

## Reducing Smoking-related Morbidity and Mortality in Kalaallit Nunaat (Greenland)

A submission on the Naalakkersuisut Ministry of Health draft parliamentary Act on tobacco products and non-smoking environments (the Smoking Act).

MAREWA GLOVER, PhD



Citation: Reducing smoking-related morbidity and mortality in Kalaallit Nunaat (Greenland). Auckland: Centre of Research Excellence: Indigenous Sovereignty & Smoking, 2019.

Published by the Centre of Research Excellence: Indigenous Sovereignty & Smoking, PO Box 89186, Torbay, Auckland 0742, New Zealand, www.coreiss.com.

Copyright © 2019 Marewa Glover



## Reducing Smoking-related Morbidity and Mortality in Kalaallit Nunaat (Greenland)

A submission on the Naalakkersuisut Ministry of Health draft parliamentary Act on tobacco products and non-smoking environments (the Smoking Act).

MAREWA GLOVER, PhD



## Contents

Introduction	5
Kalaallit health	6
The negative impacts of colonisation	6
Current wellbeing and health	7
Tobacco smoking	9
Tobacco control	9
Smokeless products can rapidly reduce smoking rates	11
Adopting a tobacco harm reduction approach	13
Tobacco harm reduction delivers benefits beyond health	17
The argument to ban risk-reduced products is flawed	19
Understanding the anti-vaping hysteria	20
The collision of two innovative technologies	21
Recommendations	23
Regulation, rather than a ban, is needed	23
Conclusion	24
Ngā mihi / Acknowledgements	25
About the author	26
References	27



### Introduction

Though part of the Kingdom of Denmark, Kalaallit Nunaat (Greenland) has a Self-Government Act which is recognised in the Danish Constitution. Since 2009, the Greenlandic people have been recognised as a people under international law with the right to self-govern.

The majority (about 90%) of the Kalaallit Nunaat population are Kalaallit (Greenlandic Inuit) (Bjerregaard & Larsen, 2018). They are recognised as Indigenous by the United Nations and are covered by the United Nations Declaration on the Rights of Indigenous People (UNDRIP) which was ratified by the Government of Greenland in 2007.

The Kalaallit have several high priority threats to their wellbeing that they are focused on: the consequences of climate change (Lapidese, n.d.), international imposition of restrictions on their traditional hunting and fishing practices (Petersen, 1995), and corporate interests in mining within Kalaallit territories.

Improving the health and wellbeing of the Kalaallit remains an ongoing concern. Kalaallit Nunaat has a very different and disproportionately higher burden of disease than the other Nordic countries (Knudsen et al., 2019). For this reason alone, policy analysis of tobacco use in Denmark, Norway, Finland or Sweden should not automatically be applied to Kalaallit Nunaat. Specific Kalaallit-centred analysis is needed. An over-riding reason for supporting Kalaallit determination of the problem and its solutions is their own desire for self-determination heard in the post-colonial refrain that "Greenland need not copy Danish solutions" (Petersen, 1995).

Kalaallit Nunaat has experienced colonisation by the Norse, Sweden and Norway, and lastly the Danish. The introduction of "Home Rule" in 1953 was supposed to be the end of the Danish colonial period, but many colonial attitudes and practices continued, marking the subsequent decades up to today as "in transition from a colonial past" (Bjerregaard & Larsen, 2018).



### Kalaallit health

Remembering that there is a history of colonisation is important for understanding the current health status of the Indigenous people of Kalaallit Nunaat. This context mitigates deficit framing, that is, viewing the inequity in health outcomes between the Kalaallit and the Danish as somehow a culturally determined fault.

### The negative impacts of colonisation

The strategies of colonisation experienced by the Kalaallit were different from the often violent methods used to destroy the culture, beliefs, societal structures and soul of the Māori of Aotearoa (New Zealand), the Aboriginal and Torres Strait Islander peoples of Australia, the First Nations and Native American tribes of North America among others. Still, the Kalaallit were similarly courted by a range of Christian missionaries who sought to replace their Indigenous beliefs. Danish cultural ways were taught, especially via the education system and discriminatory employment conditions and policies signaled that Danes were deemed superior as did the continued governance 'assistance' from Denmark (Petersen, 1995). Pressure to assimilate was directly and indirectly ever-present. One anthropologist reporting in 2006 said "the absorption of Western values is much encouraged in Greenland" (Williamson, 2006).

The negative consequences of colonisation, such as, the destruction of traditional familial and interdependent community structures including changing generation defined and gendered roles (Williamson, 2006), the replacement of cultural protocols and ethics for behavior with the dictates of Western religions (Petersen, 1995), and the damaging psychological effects of being marginalized as inferior and stigmatized as "pagan" are significant determinants of ill-health. Rapid migration from a remote subsistence village lifestyle to urban European centers has been found to have ongoing negative effects on indigenous identity and cultural disintegration (for example, see Hirini & Collings, 2005 – a New Zealand report pondering the causes of the disproportionately high suicide rates among the indigenous Māori population). Contemporary problems of unemployment, excessive alcohol use, relationship violence and physical and sexual abuse of children both



result from colonisation and corporate exploitation of lands and people, and become economic and social determinants of health.

