BRIEFING PAPERS

Global State of Tobacco Harm Reduction

The Global State of Tobacco Harm Reduction 2024: A Situation Report

Edited by Oliver Porritt based on GSTHR 2024: A Situation Report

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Introduction

In The Global State of Tobacco Harm Reduction 2024: A Situation Report (GSTHR 2024), we explored the extent to which safer nicotine products (SNP) are replacing and substituting for combustible and risky oral tobacco products. The fourth in our landmark series of biennial reports, and co-authored by experts in harm reduction, data science and economics, GSTHR 2024 considers what is driving these changes, how different regulatory environments have developed, and the complex interplay between products, consumers, and policy and regulation.

Section One of the report, A Global Perspective, uses the latest evidence and new data projections to assess the current global tobacco harm reduction (THR) situation and its potential to rapidly reduce tobacco-related disease and mortality. This Briefing Paper provides a concise summary of A Global Perspective.

What are the costs of smoking?

More than one billion people are still smoking, of whom 80 per cent live in low- and middle-income countries.[1] Smoking leads to more than eight million deaths a year, and a billion people could die from smoking-related diseases by the end of this century.[2] Smoking is the leading cause of premature, preventable death globally and tobacco kills up to half of its users.[3] In addition to the direct impact on human health, the economic costs of smoking-related disease are also staggering, estimated at nearly $2 trillion per annum.[4]

The efforts of tobacco control, focused on taxation and restrictions, have helped achieve reductions in smoking prevalence in some countries, particularly higher income nations. But even in these places, vulnerable populations are being left behind. Additional strategies are needed to drive down smoking prevalence, save lives and reduce ill health, as rapidly as possible.

What other tools can be used to bring down smoking prevalence?

Tobacco harm reduction using safer nicotine products (SNP) has the potential to bring about the most dramatic global public health revolution in decades. If fully realised, it could achieve swift and significant reductions in the stark figures of death and disease caused by smoking.

One essential scientific truth is central to the approach: that the primary source of the many health problems associated with the combustible cigarette lie in the act of inhaling the smoke released when it burns. Remove that risk and there is the possibility of nicotine consumption being relatively safe. The development of a new range of combustion-free SNP – nicotine vapes (e-cigarettes), heated tobacco products and nicotine pouches – now offer people the opportunity to consume nicotine in a fundamentally safer way. These newer smoke-free products sit alongside longer-established SNP like snus, American smokeless and nicotine replacement therapy, significantly expanding the range of options.

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What evidence is available on the relative safety of safer nicotine products?

Although the first commercially viable e-cigarette was introduced in China in 2004, it took a decade before there was significant consumer uptake. Around this time, the scientific evidence supporting the relative safety of nicotine vapes began to emerge. The first major review was published by Public Health England in 2015.[5] It concluded that nicotine vapes are 95% less harmful to your health than combustible cigarettes, and this key message has remained unchanged in close to a decade. Subsequent UK updates, and reviews from other medical and public health bodies around the world, have supported that conclusion.[6] There is also now a robust and growing body of evidence that the use of nicotine vapes provides an effective exit ramp from smoking,[7,8,9,10,11] and therefore an opportunity for improved health.

