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HARM REDUCTION & SMOKING

It has been argued that the drug and alcohol sector would not expect people dependent on illicit drugs to go cold turkey, yet this is often the most likely scenario for cigarette smokers. Is it time to ponder evidence that non-smoking tobacco alternatives have a role in public health strategies?

It is almost 20 years since the Australian Government banned the importation, manufacture and marketing of all smokeless tobacco (ST). This ban covered tobacco which could be chewed, sucked or inhaled (such as snuff). It was aimed at preventing the marketing of an alternative product that, although significantly safer than smoking tobacco, was considered to increase risks of oral cancers [1].

In recent years, debate has been mounting as to whether such blanket bans serve to hinder the potential for chronic smokers to benefit from the harm reduction qualities that smokeless tobacco products may offer [7]. Interest is growing in the potential benefits of safer non-smoking alternatives, namely low nitrosamine smokeless tobacco (LNTS). Particular attention is being paid to snus (rhymes with goose) which is widely available in Sweden. Snus is a moist powder tobacco product that the consumer places inside the lip, allowing the nicotine to pass through the membrane into the blood stream. Snus is banned in the European Union countries, but legal in Sweden which is not a member.

As snus has become more popular in Sweden, male cigarette smoking has declined, leading Queensland University health researchers Hall and Gartner to argue that there would be major public health gains if a substantial number of current smokers in other countries switched to it [8]. Not only does snus reduce risk of lung cancer and emphysema, its low nitrosamine content means it is also safer than pre-existing smokeless products, almost eliminating the link with oral cancer [9, 10]. So, a question that has arisen in recent years in particular is: whether or not it is time to offer smokers a genuine harm reduction alternative? [11].

Writing in the Lancet, Gray agreed that "snus is a harm-reduction product" when compared with cigarettes. It has also been argued that if the majority of inveterate smokers were to switch to smokeless tobacco use "and the majority of them quit smoking, it seems certain that public health overall would benefit" [9].

It has been argued that nicotine replacement therapies (NRT), namely gum, patches, lozenges and inhalers, already exist as a safer harm

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EDITORIAL COMMENT

This edition of the Bulletin takes a look at one of the issues that the traditional harm reduction sector in Australia encounters on a regular basis, but is still grappling with, the overlap and interplay between illicit drug use and nicotine addiction.

It was brought to my attention at the International Harm Reduction Conference in April where a number of presentations and poster sessions examined Tobacco Harm Reduction, known as THR.

Many professionals in the needle and syringe program (NSP) sector will be all too familiar with the role that tobacco plays as part of the drug mix. Our sector is one of the workforces, it seems, where smoking rates among staff is higher than the average rates among the general population. And as is discussed in this edition, it is commonplace for NSP clients to also be smokers.

Indeed, it is widely accepted that the institutionalised ritual of ducking out of the office for a smoke is one of the sites where many NSP staff – and others in the Alcohol and Other Drugs sector - are able to have a friendly yarn with clients.

It was argued at the International Harm Reduction Conference that new forms of nicotine delivery, such as electronic cigarettes, may now provide means for uncoupling nicotine use from smoked tobacco, thereby removing most of the harms of smoking tobacco. However, THR is less developed than harm reduction for illicit drugs. For example, the ban on smokeless tobacco in the European Union persists.

There is interesting discussion included in leading scientific journals, around the issue of non-smoked tobacco. We've included coverage of this in the Bulletin, as a way to engender consideration of the THR question more broadly.

There is increasing interest within some public health circles in the harm reduction potential of smoke-free nicotine-providing products, of which Swedish-style snus and electronic cigarettes are two examples. They do not expose the user to tobacco smoke, and there is epidemiological evidence to suggest they are significantly less harmful than cigarettes.

Insufficient harm reduction measures toward smoking is indicative of the need to foster a more holistic regulatory framework based on a continuum of risk and including all nicotine-providing products such as pharmaceutical nicotine replacement therapies.

It is also interesting to consider smoking rates among injecting drug users, and questions of whether or not illicit drug treatment programs can and/or should include options for clients to address their nicotine addiction as they concurrently undergo treatment for other substances.

Anex CEO, ***John Ryan***

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SMOKING TO FORGET

cigarettes in correctional facilities

Anex's vision is for a society in which all individuals and communities enjoy good health and well-being, free from drug-related harm. A community-based, not for profit organisation, Anex promotes and supports Needle and Syringe Programs (NSPs) and the evidence-based approach of harm reduction. We strive for a supported and effectively resourced NSP sector that is perceived as part of the solution to drug-related issues..

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Public health strategies have contributed to Australia's lowest ever smoking rates, but prevalence of smoking in correctional facilities remains extraordinarily high. Smoking rates within the prison system have been estimated as high as 90 per cent, more than four times the rate in the general community [48].

A week-long snapshot of prison entrants in Australia during 2009 showed that at the time of entering prison:

- 25% had a chronic condition (such as asthma, cardiovascular disease or diabetes);
- 52% consumed alcohol at risky levels;
- 71% had used illicit drugs during the previous 12 months;
- 37% reported having received a mental health diagnosis at some time;
- 43% had received a head injury resulting in a loss of consciousness;
- 31% had been referred to prison mental health services;
- 81% were current smokers [49].

There are many potential reasons for the high rate of smoking amongst prisoners, but perhaps most important is the fact that men, women and youths who are incarcerated are more likely to be from marginalised backgrounds. People from poorer backgrounds, people who are less educated, who have a history of mental illness, problematic drug and alcohol use or are of Aboriginal or Torres Strait Islander background are all over-represented in both the rates of smoking and incarceration [50].

Why is there such a strong link between disadvantage and smoking?

'There is a lot of evidence about these links. We know that genetic influences are very strong. Some people are born more "sensitive" to nicotine.

This sensitivity seems to be linked to predispositions to depression, anxiety, reduced cognitive abilities [and] attention deficit amongst others. These problems of themselves are risk factors for the social disadvantage and the resultant effects, so it is not surprising to see the high prevalence of smoking in these groups'

- Renee Bittoun, University of Sydney [16]

Furthermore, evidence suggests that these groups are less likely to access preventative health services and smoking cessation programs [51]. In recent years the National Tobacco Strategy has acknowledged that each of these groups have been failed by traditional quit campaigns and therefore warrant special attention. Inveterate smokers within our prison systems, in particular, require more intense interventions targeted to their particular needs, situations and perceptions [51].

It is not just socio-economic determinants which put our prisoner population at greater risk of nicotine dependency. This dependency is reinforced within the prison system itself, as smoking has long been considered the norm within correctional facilities and continues to be an integral part of prison culture. This is further strengthened by the role of tobacco as a de facto currency within prisons, the limited access to nicotine replacement therapy and quit programs and the high incidence of common triggers such as stress, boredom and the use of tobacco as a coping mechanism. Any effort toward best practice for smoking cessation for this population may be further hindered by confusion regarding responsibility for the issue. There are currently no consistent national measures between the health department and custodial authorities to address the high rates of smoking, a situation further compounded by this group's historical poor access to smoking cessation therapy and supports when outside the prison system [50].

A recent study of NSW prisons found that compared with the Australian community, inmates were more likely to fail at attempts to quit and less likely to switch to low nicotine or low tar smokes [51]. In addition, only 13 per cent of surveyed prisoners had used nicotine replacement therapy, only three per cent had attended a prison quit smoking program and only one individual in the study had used pharmaceutical support (Bupropion Zyban®). In the same study, 41 per cent of respondents reported smoking more heavily when they were in prison compared with when they were in the general community. The majority of prisoners reported that they either desired or intended to quit.