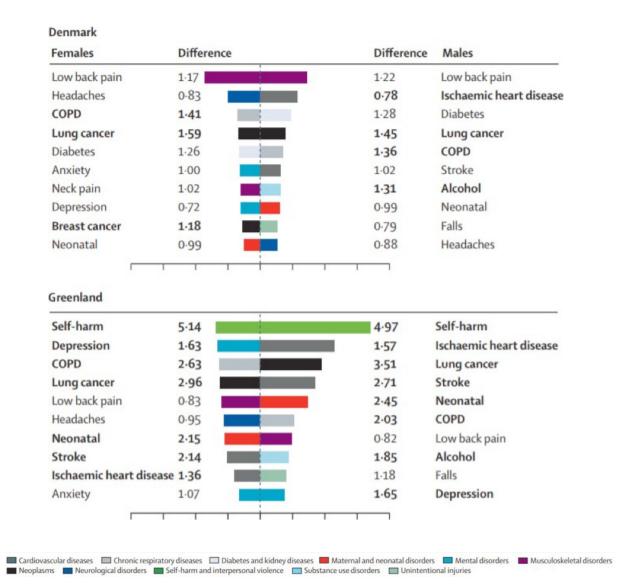
Though the specifics of the colonisation experience differ across indigenous peoples of the world, the outcomes of disproportionately negative health, employment, criminal and educational statistics compared to the colonisers and their descendants are strikingly similar.

#### Current wellbeing and health

People born in Kalaallit Nunaat die disproportionately earlier than other Nordic people (Knudsen et al., 2019). They have one of the highest rates of suicide in the world and fatal accidents are unusually common (Bjerregaard & Larsen, 2018). Kalaallit Nunaat also has poorer socioeconomic conditions than other Nordic countries (Knudsen et al., 2019).

Average life expectancy in Kalaallit Nunaat is improving. In 2017, women could expect to live to on average 77.2 years (up 8.2 years from 1990 figures), and male average life expectancy increased 8.7 years from 1990 to 70.8 years in 2017 (Knudsen et al, 2019). But, for the same year male Danes could expect to live an extra 8 years and female Danes could expect to live 5.5 years longer than Kalaallit Nunaat born women (ibid).

Disability-adjusted life years (DALYs), a measure of the burden of disease in a population, showed Kalaallit Nunaat born people experienced higher rates of morbidity than other Nordic countries (ibid). The graph below shows the stark contrast in DALYs for the top ten ranked diseases experienced by the Kalaallit Nunaat population versus their Denmark counterparts.



Age-standardised DALY rates per 100000 by sex for the top ten Level 3 causes in the Nordic countries in 2017, and difference from the Nordic region estimate Difference is expressed as proportional difference—eg, a difference of 1·17 indicates that the rate is 17% higher compared with the Nordic region estimate. Bold differences indicate that the country-specific point estimate is outside the 95% uncertainty interval of the Nordic region estimate. Anxiety=anxiety disorders. Alcohol=alcohol use disorders. Alzheimer's=Alzheimer's disease and other dementias. COPD=chronic obstructive pulmonary disease. Depression=depressive disorders. Drugs=drug use disorders. Headaches=headache disorders. Lung cancer=tracheal, bronchus, and lung cancer. Neonatal=neonatal disorders. DALY=disability-adjusted life-year.



Source: Knudsen et al. 2019.



### Tobacco smoking

Smoking tobacco is strongly associated with negative affect, psychological distress, mental health disorders – particularly depression, anxiety disorders, bipolar disorders and schizophrenia. Child physical and sexual abuse, and parental smoking are strongly associated with smoking initiation. Negative affect, such as grief, is a primary trigger to smoke and to relapse to smoking. The disproportionately high rates of child neglect and physical and sexual abuse, and suicide, likely is a significant contributor to the high smoking rates observed among the Kalaallit. Added to these very strong determinants of smoking, all the other negative consequences of colonisation listed above, plus current socioeconomic inequities within Kalaallit Nunaat, and in comparison, with Denmark, provides additional determinants to initiate and continue smoking.

Smoking prevalence among the Kalaallit is very high at around 60% (43.4% for men and 56.7% for women) (Bjerregaard, Dahl-Petersen & Larsen, 2018). To put this into perspective, the Māori adult smoking rate was 58% in the mid-1970s (Cancer Control Council of New Zealand, n.d.). Four decades of aggressive, and often punitive, stigmatising anti-smoking measures has seen Māori smoking prevalence reduce to 34% (but this still represents a massive inequity - the total country average is down to 14.2% at 2018/19) (Ministry of Health, 2019). In Europe, Greece (39%) has one of the highest smoking rates. The average rate for OECD countries is 20% (Williams-Grut, 2015).

Whilst smoking rates are only slowly declining in Kalaallit Nunaat, there has been a decrease in average cigarette consumption per smoker from 11.2 in 1993 to 9.2 per day in 2005 (Jensen & Hounsgaard, 2013).

Among just the Nordic countries, "smoking ranked as the top risk factor for both males and females in all countries, except for males in Sweden (second) and for both sexes in Finland (fourth). Males and females in Denmark had around 40% more DALYs due to smoking than the regional estimate, and Greenland had almost three times more than the regional estimate" (Knudsen et al. 2019, p.7).

Lung cancer is the most common cancer in Greenland, amounting to 34% of cancer deaths during 2000–2014 (Bjerregaard & Larsen, 2018). Smoking during early pregnancy at 35.8% is disproportionately high by world standards, though it has reportedly reduced from earlier years. However, maternal smoking varies by region reaching a high of 68% in the East of Kalaallit Nunaat (Bank-Nielsen, Long & Bonefeld-Jörgensen, 2019).

