

Want To Prevent Cancer & Reduce Cancer-Related Morbidity?

Adoption of a tobacco harm reduction approach can help

MAREWA GLOVER, PhD



Citation: Glover, M. Want to prevent cancer and reduce cancer-related morbidity? Adoption of a tobacco harm reduction approach can help. Auckland: Centre of Research Excellence: Indigenous Sovereignty & Smoking, 2019. Māori Affairs Committee Submission.

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



Want To Prevent Cancer & Reduce Cancer-Related Morbidity?

Adoption of a tobacco harm reduction approach can help

MAREWA GLOVER, PhD



Contents

| | |
|---|----|
| Introduction | 5 |
| Inequities in cancer | 7 |
| <i>Smoking-related cancers</i> | 8 |
| <i>Lung cancer in Māori: a neglected priority</i> | 10 |
| The role of institutional racism in maintaining inequity | 13 |
| The inadequacy of eurocentric tobacco control | 14 |
| Adopting a tobacco harm reduction approach | 16 |
| <i>Nicotine vaping products are different to cannabis vaping products</i> | 18 |
| Indigenous solutions to reduce tobacco smoking | 20 |
| Recommendations for a new cancer strategy | 22 |
| Conclusion | 24 |
| Ngā mihi / Acknowledgements | 25 |
| About the author | 26 |
| References | 28 |



Introduction

This submission seeks to highlight the importance of supporting evidence-informed methods that can more rapidly than ever before assist people to stop smoking.

Tobacco smoking is a significant cause of several cancers and the principal cause of lung cancer. Smoking is also associated with poorer prognosis. The first section of this submission recaps why reducing tobacco smoking needs to remain a top priority for intervention if the New Zealand Government truly wants to reduce the incidence of cancer overall, and particularly if reducing the health inequities between non-Māori and Māori is a genuine goal.

Tobacco smoking rates have reduced over the last 50 years from a peak of tobacco consumption averaged per adult (aged 15 and over) in the mid-1950s (1). The first smoking prevalence statistics calculated in the mid-1970s found that 58% of Māori adults smoked compared with a total country average of 36% (ibid). In 2017/18, 33.5% of Māori smoke while the total country average was 14.9%. It looks like a massive drop if you ignore how long it took to achieve this – 41 years!

| | 1976 | 2017/18 | Average drop over 41 yrs = |
|----------|------|---------|----------------------------|
| Māori | 58% | 33.5% | 0.6% per annum |
| Total NZ | 36% | 15% | 0.5% per annum |

Only a small minority of New Zealanders (about 15%) still smoke but smoking among Māori is still disproportionately high. The Māori smoking rate is similar to that of Latvia (34%) with only Indonesia (38%) and Greece (39%) having higher rates among OECD countries. The average rate for OECD countries is 20% (2)



The existing inequity between Pākehā and Māori smoking rates that dates back to the introduction of tobacco smoking to Māori men AND WOMEN in the late 1700s through early-1800s has never been addressed! The New Zealand tobacco control programme has only ever intended to deliver equal effects, that is, the same level of reduction of smoking across all groups regardless of the huge pre-existing disparities. There has never been an attempt to reduce the inequity itself. And this neglect should be considered a breach of Te Tiriti o Waitangi.

Of relevance to cancer, Māori begin smoking at an earlier age than other populations (3). The sensitivity of adolescent lung tissue to smoking damage has been found to have an independent effect on the development of lung cancer (4). Levels of social inequality between Māori and Pakeha has an independent effect on Māori smoking rates.

In the following sections I will review some of the literature on the cancer-related inequities that exist between Māori and Pakeha. Following consideration of the role of institutional racism, I will discuss the inadequacy of the Eurocentric tobacco control programme that is in itself a barrier to reducing smoking among Māori. I then lay out the rationale for the adoption of a harm reduction approach to tobacco smoking. A Māori tobacco control strategy designed by Māori smoking cessation experts and key informants is also needed. To conclude, I make a number of recommendations that should be seen as a compliment to the many other care and treatment related improvements other submitters will put forward. Assisting the more rapid reduction of smoking is just one important cancer prevention strategy that needs to be done.



Inequities in cancer

Cancer has taken over from heart disease as the leading cause of death in middle-age in higher income countries (5). In New Zealand, cancer is a leading cause of disability and death. Māori experience a disproportionately negative impact of cancer and inequalities in terms of cancer risk, incidence and outcome. A recent study showed a widening of disparities in cancer death rates between Māori and non-Māori and an increasing trend of inequalities in life expectancy caused by cancer (6).

Looked at together, the body of studies on cancer in Aotearoa has revealed that the inequities exist along the entire cancer pathway for Māori. There is not one point for intervention - Māori are 20% more likely to get cancer than non-Māori and nearly twice as likely to die from cancer (7). Māori experience significantly higher overall incidence and mortality rates (from all cancers combined), and differences in rates, ratios, distribution of stage, and survival for specific cancer sites. This experience mirrors international evidence of ethnic disparities in cancer incidence and outcomes, and of the disproportionate impact of cancer on other indigenous peoples (6).

It is particularly concerning that significant disparities in survival exist between Māori and non-Māori for a number of specific cancers that are potentially curable when detected early or that have good treatment options. Māori are twice as likely to die from cancer, even though they are only 18% more likely to have cancer. Māori experience significantly poorer access to all cancer services, and poorer quality of health care from diagnosis to treatment. Further, the inequalities in cancer death rates are increasing and this is a major reason for the significant gap in life expectancy (8.2 years) between Māori and non-Māori.

