.

In the *HIV Futures 10* sample, a cross-sectional study of quality of life among PLHIV, 20.8% report currently smoking, and 15.5% of the sample report smoking daily.[1] This is compared to 10.7% of the Australian population reporting daily tobacco smoking.[2] In some studies, it is suggested that PLHIV smoke at rates 2-3 times the general population.[3]

While smoking rates among people living with HIV have fallen substantially, there remains a disproportionate number of people in this community who smoke, and experience barriers to smoking cessation.

For many in NSW, HIV is a manageable chronic condition where those living with HIV can expect good long-term health outcomes. In this context, PLHIV who smoke lose more years of life to smoking than to HIV.[4,5,6]

Alcohol, other drugs and tobacco use is frequently framed by the concept of risk and harm. While it is important to consider the harms caused by practices such as tobacco smoking, the focus on risk and harm can be stigmatising, which can have negative consequences, particularly among populations who already experience stigma, discrimination, and minority stress.[7]

In addition, people living with HIV are often disproportionately impacted by trauma, sometimes as a result of experiences of stigma, discrimination and minority stress. The combination of HIV infection and trauma have therefore been considered a syndemic illness, where it is necessary that trauma-informed approaches are integrated into HIV care.[8]

The *NSW HIV Strategy 2021-2025* contains firm targets to improve quality of life and reduce experiences of stigma for PLHIV.[9] With this in mind, it is critical to consider how smoking cessation interventions can be trauma-informed and empower, rather than stigmatise, PLHIV.

This paper explores some of the impacts of smoking on people living with HIV, the barriers to quitting, and some examples of effective cessation strategies. This paper will also briefly examine if there is a role for tobacco harm reduction among PLHIV.

People living with HIV who smoke

From the *HIV Futures 10* data, we know that level of education, finance, employment status, general health, alcohol or other drug use, and social connection all play a factor among PLHIV who smoke. Their health outcomes are affected significantly when comparing to PLHIV who don't smoke. This data is similarly reflected in international studies.[10,11]

In a recent analysis of HIV Futures 7 data, the strongest predictor of having ever smoked regularly was regular cannabis use.[12]

Based on the existing data, it's evident that PLHIV who smoke often reflect a further marginalised and traumatised cohort of PLHIV, which could be a factor in smoking habits.[13]

This is a situation not dissimilar from the general population. Among the Australian population, there is a higher prevalence of smoking among Aboriginal and Torres Strait Islander people, people from culturally and linguistically diverse backgrounds, people from lower socioeconomic areas, LGBTQ people and people in regional and remote areas.[14,15]

Both within the community of people who live with HIV, and the broader Australian community, there is a need to address the social determinants of smoking in trauma-informed ways. A trauma-informed approach seeks to acknowledge the role that social determinants and forms of adversity play in a person's life, and their health outcomes, and that their decisions to start or stop smoking are impacted by factors beyond individual control.

PLHIV who smoke report doing so for many reasons that are complex and overlapping, and could be intertwined with life satisfaction, mental wellbeing, coping with stigma, social identity, and managing a complex health condition.[16]

Other reported factors include stress relief, improving concentration, socialisation and enjoyment, weight control, and habit.[17] Some report smoking to cope with depression, anxiety, and anger.[18] Some may smoke to address minority stress, including stigma associated with living with HIV or being part of the LGBTQ communities.[19]

While the characteristics of the HIV-positive population in Australia are changing, a large majority continue to identify as gay and bisexual men.[20]

LGBTQ people smoke at rates disproportionate to the general population, for a number of reported reasons similar to those already outlined.[21] Gay and bisexual men who live with HIV are also more likely to use illicit substances than others in LGBTQ communities,[22] who also use these substances at rates higher than the general population, and this is linked to elevated smoking rates.[23]

LGBTQ communities have a history of socialising in bars and other venues.[24] Even when these spaces become smoke-free, they produce a social enclave for people who smoke – who may go outside to socialise, and smoke.[25]

Any effective cessation intervention needs to consider the unique and syndemic social, structural, and intrinsic factors that may lead a person living with HIV to continue to smoke.