#### Tobacco control

Since the United States Surgeon General's 1964 report warning of the harms of tobacco smoking, prevalence rates have been slowly trending downwards across Europe and its colonies. Various smoking reduction measures have been implemented in Kalaallit Nunaat since 1995, including: restricting smoking in the workplace, totally banning smoking in public buildings and in children's and educational institutions; banning sales to under 18 year olds; and printing health warnings on tobacco product packets. Smoking bans were extended to all public and private places including restaurants, cafes, private clubs and associations in 2010 (Jensen & Hounsgaard, 2013).

Denmark was among the first wave of countries to sign up to and ratify the World Health Organisation's WHO Framework Convention on Tobacco Control (FCTC) in December 2004. The objective of the FCTC was to:

protect present and future generations from the devastating health, social, environmental and economic consequences of tobacco consumption and exposure to tobacco smoke by providing a framework for tobacco control measures to be implemented by the Parties at the national, regional and international levels in order to reduce continually and substantially the prevalence of tobacco use and exposure to tobacco smoke (WHO, 2005).



Of significance to the Kalaallit, it is important to know that despite consultation with diverse countries and groups around the world, the FCTC was largely written by white European leaders in tobacco control. Consequently, it is a Eurocentric framework. It was also largely focused on the complete eradication of tobacco use. This prohibitionist intent ran counter to Native American beliefs that tobacco was a sacred plant. Their tobacco control message was instead to return to traditional uses of the plant. This illustrates the Eurocentric nature of the FCTC though, in that it left no place for ancient and Indigenous cultures that had long histories of using tobacco in many different ways. Thus, it is fortuitous that Kalaallit Nunaat is not a Party to the FCTC.

The Kalaallit Nunaat government's public health programme (Inuuneritta) goal is to reduce smoking to 40% of the adult population by 2012 (Greenlands Hjemmestyre, 2007). This figure could quickly be achieved by allowing smokers in Kalaallit Nunaat access to any or all of the greatly risk-reduced alternatives to smoking that now exist.



# Smokeless products can rapidly reduce smoking rates

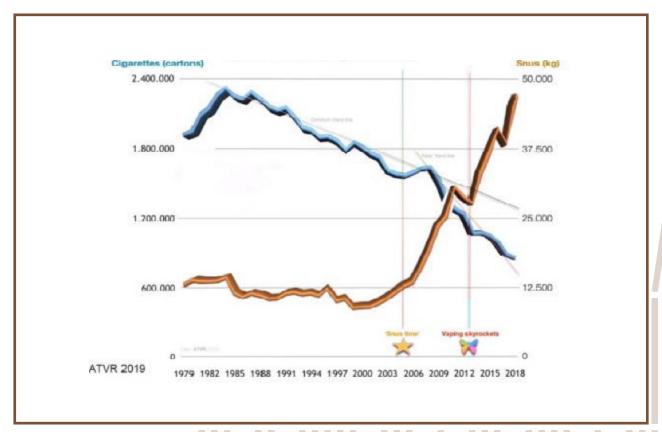
The global ecosystem surrounding tobacco smoking has fundamentally and dramatically changed with the introduction of vaping and other new risk-reduced alternatives to smoking. Whilst, Swedish snus has been used for over 200 years – use had until recently been restricted mostly to Sweden. Vaping and non-combustible tobacco heating devices have opened tobacco consumers' eyes to the broader range of smokeless products, including snus. Now, millions of smokers around the world have switched to vaping or snus or tobacco heating devices.

Where either vaping or tobacco heating devices, or both, have been launched significant rapid drops in smoking prevalence have been observed, for example in France, the United Kingdom, the United States of America, Iceland, Japan, South Korea and Norway (Shapiro, 2018). In just two years, smoked tobacco sales dropped by 40% in South Korea as smokers switched to new tobacco heating and nicotine vaping devices. Regardless of pre-existing levels of taxation on tobacco or restrictions on the marketing of tobacco products, smokers appear to be equally 'ready' to switch to an obviously harm-reduced alternative to smoking.

Norway has experienced a rapid drop in smoking prevalence, especially among younger people aged 16-24 years. This has been largely attributed to smokers switching to Swedish snus. In just three years the market volume of snus grew by 20% shifting the proportion of smokers to snus users. Proportionately fewer young people now smoke. Strikingly only 1% of young Norwegian women now smoke (Shapiro, 2018).

Iceland has also experienced a rapid drop in smoking prevalence, with a stunning 60% drop in smoking among young people aged under 18 years in just two years (Snaebjörnsson, 2019).

Though causal assertions cannot be made, Snaebjörnsson's graph below shows what he calls "the 'X' factor" – that is, upon the entry of snus, smoking drops and then with the launch of vaping, smoking rates drops even more rapidly. In 2018, about 6% of people aged 14-79 were vaping daily (ibid). Among adults smoking has declined 46% during 2014 to 2017 (ibid)





Source: Snaebjörnsson (2019). Cigarette & SLT/Snus sale in Iceland 1997-2018... and inroad of Vaping – the results.



When these almost unbelievable rapid quit rates are juxtaposed against historical data on reducing smoking rates, it reframes the reductions we've celebrated in the past, as shockingly slow. For example, in New Zealand, a leader in implementing a comprehensive and sustained tobacco control programme, smoking prevalence has reduced at an average of just 0.5% per year over the last 41 years!