Whilst death rates have been reported to be significantly higher for Māori for a number of cancer sites, including cancers of the breast, cervix, lung, liver, testis, thyroid, uterus, pancreas, prostate, stomach, larynx, oesophagus, multiple myeloma, non-Hodgkin's lymphoma, and those of ill-defined sites, this submission will



focus on smoking-related cancers (8). Smoking is a preventable behavior, and with recent advances in the development of greatly risk-reduced nicotine and tobacco products, smoking behavior is now highly modifiable.

Smoking-related cancers

Smoking tobacco has been associated with a higher risk of many cancers. A recent analysis of the contribution of smoking to cancer incidence in U.S. adults aged 50 and over (shown in the following table) found that smoking contributed to a small fraction of even some cancers not previously thought to be affected by smoking (9).

Mean smoking-attributable fractions, U.S. adults ages 50 + . Source: 1980–2004 U.S. vital statistics data.

| Causes of death | Female | Male |
|--|--------|------|
| Established and additional causes combined | 15% | 22% |
| Diseases established as caused by smoking | | |
| Lip and oral cavity cancer | 14% | 35% |
| Esophageal cancer | 20% | 27% |
| Stomach cancer | 2% | 18% |
| Colorectal cancer | 14% | 32% |
| Liver cancer | 0% | 0% |
| Pancreatic cancer | 13% | 3% |
| Laryngeal cancer | 45% | 34% |
| Lung cancer | 83% | 87% |
| Cervical cancer | 0% | — |
| Urinary bladder cancer | 18% | 15% |
| Kidney and renal pelvis cancer | 10% | 18% |
| Acute myeloid leukemia | 11% | 16% |
| Diabetes | 0% | 28% |
| Ischemic heart disease | 25% | 20% |
| Other heart disease | 25% | 23% |
| Stroke | 8% | 7% |
| Atherosclerosis | 0% | 9% |
| Aortic aneurysm | 26% | 45% |
| Other arterial diseases | 22% | 38% |
| Pneumonia, influenza, and tuberculosis | 33% | 31% |
| Chronic obstructive pulmonary disease | 61% | 43% |
| Additional diseases associated with smoking | | |
| All other infections | 14% | 27% |
| Breast cancer | 12% | — |
| Prostate cancer | — | 17% |
| Rare cancers | 10% | 26% |
| Cancers of unknown site | 8% | 14% |
| Hypertensive heart disease | 0% | 9% |
| Essential hypertension/hypertensive renal disease | 29% | 14% |
| All other respiratory diseases | 24% | 32% |
| Intestinal ischemia | 44% | 21% |
| Liver cirrhosis | 0% | 47% |
| All other digestive diseases | 14% | 32% |
| Renal failure | 0% | 22% |
| Additional rare causes combined | 9% | 0% |
| Unknown causes | 0% | 0% |

Lariscy JT. Smoking-attributable mortality by cause of death in the United States: An indirect approach. *SSM-Population Health* 7, 2019. doi.org/10.1016/j.ssmph.2019.100349