In such a stressful environment as prison, readily available and accessible smoking cessation advice, support and treatment is essential to assist those wanting to quit. Certainly in some Australian prisons, quit smoking groups and telephone support from Quitline have been provided, with a mixed degree of uptake. In

	SMOKING RATES (approx)	INCARCERATION RATES (approx)
Mental health	40-80 percent	70 percent
Drug dependency	70 percent	70-80 percent
Aboriginal or Torres Strait Islander	50 percent	30-35 percent

NSW and Victoria, for instance, programs have been established to assist incarcerated smokers to quit or reduce their smoking in smoke free locations [50]. In Victoria, the program is further enhanced with the provision of free nicotine replacement therapy, made possible through a levy fund that has operated in Victoria's public prisons since 1993. Not all prisoners have ready access to nicotine replacement therapy however. And though many prisons now sell nicotine patches through prison canteens, it is unrealistic to expect prisoners with little or no money to cover the cost of pharmacotherapies [50].

In recent years, partial or total smoking bans in prisons have been introduced in Australia and other Western countries. Total smoking bans, however, have had limited impact on smoking by prisoners both during and after their sentence, and seem to be ineffective in assisting prisoners to quit long term [50]. This is perhaps because whilst incarcerated there is little or no motivation on the part of the individual to quit.

Prison smoking bans are not only potentially ineffective, but also unethical if enforced without freely available treatment and support. In most public settings where smoking has been banned, individuals are able to leave the premises to smoke. This is clearly not an option for prisoners who are often locked in their cells for extended periods of time. For example, in NSW the average time spent in cells per day is 15 hours [51].

Many Australian prisons and other corrective service facilities still permit indoor smoking (sometimes with restrictions), but as with smoking regulations more generally, the rules are not consistent across the country. Prisoners and prison staff alike suffer the effects of environmental tobacco smoke. In the NSW study, more than half of non-smoking prisoners and more than a third of smokers reported that tobacco smoke was detrimental to their health whilst incarcerated. And despite a correctional system policy of not placing non-smoking prisoners with a smoker, around 30 per cent of the non-smoking inmates were sharing a cell with a smoker at the time of the survey [51]. In 2007, the NSW Department of Corrective Services stated that "there have been a small number of workers' compensation claims that have attempted to link environmental tobacco smoke exposure to illness" [50].

In another study of prison smoking it was found that "in most correctional facilities in Australia, there is the additional issue of indifference in social concern, and reluctance by correctional authorities to allocate resources and address tobacco use in prisons, an issue that is sometimes perceived as capable of disrupting the peace in correctional environments, through protests and riots by inmates" [52]. It must also be recognised that ill health due to tobacco and spending on smokes can create significant challenges for prisoners post-release as they look for jobs and housing.

The current prevalence of smoking amongst prison populations remains unchanged from that reported for this population in 1996 [50]. In contrast, the prevalence of smoking for the general population has dropped by more than five per cent over the same time period. As the prevalence of smoking within the general community continues to decline, assisting cessation in sub-populations containing a disproportionate number of smokers should become increasingly important. Though time in prison is no doubt challenging, incarceration theoretically presents an opportunity to initiate sound and supportive smoking cessation programs.

SMOKE AND MIRRORS

‘There is a tendency to throw smoking into the too-hard basket by workers in our field. There is much to be read today about smoking, nicotine addiction, drug interactions, genetics of nicotine addiction, harm reduction and treatment. Keeping in mind that tobacco smoking is the most likely cause of death in all our smoking clients irrespective of their presentations, it is our obligation to keep up to date with the literature – it will certainly help advance our ability to help our clients become smoke-free’ – Renee Bittoun, University of Sydney. [16]

The prevalence of tobacco use is particularly high amongst people who use other drugs. This is made evident by data from the Australian drug and alcohol treatment sector, with reports of up to 90 per cent of clients being nicotine dependent [17]. This is more than four times higher than rates for the general population (AIHW, 2008).

Historically, there has been a reluctance amongst drug and alcohol treatment services to simultaneously address clients’ tobacco dependence, out of a concern that the extra challenge may hinder outcomes by, in part, denying clients a well-loved “coping tool” as well as placing additional demands on expertise and staff time [18]. And of course for many staff in the sector, smoking continues to be an effective “engagement tool” that creates an opportunity to develop rapport and conversation with clients [19].

Generally, even with specific treatment the rates of smoking cessation are very low amongst people who are drug dependent [20]. In addition, studies suggest that smoking cigarettes causes substantial morbidity and mortality in people who are drug dependent [21]. It has even been suggested that smoking can be more lethal to drug dependent patients than their primary illicit drug of choice [22].

As with any example of poly-drug use, the interactions between tobacco and other drugs are complex, potentially influenced by genetic and neurobiological determinants, in addition to psychological and social factors.

The main concern, as with any example of poly-drug use, is the synergistic effects of tobacco and other drugs. In fact, many health risks for dual use of drugs are multiplicative rather than only adding an additional layer of risk. The combined consumption of tobacco and alcohol, for instance, is thought to double the associated health risks. The risk of oesophageal cancer is a prime example. The solvent properties of alcohol increase the potential for the carcinogens found in tobacco smoke to penetrate the deeper basal layers of the throat. Furthermore, people with significant alcohol and drug dependence “are more likely to die from tobacco-related causes such as coronary heart disease, cancer, stroke and chronic lung disease, than from causes related to the use of any other drugs” [23]. This may be partly related to the respective reinforcing effect of tobacco and drug use resulting in increased consumption and increased potential health risks.

Although it is generally accepted that tobacco dependence should be addressed in drug and alcohol treatment services, there is little clarity or consistency in policy to support this. Consequently, many services actually discourage clients from attempting to simultaneously address their tobacco and other drug dependence as it is deemed counter productive, potentially interfering with their efforts to withdraw from the perceived primary drug of concern. Furthermore, for many residential services there is the high probability of other clients in residence smoking tobacco throughout their stay, often excessively as a means to cope with the withdrawal process [24].

As a staff member from a residential withdrawal unit told the Bulletin: “We put so much effort into assisting individuals address their problematic heroin use, claiming success when they quit using. And then we think little of our duty of care when they are diagnosed with lung cancer or cardiovascular disease.”

Increasingly, however, studies are demonstrating that treatment for tobacco dependence offered concurrently with other substance dependence treatment does not increase use of other drugs and may even improve outcomes [22]. There is also evidence to suggest that illicit drug use can make smoking cessation more difficult [25].

A recent study from the United States looked at the correlation between craving for tobacco and other drugs. The study identified a strong association between the smoking and craving of tobacco and the use of and craving of illicit drugs, namely cocaine and heroin [26]. It found that tobacco smoking increased significantly with craving for both cocaine and heroin whilst the craving for, and smoking of tobacco reduced considerably during periods of abstinence from cocaine and/or heroin. There was also a tendency for smoking in the morning, which is a sign of nicotine dependency, to be especially reduced during these periods. Such results suggest that tobacco use may increase craving for, and the likelihood of continued use of, cocaine and heroin. The study concluded that treatment for tobacco dependence should therefore be offered concurrently with treatment for other drug dependencies [26].