The impact of smoking on PLHIV

Addressing smoking is critical to optimising health outcomes for people living with HIV.

The health benefits of tobacco cessation are well-documented, but there are specific and significant health benefits that apply to cessation among PLHIV, including a decreased risk of AIDS-related diseases, non-AIDS-related cancers, and cardiovascular disease.[26,27,28] PLHIV, including those on effective treatment regimes, are at elevated risk of cardiovascular disease than the general population, so it is especially important to find ways to reduce this risk.[29]

In the United States, it has been estimated that life expectancy among HIV positive smokers is

reduced by at least 16 years compared with HIV-positive non-smokers, and that 94% of lung cancer diagnoses among PLHIV could be prevented by eliminating cigarette smoking.[30] Among treatment-adherent PLHIV, smokers are 6 to 13 times more likely to die of lung cancer than of AIDS-related causes.[31]

Smoking is also linked to HIV-related oral lesions, as well as generally poorer oral-health outcomes, impacting quality of life.[32]

PLHIV who have uteruses experience adverse foetal outcomes and early natural menopause.[33]

As tobacco use and HIV together may accelerate the development of lung cancer,[34,35] and the prevalence of smoking among PLHIV is disproportionate to the general population, it is essential that PLHIV are provided with effective cessation interventions.

Quitting smoking is associated with increased HIV treatment engagement, and better health outcomes.[36]

As well as health benefits of smoking cessation, quitting also has significant economic benefit. Financial security is strongly linked to good quality of life. 17.2% of participants in *HIV Futures 10* were experiencing significant financial stress, compared to 11.5% of the general population.[37] The economic benefit of smoking cessation could therefore have a positive impact on quality of life for PLHIV.

Barriers to quitting smoking

Barriers to quit operate at a number of levels, including individual and lifestyle factors, social and community networks, living conditions, and cultural and socioeconomic factors.[38]

The structural demographic characteristics and syndemic factors linked to PLHIV who smoke outlined earlier, such as drug use, mental health concerns, experiences of trauma and lower socio-economic status are all linked with additional barriers to quitting.[39,40,,41,42]

As has earlier been outlined, illicit drug use is associated with smoking status, however, it is also associated with a reduced interest in quitting smoking, and a reduced likelihood of making a quit smoking attempt.[43]

Quitting for the 'wrong reasons' such as societal pressure has been viewed as an explanation for unsuccessful quit attempts.[44] There is also some evidence to suggest that the perceived benefits of smoking (such as those outlined earlier, including socialisation and stress reduction) may be linked to the lower quit rates among PLHIV.[45]

PLHIV are more likely to experience financial stress, housing insecurity and mental health concerns.[46] These kinds of concerns have been viewed as more immediate and therefore a competing priority that prevents the ability to focus on smoking cessation.[47]

PLHIV are significantly more likely to engage in a quit attempt if their HIV treatment provider provides smoking intervention information.[48] However, treatment providers report systemic barriers to providing such interventions, including the cost of pharmacotherapy, lack of time, and lack of confidence in their ability to provide such interventions.[49,50]

Effective smoking cessation strategies

While some evidence suggests that PLHIV experience greater nicotine dependency and are less likely to quit,[51] many want to.[52]

There is evidence that indicates only limited success of the standard "abstinence-focused" cessation strategies among PLHIV.[53]

While there is a need for further research into tailored interventions for PLHIV, within the broader population and among populations with high smoking rates, successful cessation strategies typically centre around integrated care, behavioural interventions, and pharmacological interventions.[54]

The Australian Government announced in its 2021-22 budget a new National Lung Cancer Screening Program, set to be operational by 2025.

The Program will facilitate a multidisciplinary approach to cessation for eligible people at high risk, including potential early detection of lung cancers. Once this program is operational, it will be critical for HIV community organisations to build knowledge of the Program among PLHIV, and for HIV healthcare providers to be able to refer eligible people to the program.