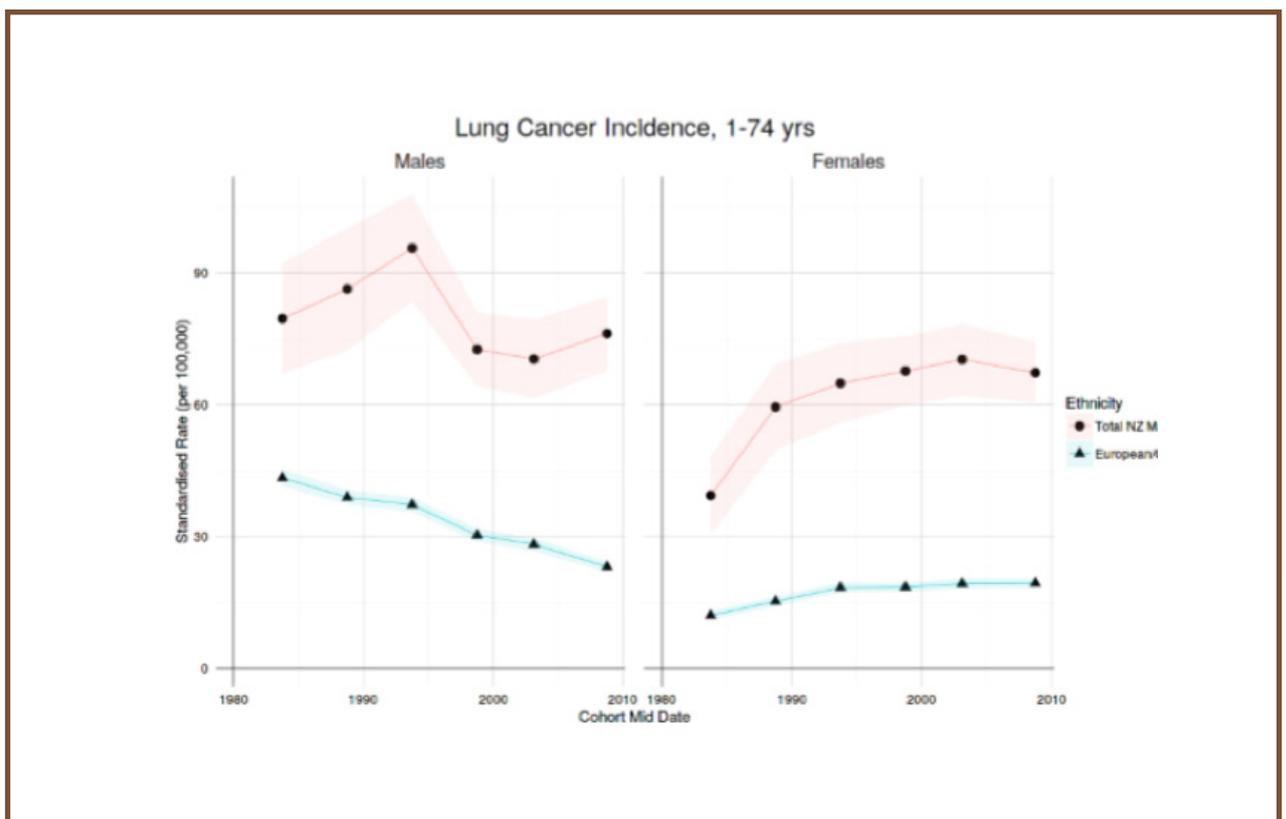


Lung cancer is the most common type of cancer caused by smoking and the most common cause of cancer-related death worldwide. Laryngeal cancer is the next most common smoking-related cancer. As shown above, smoking also causes some cancers of the lip and oral cavity, oesophagus, colon, stomach, pancreas, bladder and kidney. Though contested, Lariscy, found a fraction of breast and prostate cancers could also be associated with smoking, as well as some rare cancers and cancers of unknown site.

Lung cancer in Māori: a neglected priority

Cancer is the leading cause of death in New Zealand and lung cancer leads as the most common cause of death from cancer (10). Its high incidence and poor prognosis make it an important public health concern. The disproportionately higher lung cancer rates for Māori are particularly concerning.

Cancer incidence - Lung Cancer



Source: Disney, et al. (2016) New Zealand Census Mortality and Cancer Trends Study Data Explorer.



The death rate from lung cancer in Māori is three times higher than in non-Māori, and the average age of death from lung cancer among Māori is lower (63 years compared to 70 years) than for non-Māori. The high rates of tobacco smoking among Māori are likely to contribute to the high incidence of lung cancer observed. Importantly, the proportion of lung cancer in Māori due to tobacco smoking has never been established and remains unknown. Thinking that all cases of lung cancer in Māori are due to smoking would be an assumption. Environmental tobacco smoke (passive smoking), smoking marijuana, occupational exposures, diet, socioeconomic status, or level of deprivation, are also likely to play a role in the pathogenesis of lung cancer in Māori.

Current lung cancer risk reduction programmes focus on reducing tobacco smoking, however, these have been slow at reducing smoking rates among Māori.

The poorer quality of the assessment and management of lung cancer along the care pathway is a compounding problem. There is circumstantial evidence of inequalities in the care of Māori with lung cancer, and that this results in worse outcomes. For example, the ratio of Māori to non-Māori mortality for lung cancer is higher than that for lung cancer incidence (3.5 for mortality compared with 2.8 for incidence). In other words, case fatality rates for lung cancer are higher for Māori compared to non-Māori (11). Possible explanations include a delay in presentation or delays in the investigation, diagnosis, staging, or treatment of lung cancer. Māori are less likely than non-Māori to have their cancer staged at diagnosis and the reasons for this are not clear. While there is no New Zealand data on whether treatment rates may also differ, ethnic differences certainly exist in the treatment of early stage lung cancer in the United States (9). Indeed, the lower survival rates for black patients with lung cancer compared to white patients is largely explained by the lower rate of surgery.

Late diagnosis of lung cancer has a destructive impact because of the limited treatment options. Screening programmes for lung cancer have been recommended. Young et al (2011) (12) identified a genetic link between susceptibility to chronic obstructive respiratory disease (COPD) and lung cancer. Young suggested that people who smoked should be routinely offered spirometry checks to increase early detection of COPD and potential subsequent lung cancer. He and colleagues also developed a genetic test for lung cancer, but early development work was based on European gene lines. I am unsure if he ever developed a similar test for people of Asian / Polynesian descent. This is another way Māori are neglected – when medicines or gene specific tests or treatments are developed first for peoples of European descent.

A further discriminating factor that disadvantages Māori, Pacific and disadvantaged socioeconomic groups who have higher smoking rates is the stigmatization and shaming of people who smoke. Poorer care of smokers who develop lung cancer has been partly attributed to health professionals holding a judgmental attitude towards people who smoke – they are seen to be to blame for their illness. This has had flow on effects to research funding committees and treatment resource allocation decisions – resulting in lung cancer being demoted or entirely neglected as a priority (13). The lack of research and public health emphasis on lung cancer will likely be compounded by unconscious racial and class bias against Māori, Pacific, and disadvantaged populations who are disproportionately at higher risk.

One innovative study that has been recently funded in New Zealand is looking at the efficacy of training dogs to detect lung cancer in humans (14).

In conclusion, the disparities in lung cancer rates across ethnicity and socioeconomic status in New Zealand should be addressed or else, as predicted by Shaw and colleagues (15), these disparities are likely to increase over time.



The role of institutional racism in maintaining inequity

Institutional racism has been identified as a barrier to Māori achieving health equity with Pākehā. Institutional racism is built into the way society is structured. It occurs when the policies and practices of organisations prevent some groups in society from accessing resources and power (16). In New Zealand, the healthcare system as a whole was modelled on the English healthcare system, where most of the Pākehā came from. They replicated their English way of life here in Aotearoa. Their numerical and political dominance has kept all of the Government structures, such as, the education system, the health system, the political system and the justice system largely in line with their cultural values, beliefs and ideas. When a group embeds their ways as ‘the’ way everything should be in a society, despite the existence of a pre-existing different cultural group (such as Māori – the Indigenous people), this is called ethnocentrism or cultural racism (16, 17).

There is a growing body of evidence that racism is a major determinant of health and a fundamental driver of ethnic inequalities that must be addressed in order to improve Māori health outcomes and reduce inequalities.

