Tobacco Use and the LBGTQI2 and HIV/AIDS communities in Canada

By

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Limited data is available concerning prevalence of smoking in Canada within the LGBTQI2 or people living with HIV/AIDS (PLWH) communities. *The Canadian Tobacco Use Monitoring Survey* and the *Canadian Community Health Survey*, which tracks the incidence of Canadian smokers, do not ask participants whether they belong to any of the LGBTQI2 communities nor HIV status. Therefore, there is a gap in our knowledge concerning the gravity of the situation.[1,2]

Recommendation 1: That increased funding be available for research to be carried out nationally, on an *ongoing,* inflation indexed based, to monitor the incidence of smoking within the LGBTQI2+PLWH communities and to evaluate new prevention and cessation interventions to determine trends and efficacy within such subpopulations.

Studies carried out in several countries have consistently shown the prevalence of smoking among the LGBTQI2+PLWH to be higher than the general population.(3,4)

A 2017 study conducted by the British Columbia Centre for Excellence in HIV/AIDS found that "rates of smoking are three times higher among gay and bisexual men compared to the general population in a province that has the lowest rates of smoking in the country. The rates are highest among bisexual men - 73.5% of whom are smokers, with 62.4% smoking every day."[5]

Their study found that: "A total of 37.0% (413/1115) of study participants were current smokers. HIV-positive individuals (50.0%), men under 30 years old (40.4%), and individuals earning < $20,000 per year (51.6%) reported the highest prevalence of smoking. Asian men had a much lower prevalence of smoking (20.5%) ($p < 0.001$ for all). Multivariate modeling found a reduced odds of smoking among individuals of Asian heritage and increased odds of smoking among individuals aged <45 years; income levels below $60,000, self-reported HIV seropositivity and self-reported sexual orientation other than gay." The authors concluded "The prevalence of current smoking among MSM in this sample was 37.0% which is lower than previous studies of MSM in Canada, but still much higher than of the general male population in British Columbia (10.2%). Men's health programs which are directed towards gay, bisexual and other MSM should prioritize smoking cessation programs, particularly for young men and those living with HIV."

Similar results were reported by another study conducted the *Toronto Rainbow Tobacco Survey.* It found that in Toronto"36% of LGBTTQ participants reported current smoking…. The smoking prevalence rates ranged from 24% to 45% across the different sexual orientation and gender identity groups of the sample, with bisexual women and bisexual men reporting the highest smoking rate at 45%. The study also reports the first known smoking prevalence rate for gender queer people at 44%. Younger LGBTTQ participants reported even higher smoking rates.[6]

These studies illustrate the inequality of burden of harm due to smoking that such communities are currently experiencing.

There are several reasons why such inequality in health continue to exist. In an article entitled "A review of lesbian, gay, bisexual, trans and intersex (LGBTI) health and healthcare inequalities", the authors posit that there are several causes which contribute to the disparity in poor health. These include "(i) cultural and social norms that preference and prioritize heterosexuality; (ii) minority stress associated with sexual orientation, gender identity and sex characteristics; (iii) victimization; (iv) discrimination (individual and institutional)and (v) stigma."[7]

By assuming that heterosexuality constitutes the norm in our society, healthcare providers may overtly behave unethically towards members of the LBGTQI2 communities, which entails negative attitudes, anger or display of demeaning behavior towards different sexual orientations, gender identity or sexual characteristic and its diversity.

Recommendation 2: That healthcare providers be taught in their ethics education/training of the diverse sexual communities and act ethically towards members of such communities. This entails applying, *at the very least*, the

principles of autonomy, beneficence, non-maleficence and the principle of social justice on an individual and population level. Specifically, that healthcare providers be taught in healthcare institutions via their ethics committees, to recognize social diversity and rectify heteronormal assumptions, which also recognize the healthcare needs of members of the LGBTQI2+ communities and implement policies which, until today, failed to reduce disparity in health when compared with the general population.

The consequences of stigmatization and of being treated disrespectfully by a segment of the healthcare establishment and by a segment of the population results in "minority stress". Minority stress posits that due to stigma, discrimination, prejudice, violence and poverty, members of the LGBTQI2+ PLWH experience an increase level of daily chronic stress, which the heterosexual community does not experience to the same degree. In addition to this list, the intersection with race, ethnicity, low socioeconomic status or immigration/cultural diverse background can further increase minority stress.