	1976	2017/18	Average drop over 41
			yrs =
Total NZ	36%	15%	0.5% per annum

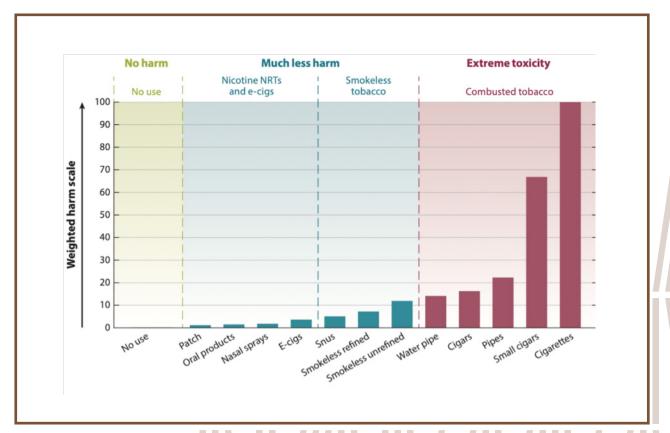
There is no need for Kalaallit Nunaat to be constrained to this same pathway – just because it's what other countries have done in the past. That would be like denying Greenlanders the latest fastest internet technology until they have stepped through decades of using outdated cable technology. Kalaallit Nunaat has the chance to leapfrog over the inefficient tobacco control methods of the past by adopting a tobacco harm reduction approach today.

### Adopting a tobacco harm reduction approach

Reducing smoking prevalence more rapidly than any previous methods used by tobacco control is an important benefit of vaping products. But, reducing the risks to health is the penultimate goal. Does using snus or a tobacco heating device, or vaping, reduce the risk of developing disease and of dying prematurely?

The evidence that these products do reduce harm is strong. The Swedish experience with snus provides the strongest longitudinal evidence that the risks associated with smoking tobacco can be almost completely avoided by smokers if they switch completely to using snus (Lee, 2013; Rodu, 2019).

A basic harm reduction concept to understand is that the products exist on a continuum of risk to health compared to continued smoking (as illustrated in the following graph).



Source: Nutt, et al. (2014) Estimating the harms of nicotine-containing products using the MCDA approach. Eur Addict Res, 2014;20:218-225.

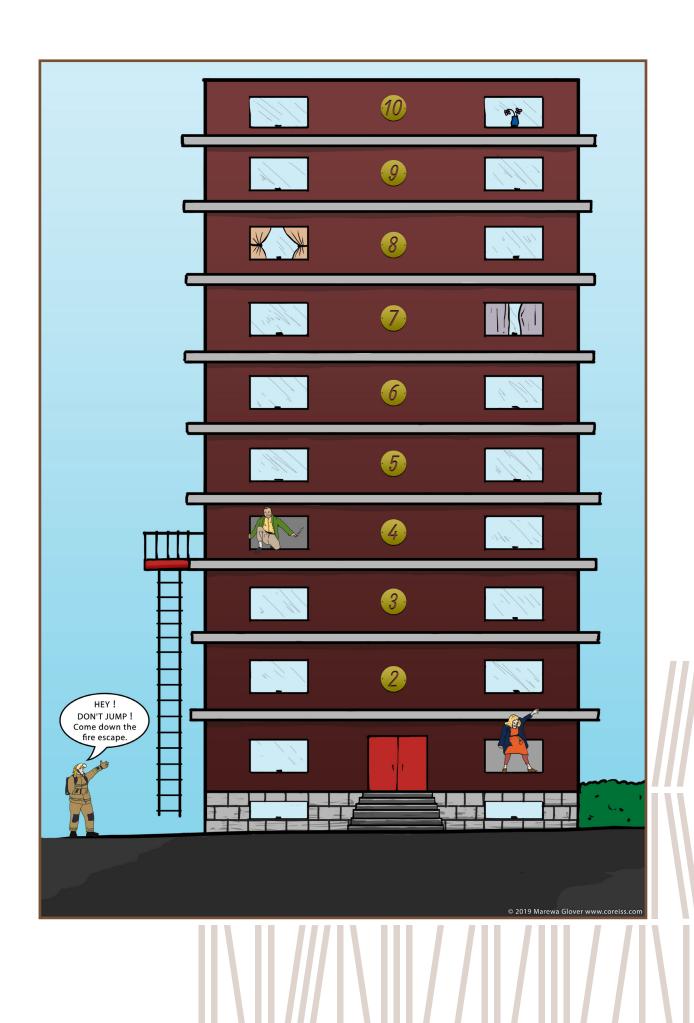


Most of the carcinogenic effects are delivered by the combustible products, that is – it's the smoke that kills. Vaping nicotine has been estimated to be at least 95% safer than smoking. Swedish snus has been estimated to be at least 95-98% safer than smoking and the more recent tobacco heating devices are estimated to be about 85% safer than smoking (Shapiro, 2018).

The concept of a continuum of harm has been criticised for minimising the actual gain to population health that a switch from smoking tobacco to any of the risk-reduced alternatives would deliver. Dr Carl Phillips, a tobacco harm reduction expert, argues that use of a "continuum" conveys that the harm reduced products can be ranked in terms of relative risk to health but the evidence only supports two levels of risk:

- 1. smoking tobacco is a proven risk
- 2. use of snus, NRT, vaping and abstinence, which pose approximately the same risk. Use of tobacco heating devices might add some variety to the second level of very low risk, but the evidence is so far not definitive (Phillips, 2019)

To illustrate the risk of continued smoking versus use of snus or vaping, the following picture (by Glover, 2019 based on a paper by Phillips et al, 2006) shows the risk of long-term smoking versus long-term use of a smokeless product. The smoker faces damage to their health or death equal to the likelihood of injury or death resulting from falling from the fourth floor of a high-rise building. A user of smokeless products faces a risk to their health equal to that of a person falling from the window one and a half stories up from the ground – which would almost certainly be a non-fatal fall.