New Zealand evidence includes the very different profile of Māori to non-Māori with respect to the determinants of health such as education, employment, income, housing, income support, dealings with the criminal justice system, health literacy and deprivation (18). These factors also reflect exposures to other risks like tobacco use, poor nutrition, overcrowded and substandard housing, unsafe workplaces, problem gambling, and ‘binge’ patterns of alcohol use (19). Also, Māori experience longer and slower pathways through health care (20) and their hospitalisation rates are uncharacteristically low in disease categories where Māori have high death rates. Māori facing difficulty in accessing transport or resources have more obstacles to attending health services for both treatment and prevention. Māori are also less likely to receive appropriate levels of care for screening and treatment of ischaemic heart disease (21), pain relief during labour and childbirth (22), the diagnosis and treatment of depression (23), diabetes screening and management (24) and they have higher levels of adverse events in hospital (25).

Continued and intensified efforts are needed to combat institutional racism and unconscious bias in the health system.



The inadequacy of eurocentric tobacco control

Tobacco control as a sector began in New Zealand in 1982 with the establishment of Action on Smoking and Health New Zealand (ASH). “ASH took its values from ASH in London” (26). Pākehā medical doctors, academics and lobbyists predominated in the sector and later in the wider public health sector that continues today.

In 2005, New Zealand’s world-leading *Smoke-Free Environments Act* (1990) and its by then comprehensive tobacco control programme became an exemplar for the World Health Organisation’s *WHO Framework Convention on Tobacco Control* (FCTC) (27), the world’s first global treaty intended to reduce a health problem.

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 (27).

Despite consultation with diverse countries and groups around the world, the FCTC was largely written by white European leaders in tobacco control – it was Eurocentric. The FCTC 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 how it left no place for ancient and Indigenous cultures that had long histories of using tobacco in many different ways.

The international tobacco control movement shifted once we had the FCTC. Governments throughout the world began a race to implement as many of the strategies and bans listed therein as they could. Even in New Zealand, there were enough novel measures to keep us lobbying for more funding and more regulations for decades to



come. Further, the FCTC urged signatories not to be limited by the articles and principles of the Convention and, local laws permitting, to impose *stricter* requirements than what was suggested (27).

As I have summarised in previous submissions (28), ever since the United States Surgeon General's 1964 report confirmed that smoking kills, the New Zealand government has run advertisements warning of the dangers of smoking. We've had 35 years of anti-smoking campaigns – no smoking stickers, stop smoking ads on TV and radio and gory pictures on cigarette packs. In 1990, the *Smoke-Free Environments Act* banned smoking in indoor workplaces and schools. We've had regular tobacco tax increases, subsidised nicotine patches, gum and lozenges and free stop smoking counselling both via the Quitline (0800 778 778) and, in some places, free face-to-face support at local health centres.

Times have now changed. The culture of smoking has changed fundamentally and dramatically with the introduction of vaping and other risk-reduced alternatives to smoking. Smokers who have for decades been let down by the low-efficacy of stop smoking products and programmes are switching in droves to vaping or snus or tobacco heating devices – without our help or say so. They no longer need, nor do they want us, at their back pushing them to stop – they're doing it on their own and together with their fellow smokers.



Adopting a tobacco harm reduction approach

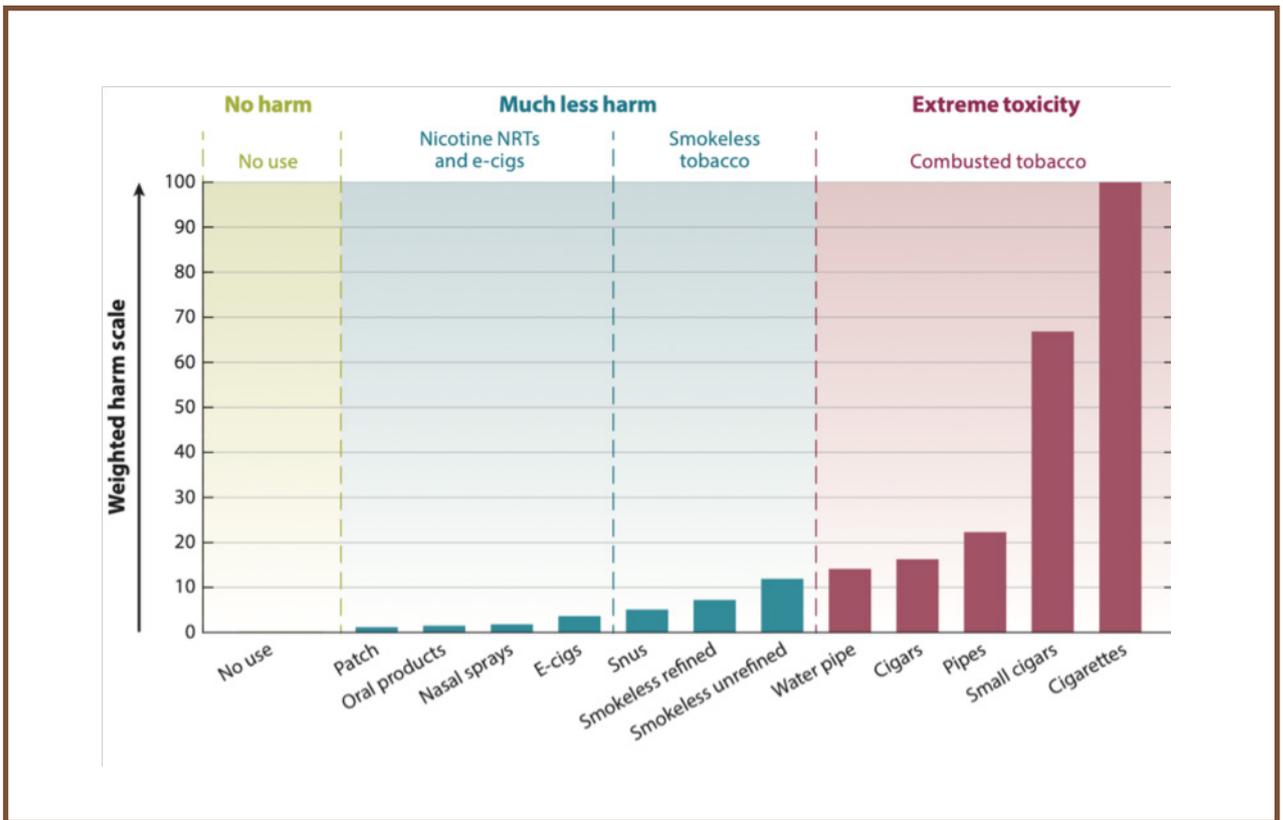
A harm reduction approach recognizes that total abstinence is not always achievable for everyone, or it may not be desired by everyone. We all engage in behaviours that put our health or our very life at risk every day when we drive a car in Auckland traffic, or when we go out fishing. To mitigate the risk, we wear lifejackets, seat belts, condoms. We use Uber instead of driving after drinking alcohol at the restaurant. If you've got diabetes, you switch to Coke Zero, eat less carbs, exercise a bit more.