A similar study in China found that the rate of cigarette smoking in people who are heroin dependent is generally very high and that tobacco consumption increased significantly during the period of active heroin use [27]. Conversely, tobacco use was found to decrease when participants commenced methadone maintenance therapy. The principle reason given for the increased consumption during the period of active heroin use was to maintain the “heroin pleasure”. Force of habit was given as the primary motivation for smoking before initial heroin use and after commencement of methadone maintenance. The study proposed that the prolonged rewarding, or synergistic effect of heroin following cigarette smoking may account for the increase of nicotine consumption found in heroin-dependent patients.

The synergistic effect of tobacco on other drug use is largely due to pharmacological interaction. Nicotine, likely many other drugs, works on the brain’s reward system, increasing the availability of feel good neurotransmitters such as dopamine. Nicotine, like methamphetamine, achieves this in part by inhibiting monoamine oxidase, the enzyme responsible for the breakdown of dopamine [28]. Numerous studies have demonstrated how psychoactive mechanisms can influence drug taking behaviour. A study in rats, for example, found that pre-treatment with nicotine increased self-administration of cocaine [29], whilst pre-treatment with a nicotine antagonist drug mecamylamine decreased cocaine self-administration [30]. Similarly, studies amongst opiate-dependent smokers found cigarette smoking increased in pre-treatment with heroin [31] or methadone [32]. Methadone self-administration in turn increased in pre-treatment with nicotine [33].

Studies have shown that a significant number of drug and alcohol service users express interest in quitting smoking [22]. Given the impact of synergistic drug relationships, it seems perhaps logical to inform people seeking treatment that concurrent quitting might be easier than sequential quitting. In fact, rather than compromising the outcomes of detox and rehab, there is some evidence that smoking cessation can actually enhance short-term abstinence [18]. In Australia, the National Tobacco Strategy is beginning to acknowledge previous shortcomings in effectively addressing the needs of populations which have not benefited from pre-existing smoking cessation campaigns, including those with problematic alcohol and other drug use.

The relationship between smoking and substance use presents questions for harm reduction more broadly, but for drug treatment in particular. It is common for Australian residential withdrawal and rehabilitation services to not address nicotine addiction simultaneously, and for clients’ ‘smoko’ privileges have been known to be used a disciplinary tool. In such scenarios, the threat to take away one drug (cigarettes) is used as a means to facilitate treatment of another. It has been argued that not dealing with tobacco dependence can be seen as a form of harm reduction in that tobacco use is viewed as a lesser evil compared with alcohol or illicit drug use and/or other self-harm behaviours. Three prevalent assumptions undermining nicotine cessation being included in other drug treatment are:
(1) clients are not interested in cessation;
(2) staff are not interested in helping clients quit; and
(3) quitting smoking may hinder abstinence from alcohol or illicit drug use [34].
However, a recently published review in the journal, Drug and Alcohol Dependence, argued that in fact, treating tobacco addiction during other addictions treatment “appear to enhance rather than compromise long-term abstinence” [18].

DRUG	SEVERITY	POSSIBLE CONSEQUENCES
Clozapine	moderate	Increased risk of drug’s adverse effects
Olanzapine	moderate	Increased risk of drug’s adverse effects
Diazepam	moderate	Increased sedation
Methadone	moderate	Sedation & respiratory depression
Caffeine	moderate	Increased risk of side effects
Digoxin	moderate	Increased risk of adverse effects
Local Anaesthetics	minor to moderate	Increased risk of adverse effects
Oral Contraceptives	minor to moderate	Increased risk of adverse effects
Warfarin	moderate	Increased risk of bleeding

Smoke-free Health Service: Drug Interactions with Smoking. Issued: July 2008

COST OF SMOKING ON MENTAL HEALTH

Like consumption of any other drug, smoking has mood altering properties. Many regular smokers will light up when they're bored, anxious, angry or elated in an effort to ease or enhance their mood. A quick hit of nicotine provides a temporary coping mechanism for life's stressors. It should come as no surprise then that many people experiencing mental illness smoke cigarettes. In fact the incidence of smoking amongst those with a mental health diagnosis is exceptionally high and unlike the rest of the population, these rates are not declining [35].

In the United States, the 2005–2006 National Survey on Drug Use and Health examined smoking behaviours status among people with and without history of depression, anxiety, anxiety with depression or major depression. It found that 33 per cent of people reporting ever having the aforementioned mental health conditions were current smokers, compared with 22.5 per cent of people not reporting such issues [36].

It is currently estimated that roughly one third of Australians with mental illness smoke cigarettes, compared to less than 20 per cent of the general population. This increased rate of smoking is particularly elevated among people with schizophrenia. A recent Melbourne University study amongst people living with bipolar disorder or schizophrenia found 51 per cent were daily smokers, approximately double the national rate [37]. And among in-patients with co-existing alcohol and other drug problems, smoking rates as high as 90 per cent have been reported [38].

Like other smokers, people with schizophrenia use tobacco not just as a way of dealing with unpleasant feelings, but for the role nicotine plays in stimulating the dopaminergic pathways in the brain. The associated elevation of dopamine creates a temporary sensation of improved cognition, concentration and alertness. Such enhancement improves one's ability to process information and may thus be appealing to someone with schizophrenia particularly where cognitive dysfunction is a symptom of their illness or a side effect of their anti-psychotic medication [39]. As a result of this dopaminergic action, smokers may need to increase their medication, as some anti-psychotics also work by influencing dopamine levels. Higher dose medication puts them at increased risk of side effects particularly restlessness and movement disorders. In addition to this, certain chemicals found in cigarette tar contribute to the breakdown of some anti-psychotic medication [40]. This side effect of cigarettes also means some will require increased anti-psychotic doses and again risk associated side effects. Because of these interactions, people who quit or reduce their tobacco use without consultation with their prescribing doctor are at risk of severe side effects from excessive anti-psychotic medication [41].

Long term ramifications of smoking, such as cardiovascular and respiratory disease are well recognized. However less is known about the impact on the brain. Research suggests that the long term effects of nicotine on brain function may include decreased dopaminergic activity [40]. Such damage would be of particular concern for people with mental illness as dopamine disturbance is a significant factor in many conditions, including the link between excess dopamine and symptoms of psychosis and decreased dopamine activity resulting in negative or deficit symptoms of schizophrenia, such as lack of motivation, and energy and blunt affect [40].

Smoking is not only linked with a greater severity of psychotic symptoms, but studies suggest that people with schizophrenia who smoke have an earlier onset of schizophrenia and require a greater number of hospitalisations than those who don't [42]. In addition to this, there is a strong association between smoking and depression as nicotine withdrawal can provoke the onset of major depression [43].

People with schizophrenia have higher than average mortality rates, in exclusion of an increased incidence of suicide. Rates of cardiovascular and respiratory disease are particularly high, with pneumonia and cardiovascular diseases two of the major causes of death in this subpopulation. In fact, smoking related diseases are the second largest killer of people with mental illness [44]. Smoking is also closely related to alcohol abuse, another significant unnatural cause of death among people with schizophrenia [2].

The increased risks of smoking for those with mental illness are not limited to physical and psychological health. There is concern that current measures to reduce smoking through price hikes will be particularly difficult for people with schizophrenia and other mental illness. Recent figures suggest that people with schizophrenia who smoke are spending up to 35 per cent of their income on cigarettes. After accommodation expenses, little money is left for anything else with smoking often prioritized over essentials such as food and transport costs. Furthermore, such financial constraints can result in fewer opportunities to participate in the community, amplifying social disadvantage and isolation for a group of people who already experience stigma as a result of their mental health problems.