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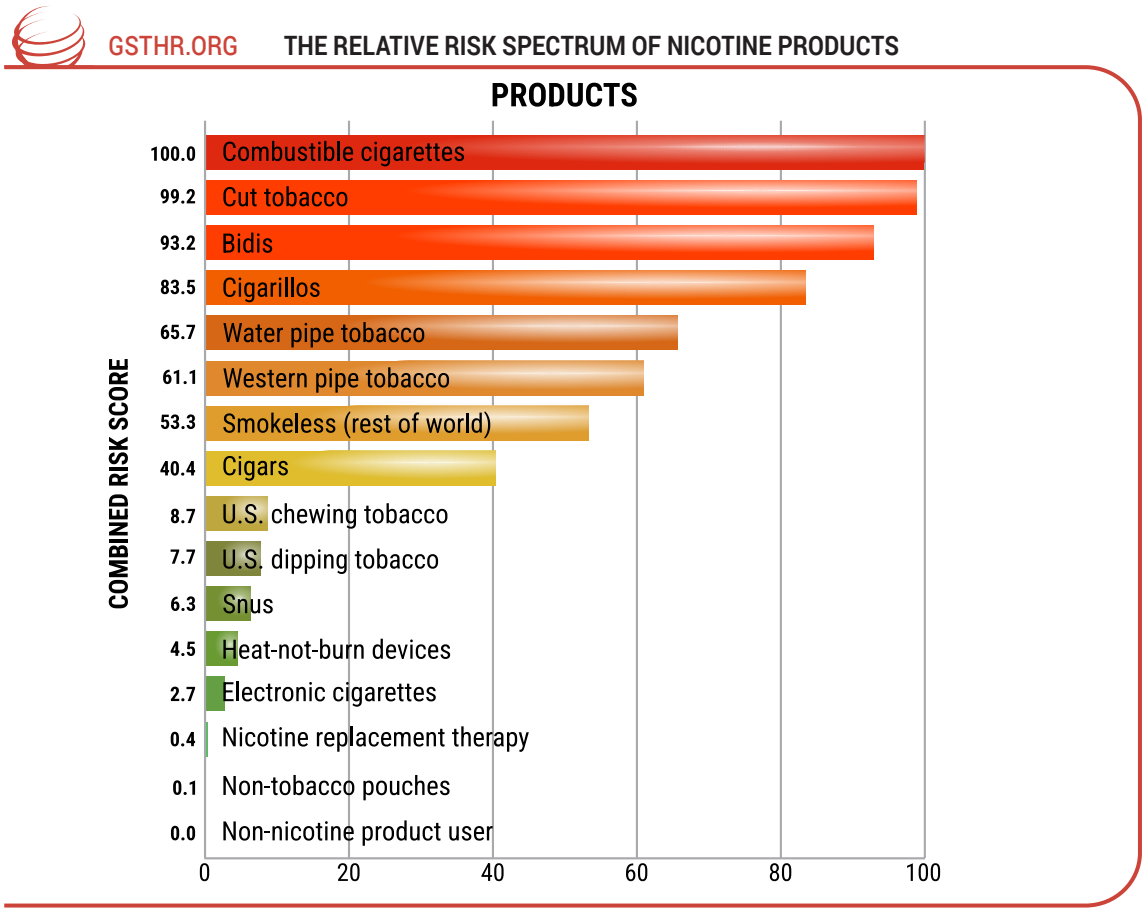
Similarly favourable scientific assessments have been published in respect of oral products such as snus – which brings with it a wealth of epidemiological evidence about its role in reduced smoking-related morbidity and mortality from Scandinavia.[12,13,14,15] And, while there have been more cautious assessments in relation to heated tobacco products (alternatively called heat-not-burn devices), these have also been shown to sit significantly lower on the spectrum of risk when compared to cigarettes and other combustible tobacco products.[16,17]

Figure 1.



Data source: Murkett et. al. 2022. Graphic prepared by GSTHR 2024

How is the safer nicotine product market growing?

The relationship between product development and consumers has been a significant factor in the growth of SNP use. The new nicotine industries developed a range of products consumers were willing to use, with elements of the established tobacco sector subsequently playing catch up. There has been continued growth in the range of products, with various types of nicotine pouches, snus, and a wide selection of vapes and heated tobacco products now available in some markets.

Many people who were smoking have been motivated to switch to these products, on the understanding that they can continue to consume nicotine but at much lower risk to their health. Trying to determine the actual numbers of people who use SNP instead of smoking is challenging, due to the limited number of public health surveys looking at this issue, and the lack of publicly available market data. However, our research suggests that the global number of people who vape has increased from 58 million in 2018 to an estimated 114 million in 2023.[18]