# Tobacco harm reduction delivers benefits beyond health

The implications of new technologies for society at large are commonly missed at first (Juma, 2016). The arguments against vaping deliberately narrow to critiquing the technical aspects, that is, the hardware, the risks inherent in interacting with the materials used in the devices and to measuring toxicity in the e-liquids or vapour. It's all about the risks to physical health.

The evidence to date, on the toxicology of e-cigarette vapour, is strong enough for the United Kingdom's Royal College of Physicians (2016) and the United States of America's National Academies of Science, Engineering and Mathematics (2018) to support switching from smoking tobacco to vaping as a greatly risk-reduced alternative.

Looking beyond health, rapid mass migration from smoking tobacco to use of a single, or a combination of any of the, risk-reduced alternative products will bring about several socioeconomic shifts. First, beneficial changes will accrue for the individual (mentally, financially and spiritually). Consequently, the family will benefit (less exposure to cigarette smoke, increased cash for other needs, lowered initiation of smoking among children). Society will benefit as ex-smokers begin to take less sick leave and through improved health begin to stay in work longer. Within just one to two decades the demand for healthcare to tend to respiratory illnesses, cancer, cardiovascular disease, diabetes type 2, and smoking-related illness in infants and children, will decrease. This will enable vital health dollars to be redirected to addressing other health problems.



There will be fiscal implications for government. Reduced income from the excise on tobacco may worry politicians, but passing laws that will undermine quitting, that is, keeping people smoking for the tax is not ethical. Within just a few decades the extra healthcare costs due to smoking will reduce. Governments need to look for other sources of income. Ex-smokers will have increased longevity which will increase the number of people living into retirement.

Kalaallit Nunaat has already begun to increase the age of eligibility for the old age pension. The retirement age generally is going to be increased from 66 to 67 from 1 January 2021. This indicates a concern about how the country will afford an increasing pension budget. Not only will more ex-smokers live to draw a pension, they will draw a pension for longer proportionate to the years since stopping smoking. Again, discouraging quitting because more people will need to be paid a pension is not ethical.

Having more adults survive into old age, and more elders living longer, is beneficial for children, family life and for the preservation of the Kalaallit culture.



## The argument to ban risk-reduced products is flawed

A harm reduction approach recognizes that total abstinence is not always achievable for everyone, or it may not be desired by everyone. One study of eleven countries found that among smokers who had previously made a quit attempt the percentage not planning to quit ranged from 14.9% in South Africa up to 57.2% in New Zealand (Riahi, Rajkumar & Yach, 2019).

The fire-fighter on the ground in the previous picture represents all the stop smoking help and aids that can help people quit. Decades of research on the efficacy of these has shown they have low appeal to people who smoke, and even among those that avail themselves of aid, only about 6% achieve sustained abstinence at 1 year. It may be easy to choose to quit, the problem is that it has been very difficult to quit with the incumbent methods. Risk-reduced products means this is no longer the case.

Vaping is particularly promising with an increasing number of rigorous randomised controlled trials showing that vaping nicotine is not only an effective way to stop smoking (Walker et al., 2019), it is superior to pharmaceutical nicotine replacement therapies (NRT) (Hajek et al., 2019).

Given access to snus, vaping products or tobacco heating devices, smoking becomes a highly modifiable behavior. Banning the very products that can bring about rapid mass quitting is irrational.

What is also irrational and shows a complete lack of compassion and understanding for the problem smokers face, is the proposal to increase financial strain among the lowest income groups (which is strongly associated with smoking) and thus increase their stress by making tobacco products less affordable. Adding stress to the existing multitude of powerful negative social determinants of smoking and taking away the fire escape is likely to increase smoking rates.



More supportive and effective solutions for assisting smoking cessation exist that could be used in conjunction with switching to a risk-reduced product or as a standalone cessation option. For example, financial incentives appear to be effective (Notley et al, 2019). Incentives are a promising adjunct to cessation support for reducing smoking amongst pregnant indigenous women (see for example: Glover et al, 2015). Quit competitions, retail vouchers, prize draws and gift packs could all be used to incentivise quitting or switching, and appointment attendance and treatment adherence and appear acceptable and effective with other indigenous people (Glover et al, 2014).

In addition to supporting people who smoke to switch to risk-reduced products, more effort needs to go in to reducing the drivers of smoking initiation. To stop smoking it is going to be necessary to do more to stop the physical and sexual abuse of children and male-partner violence. These harms should be given a higher priority than the implementation of punitive and regressive tobacco control measures.

Kalaallit Nunaat is not the same as Denmark, Sweden, Iceland or Norway. There is a unique history, people of a different culture and they are a people who have internationally recognized rights to self-determination – to not be dictated to by Scandinavian people who think they know better, who are by that definition, racist. Kalaallit Nunaat specific research should be encouraged to identify locally effective approaches.