Schizophrenia can affect the information processing capabilities required in receiving and responding appropriately to information about the dangers of smoking [45]. It has been suggested that strategies for smoking cessation may be less effective with schizophrenia because the strategies are aimed at rational decision makers who are influenced by social reinforcers. Similarly, quitting or reducing smoking is easier when smoking becomes inconvenient and disliked by one's peers. With such high smoking prevalence rates, it is clear that the social factors which have helped many in the general population to quit may be less present amongst people with mental illness. Such arguments have been used to support proposed smoking bans in mental health facilities [46, 47].

As with other high risk groups, including people who use drugs, people who are incarcerated and people of Aboriginal and Torres Strait Islander background, people with mental health issues not only have a greater prevalence of smoking, but also greater potential for associated physical, psychological and social hardship. Each of these factors needs to be addressed should smoking cessation or reduction be achieved.

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reduction alternative. Such arguments however do not allow for the fact that snus and versions of it are potentially more attractive to smokers. As a purely recreational tobacco product delivering similar nicotine levels to smoking, many may see it as a more enjoyable and sustainable substitute.

Currently NRT products are marketed as short-term, low-dose treatment options that may fail to address the social, recreational and pleasure seeking aspects of smoking. It must also be noted that some harm reduction proponents of snus, including Gartner and Hall, agree that promotion of LNST need not preclude the promotion of high-dose and clean nicotine products [7]. Rather they acknowledge the need for NRT to exist as a more effective tool for smoking cessation, citing problems with ineffectual low dosing.

Some cigarette manufacturers produce 'snus versions' of their most popular brands of cigarettes.

Gartner and Hall recognise the need for better regulation of all tobacco products, and lower taxes on certain products such as snus and clean nicotine products to enable them to more successfully compete with cigarettes. Such measures would help to address concern that tobacco industry promotion of snus use may encourage dual use and/or increase overall tobacco use, with the potential to include current non-smokers. Long term studies from Sweden have shown that snus use rarely leads to smoking in non-smokers, and whilst there are cohorts of young people who have adopted snus use, it has been proposed that it is likely this was done instead of adopting smoking [12]. Similarly, dual use need not always be a negative outcome if it encourages smokers to try snus and leads to some people switching completely [13].

In Sweden, snus is a far more popular smoking cessation aid than NRT and smokers who use snus are more likely to quit than smokers who use NRT [12]. The use of NRT in Australia remains similarly low, particularly amongst lower socioeconomic demographics. It seems fair to assume, therefore, that should a product such as snus prove more attractive and more effective for smokers, its introduction could increase the quitting rates and in turn produce a greater public health benefit.

Another common concern is that smokeless tobacco products are less successful in countries without a significant cultural history of use. Although widely used throughout the world, smokeless tobacco products are rarely used in Australia despite amendments to the 1991 ban allowing importation of up to 1.5kg of smokeless tobacco products for personal use [2]. Of course, the ban still proves a significant impediment to determining if snus is indeed a culture-bound practice [14]. It could also be argued that this lack of popularity may limit the use of snus beyond assisting inveterate smokers to address their dependency; that is, limit snus to harm reduction purposes alone. As snus is considered a safer form of smokeless tobacco, associated risks would be reduced.

Unlike other smokeless tobacco products, snus is pasteurised not fermented and is stored under refrigeration. Such techniques inhibit bacterial growth and the associated formation of nitrosamines, the main carcinogens in tobacco. The elimination of high nitrosamine levels, combined with the lack of carbon monoxide, greatly reduces the risks of cardiovascular disease, chronic obstructive pulmonary disease and cancers associated with smoking. And like all smokeless products, snus does not produce environmental, or second hand smoke.

It is estimated that 20 per cent of Swedish men use snus regularly, most commonly as an aid in smoking cessation. Its use in place of smoking cigarettes is thought to be responsible for significant reduction in both the prevalence of smoking and in the rates of tobacco-related illness. Longitudinal Swedish studies comparing snus users to smokers have demonstrated not only a reduction in tobacco-related diseases, but also an overall lower mortality. It must be noted however, that snus use has been associated with a possible increased risk of pancreatic cancer. Snus use is also associated with gum and dental disease however such ailments generally clear on discontinuation of use [10].

Nevertheless, the Swedish experience has prompted some researchers to suggest that smokers who are unable to quit should use low-nitrosamine smokeless tobacco products, such as snus, to reduce tobacco-related harm. Some health professionals believe that any health risk from snus, no matter how small, is too great for its use to be encouraged. Some harm reduction advocates suggest that mass marketing of snus would probably lead to less quitting as occurred with low-tar smokes "due to similar perceptions of reduced harm" [15]. Study results from Sweden demonstrate substantial reductions in tobacco-attributable mortality despite a high prevalence of snus use [10].

Whilst Australian tobacco smoking has certainly declined in recent years, there continue to exist in large sections of our community who have not benefited from these advances. The challenge would be to stick to the harm reduction theme, ensuring that any messages promoting snus identify its use as a "less harmful" alternative, rather than "not harmful".

Hall and Gartner have gone so far as to argue that the reluctance of the public health sector to find "ethical ways of regulating and engaging with tobacco harm reduction" enables the cigarette industry free to pursue profits "while recalcitrant smokers are unjustly denied access to ways of reducing the health consequences of their tobacco use" [8].

NSP layout can help clients chill out

The Bulletin continues its series on the importance of NSP staff building rapport with clients and again explores the role of referral to other services including treatment options. The main service in Canberra is DirectionsACT.

DirectionsACT Needle and Syringe Program workers Tammy Waters & Jess O'Dea.

Canberra hides its drug problem very well, according to DirectionsACT NSP manager, Ms Tracey Dobie

"We are no different from Sydney or Melbourne or anywhere. We have our homeless, then the majority of Canberra is working class. It's not all public servants," Ms Dobie said.

Ms Dobie discussed the sensitive issue of the extent NSP workers should refer clients to drug treatment.

"If a client is not willing to make any changes there is no point in just trying to refer them. I mean it has to be their decision, and I mean we wouldn't sit down and say to the client 'While we are handing out equipment you should really think about rehab or detox.' The client has to raise that issue with us," Ms Dobie said.

DirectionsACT is able to refer clients to a range of internal services. These include Arcadia House which is a non-medicated detox unit, and Alphia Wellness Clinic. In addition to a GP, it has a treatment support worker, a counsellor, a registered nurse, a mental health nurse, a liver clinic and herbal medicine/acupuncture specialist. They also run the Inside Out program which works with prisoners.

The Bulletin asked what a staff member may do if a client walked in and looked in a bad way.

"That would depend on the client and the relationship we had with the client. If it was someone that we knew that was getting worse and more messy each time they came in, then we would probably suggest that they have a chat to the crisis counsellor. We'd probably sit there and say 'You look a bit worse for wear buddy, is everything okay, what's going on?'" Ms Dobie said.

"If that then started a conversation that was going to head down that track we might suggest 'Why don't you come in and have a cuppa and sit down with the crisis counsellor and you might be able to look at a few things that could help you out'."

The Bulletin then asked if there were situations when a crisis counsellor could walk past a client on purpose in order to manufacture the opportunity for such a conversation.

"Well if we felt it was necessary and we knew that this client knew the crisis counsellor, then that may happen. We would look at it as being a win situation for both of us, because we have concern for the client and the crisis counsellor could walk past 'Hey mate, is everything alright? Come in and have a chat.'

"If we had someone who came in and was that intoxicated and looked dreadful, we would probably sit them down anyway before we gave them equipment. We'd offer them water or a cuppa. We usually say to them can they come back and let us know if everything was okay."