Tobacco screening and cessation programs tailored for PLHIV and integrated into routine HIV care appear to be the most effective, such as the Infectious Diseases Society of America's primary care guidelines for PLHIV. It advises healthcare providers that "all patients who smoke should be strongly encouraged to stop smoking and offered smoking cessation assistance" and that "screening for smoking should be done at every healthcare encounter".[55]

The Royal Australian College of General Practitioners' (RACGP) guidelines for supporting smoking cessation similarly encourage integrated approaches to smoking cessation.[56]

Frequent encouragement by HIV care providers regarding smoking cessation has been associated with increased likelihood of interest in cessation.[57] Some tailored smoking cessation programs have showed positive results.[58] Better understanding the characteristics of PLHIV who smoke and quit is key to tailor interventions.[59]

In addition, an understanding of the potential metabolic implications of smoking cessation and the possible interaction with medications is necessary for healthcare providers to consider. Studies indicate that some HIV medications may be better suited to those seeking to quit as they have different impacts on the metabolic ratio of nicotine.[60]

While there have been limited clinical trials for smoking cessation among PLHIV, the studies that have demonstrated some success involved tailored training for clinical staff, increased patient screening, and more frequent follow up, via face-to-face and innovative methods, including technology-based interventions.[61,62,63,64,65]

As well as trained in trauma-informed care, HIV treatment providers should be trained to identify smokers and nicotine dependence, behavioural-change frameworks that promote cessation, and available pharmacotherapies, in order to provide integrated care.[66,67,68,69] This includes providing prescriptions for pharmacotherapies, such as Champix or nicotine-replacement therapies, as well as referrals to behavioural programs and information about support programs including Quitline, Quitcoach and Quitbuddy.

Some research indicates that integrated care for PLHIV who smoke and experience mental health concerns could occur alongside mental health interventions, instead of (or as well as) alongside HIV care.[70] It has been established that smoking cessation can improve mental health and wellbeing, and is typically not detrimental to psychiatric symptoms.[71]

It is essential that the overlapping and syndemic factors that affect a person living with HIV are considered together, as they are not distinct from each other.

There is some concern among researchers that the stigmatisation of smoking as a public health tool has unintended negative consequences on smokers who may experience other forms of stigmatisation and marginalisation, including PLHIV.[72]

It may be necessary, therefore, to consider smoking cessation strategies and tobacco control policies that address the social determinants of smoking, and encourage tailored interventions that understand the unique and complex factors that contribute to

smoking status at the individual and community level.[73,74]

Research has demonstrated that cessation interventions that are tailored to LGBTQ-communities are more successful among this cohort. Tailoring included meeting in LGBTQ spaces, LGBTQ facilitators, and discussion of LGBTQ-specific triggers.[75,76]

Successful smoking cessation is complex, and often due to a number of factors. Ultimately though, a study of ex-smokers found that there are a multiplicity of strategies that lead to success, and smoking cessation should be viewed as a journey, where self-directed change is one key component, alongside policies that change the conditions of social inequities.[77,78]

Accordingly, efforts to improve quality of life, reduce experiences of stigma and address trauma among PLHIV form a critical component of smoking cessation that must occur alongside self-driven behavioural and pharmacological interventions.

The role of health promotion

ACON has long advocated for the role of peer support and education in the care of PLHIV. It is highly possible that integrating tobacco cessation training for peer educator and support roles, and client and clinical services roles at ACON and Positive Life NSW could have an impact on reducing smoking rates within this community.

ACON and Positive Life NSW are also in a position to provide tailored community health promotion and campaigns to further promote smoking cessation, as well as links to mainstream peer-based programs.

Research into effective smoking cessation strategies for PLHIV indicate that presenting evidence of smoking's specific impact on this population, rather than re-packaging existing messaging with new imagery is most effective.

A targeted health promotion campaign, aimed at providing PLHIV with specific, tailored information about the impact of smoking on their health that seeks to inform, empower and not stigmatise people living with HIV may be an effective way to encourage cessation attempts. We advocate for community-led health promotion approaches as they meet our communities where they are, without stigma.