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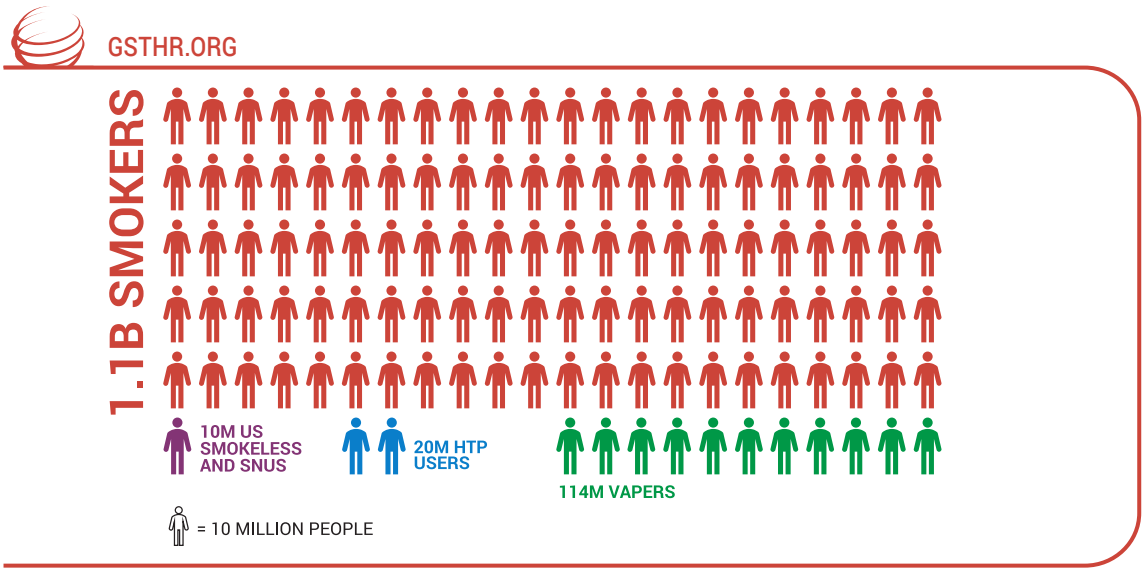
Considering previous estimates for the total number of people using heated tobacco products (20 million) as well as the users of snus and other smokeless products (10 million), this means there were at least 144 million SNP users around the world when GSTHR24 was published.

Figure 2.



The evidence is therefore clear: millions are substituting SNP for the cigarette, though this transition often involves a period of 'dual use', where individuals use both cigarettes and SNP. While sometimes criticised, evidence from GSTHR24 shows this is often a pathway to reducing cigarette consumption and, for many, quitting combustibles altogether.

The market data that are publicly available provide another valuable indicator on the growing popularity of SNP. Indeed, looking at global market estimates, GSTHR24 reveals

that, when adjusted for inflation (assuming a constant currency value), combustible tobacco sales actually decreased to $685 billion in 2024, an 8.9% decline from 2015. In contrast, inflation-adjusted SNP sales, which include snus, nicotine vaping products, HTP and nicotine pouches, grew nearly sixfold from 2015. In non-adjusted terms, the SNP market reached $96 billion in 2024.

Data now support the theory that, when consumers are given accurate information about the relative safety of SNP, as well as access to affordable and suitable products, significant reductions in smoking rates will occur.

What role does regulation play?

Before the advent of SNP, the role of tobacco regulators and their legislators was relatively straightforward. Cigarettes come in a simple form. They are easy to classify and therefore regulate. The same is largely true for other combustible tobaccos. Things became more complicated when new products emerged that did not burn tobacco, but still contained nicotine.

The mistaken belief that nicotine is among the most dangerous elements in combustible tobacco persists in many sectors. It continues to affect decisions made by regulators about SNP. They also face the challenges posed by understanding any new product category. Many are simply unsure what to do.

Some major institutions, notably the World Health Organization (WHO), have adopted a highly sceptical and prohibitionist approach. Despite the increasing weight of evidence to support THR, the WHO continues to deny any potential health benefits of switching from cigarettes to SNP. The organisation and its allies have sought to encourage countries to introduce regulatory frameworks at least as restrictive as those for cigarettes, and, in some cases, more so.

In several countries, the result is that safer products have been banned while cigarettes remain universally available. At the 2024 Conference of the Parties to the Framework Convention on Tobacco Control in Panama, however, some Parties signalled that they are uncomfortable with the current position on tobacco harm reduction.

Tobacco policy is set domestically in most countries, except in the European Union, in which countries must adopt a minimum regulatory framework.[19] Every country has its own economic, political, social and cultural factors that help determine its individual tobacco control policies.