Clients may reject the suggestion of drug treatment referral, but "then we have had clients come in and say 'I wanna go to detox', and then you start talking to them about it and they go 'No way, I'm not interested anymore', and they get up and walk off'. It depends on the day," Ms Dobie said.

Layout can shape interactions

The physical layout and atmospherics of an NSP is increasingly recognised as an important component of either fostering or hindering opportunities for conversation and rapport.

Ms Dobie cast her mind back a few years to when they ran an NSP in a different part of the city centre. While it was far less salubrious than the newer city NSP, in some ways it made it easier to engage clients, she said.

"Before we were in the city and we had a drop in centre, so a lot of clients used it as their lounge room. We would provide breakfast and lunch and the NSP was smack bang in the middle of that. It was basically a family, because we knew everybody and we've got clients that have been coming here since 1988 when the NSP opened. And it was – you could wander around and talk to them and get to know them. You'd build that relationship with the clients, and you knew what was going on in life.

"I suppose it's a lot different now because in the new space in the City Health building there is no area [like that]. Clientele is completely different. We still get a few of the old regulars that come in for equipment, but we get a lot more suits now because of where we are. When you went into the old one is wasn't a nice one. It was an old building, never been done up, you'd walk up this very long staircase that people had spray painted the walls, and um, coffee and everything all over the stairs. It was very rough looking so a lot of like white collar people wouldn't relax in it. They would go to a secondary outlet. It's a lot more public service types now and they don't stay to have a conversation. They just come in to get their equipment," Ms Dobie said.

As for new clients, the staff needed to take it slowly and demonstrate that their service was practical in order to assure newcomers.
"We usually ask them their most recent drug of choice, and where they come from, so usually if a client is new and they are unsure, they'll be a bit hesitant when they are giving their statistics over.

"So the girls would start talking to them: 'So are you new here? Are you from around here, what are you using?' For example, if a client came in and said 'I'm injecting dexies I want a wheel filter', we'd say 'Have you done this before, are you new to this?' Because we have brochures on the wheel filters and information on this, we'd tell them that 'These are the colours that you need because this is what they do and this is what they filter'," Ms Dobie said.

"And then staff would start getting through with the client, getting that experience with the client, giving them that knowledge that the client would think 'Well you're very helpful'. And next time they come back they would probably start talking to them again and then they would build up rapport that way."

A good example was the approach taken to steroid injectors, which Ms Dobie said was becoming more common.

"We do it with the steroid users too because we get a lot of young ones coming in and asking for equipment for steroids. And we'd say 'Well what are you doing, how are you doing this, why have you started using steroids?' If they said 'Because my mates are all doing it', well we'd go in and say 'You're not sharing a bladder are you?, because that's not safe'.

"A lot of them will say, 'What do I do then?'. We'd reply 'You really shouldn't be sharing, and if you are going to put your needles into the bladder, then make sure it's a clean needle every time that you're doing it.' And then we check with them, 'What size tips do you need? Do you know what you're doing? Are you doing it intramuscular?', and that's how we'd sort of build the rapport with the clients. Steroid use is pretty constant here."

The Bulletin asked Ms Dobie about how staff handle situations when a client was being rude or disruptive, which although rare, is a challenge faced by NSP staff right across Australia.

"We will ban people, because I mean we are not there to get abused so and we do have a couple of clients that have done this in the past and what we usually do is we say 'Well if you're going to continue to come in here and treat us like shit, then let's get a contract going and talk to one of the counsellors, sign this contract and you're banned [for a while]. It depends on what they have done," she said.

"Especially at the old NSP we've had it where we've said 'Okay you can come up and get equipment, but you're not staying around. Get equipment and then leave.' After they sign the contract, they can see a counsellor and deal with those issues and then when they think they have actually surpassed whatever issues they had, then the counsellor makes the decision as to whether they can come back or not. Usually, the majority of the time it's four to six weeks."

Discretion was essential in the rare situation where a client was virtually banned, Ms Dobie said.

"It depends. If they are just coming in to get a pack, we'll stop them: 'You're not allowed access to the service because there are secondary outlets all around Canberra.' If they were in for specific equipment, such as filters or butterflies, then we would probably put a stipulation on that to say 'come in, don't bother conversing'.

"Because we have had a couple of clients come in and talk crap, and what I've always said to the team is that we've all got to come from the same line, so that if he comes in and talks like that, just turn around and say to him 'I'm not even gonna bother dealing with you if you talk like that', and we all need to have the same response. Eventually, the majority of the time they will come in and think 'shit they are not even looking at me.'"

Note: Ms Dobie said they had steroid-users who were injecting a tanning drug: "We notice a lot that some are also injecting this thing called Melanotan®, which gives them colour as well. We've had a lot of that in the last 12 months. We wanted to do a pamphlet on it because not only was it the steroid users, but it was also the girlfriends." (see http://www.tanning-ultimate.com)

DirectionsACT has two primary outlets, one is located opposite the GPO in the City Health building, and the other is located at the rear of the Phillip Health Centre which is located in Woden Town Centre. It has a Head Office located in the old Woden Police station, which is also located in the Woden Town centre.

Identical twins make staff think twice

Clients aren't required to give names picking up. Many however use codenames such as Naked Brunch, Jesus or 331/3. Ms Dobie's favourite codename is DV8R (deviator), which is shared by twin brothers who are so identical that staff can't tell them apart.

"They are great guys. They will come in and because of limits on the amount of certain equipment people can be given, usually people only come to the NSP once a day.

"But it's happened when one of them has come in and the girls would have done the transaction. And then two hours later the other one would come in and staff would go 'You've already come in today', and he says 'No I haven't'… 'Oh yes you have'… 'No I haven't'. It can be quite comical, because the only way we can tell them apart is because they use different stuff so they both need different equipment."

ILLEGAL TOBACCO A DRAG ON REVENUE

Non-smokers may be unfamiliar with the term "chop-chop". It is said to be a derivative of the Cantonese word Kap, meaning fast, as in, get in and out of the tobacconist, petrol station or convenience store quick smart with a bag of illegal tobacco. More likely however, chop-chop refers to the roughly cut nature of the cured tobacco leaves.

In Australia, chop-chop is usually sold in plastic bags in bulk size of half-kilogram or kilogram weight, costing half to a third of licit tobacco. As a chop-chop smoker told the Bulletin: "My tobacconist sells it loose in a bag. It's about $25 a kilo, or a box of 100 ready rolled smokes goes for 15 bucks."

Sydney University professor Renee Bittoun runs Australia's only dedicated smoking cessation clinic. She believes the use of chop-chop, both locally grown and imported, is widespread and may constitute up to a quarter of all tobacco being smoked in Australia (The Age, 2010). However, the 2007 National Drug Strategy Household Survey found that only eight per cent of respondents 14 years old or over had smoked unbranded loose tobacco. A report funded by the tobacco industry claimed that chop-chop accounted for at least 12 per cent of total tobacco consumption in Australia, resulting in a $624 million revenue loss for the government [53]. According to these estimates, one in every 17 cigarettes smoked in Australia contains chop-chop.

Prior to the 2006 closure of Australia's commercial tobacco production, chop-chop was sourced primarily by diversion from licensed growers. Bales of minimally processed tobacco would be purchased or stolen and distributed by organized crime groups [54]. Back then, chop-chop dealers would offer tobacco growers $4000 a bale. This was a hefty mark up from the legal price of $660 a bale. More recently, it has been proposed that the recent price hikes in the cost of commercial tobacco, could generate an increased demand for illicit tobacco.