The negative consequences of banning the Kalaallit's right to what could be for many a life-saving alternative to continued smoking not just in this generation, but for two to three generations to come, should not be under-estimated. Denmark should already be shamed for the serious effects that colonisation and corporate exploitation has had on the Kalaallit. If they stand in the way of Kalaallit having access to e-cigarettes - what Professor David Abrams says is "the single biggest public health opportunity we've had in 120 years to get rid of cigarettes" (Abrams, 2019) they should be roundly denounced internationally.

### Understanding the anti-vaping hysteria

The development of technologies that allow people to use nicotine without the disease-causing constituents contained in smoke is nothing short of revolutionary. These risk-reduced alternatives to smoking, as Abrams says, could bring about the end of cigarette smoking.

However, there is significant public and political pressure being exerted within some countries and by the WHO to ban or effectively sabotage the effectiveness of e-cigarettes as an alternative to smoking tobacco. An anti-vaping hysteria has swept through the USA unnerving other countries. India has since banned the import, production and sale of e-cigarettes. Even the New Zealand government has stalled passing progressive regulation confirming our adoption of a tobacco harm reduction approach.

In June 2019, the Health Promotion Agency, a New Zealand government agency, launched a Vaping Facts website designed to combat misinformation about vaping. It is an important initiative because the lies are intended to put people off vaping and drum up support for bans or regulations that will heavily restrict access to vaping products. To follow, was a mass media campaign intended to encourage people who smoke to switch to vaping. However, within days of USA President Trump's announcement that he would consider banning e-liquid flavours, the NZ Associate Minister of Health stopped the campaign from being launched and shelved passage of new e-cigarette regulation. Trump has reportedly backed away from a flavour ban in preference for regulation.

In the USA, there was already alarm among some parents about an uptick in youth experimentation with vaping. Anti-vaping lobbyists deliberately exaggerated the prevalence of this teen experimentation with vaping (West, Brown & Jarvis, 2019). They obfuscated facts, for example, implying that the use rates represented regular ongoing use of vaping by teens, when in fact most had only tried vaping once or were



infrequent experimenters. Further, many of the regular youth users of nicotine vaping were ex-smokers. Many unsubstantiated claims of harm were made to scare parents and teachers into a frenzy of concern.

Then in August 2019, some primarily middle-upper class young people developed an inflammatory lung illness, and some of them died. Despite some medical professionals knowing from the outset that the victims had been vaping cannabis-containing liquids, the outbreak was blamed on "vaping" generally. Anti-vaping health professionals seized upon the truly tragic outbreak of hospitalisations and deaths to convince the American public that nicotine-vaping was the culprit. This was a deliberate lie.

It was two months before the USA Centre for Disease Control finally announced that vitamin E acetate (an oil) found in vaping cartridges was the "strong culprit" likely to be causing the lung injuries and associated deaths. By then over a thousand people had been affected and almost 40 people had died. But still the CDC did not clearly and strongly state that it was contaminated cannabis vaping cartridges mostly purchased on the black market, NOT nicotine vaping, that were to be avoided.

As at the 17th of December, 54 people had died and 2,506 cases of lung injury had been reported to the CDC.

### The collision of two innovative technologies

Technology that enabled the cannabidiol (CBD) and tetrahydrocannabinol (THC), to be extracted and separated has triggered a different but concurrent revolution in the attitudes towards cannabis, how it is used and the range of products that are now being produced and sold in countries where cannabis use was already legal, and in jurisdictions that are decriminalising cannabis use.

These are two different technological innovations that are now colliding and causing new dilemmas and concerns, especially for jurisdictions that prohibit cannabis.

Though the electronic cigarette was invented for vaporising nicotine-containing liquid, the technology was quickly adopted and exploited by people outside of the stop smoking and tobacco product market. Over 5 years ago I found (online) a number of vaping devices being marketed as weight loss devices. Instead of nicotine, they claimed to contain flavours and sometimes guarana. Another website corruptly claimed that their vaping devices and liquids enabled people to vape vitamins. Other early retailers sold vaping e-liquids along with wild health claims, such as that vaping a particular liquid could cure baldness. Regulation and research have helped to curb some of this 'snake oil salesmen' behaviour.

As early as 2015, I heard that cannabis users (in Euro-Western nations including NZ) were trying to adapt vaping technology to vape cannabis. I am not talking about dry-herb "vaporisers" – devices that heat dry leaf material. The "vapor" from a dry-herb heating device refers to the natural liquids in the leaf that are released during the heating process. The early nicotine-containing liquid vaporisers reportedly could not cope with the more viscous solutions cannabis users were experimenting with. That is, the devices broke. The technology has since advanced and CBD-containing and THC-containing liquids for vaporising now exist and specific devices for vaporising these liquids also exist. They are usually different from the nicotine vaporising devices.

The legal status of cannabis, its derivatives and products and devices designed specifically for 'delivering' CBD or THC varies by country, and within the USA, by state.

In countries, where nicotine vaping was established such as the USA, which then state by state overturns cannabis prohibition, vaping CBD and or THC becomes an established and accepted practice among adults who are legally permitted to purchase cannabis products. In the USA this is usually at 21 years of age. An illicit market still exists to supply to people aged 20 years and under, and for people who cannot afford the permitted, but often high priced, cannabis products.



In countries where cannabis use remains illegal, such as in New Zealand, a black market in cannabis products exists. Dry-herb vaporisers are openly sold throughout NZ (the devices are not illegal). Based on anecdotal reports, I believe some people in NZ are vaping CBD and THC- containing liquids.