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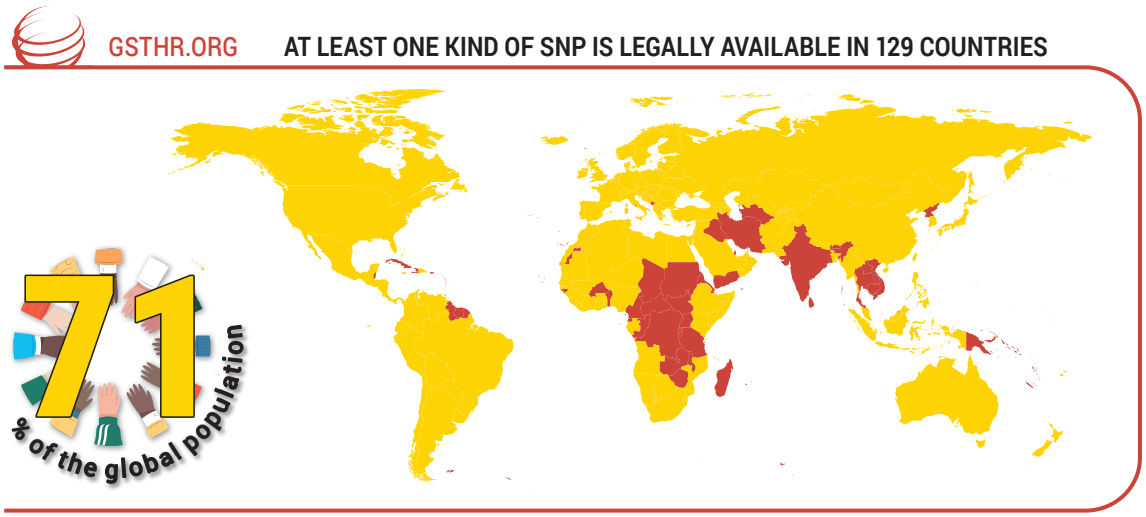

But, as this report reveals, as of 2024, at least one category of SNP (nicotine vapes, HTP, snus or nicotine pouches) is now legally available in 129 countries. This covers four billion people, representing 71% of the global adult population.

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How do approaches to smoking and THR vary around the world?

GSTHR24 comprises two parts. The first is the aforementioned A Global Perspective, and the second is Regional and National Insights. The latter takes an in-depth look at the status of tobacco use and THR in two regions, alongside an up-to-date assessment of four countries that – in different ways – have enabled THR to drive down smoking rates.

In Eastern Europe and Central Asia, while smoking rates are high, there is also widespread use of an estimated fifty different varieties of the oral product nasvay. Often of unknown provenance and with unquantified health risks, nasvay use makes up a significant proportion of overall tobacco consumption in the region. SNP uptake is comparatively low, and recognition of THR virtually non-existent. The current trend towards heavy restrictions or prohibition of SNP risks undermining the potential of THR in the region even further.

Meanwhile, in Latin America, there are some striking contrasts. Despite having the highest absolute number of smoking-related deaths and associated costs in the region, the government of Brazil does not appear ready to relax restrictions on vapes, having banned them way back in 2009.[20] By contrast, Chile, which has the highest smoking prevalence and largest proportion of smoking-related deaths in Latin America, has recently introduced a comprehensive package of measures that have been specifically designed to encourage people who smoke to switch to SNP.[21] Consumers can purchase SNP in most countries, but often from unregulated sources.

The four countries profiled in The Global State of Tobacco Harm Reduction 2024: A Situation Report all provide evidence of the significant progress that can be made when people who smoke are given the opportunity to substitute cigarettes with safer products. This represents a major public health win, but notably one that requires minimal financial investment from the state.

the country profiles of Japan, New Zealand, Norway and the UK all provide evidence of the significant progress that can be made when people who smoke are given the opportunity to substitute cigarettes with safer products

Each of the countries featured shows a different pathway to achieving success in reducing smoking prevalence. The rise in the use of HTP in Japan had little to do with the government, apart from the fact that vapes were effectively banned under existing legislation and HTP were not. A non-interventionist tobacco policy allowed for the advertising of HTP as safer than smoking, and consumers responded. Since the introduction of HTP a decade ago, cigarette sales in Japan have fallen by more than 50%. No legislative or public health intervention has ever delivered such a dramatic drop in cigarette sales over such a brief period.

Snus has been available for more two hundred years in Norway, but had been overtaken by smoking in terms of popularity. A shift back towards snus use followed improvements in manufacturing techniques that made the product safer together with evidence of its relative low risk compared to cigarettes. The impact has been dramatic. In 2023, there were twice as many Norwegians, aged 16-74, using snus compared to the number who smoked (16% vs 7%).[22] And among younger groups smoking has all but disappeared. Just 2% of women aged 16-34 and only 4% of 16-24-year-old men smoked daily in 2023.