Professor Bittoun was recently quoted in The Age as saying that illegal tobacco such as chop-chop cost the taxation department hundreds of millions of dollars in lost revenue. ''It is not hard to grow and, given it looks like big spinach, might not normally attract much attention. Chop-chop is very cheap and it is often sold under the counter by weight by unscrupulous tobacconists, grocers and even service stations," she said (The Age, 2010)

Although the closure of the legal tobacco growing industry in Australia can be expected to cause a downturn in the local chop-chop market, it does not preclude the possibility that illegal growing will continue, as it does, for example, with cannabis. Illegal importation of leaf and other tobacco products has also increased. The main source of black-market tobacco in Australia is now believed to be Indonesia, where the tobacco industry is largely unregulated.

For example, in 2008 Customs seized a shipping container from Dubai which had a little more than 2 million undeclared cigarettes and 120 kilograms of undeclared loose tobacco [55]. It has been suggested that tobacco smuggling is an increasingly popular criminal pursuit as the penalties are far less severe than that for drugs. Where drug smugglers face up to 25 years in jail, the maximum penalty for tobacco smuggling is only 10 years. According to customs officials at wharfs and airports, huge quantities of tobacco are being brought into Australia. A customs official Richard Jenesko has said "the smugglers are importing larger quantities, you know, they're being more sophisticated in how they do that, and this is just another one of the things that'll make them lots of money" [56].

Customs reported in April that more than 200 million cigarettes had been detected entering Australia illegally in the previous three years. That is equivalent to approximately 11 million packets of 20 smokes. It is argued that the chop-chop and illegal tobacco trade will increase even further following the recent tax rise for cigarettes. Certainly Australian studies suggest that our market for illicit tobacco has thrived over recent decades as increasing taxation forced licit cigarette prices high by international standards [57]. And with or without a legal market, Australian chop-chop availability continues to be supported by both unlicensed domestic growers and suburban home-grown production. In addition to the international imports and locally grown tobacco, the illicit market is propped up by international smuggling of counterfeit tobacco products, diversion of duty-free tobacco products and an increase in illegal internet sales.

'It is not hard to grow and, given it looks like big spinach, might not normally attract much attention. Chop-chop is very cheap and it is often sold under the counter by weight by unscrupulous tobacconists, grocers and even service stations'

'My tobacconist sells it loose in a bag. It's about $25 a kilo, or a box of 100 ready rolled smokes goes for 15 bucks.'

The chop-chop market is regarded as a critical public health issue as these lower prices enable greater consumption and associated poor health. Furthermore, increases in the illicit market decrease money available for publicly-funded health care [58].

Whilst the negative health consequences of increased tobacco consumption are obvious, little is known as to what additional risks may come from smoking chop-chop. As with any other illicit drug market, analysis of chop-chop varies considerably from batch to batch, including varying levels of nicotine. The final product may be adulterated by both producers and dealers in an effort to increase weight and, in turn, profit.

> Many of the patients attending the Smokers' Clinics (dedicated exclusively to patients who smoke and have chronic obstructive pulmonary disease [COPD]) smoke this type of illegal tobacco. Several patients volunteered that smoking chop-chop precipitated an acute exacerbation of their COPD. Four patients have recently presented to a hospital emergency department for exacerbation of COPD after smoking chop-chop. Although smokers are loathe to volunteer their use of this illegal tobacco, smokers and clinicians should be warned that smoking chop-chop does not constitute a positive health move, is not less harmful, and may be quite dangerous.
>
> *Smoking Research Unit, Department of Psychological Medicine, University of Sydney, Sydney, NSW.*
>
> *Renee Bittoun, Director (and Director, Smokers' Clinics, Central Sydney Area Health Service).*

Chemical analysis of various samples have found bulking agents such as raw cotton, cabbage leaves and grass clippings. There is also evidence to suggest illicit crop production is associated with elevated concentrations of heavy metals and other toxic substances [59].

Perhaps the most common concern stems from poor handling techniques and the associated risk of fungal infections [60]. Dense fungal contamination is thought to be the result of faulty curing processes. It is believed to cause toxic responses in the lungs, liver, kidneys and skin ranging from allergies to bronchitis and asthma. A South Australian smoker told The Bulletin: "I've stopped smoking chop-chop. It's been a bit wet, a bit moist. They add water to make it heavier and people are getting fungal infections in the throat."

Despite all of these concerns, many smokers perceive chop-chop as a more "natural" or unadulterated alternative to tailored cigarettes [61]. In a 2002 study conducted in one of her smoking cessation clinics, Professor Bittoun found that 43 per cent of her patients smoked chop-chop, with 83 per cent saying they did so because it was cheaper and 58 per cent because they believed it to be healthier. Nevertheless, the limited medical literature on the topic suggests that illicit tobacco use is in fact associated with more harm to users' health than licit tobacco [60].

Certainly recent studies have shown an association between the use of chop-chop and increased incidence of poor physical and mental health however this relationship is more likely to be circumstantial than causal.

RURAL RELAPSE TESTS LOVING COUPLE

Being an illicit drug injector is a stigmatised lifestyle at the best of times, but in a small town it runs the risk of shame and isolation if people find out about it. The Bulletin speaks with a couple living in a medium-sized town in the heart of wheat and sheep country. We'll call them Anna and Phillip.

They are both well known in their community, with Anna working in a high profile job. After a decade off hard drugs, Phil relapsed and Anna found out about it. Even wanting to go into treatment was tricky, because in a small town, can you really be sure of maintaining anonymity? Their relationship is struggling, but together they have checked treatment options in the big smoke and Phillip has now begun a residential treatment program. Just as he started, Anna and Phil shared their thoughts on drug use and health seeking behaviour in a rural setting.

PHILLIP, can you please describe circumstances or events that you think influenced the relapse.

The events that influenced my relapse were my peers, my personal issues and day-to-day circumstances. Also, a failure to achieve personal goals had a part to play. Just feeling down about myself I think.

In order to set the scene a little bit, can you tell us a bit about the main drugs available in your area? E.g.: How easy is it to access illicit drugs outside major cities?

The major drugs that are available in my area are speed, marijuana and ecstasy. I'm pretty sure that heroin would have been attainable if that was my choice of drug. I have been clean of heroin for at least 10 years. It's fairly easy access to illicit drugs outside major cities because the bigger dealers do runs to major cities and bring it back to their towns.

What are the greatest challenges of being an injecting drug user in a rural community?

The greatest challenges of being an injecting drug user in a rural community is that the majority of the time people know just about everyone else, and word gets around that you are a user which firstly means that word spreads quicker and easier if people find out. Consequences of that have a snowball effect, you might be pigeon-holed, it could be harder to get employment etc.

Where do you feel most comfortable accessing injecting equipment and why?

I personally don't feel comfortable accessing syringes anywhere, but if I had to choose it would be a community centre. I get embarrassed that I'm a user and also worry about people that I know might see me. Maybe it would be good if the NSP could do some home visits, but I realise that might be hard to do.

What would you change about how NSPs operate?

Like I said in the previous answer, I don't think that I like to access syringes from anywhere, but if they could do home visits or meet up somewhere where I'd feel comfortable that would be okay. Such as in a park. Especially coming from a rural place, I think that would suit me and be ideal for me personally.

How does anonymity affect your drug use? Who, for instance, would be the last person you would want to run into when accessing the NSP?