When the evidence suggested that even smoking just a few cigarettes a day still represented a risk of heart attack, tobacco control stopped being supportive of just smoking less. Complete abstinence became the rule. Over a couple of decades this rule hardened into a demanding 'quit or die' narrative. Then along came the electronic cigarette.

At first, I thought the electronic cigarette was just another stop smoking gimmick out of China - there'd been a lot of them. But smokers around the world flocked to the e-cigarette. They took over the improvement of the technology and began opening up ecig manufacturing plants, e-liquid production businesses and vape shops. Millions of smokers across Europe and the U.K., then the U.S., completely switched from smoking cigarettes to vaping. Vaping revolutionised the tobacco product market AND tobacco control (although a lot of tobacco control people are still struggling to grasp the harm reduction concept. They still want total abstinence and eventual prohibition of all tobacco and nicotine use).

The nicotine and tobacco use landscape began and is still undergoing a tectonic shift. There are now a wide range of greatly risk reduced alternatives to smoking tobacco and some of them are proven (Swedish snus) or have been recently proven (vaping nicotine) as effective ways to stop smoking. The innovations in the new technologies hasn't stopped so we can expect to see more improved products and systems that will more quickly move people away from smoking.

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 (29).

Research on the risks or benefits of the new vaping or heated tobacco products is moving quickly but for every strong scientific study there are a multitude of poor to unscientific papers. When focused on improving health, it is imperative that leading experts in the products are listened to – not soccer mums or children who have been propped at a lectern to read mum or dad's prohibitionist propaganda.

Nicotine vaping products are different to cannabis vaping products

I need to acknowledge that at the time of uploading this submission an anti-vaping hysteria has gripped the U.S. Alarming warnings and extreme prohibitionist demands to ban e-cigarettes and e-liquid flavours and nicotine levels and vaping indoors, outdoors, anywhere - are spewing out of America via all media channels and across social media. Politicians across the U.S. and now in New Zealand and India, are rushing to pass bans or regulations intended to staunch the migration of smokers to vaping products.

The anti-vaping protestors have always been there. This panic has been caused by their exploitation of a tragic small number of deaths that have resulted from people vaping contaminated THC (tetrahydrocannabinol from cannabis) cartridges. About 530 people across 38 states have reportedly experienced severe respiratory incidents and 7 deaths have occurred among mostly young white adults who bought and used a black-market cannabis cartridge for vaping. Analysis has confirmed that an acetate derived from Vitamin E which was being used as a dilutant to carry the THC contained some oil. Inhalation of the oil contaminated aerosol is believed to have caused the alarming cases of respiratory inflammation. This 'outbreak' is contained to the U.S. That is, no cases of this illness have been reported in any other country where millions of people have been vaping nicotine for 14 years. Nicotine vaping is not the culprit.

The event certainly raises some serious topics to be debated in New Zealand.

Regulation is needed to ensure that only quality vaping products are able to be sold in New Zealand. Excessive regulation, such as banning non-cigarette flavours, would result in a black market of unregulated e-liquids – the very situation that led to contaminated dabs / carts being sold on the streets in the U.S. Non-cigarette flavours are critical to the efficacy of nicotine vaping for complete transition from smoking to vaping.

Regulation will also contribute to clearing up the misinformation that is circulating about the risk profile of nicotine vaping. In June 2019, Associate Minister Salesa launched a government-funded website designed to combat misinformation about vaping (30). It is an important initiative because the lies are intended to put people off vaping and drum up support for bans or at least heavily restrict access to vaping products. *Vaping Facts*, produced by the Health Promotion Agency, a government agency, is a world-leading campaign second only to campaigns run by Public Health England to encourage people who smoke to switch to vaping (see for example: (30)). The Health Promotion Agency's already developed mass media campaign intended to encourage people who smoke to switch to vaping should be immediately launched.

At the moment in New Zealand cannabis is still illegal. The debate leading up to the referendum on decriminalisation of cannabis needs to consider how vaping cannabinoids would be regulated to ensure the U.S. contaminated cannabis carts-related deaths are not replicated here. Given that there is already a black market in cannabis, do we need to be alert now for illicit THC carts? How can we ensure only quality cartridges are used, if at all, here? Shouldn't the Ministry of Health be issuing truthful information so that potential cannabis users attracted to vaping cannabis can be forewarned?