Meanwhile the UK's generally supportive, public health-oriented SNP policies developed after a long history of harm reduction in drugs and the prevention of HIV/AIDS. This has helped the number of people who smoke in the country to fall by almost 50% since the introduction of vapes nearly two decades ago. Our data also revealed that in 2025 the number of vapers in the UK is set to overtake the number who smoke. Our forecast predicts that a little over 10% of adults will still smoke while the number who vape will keep rising from the 11% recorded in 2024.

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The New Zealand government adopted a similar approach to the UK, explicitly supporting a switch from cigarettes to vapes, and this has contributed to a significant reduction in smoking prevalence. Indeed, in 2023, 11.9% of adults vaped in New Zealand compared to 8.3% who smoked, but it should be noted that smoking rates remain much higher among Maori populations.

In all four of these countries, though, a rise in SNP sales has been matched by both a downturn in the cigarette market and a reduction in the prevalence of smoking.

Inevitably, though, SNP have thrown up numerous challenges for regulators. A number of countries initially banned them but have since lifted some restrictions. Others have introduced new controls. Most, however, have chosen to assimilate regulations about these products into existing tobacco laws, which over time have become aligned with the recommendations of the Framework Convention on Tobacco Control.[23]

How has progress been hindered by fear, lack of trust and misinformation?

Concern about young people's use of SNP, particularly vaping, has prompted regulatory action in some countries – whether this has been supported by evidence or not. Adolescent use of vapes has also been linked in many instances to the availability of flavours, prompting some regulators to introduce flavour bans of varying specificities. But the narrative on young people and flavours ignores the evidence around the important role flavours in vapes play for people quitting smoking.

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The rise of cheap single-use vapes has also amplified concerns about use by young people and the environmental impact of these products, with a number of bans already in place and other countries set to follow suit.[24,25] There is no doubt that these products are both affordable and easy to use. What is often overlooked, however, is that these features make them particularly well-suited to the most hard-to-reach cigarette users seeking an exit from smoking.

Various financial and economic obstacles to the uptake of SNP were to be expected. The arrival of innovative nicotine-containing products onto the market has constituted the most significant disruption to the global tobacco industry since the invention of the cigarette-rolling machine. The agricultural value and export value of tobacco, as well as the domestic tobacco industry, are sizeable in some countries, so competition from SNP may not be welcome. And most multinational tobacco companies have been reluctant to invest substantially in SNP, both because of the uncertain trajectories of regulatory control, and an obligation to maximise profits for investors. Combustible cigarettes remain hugely profitable for their manufacturers.

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Perhaps less predictable has been the resistance of many organisations to accept the potential offered by SNP. Where research and critical analysis were needed, an infodemic of myths, misinformation and disinformation has emerged. This has been disseminated by often well-intentioned international and national non-governmental organisations, as well as some medical, academic and public health organisations. They are frequently funded by generous but misguided philanthropy from sources hostile to THR using SNP.

Some in the media have been happy to amplify more lurid stories and concerns about safer products, which often relate to the lack of trust in the legacy tobacco industry and its motives. Much of the professional discourse and debate around THR has now become toxic. Unlike in many other areas of public health, the views and experiences of people who used to smoke and are now using SNP are rarely sought or heard. Sometimes they are suppressed. The end result is fear and uncertainty about THR, among frontline health professionals, policymakers and –

worst of all – among people who smoke. People are continuing to smoke because they have been led to believe that SNP are as dangerous as, or even worse than, cigarettes.

Tobacco harm reduction: into the future

Despite all the challenges, however, there are many reasons for optimism as we approach the end of this century's first quarter. The use of SNP is increasing. We have clear evidence that, where circumstances allow, people are keen to switch from smoking to safer forms of nicotine use. Our research shows that more than two-thirds of the world's population – in nearly 130 countries – can legally access at least one form of SNP. The consumer base is growing, alongside evidence of the public health benefits of the substitution of SNP for smoking. These products are here to stay, and the voices of consumer advocates whose lives they have improved are getting louder.

As we look to the next twenty-five years and beyond, so much more can be achieved if the potential of harm reduction is seized. Many are already benefiting from having switched from smoking to SNP – often despite opposition or indifference from their governments and mixed messaging from health bodies. Statistical modelling demonstrates that in the coming decades, millions of people could live healthier, longer lives if SNP are substituted for smoking. If fully realised, tobacco harm reduction has the potential to rapidly reduce the global number of smokers. This would deliver one of the greatest public health gains of the 21st century.

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