The last person I would like to run into while accessing NSP is my parents. I would absolutely die. I think I would most likely lie to them and say that I was getting the syringes for a friend who has diabetes and was too unwell to come for himself. Other people would include my partner if she didn't know I use, and people that I know - which is a highly increased chance being in the rural country.

For you, what is the difference between managing and not managing your drug use?

If there is a difference between managing and not managing, it's a very fine line. I know I have said to myself when I have quit before that I won't touch it again and I have for a few months. Anyway, when I stupidly think to myself "well you have done so good to go without it for six months, you're in control now so you can reward yourself by have a shot or a taste, it will only be one shot", in the end I have found that it takes you back to square one and before you know it you're addicted again. Stuck in the same rut, chasing the drug of choice.

How easy is it to access treatment services if you live outside of major cities?

Accessing treatment in rural areas isn't the same as it is major cities. That's why I have to travel to [capital city] from [town] to have access to a detox/rehabilitation centre. Maybe people in the country/rural areas are in denial that rural residents aren't 'users' or councils or governments are interested in offering those sort of services to rural people?

What, if anything, are the main barriers to accessing treatment?

The main barriers would be being able to get a treatment facility or for people who work, maybe their bosses don't know they are users. Maybe if they choose to go to rehab their jobs might not be there when they get back. But then again, most users don't have jobs – sad but true.

In your opinion, how can someone best help a loved one whose drug use has become problematic? What do you think is the worst thing they could do?

The best way to help a loved one that has a problem would be to show them love first of all, don't ever push them away as I think it would be the worst thing to do. Make them aware that the drug using has become a major focus for them, and a problem that is affecting 'you' and it's best for all involved that help be sourced. Maybe even come to a compromise that if they get help (with you helping them, i.e.: if possible take them to where they need to go to get help) you might take them to score, and …

But then again, after some thought that might not be a good idea. Basically, support them and let them know that their using has an effect on you and show them that you care I guess.

Maybe what I suggested above – taking them to score – might be the worst thing they could do. Also being angry at them for using in the first place as the other person involved hasn't used drugs and wouldn't know how much it can grab you by the balls (a term I use when I look back to when I was on heroin, that's how it felt). Another bad thing would be turning your back on the drug user or pigeon-holing them thinking that they will always be a user, like that saying suggests 'once a user always a user'. Because that isn't necessarily the case every time.

Why do you think injecting drug use is so demonised?

Because society has made it like that. Society looks down on people who have a drug addiction, especially drug users that use syringes. They look at them as scum, bums, dirty people etc. People just don't realise how hard it might be, or is, to get off these drugs. Drug users are pigeon-holed and they are not given a fair go so to speak. Which would possibly cause a person to relapse if they have been clean as they would lose faith and they think 'well, if people won't give me a fair go, so to speak, then what's the point in me giving up drugs?'

What role does the media play in the mainstream's view of injecting drug use?

The media have a big role to play in what mainstream society have to say about injecting drug users, because they always focus on the negatives, like drug users leaving syringes on beaches, drug users committing crime. The commercials on television show only the bad side of drug users whereas they should maybe let mainstream society know that injecting users are also human beings who feel rejected by society and need help, as would a marijuana smoker or an alcohol abuser.

ANNA, can you tell us about when and how you first learned of your partner's relapse, and what was it like between you as a couple when you first began to deal with it?

Prior to our meeting in 2006, my partner used heroin, ice, speed and marijuana. He had stopped using all but marijuana by the time we met, and also stopped using that soon after we started dating. He was very honest about his drug use from the beginning of our relationship. He had hepatitis C as a result of sharing spoons while using heroin and was also very upfront about this. He was embarrassed, ashamed and depressed and knew little about the disease, wrongly thinking it was a death sentence.

I helped him find out about available treatments and in the following two years he underwent a combined PEGASYS® [interferon] program which effectively cleared the disease. He said very genuinely he would never use again.

But he started a construction job in early 2009 which required him to go away for a week at a time. Some of his workmates were drug users, some were dealers, and before long he had resumed using marijuana. He must have hidden it for about a month before I found a text message on his phone referring to buying some. He then came clean, but said it was just a bit of fun and he wasn't doing it often. I was concerned he would become a heavy smoker and that it would lead to harder drugs.

I was right. Within a couple of months he was smoking at least a few hundred dollars worth a week. By the start of this year he wanted something else, and turned to speed. At first he was snorting, but this soon turned to injecting. I discovered it when I found a needle in his bag.

I confronted him about it and he got angry at me, telling me I shouldn't have been looking through his things. Our relationship was under immense strain and things went from bad to worse, as he began spending his entire weekly wage in a matter of hours to support his habit. Things were so bad, we separated but continued living under the same roof.

Did you have any preconceptions about drug use before this? If so, how do pre-existing thoughts/impressions differ from what you have now observed and learned?

I have always been an open minded person and since meeting my partner and learning about his past I have not judged someone based on their drug use. I have been scarred by the effects of drugs I have witnessed in the past few months, including a stroke-like episode. My partner was speaking to me, but using random words in sentences and growing increasingly frustrated because I couldn't understand him. He passed out soon after and was unconscious for 14 hours. It was one of the worst experiences of my life.

As the partner of someone who uses illicit drugs, do you worry that he will be subjected to stigma and judgement? Can you describe your sense of stigmatisation that can occur in your community?

If his drug use was common knowledge we would both be looked down on. I have a high profile job and between the both of us, we are well known in the community. Also if it was common knowledge, I'm sure police would have been involved. People in this area tend to be small minded and don't look at the bigger picture or understand any of the reasons why a person might turn to drugs.

How do such attitudes affect you as his partner?

I am disappointed about the community's lack of understanding. When my partner was living with hepatitis C we had to be very secretive about his condition and never even told our closest friends. There is a lot of stigma surrounding drug use and the resulting health problems, and as someone who loved someone living with both, I felt isolated and lost.

How have you and your partner worked together on moving toward drug treatment? What kind of hurdles have you encountered? How have you resolved them?

I helped my partner find out about drug and alcohol rehabilitation providers and he chose the one that suited him. He was recently accepted into a week-long detox and has now begun a four-month residential rehabilitation program. Travelling to [capital city] to access these services is challenging and the financial struggles we face with him not working make things difficult. But we take each day as it comes.

Have you ever accessed the NSP with him or for him?

No. I would not be comfortable doing this, I wouldn't do it. Despite confidentiality clauses, people in small towns talk. It wouldn't take long for something like that to get back to my boss and it would be very difficult to explain. There are no secrets in this town.

What impact has his dependency had on you personally and on your relationship?

I was scared what would happen if I didn't take him [to buy drugs], give him money, etc... even if it meant we couldn't pay bills or buy groceries. We always had a fridge and cupboards full of food. When this started up, gradually the cupboard and fridge and freezer became bare, bills were being put off, late fees were coming in.

I hope that when he has completed rehab things will improve, but that remains to be seen. Financially, we are in the worst position we have ever been. We are completely reliant on my wage. One positive to this is that guilt about our financial situation has encouraged my partner to abstain. Our relationship had suffered significantly and at this stage we are not out of the woods.

In what ways, if any, has this benefited your relationship? E.g.: what have you learned about yourself and each other?

I think my partner sees now how much I love him and how willing I am to stand by him, no matter what. His drug and alcohol use in the past two years alone has resulted in him doing very destructive things, including drink driving and losing his licence, getting in a fight and damaging a vehicle, resulting in a criminal conviction, and cheating on me but not remembering it.