The consequences of such increased level of stress can lead to addictive behavior that appears momentarily to help cope with such increased and chronic stress in the short run, such as tobacco, alcohol and illicit drug use, but can have devastating health consequences in the long run, especially when it comes to smoking cigarettes.

Studies have also illustrate a higher incidence of smoking among people living with HIV/AIDS (PLWH). Over 40%-60% PLWH smoke in USA, Europe and Australia.[8] These are heavy smokers who smoke 16-23 cigarettes per day with high levels of nicotine dependence [9]. In one study low-income women on HIV therapy 56% were current smokers, smoking more than a pack a day.[10]

Smoking among PLWH increases the risk for the following diseases: oropharynx, increased risk of oral candidiasis (2.5 times)[11]; Lungs: increase risk COPD; recurrent bacterial pneumonia (over 2 times); Smoking as a risk factor for Pneumocystis pneumonia[11,12]; Globally a major cause of morbidity and mortality in PLWH is pulmonary tuberculosis (20 times). TB is responsible for more than 25% of deaths PLWH especially in developing countries.[13]

Untreated HIV infection and smoking increased risk of developing non-AIDS defining disease such as cardiovascular disease (CVD). HIV patients have a 2 fold risk of major CVD events compared with a non-smoker.[11] HIV smokers who quit decreased risk from 2.3 to 1.5 after 3 yrs. compared to never smoker.[14] Both HIV and smoking contributes independently to arteriosclerosis and subsequent CVD events[15][3]

In the general population smoking increases the risk for many types of cancers: oral cavity, pharynx, esophagus, stomach, pancreas, larynx, lung, cervix, urinary bladder, and kidney.[16] HIV is associated with increased risk from human papilloma virus (HPV), cancer of cervix, anus, vulva, vagina, and penis.[17].

PLWH are at increased risk for lung cancer independent of smoking.[18] Smoking additionally increases risk for lung cancer. HIV infection and smoking as lung cancer risk factors has a *hazard ratio* of 9.4 compared to non-smokers.[19]

When it comes to life expectancies PLWH who smoke cigarettes die quicker than those who do not smoke. A 35-years-old HIV smoker has a median life expectancy of 62.6 years vs. 78.4 years for non-smokers. More than 60% of deaths in the PLWH were associated with smoking. The number of life years lost associated with smoking and HIV is 12.3 vs. 5.1. PLWH lose more life years to smoking than to HIV.[20]

Quality of life is also affected by those who are HIV and smoke cigarettes. "Current smokers scored the lowest on the SF-12 physical component scale followed by former smokers and never smokers". These were: vigorousness or moderate activity; lift or carry groceries; climb several flights; accomplish less; pain; general health.[21] Current smokers reported significantly *poorer overall physical function*, compared with never/former smokers. "HIV patients who currently smoke have increased mortality and decreased quality of life as well as increased respiratory symptoms, COPD, and bacterial pneumonia"[21].

In addition, we need to note that there are social factors that, as independent variables increases the risk that PLWH will continue to smoke as means of coping with their realities. “Smokers are more likely to also be abusers of alcohol or drugs. Tobacco use may increase when persons are under the influence of these substance. Substance abuse can also be a risk factor for smoking cessation failures.[8,9,22]

Of people living with HIV/AIDS, 62% of regular smokers suffer from depression symptoms and 38% from major depressive disorder. PLWH may use smoking and other drugs to cope with stress and living with difficult illness, social disadvantages and sexual orientation issues, which may act as barriers to smoking cessation.[22]

Recommendation 3: That a smoking cessation program be integrated systematically in the care plan for PLWH. All visits with healthcare professional should entail screening for tobacco use and an appropriate cost free smoking cessation program tailored to the needs of the community. Moreover, medications for smoking cessation should be free of charge, given that a significant portion of PLWH live with income below $20,000 per year, which has been shown to be an independent risk factor in people who smoke cigarettes. [8, 23]