In all of the debate about vaping nicotine or cannabinoids, people who smoke that increase their risk of cancer, need to be at the centre – it's smoke that kills. About 580,000 New Zealanders currently smoke tobacco. We mustn't block the fastest most effective ramp out of cigarette smoking that they've ever had. Rapidly reducing smoking prevalence will deliver the fastest and greatest reduction in cancer morbidity and mortality before us at this time.

Further to this, Swedish-style snus tobacco and nicotine products (a smokeless and vapourless product) should be confirmed legal for sale in New Zealand when the *Smoke-free Environments (Regulation of E-Cigarettes) Amendment Bill* is debated later this year.



Indigenous solutions to reduce tobacco smoking

In addition to regulating to support adoption of a tobacco harm reduction approach, other effective solutions for assisting smoking cessation exist that could be used in conjunction with switching or as a standalone cessation option. For example, financial incentives appear to be effective (31). Retail vouchers, prize draws and gift packs could all be used to incentivise quitting or switching, and appointment attendance and treatment adherence (32).

A tobacco control strategy with a strong emphasis on Māori-focused outcomes has been highlighted as a critical tobacco control activity for the NZ government to address inequalities and ensure a significant reduction in tobacco-related harm is achieved within the next decade (33). Māori tobacco control and smoking cessation experts, including myself as the most qualified and experienced Māori academic in this field, should be involved in shaping that strategy.

The government's new *Vaping Facts* website <https://vapingfacts.health.nz/> should be supplemented with culturally appropriate campaigns designed by-Māori-for-Māori.

Future smoking cessation campaigns should strenuously focus on people who smoke to avoid inadvertently normalising smoking or alternative products among never smokers. Marketing strategies such as niche marketing, identifying smokers through registers, messaging in smoking areas, increased proactive support from healthcare professionals and use of peer influencers would be less likely to trigger never smokers to try smoking. All services delivering to people with smoking-related cancers should be screening for smoking and offering quit or switch support.

As I have suggested in a previous submission to the Health Select Committee (28) with only about 580,000 smokers in New Zealand, one cost-efficient intervention would be to establish a register of smokers and use computer assisted dialling and an interactive voice response system to identify smokers wanting quit support.



This highly innovative, at the time, intervention was first used in Ottawa hospitals to follow-up smokers who had been supported to quit while in hospital (34). Having identified a patient wanting quit support, the automated system then sent a referral to a live nurse to follow-up.

For assisting with rapidly reducing Māori smoking rates, promising by-Māori-for-Māori interventions like *Vape2Save* should be funded for national delivery and independently evaluated. *Vape2Save* provides financial literacy skills and incorporates switching from smoking to vaping in a facilitated peer and whānau group-based support format. The program data to date indicates that very high quit rates are being achieved. Of the 80 participants in 2015, 70% were quit (no longer smoking) by 4 weeks. In 2017, 82 participants did *Vape2Save* programs - the quit rate at 4 weeks was 79%. Of the 67 participants in 2018, 69% were validated quit at 4 weeks (35). With such high indicative quit rates, it is almost a scandal that the program has been running for 4 years on a voluntary basis. No wonder the inequities between Māori and non-Māori smoking rates are widening!

Interventions that are effective for Māori are not being funded and it's not because the Government can't afford to pay for them. The government takes far more tax from people who smoke than what it costs them to provide healthcare to smokers who get sick from having smoked. In 2018, the government earned \$1,923,000,000 (almost \$2 billion) from the excise tax on tobacco (36). Almost 30% of that tax bill was drawn from Māori who smoke.

The excise tax on tobacco in New Zealand is the highest in the world relative to income. With our disproportionately high smoking rates, this represents a massive economic loss to the Māori nation amounting to a total expenditure on tobacco including the tax and GST of \$1,023,000,000 per annum! Considered in the context of the over-representation of Māori among the unemployed, and lower income deciles, this loss of money to tobacco smoking is a seriously negative economic determinant of ill-health for Māori. Remember this when you're reading of all of the financial barriers to accessing screening and treatments for cancer.



Recommendations for a new cancer strategy

Continued and intensified efforts are needed to combat institutional racism and unconscious bias in the health system

We maintain that to eliminate racism and achieve health equity and improved Māori health outcomes the health sector must engage authentically with its *Tiriti o Waitangi* obligations. The recent Waitangi tribunal report on the WAI 2575 health kaupapa (agenda) claim clearly articulated the historic and contemporary failure of the health sector to protect and promote Māori health. Going forward, we need Māori expert involvement in policy making, sector design, implementation and evaluation of all aspects of the cancer care continuum.

Resource the development of indigenous solutions

To increase rates of cancer screening and earlier detection, and equitable care, we suggest that Māori experts be involved in the decision making, and that policy-makers draw on strategies that have proven successful in the past whilst looking for more effective solutions. Māori health providers and researchers should be better resourced to design and evaluate innovative and kaupapa Māori / matauranga Māori solutions.

Improve monitoring and reporting for Māori

To address treatment delays, we recommend that district health boards (DHBs) be required to report median diagnosis and treatment delays by ethnic group. This reporting will make ethnic inequities transparent. A new performance measure could encourage providers to report reasons for delays and respond to them.

Deliver in a Māori way to Māori where they are

We recommend that existing transport assistance programmes be improved, and that local delivery of care be achieved with a focus on better delivery to Māori in their homes and communities. One example, is Dr George



Laking's proposed trial to deliver oncology services to whānau in their home, in their community (37).

Reorient the funding to ensure treatments are available to reduce the inequity

Funding for advanced cancer drugs, including for lung cancer, and treatments in the public system need to be increased to reduce ethnic inequities.

Adopt a harm reduction approach to reduce smoking

Finally, we recommend that all smokers be supported to switch to any, or a combination of, the greatly risk-reduced nicotine and tobacco products that exist. People who smoke who are at higher risk of cancer, or who have been diagnosed with cancer, should be a priority for stop smoking services.