I have learnt that I am very tolerant and forgiving, and this alone has resulted in me losing friends who think I shouldn't support him, and a rift in my family, because of the same issue. Luckily I have recently managed to smooth things over with my family. With my partner being willing to go into rehab, I have learnt that he does want to change. I am very grateful for that. It's going to take a while to recover from this and with him in rehab and not working things are even harder now, but I'm doing my best.

SMOKING AS GATEWAY DRUG

It is well recognized that the smoking of tobacco is commonly used in conjunction with other drugs [62]. The 2007 Australian National Drug Strategy Household Survey looked at the incidence of concurrent tobacco and other drug use. It found that non-smokers were far less likely to have used other drugs compared with smokers. Smokers were more than four times as likely to have used cannabis than non-smokers, and were more than three times as likely to have used illicit drugs [63].

Similarly, a 2005 study of Australian secondary school students found that approximately half of the students who reported having used cannabis, amphetamines, hallucinogens or ecstasy stated they had used tobacco concurrently [64]. A United States study found that participants who smoked were seven times more likely to have tried cannabis or to have tried cocaine, 14 times more likely to have at least dabbled with crack-cocaine and 16 times more likely to have ever tried heroin [62]. Given such reports, is tobacco to be regarded with greater caution as the original "gateway drug" or are there other factors at play here?

In the United States, it has been estimated that up to 90 per cent of people in drug rehabilitation programs concurrently use and are addicted to tobacco whereas smoking rates for the general population are slightly more than Australia's at around 25 per cent. Tobacco use in particular has proved a strong and consistent predictor of subsequent illicit drug use, but it is certainly not clear as to whether or not this is a causal relationship. Research indicates it is rare for a "hard core" drug user to bypass the initial behaviour of cigarette use prior to using illicit drugs [64]. Consequently, nicotine has been described as an "almost essential precursor" and a "necessary intermediate" to the use of cannabis and other drugs [64].

A study in the US looked at the psychosocial and pharmacologic explanations of nicotine's "gateway drug" function. It suggests that nearly 90 per cent of regular smokers become addicted to nicotine and that the development of nicotine addiction is particularly rapid in teenage smokers [28]. The study suggests that it is the normalcy of smoking that contributes to its potential "gateway" role for young people. Certainly for many teenagers, cigarettes represent their first personal experience with the phenomenon of drug addiction. When adolescents recognise that nicotine addiction doesn't disrupt life it is easier to develop a lower risk perception of drug addiction in general. Being addicted to a drug can therefore be regarded as neither abnormal nor risky and spending significant amounts of money for drugs also acquires a sense of normalcy [28]. It is argued that this initial decision to smoke makes the risk involved with using other drugs seem less severe. For a young person who has smoked cigarettes for years without any obvious experience of its ill effects, it is suggested that using illicit drugs may seem only slightly more dangerous. It is this argument that identifies tobacco smoking as a "stepping stone" to so-called harder drugs. The study goes on to suggest that peer groups of young people who smoke cigarettes are likely to receive offers of, and reinforcement for, other drugs. The need for acceptance and camaraderie of peers is said to influence drug use.

For many young people, the adoption of cigarette smoking is often against their parents' wishes and the law. Proponents of the gateway theory believe it surreptitiously fosters skills of secrecy and concealment. It's suggested that behaviour such as disguising the smell of cigarettes, denying smoking and lying to authority figures are learned behaviours. Smoking can therefore be regarded as a skill that can be applied to the use of cannabis and to a lesser extent, crystal methamphetamine, cocaine and heroin. The body's initial negative reaction of coughing, irritation, and nausea is quite quickly overcome. So smoking of cannabis, for example, does not create the initial adverse reaction in a cigarette smoker that it would in a non-smoker. In addition, a smoker becomes comfortable and familiar with the social and ritualistic learned behaviours that could potentially be applied to illicit drug use. It is important to note that with declining Australian rates of cigarette smoking, it is now becoming more common for cannabis dependence to lead to tobacco dependence than was previously the case [2].

Smokers, irrespective of age, soon recognise that their mood can be altered or enhanced by the chemical side effects of their tobacco use. As with the use of any other psychoactive drug, smokers who learn to rely on tobacco to combat stress and boredom may be less likely to develop acceptable, healthy coping skills. It is possible then that this lack of effective coping skills combined with tobacco's stress reduction function may predispose them to the use of other substances for mood altering purposes.

There is no denying that in the western world, the smoking of tobacco commonly precedes or co-exists with other forms of drug use. This does not necessarily mean that the relationship between nicotine and other drug use is causal. The more likely scenario being that the uptake of tobacco smoking, like that of drug use, is influenced by a variety of individual biological, social, educational and other environmental risk factors [2]. The primary reason to avoid tobacco use is arguably not because of any potential gateway function, but rather the great morbidity and mortality it directly causes.

Cigarettes and the brain

Cigarette smoking reduces levels of MAO-B which is an enzyme responsible for the breakdown of dopamine and other feel-good neurotransmitters. Some studies have found smokers had 40 per cent less MAO-B than non-smokers or former smokers. Smoking creates a cycle where reduction in MAO-B causes more dopamine, which causes greater pleasure for smoking, which leads to more smoking, which causes less MAO-B.

Smoking-induced reduction of MAO-B appears to cause a synergistic effect with the dopamine-stimulating effect of smoking by slowing the breakdown of this pleasure-enhancing neurotransmitter. By the same mechanism, smoking may enhance the pleasure that results from using heroin, cocaine, alcohol, and other psychoactive drugs. According to some researchers, if tobacco use can increase dopamine levels in the brain by inhibiting MAO-B, "it would give a neuropharmalogic basis to the proposal that cigarettes are a `gateway drug'". These researchers believe nicotine may create a biochemical pathway or channel "so that the next drug becomes more pleasurable than it would otherwise." Thus, an adolescent who regularly uses tobacco will undergo brain chemistry adaptations. These brain chemistry changes heighten the pleasurable effects of taking other drugs, and the reinforcement increases the likelihood that the adolescent will become addicted to other substances [65].

KING OF HARM

As one of the greatest preventable causes of death and disease, smoking is thought to be responsible for approximately 15,000 deaths in Australia each year [1]. Nicotine addiction in and of itself is a chronic relapsing disease. The links with serious disease, including cardiovascular disease, cerebrovascular disease, chronic obstructive pulmonary disease, lung and other cancers are well documented [2]. In addition to this, smoking is known to have a negative impact on the health of the unborn child with an increased risk of miscarriage, ectopic pregnancy, premature birth, low birth weight and developmental delay [3].

Tobacco smoking is also responsible for the vast majority of all drug-caused deaths, with estimates as high as 90%. In 2004–05, this equated to 14 times as many alcohol related deaths and 17 times that related to illicit drug use [1]. And yet, for many Australians accessing drug and alcohol treatment services, tobacco smoking continues to be common practice. It is well recognized that those in drug treatment smoke more heavily and at higher rates than the general population [4]. Despite this, a study of Australian drug and alcohol treatment services found smoking cessation was rarely addressed, with staff concerns regarding the possible negative impact on other drug treatments and a lack of policy or training thought necessary to successfully address smoking cessation [5].

Most tobacco smokers are dependent on nicotine. Similarly, research on drug dependence has shown that of all people who begin smoking tobacco, almost one third (32%) will become dependent smokers. This is a far greater addiction rate than seen in the use of other drugs including heroin (23%), cocaine (17%), alcohol (15%) and cannabis (9%) [6].