As the data shows, smoking is more than double for people of low socioeconomic status, who, as well, have other social stressors. In an article entitled "*Trends and Correlates of Cigarette Smoking and Its Impacts on Health-Related Quality of Life Among People Living with HIV: Findings from the Ontario HIV Treatment Network Cohort Study, 2008–2014*" the authors conclude the following: "To reduce the burden of cigarette smoking, cessation interventions that take into account the complex social, economic, and medical needs of people living with HIV are needed urgently." These social, economic and medical issues, the author note relate to “Canadian-born, single, unemployed with lower education, heavy drinkers, nonmedical drug users, and to have current depression than former cigarette smokers or those who never smoked. Current cigarette smokers also had significantly ($p < 0.001$) worse SF-12 physical component summary ($\beta = -2.07$) and SF-12 mental component summary ($\beta = -1.08$) scores than those who never smoked after adjusting for demographic, socioeconomic, and HIV-related clinical variables.[24]

Recommendation 4: Socially anchored and systemic inequalities, such a low income, high use of alcohol use and other illicit drugs, as well as depression need to be screened for, integrated in the care plan of PLWH, as well as implementing social service policies which reduces socioeconomic inequalities, in conjunction with nationwide smoking cessation programs targeted for such subpopulations.

Moreover, the tobacco industry has been targeting the LGBTQI2+ communities. Ads are placed in gay venues frequented by members of the LGBTQI2+. Even when tobacco ads are prohibited in the public sphere, they nevertheless end up unimpeded in private bars.

Recommendation 5: That ads promoting cigarette smoking be banned from private bars and other LGBTQI2+ venues and a designated budget be allocated for enforcing of such a ban.

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As the above summarized, tobacco is leading cause of preventable death and illness in the LGBTQI2 and PLWH. It accounts for over 50 disparate diseases and several deadly cancers. Half the smokers will die from lifelong smoking and they will lose 10 years of life. The situation is even worse when it comes to people living with HIV (PLWA).

To reduce the level of smoking in Montreal, we at the McGill – Jewish General Hospital Cancer Prevention Centre offer a free smoking cessation group program open to the general smoking public who wish to stop smoking cigarettes. From its inception in 2004 we quickly noticed that members of minority groups, such as first nations, members of the LGBTQI2+ communities, members of low socio-economic status and mental health patients were under utilizing our free service.

This early observation in the underutilization of our smoking cessation service resulted in us trying to understand and eventually target such populations with the ethical consideration that such populations bear a heavier health

and social burden linked with tobacco smoke.

Based on the ethical principle of justice, one of the basic pillars of biomedical healthcare ethics, we embarked on ways of first trying to find out why the level of smoking in these communities is double or more than in the general population, but more importantly, how to implement a policy that reduces this grave injustice.

We made several efforts to contact members of the various organizations that offer health related services targeting the LGB and HIV/AIDS communities to try to implement smoking cessation programs targeting specifically members of their diverse communities.

At first there was little interest, as such organizations were coping with other priorities. Eventually we were able to work with Rezo, a Montreal organization which promotes gay/bisexual men's health, including prevention of HIV/AIDS and starting on June 2011 a smoking cessation program tailored to the gay/bisexual community was offered to the gay/bisexual as well as to PLWH.

Initially, our center in conjunction with Rezo was able to allocate $3000 annually for advertisement for the smoking cessation program in gay publications, placing posters throughout the gay village, and postcard size signs distributed in gay/bi friendly establishments. Unfortunately, austerity measures implemented by the Liberal government in 2015 resulted in termination of funding for advertisement of this project. The consequence of cutbacks resulted in members of the LGBTQI2+ communities not being informed of the program's existence and an end to the program in November 2015.

Nevertheless, our pilot project showed that it is possible to implement an effective smoking cessation program targeting the gay/bi and PLWH communities provided proper and ongoing funding for such a program is available.

From June 2011 until November 2015, there were 9 group programs offered to the gay/bisexual/PLWH communities. In total 38 people participated in these programs. The one year abstinent was 28%, which compares favorably with data we have from our general population smoking cessation programs.

The following summarizes recommendations, which we believe, need to be implemented if we want to reduce the burden due to cigarette smoking within the LGBTQI+ and PLWH communities:

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implementing social service policies which reduces socioeconomic inequalities, in conjunction with nationwide smoking cessation programs targeted for such subpopulations.

Recommendation 5: That ads promoting cigarette smoking be banned for private bars and other LGBTQI+ frequented venues and a designated budget be allocated for enforcing such a ban

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