Snus tobacco and nicotine products should be confirmed legal for sale

It is very important that the final look of the future *Smoke-free Environments (Regulation of E-Cigarettes) Amendment Bill* does not undermine smokers' access to risk-reduced products for vaping, tobacco heating, or to Swedish style snus. Access to risk reduced alternatives to smoking needs to be cheaper than tobacco for smoking, and as convenient as buying a pack of cigarettes is now. Thus, the new risk-reduced alternatives should not be taxed initially. It is equally 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. If the flavours are banned, one of the key ingredients that helps people transition away from smoking will be gone. Trying to make vaping e-liquids into unpleasant tasting low-dose nicotine replacement products will slow the migration of smokers from burning tobacco to harm reduced alternatives.



Conclusion

Reducing health inequities between Pākehā and Māori should be a priority. This should be done not only because Te Tiriti o Waitangi promised ngā iwi Māori equity, partnership at a governance level and the protection of our taonga including our health, but because it is the right thing to do. Reorienting funding to reduce the inequity is also supported as right and just by the United Nations Declaration on the Rights of Indigenous People.

As we have shown, Māori experience inequity across the spectrum of cancer intervention points from ineffective Eurocentric prevention programmes, lack of adequate risk assessment and screening, later prescription of treatment, differential treatment and denial of life-prolonging drugs in the public system. We believe if these inequities are reduced, the survival gap between Māori and non-Māori will narrow.

We propose that ethnic inequities can be improved by: supporting a harm reduction approach to reduce tobacco smoking prevalence (Māori will disproportionately BENEFIT from this); and by implementing individualized risk assessments, innovative and increased screening coverage to Māori, reducing treatment delays for Māori, increasing funding of drugs and treatments for Māori in the public system, offering Māori patient navigation services, and mandating reporting of ethnic cancer data by DHBs.



Ngā Mihi / Acknowledgements

I want to thank Dr Paramanathen for his help with writing draft content.

In June 2018, I founded my own independent Centre of Research Excellence: Indigenous Sovereignty & Smoking after receiving 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.

Recent false statements about me have been widely circulated in New Zealand media and via Facebook and Twitter. In a recent Public Health Association of New Zealand newsletter Dr Stone, their CEO, stated that I was influenced by Philip Morris International. She also said that I made false statements to the select committee considering amendments to the *Smokefree Environments (prohibiting smoking in motor vehicles carrying children) Amendment Bill*. The Public Health Association of New Zealand has now issued a public apology saying the statements made by Dr Stone were false and that both “Dr Stone and the PHA retract these comments and unreservedly apologise to Dr Glover for the comments made”.



About the author

For Māori readers, who will want to know my tribal and whānau (family) links, I am descended from Ngā Puhi from the Hokianga and Waikare in Northland. My hapū (subtribes) are Te Popoto and Te Kapotai. The most recent whānau names on my maternal grandfather's side are the Cooks and Bakers (i.e. the Bakers on the Hokianga side of the island). My father was a Pākehā of English descent, and my mother's mum was Irish.

I have been working on reducing smoking since 1988 when I began working in community health. I later worked as a Māori policy analyst at the Public Health Commission (PHC). I worked on three policies when I was there: reducing the harms of tobacco smoking, preventing cervical cancer and preventing Sudden Infant Death Syndrome.

Because tobacco smoking was the biggest preventable killer of Māori I decided to focus all my training and passion on reducing the harms of tobacco smoking. All the jobs and most of the research I have conducted or supported over the last 27 years have been focused on helping people stop smoking.

I have designed and evaluated many stop smoking and harm reduction programmes. Over my 20 year long academic career I have so far led or contributed to over 100 scientific publications. In recognition of this, in 2017, I was a finalist in the New Zealand Women of Influence Awards. In 2018, I was promoted to Professor of Public Health at Massey University, the International Network of Nicotine Consumer Organisations (INNCO) awarded me Professional Advocate of the Year and BlacklandPR selected me as one of their finalists for 2018 Communicator of the Year. Beyond all my expectations, in 2019, I was selected to be one of the three Finalists in the Kiwibank New Zealander of the Year Awards.



Through my Centre I will be continuing to research how to more rapidly reduce how many people smoke. I will also be continuing to find out how we can more effectively help pregnant women who smoke to abstain from smoking as quickly as possible upon finding out they are pregnant. Towards this end, one of my new projects tested the use of a positive Māori value delivered in a humorous way. The videos we produced won Best Director and Best Picture at the *6th Global Forum on Nicotine* in Warsaw. You can view these here: <https://youtu.be/fn9tH5hLoCM>. Follow our work on our Facebook page or sign up for our publications on www.coreiss.com, or follow me on Twitter [@MarewaGlover](https://twitter.com/MarewaGlover).



References

1. Cancer Control Council of New Zealand. *Tobacco control in New Zealand: A history*. Wellington: Cancer Control Council of New Zealand, n.d.
2. Williams-Grut O. 22 wealthy nations that smoke the most'. *Business Insider*, 7 November 2015.
3. Ministry of Health. *Tobacco Use 2012/13: New Zealand Health Survey*. Wellington: Ministry of Health, 2014.
4. Hymowitz N. Cigarette smoking and lung cancer: Pediatric roots. *Lung Cancer International*, 2012; 790841:1-7. doi:10.1155/2012/790841
5. Dagenais GR, Leong DP, Rangarajan S, Lanas F, Lopez-Jaramillo P, Gupta R, et al. Variations in common diseases, hospital admissions, and deaths in middle-aged adults in 21 countries from five continents (PURE): A prospective cohort study. *The Lancet*, 2019. doi: 10.1016/S0140-6736(19)32007-0
6. Cormack D, Robson B, Purdie G & Ratima M. *Access to Cancer Services for Māori: A Report prepared for the Ministry of Health*. Wellington School of Medicine and Health Sciences, 2005.
7. Ministry of Health. *Te Mahere mō te Mate Pukapuka o Aotearoa 2019-2029*. Wellington: Ministry of Health, 2019.
8. Robson B, Harris R. *Hauora: Māori Standards of Health IV. A study of the years 2000–2005*. Wellington: Te Rōpū Rangahau Hauora a Eru Pōmare. 2007.
9. Lariscy JT. Smoking-attributable mortality by cause of death in the United States: An indirect approach. *SSM-population health*, 2019 Apr 1;7:100349.