Quite apart from the debate on legalising cannabis, at the moment, cannabis use is illegal in Kalaallit Nunaat. Just like in the UK and NZ, where nicotine vaping is established and supported as a legitimate and highly effective stop smoking aid, the vaping of cannabis- containing liquids is likely to remain contained to a minority of people willing to break the law and risk the punishments. No deaths from vaping oil have occurred in the UK or NZ.



## Recommendations

I strongly recommend that the Naalakkersuisut (Kalaallit Nunaat government) adopt a harm reduction approach to reduce smoking. Nicotine vaping products, tobacco heating devices and snus tobacco and nicotine oral pouches should be confirmed legal for import, marketing and sale to adults. All people who smoke should be encouraged to quit or switch to any, or a combination of, the greatly risk-reduced nicotine and tobacco products that exist.

Access to risk reduced alternatives to smoking needs to be as convenient as buying a pack of cigarettes is now. Thus, the new risk-reduced alternatives should be able to be sold in the same outlets as tobacco cigarettes and should not be taxed initially, or a tax relative to risk could be considered.

It is important that the acceptability of the products is not undermined by unnecessary restrictions on the nicotine levels or the flavours. If the nicotine level is set too low, the products will become useless for people with high need for nicotine, such as is the case for many people with mental health disorders. With regards to nicotine vaping liquids, if the flavours are banned, one of the key ingredients that helps people transition away from smoking will be gone.

### Regulation, rather than a ban, is needed

Regulation of risk-reduced alternatives to tobacco smoking can ensure that only quality snus, nicotine vaping, or heated tobacco products, are able to be sold. If uptake among non-smoking youth is a concern, advertising could be restricted so it is only seen by adults aged 18 and over and sales could be restricted to adults. If health warnings are to be required on packaging, they should be truthful and specific to scientifically established risks of the product. In order to encourage current smokers to switch to the risk-reduced alternatives, tax should be scaled relative to risk.



## Conclusion

Kalaallit Nunaat's tobacco control regulations and policies should center the needs of the Kalaallit population who experience disproportionately greater harm from smoking. Denying them access to greatly risk-reduced alternatives to smoking tobacco could be seen as a breach of their human rights under the United Nations Declaration on the Rights of Indigenous People (UNDRIP).

Supporting a harm reduction approach to reduce to bacco smoking prevalence will disproportionately BENEFIT Greenland's Kalaallit population.



## Ngā mihi / Acknowledgements

The work of the Centre of Research Excellence: Indigenous Sovereignty & Smoking is supported by a grant from the Foundation for a Smoke-Free World, an independent nonprofit organization whose purpose is to improve global health by ending smoking in this generation. The Foundation has a pledge agreement with Philip Morris International (PMI) that secures funding and ensures complete autonomy to pursue its mission to end smoking in this generation. PMI and the tobacco industry, generally, are precluded from having any control or influence over how the Foundation spends its funds or focuses its activities. Independence is explicitly outlined in the Foundation's bylaws.

The research produced by the Centre of Research Excellence: Indigenous Sovereignty & Smoking, the contents, selection and presentation of facts, as well as any opinions expressed on the Centre's website, or in its presentations and publications are the sole responsibility of the Centre and its authors and under no circumstances shall be regarded as reflecting the position of the Foundation for a Smoke-Free World, Inc.



## About the author

Dr Glover is an Indigenous Māori behavioural scientist from New Zealand. She has worked on reducing smoking since 1988. She has designed and evaluated many stop smoking and harm reduction programmes, including many focused on reducing tobacco-related harms among the indigenous people of New Zealand and Australia. She has over 100 scientific publications. In 2017, Dr Glover was a finalist in the New Zealand Women of Influence Awards. In 2018, she was promoted to Professor of Public Health at Massey University; she was awarded Professional Advocate of the Year by the International Network of Nicotine Consumer Organisations (INNCO); and, she was a BlacklandPR (NZ) finalist for Communicator of the Year. In 2019, Dr Glover was one of three finalists for the prestigious national New Zealander of the Year Award.

After 17 years in academia, with the help of a grant from the Foundation for a Smoke-Free World, Dr Glover have established her own independent research centre focused on reducing the harms of tobacco use amongst all indigenous peoples worldwide. Of special importance to her is increasing support to help pregnant women abstain from smoking.



## References

Abrams, D. 'E-cigarette panic is ruining "biggest public health opportunity" in 120 years, scientist says'. CBS News, 20 September 2019. Available from: https://www.youtube.com/watch?v=xdQxACUGrjM

Bank-Nielsen PI, Long M, Bonefeld-Jörgensen EC. Pregnant Inuit women's exposure to metals and association with fetal growth outcomes: ACCEPT 2010-2015. Int J Environ Res Public Health, 2019:16(7):1171.

Bjerregaard P, Dahl-Petersen IK, Larsen CVL. Measuring social inequality in health amongst indigenous peoples in the Arctic. A comparison of different indicators of social disparity among the Inuit in Greenland. SSM – Population Health, 2018:6:148-157.

Bjerregaard P, Larsen CVL. Three lifestyle-related issues of major significance for public health among the Inuit in contemporary Greenland: a review of adverse childhood conditions, obesity, and smoking in a period of social transition. Public Health Rev, 2018;39:5.

Cancer Control Council of New Zealand. Tobacco control in New Zealand: A history. Wellington: Cancer Control Council of New Zealand, n.d.