Tobacco harm reduction

Harm reduction frameworks have long played a part in health messaging to PLHIV and LGBTQ communities, particularly in relation to sexual health and alcohol and other drug use.[7980]

In a systematic review of smoking cessation programs for LGBTQ people, researchers affirmed that any intervention should be culturally relevant and avoid shaming smokers: providing advice, focusing on smoking behaviours or on "ex-smoker" as an identity may be ineffective among these groups as they can provoke shame.[81]

Considering the impact of minority stress, external stigma and discrimination and the possibility of internalised shame regarding LGBTQ experiences and/or HIV status, approaches that seek to empower communities could be more effective.

According to the RACGP, tobacco harm reduction involves attempts to reduce exposure to toxins from smoking by reducing the amount of tobacco used, or using less toxic products as an alternative to cigarettes, such as smokeless tobacco products and nicotine replacement therapies.[82] Tobacco harm reduction strategies have been considered among populations with disproportionately high smoking prevalence and low quit rates, such as people living with mental illnesses.[83]

While smoking cessation will produce the best health outcomes, and there is no risk-free level of exposure of tobacco smoke, tobacco harm reduction may therefore present an opportunity

to encourage reducing tobacco-related harms for those unwilling or unable to quit, without provoking added stigmatisation or shame.[84,85,86,87]

Nicotine replacement therapies (NRT) have long been a part of smoking cessation strategies. Nicotine vaping products (NVP) are illegal to use in Australia without a prescription,[88,89,90] but are more readily available in other jurisdictions where encouraging a switch from tobacco smoking to vaping forms part of the public health strategy, such as New Zealand[91] and the UK.[92,93]

NVPs are controversial, and subject to significant policy debate while their impacts are still under investigation. While there is a lack of long-term clinical evidence, the 2022 Cochrane review found that NVPs increase quit rates when compared to more traditional NRTs (e.g. nicotine patches or chewing gum).[94] Data suggests that NVPs are much less harmful than cigarette smoking, however, further research is needed, especially on the long-term effects.[95]

There is evidence to indicate a sharp increase of use of NVPs among previously non-smokers, especially young people, which is cause for significant public health concern and the subject of contemporary policy debate.[96,97]

However, the efficacy of NVPs as a smoking cessation tool, and the reduced harm when compared to combustible cigarettes, indicate that use of NVPs among PLHIV who smoke may be a suitable harm reduction tool,[98] especially if used in conjunction with other smoking cessation interventions,[99] such as integrated care and behavioural support,[100] and particularly if used as a short-term transition to complete cessation.[101,102] This is especially so for people who have already tried to achieve smoking cessation with other therapies.[103]

Any harm reduction initiative must be tailored toward the specific characteristics of PLHIV who smoke, including efforts to reduce experiences of stigma and trauma, and to understand the social determinants of smoking, as well as encouraging a path to total cessation.

Conclusions

People living with HIV who smoke typically occupy a number of intersecting demographics that smoke at rates disproportionate to the general population, providing a complex and overlapping picture of smoking behaviours.

This paper has compiled the evidence relating to the social and structural factors associated with smoking among people living with HIV. It has also outlined the significant impacts of smoking that are specific to PLHIV, as well as some of the barriers to quitting experienced by people in this community.

The paper also compiles the evidence on effective cessation strategies, and presents the data that suggests harm reduction can be effective in this community.

There is a lack of specific evidence to best understands the cessation needs of PLHIV who smoke. However, the evidence presented in this paper offers the following conclusions:

- People living with HIV who smoke do so for complex and overlapping structural, lifestyle, and social factors that can create syndemic illness, including links between trauma and HIV.
- The health benefits of smoking cessation are well-documented, and there are health benefits that are particularly specific, and significant, to PLHIV.
- There is evidence to suggest that integrating smoking cessation into HIV healthcare increases the likelihood of a quit attempt.
- In order to be effective, smoking cessation strategies need to be cognisant of the social determinants of smoking among PLHIV, and be accordingly tailored.

- Community organisations such as ACON have a role to play in developing empowering, tailored health promotion campaigns that encourage cessation.
- Tobacco harm reduction could be considered an option for PLHIV who are unwilling or unable to completely quit smoking, particularly if used as a short-term transition to complete cessation. given the familiarity of PLHIV with harm reduction messaging.

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