- 
10. Harwood M, Aldington S, Beasley R. Lung cancer in Maori: a neglected priority. *NZ Med J*, 2005;118(1213) U1410.
 11. Jeffreys M, Stevanovic V, Tobias M, Lewis C, Ellison-Loschmann L, Pearce N, Blakely T. Ethnic inequalities in cancer survival in New Zealand: linkage study. *American Journal of Public Health*, 2005 May;95(5):834-7.
 12. Young RP, Hopkins RJ, Gamble GD, Etzel C, El-Zein R, Crapo JD. Genetic evidence linking lung cancer and COPD: a new perspective. *The application of clinical genetics*, 2011;4:99.
 13. Bach PB, Cramer LD, Warren JL, Begg CB. Racial differences in the treatment of early-stage lung cancer. *New England Journal of Medicine*, 1999 Oct 14;341(16):1198-205.
 14. Hackner K, Errhalt P, Mueller MR, Speiser M, Marzluf BA, Schulheim A, Schenk P, Bilek J, Doll T. Canine scent detection for the diagnosis of lung cancer in a screening-like situation. *Journal of breath research*, 2016 Sep 28;10(4):046003.
 15. Shaw C, Blakely T, Sarfati D, Fawcett J, Hill S. Varying evolution of the New Zealand lung cancer epidemic by ethnicity and socioeconomic position (1981-1999). *NZ Med J*, 2005 Apr 15;118(1213).
 16. Glover M, Dudgeon P, Huygens I. Colonisation and racism. In: Prilleltensky I, Nelson, G, editor. *Community Psychology: Wellness & liberation*. Australia: Palgrave MacMillan Publishers; 2004. p. 330-44.
 17. Howitt D, Owusu-Bempah J, Owusu-Bempah K. *The racism of psychology: Time for change*. Prentice Hall; 1994.
 18. Ministry of Social Development. *Annual Report, 2005/2006*. Wellington: Ministry of Social Development.
 19. Howden-Chapman P, Tobias M. *Social inequalities in health: New Zealand 1999*. Wellington: Ministry of Health, 2000.
 20. Sadler L, Priest P, Peters J, Crengle S, Jackson R. *Cervical cancer audit report: screening of women with cervical cancer 2000-2002*. Wellington: Ministry of Health. 2004;9.
 21. Bramley D, Riddell T, Crengle S, Curtis E, Harwood M, Nehua D, Reid P. A call to action on Maori cardiovascular health. *NZ Med J*, 2004 Jul 9;117(1197).
 22. Ministry of Health. *Report on Maternity: Maternal and newborn information 2003*. Wellington: Ministry of Health 2006.
 23. Arroll B, Goodyear-Smith F, Lloyd T. Depression in patients in an Auckland general practice. *NZ Med J*, 2002;115:176-179.
 24. Cram F. *Improving Māori access to diabetes health care: Literature review*. Auckland: Katoa Ltd. 2014.
 25. Davis P, Lay-Yee R, Dyal L, Briant R, Sporle A, Brunt D, Scott A. Quality of hospital care for Māori patients in New Zealand: retrospective cross-sectional assessment. *The Lancet*, 2006 Jun 10;367(9526):1920-5.
 26. Laugesen M. *My life in public health: A memoir from the frontlines of global disease eradication, children's health, and ending smoking*. Christchurch: Health New Zealand, 2019; p.140.
 27. World Health Organisation. *WHO Framework Convention on Tobacco Control*. Geneva: WHO; 2005. 42 p. Available from: https://www.who.int/tobacco/framework/WHO_FCTC_english.pdf

- 
28. Glover M. *Do we really need another law? The cost of New Zealand of banning smoking in cars*. Auckland: Centre of Research Excellence: Indigenous Sovereignty & Smoking, 2019.
 29. Shapiro H. *No Fire, No Smoke: The Global State of Tobacco Harm Reduction 2018*. London: Knowledge-Action-Change, 2018.
 30. Health Promotion Agency. *Vaping Facts*. <https://vapingfacts.health.nz/>
 31. 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).
 32. 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
 33. Māori Affairs Committee. *Inquiry into the tobacco industry in Aotearoa and the consequences of tobacco use for Māori*. Report of the Māori Affairs Committee. Wellington: NZ Government.
 34. Ontario Ministry of Health. *The Ottawa Model for Smoking Cessation, The Network's Success: Simply Smoke Free*. Available from: <http://www.health.gov.on.ca/en/pro/programs/cdpm/pdf/ottawa.pdf>
 35. Ruwhiu-Collins R. Personal Communication. 2019.
 36. Siddharth P. *Quantifying Māori spend on tobacco, alcohol & gambling*. NZIER, May 2019.
 37. Parahi C. 'Insecurity of some white people hinders investment in Māori health, says oncologist George Laking.' *Stuff*, 15 September 2019. Available from: <https://www.stuff.co.nz/national/health/114878119/insecurity-of-some-white-people-hinders-investment-in-maori-health-says-oncologist-george-laking>