Glover M. Picturing the risk of smoking vs vaping. Auckland: Centre of Research Excellence: Indigenous Sovereignty & Smoking, 2019. Leaflet.

Glover M, Cowie N, Kira A, Gentles D, Paton C, Moetara W. The WERO group stop smoking competition: Main outcomes of a pre- and post- study. BMC Public Health, 2014; 14(599). doi: 10.1186/1471-2458-14-599.

Glover M, Kira A, Walker N, Bauld L. Using incentives to encourage smoking abstinence among pregnant indigenous women? A feasibility study. Matern Child Health J, 2015;19(6):1393-9. doi: 10.1007/s10995-014-1645-2



Greenlands Hjemmestyre. 'Inuuneritta', Public Health Program. Strategies and targets for public health 2007–2012. Nuuk: Grønlands hjemmestyre, 2007.

Hajek P, Phillips-Waller A, Przulj D et al. A randomized trial of e-cigarettes versus nicotine- replacement therapy. NEngl J Med, 2019;380:629-637.

Health Promotion Agency. Vaping Facts. https://vapingfacts.health.nz/

Hirini P, Collings S. Whakamomori: He whakaaro, he kõrero noa. A collection of contemporary views on Māori and suicide. Wellington: Ministry of Health, 2005.

Jensen AB, Hounsgaard L. "I only smoke when I have nothing to do": a qualitative study on how smoking is part of everyday life in a Greenlandic village. Int J Circumpolar Health, 2013;72:21657.

Juma, C. Innovation and Its Enemies: Why People Resist New Technologies. New York: Oxford University Press, 2016.

Knudsen AK, Allebeck P, Tollånes et al. for the Nordic Burden of Disease Collaborators. Life expectancy and disease burden in the Nordic countries: results from the global burden of diseases. Injuries, and risk factors study 2017. The Lancet, 2019; published online first. https://doi.org/10.1016/S2468-2667(19)30224-5

Lapidese J. The world is changing for Greenland's native Inuit people. (n.d.). Blog accessed online at https://oceanwide-expeditions.com/blog/the-world-is-changing-for-the-native-inuit-people

Lee PN. Epidemiological evidence relating snus to health – an updated review based on recent publications. Harm Reduction Journal, 2013;10:36.

Ministry of Health. Annual update of key results 2018/19: New Zealand Health Survey. Wellington: Ministry of Health, 2019. Accessed online: https://www.health.govt.nz/publication/annual-update-key-results-2018-19-new-zealand-health-survey

National Academies of Sciences, Engineering and Medicine. Public health consequences of e- cigarettes, 2018. Webinar slides available at: https://www.nap.edu/resource/24952/NASEM-E-Cigs-Webinar-Slides.pdf

Notley C, Gentry S, Livingstone-Banks J, Bauld L, Perera R, Hartmann-Boyce J. Incentives for smoking cessation. Cochrane Database of Systematic Reviews, 2019;(7).

Nutt D, Phillips L, Balfour D, Curran V, Dockrell M, Foulds J, et al. Estimating the harms of nicotine containing products using the MCDA approach. Eur Addict Res, 2014, 20:218–225.

Petersen R. Colonialism as seen from a former colonized area. Arctic Anthropology, 1995;32(2):118-26. Accessed online at: http://arcticcircle.uconn.edu/HistoryCulture/petersen.html

Phillips CV. Post on Twitter, November 28, 2019. https://twitter.com/carlvphillips/status/1199827133863997442

Phillips CV, Guenzel B, Bergen P. Deconstructing anti-harm-reduction metaphors; mortality risk from falls and other traumatic injuries compared to smokeless tobacco use. Harm Reduction Journal, 2006;3:15. doi:10.1186/1477-7517-3-15.

Riahi F, Rajkumar S, Yach D. Tobacco smoking and nicotine delivery alternatives: patterns of product use and perceptions in 13 countries. [version 2; peer review: 2 approved]. F1000Research, 2019, 8:80. https://doi.org/10.12688/f1000research.17635.2

Rodu, B. Mortality among male smokers and smokeless tobacco users in the USA. Harm Reduction Journal, 2019;16:50.

Royal College of Physicians. Nicotine without smoke: Tobacco harm reduction. London: RCP, 2016.

Shapiro H. No Fire, No Smoke: The Global State of Tobacco Harm Reduction 2018. London: Knowledge-Action-Change, 2018.

Snaebjörnsson, K. Harm reduction in Iceland. 2nd Scientific Summit, Athens, 29-30 May 2019. Accessible at: http://www.nosmokesummit.org/presentations/

Walker N, Parag V, Verbiest M, Laking G, Laugesen M, Bullen C. Nicotine patches used in combination with e-cigarettes (with and without nicotine) for smoking cessation: a pragmatic, randomised trial. The Lancet, 2019; published online first.

West R, Brown J, Jarvis M. Epidemic of youth nicotine addiction? What does the National Youth Tobacco Survey reveal about high school e-cigarette use in the USA. (Preprint). Qeios, October 7, 2019. https://doi.org/10.32388/745076.3

Williams-Grut O. '22 wealthy nations that smoke the most'. Business Insider, 7 November 2015.

Williamson KL. Men's and women's spheres among couples from Maniitsoq (Greenland). Une note de la revue Études/Inuit/Studies, 2006;30(1):123–133.

World Health Organisation. WHO Framework Convention on Tobacco Control. Geneva: WHO; 2005. https://www.who.int/tobacco/framework/WHO\_FCTC\_english.pdf

