SERI SOCIAL & ECONOMIC RESEARCH INITIATIVE

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ADVANCING SMOKING CESSATION IN ASEAN:

THE ROLE OF NICOTINE REPLACEMENT THERAPY

WHEN YOU CAN'T BREATHE, NOTHING ELSE MATTERS

Lewis Mumford

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THE FOUNDATION OF A PROSPEROUS NATION IS THE HEALTH OF ITS PEOPLE.

YB Datuk Seri Dr. Zaliha binti Mustafa

EXECUTIVE SUMMARY

Tobacco consumption remains a public health crisis across the ASEAN region, imposing a significant burden on healthcare systems. This requires a comprehensive response.

Nicotine replacement therapy (NRT) is a proven method to help smokers quit smoking. It is also a necessary tool that contributes to the implementation of Article 14 of the World Health Organisation Framework Convention on Tobacco Control (WHO FCTC), which promotes tobacco cessation. The use of NRT remains low in ASEAN countries due to barriers such as its limited availability, accessibility, affordability and integration into national health policies.

This report explores **the role of NRT in improving smoking cessation outcomes, highlights policy gaps hindering its widespread use and outlines actionable policy recommendations to increase its accessibility, affordability, and integration into public health systems.**

KEY TAKEAWAYS

A. SHIFT TO OVER-THE-COUNTER AVAILABILITY

Most ASEAN countries continue to consider NRT as a specialised medical intervention available only through formal healthcare, like pharmacies, rather than as a readily available cessation product. Allowing over-the-counter (OTC) availability of NRT products is crucial in reducing barriers to NRT usage.

Malaysia's 2022 reclassification of NRT products (i.e. nicotine gum and patches only) to OTC status represents an important shift and a model for other ASEAN countries to emulate. 77% of smokers were more likely to use NRT products following their reclassification to OTC status.1 This policy shift potentially reduces the burden on healthcare systems by removing barriers to accessing NRT.

B. IDENTIFIED GAPS IN ASEAN SMOKING CESSATION PROGRAMS

While most ASEAN countries have ratified the WHO FCTC, smoking cessation programs in ASEAN remain fragmented and under-resourced.

- Only a few countries (notably Brunei and Malaysia) fully fund NRT through public healthcare systems.
- National quitlines and cessation clinics are in place, but public awareness and resource allocation are insufficient.
- NRT product ranges are often limited, especially in low-income areas and public clinics, limiting uptake among smokers attempting to quit.
- Differences in regulatory frameworks, especially around safety data requirements and management, hinder the timely approval and distribution of NRT products. The regulatory pathway and classification of NRT products across the region are key factors that could significantly influence the accessibility of these products.

C. ADDRESSING THE AVAILABILITY AND ACCESSIBILITY GAP

Tobacco products in many ASEAN countries are often widely available and more accessible than NRT. This imbalance perpetuates addiction and undermines cessation efforts. With the economic costs of smoking and tobacco use amounting to $138 billion annually for ASEAN member states, due to direct healthcare costs and indirect costs from lost productivity caused by illness and premature death (refer to Appendix A), this imbalance needs to be addressed.

As comprehensive measures are needed to unlock the full potential of NRT in reducing tobacco use across ASEAN, the report makes the following strategic policy recommendations:

1. **Enhance OTC Availability:** Make NRT formats available over the counter region-wide, and expand their availability to include pharmacies, grocery and convenience stores, as well as e-commerce platforms.
2. **Integrate NRT into Cessation Programs:** Embed NRT in programs that mitigate their costs, facilitate access and awareness.
3. **Boost Public Awareness:** Launch campaigns to correct misconceptions and promote NRT as a safe, first-line cessation option.
4. **Align Regulatory Pathways and Classifications:** Harmonise regulatory standards and NRT classification across ASEAN to enable quicker, more cost-effective NRT approvals. Leverage reviews and approvals of other agencies or key reference markets to streamline the regulatory review process and timeline.
5. **Expand NRT Access to Retail and Community Channels:** Move towards broadening availability of NRT in parity with the widespread availability of cigarettes.
6. **Earmark Tobacco Tax Revenue:** Allocate a portion of revenue for cessation services to mitigate the relative affordability of tobacco products compared to NRT products.

10 QUICK FACTS

1. TOBACCO CAUSES **8** million deaths annually worldwide
   ASEAN accounts for 10% of these deaths.

2. ASEAN ECONOMIC COSTS **$138** billion annually
   in healthcare and productivity losses

3. **Cigarettes are easier to buy** than NRT
   keeps smokers trapped in addiction.

4. NRT boosts quit success rates by **50 - 70%** compared to quitting unaided

5. OTC access is a game changer, ***REMOVES BARRIERS*** and ***MINIMISES THE ACCESSIBILITY GAP*** between quitting tools and cigarettes.

6. Malaysia's 2022 **reclassification of NRT** (gum & patches) as OTC **expanded access and empowered smokers to quit.**

7. **77%** of Malaysian smokers said they were more likely to try quitting once NRT became OTC.

8. OTC gum/patches increased quit attempts and abstinence.
   (from California data)
   Singapore survey found that **59%** of smokers would use NRT if available OTC

9. **POLICY GAPS PERSIST IN ASEAN:**
   - only Brunei & Malaysia fully fund NRT
   - awareness and access remain weak

10. **THE PATH FORWARD:**
    - Harmonise regulations
    - Expand OTC/GSL access to all NRT products
    - Subsidise via tobacco taxes
    - Integrate into cessation programs
    - Run public campaigns to drive awareness

[1] Over the counter (OTC) which also encompasses general sales list (GSL): Non-prescription drugs that are available front of the counter without the need of prescription or a pharmacist to dispense.

INTRODUCTION

Tobacco use and its harms remain a leading public health challenge globally and in the ASEAN region, contributing significantly to non-communicable diseases (NCDs) and premature deaths.[2] Global annual tobacco-related deaths have risen at a rapid rate, from an estimated 0.3 million in 1950 to almost 8 million deaths in 2019, with the ASEAN region accounting for nearly 10% of these deaths.[3] This places an immense burden on healthcare systems and requires policymakers to address this health crisis.

Most ASEAN countries have adopted tobacco control policies aligned with the World Health Organisation Framework Convention on Tobacco Control (WHO FCTC), including taxation, smoke-free laws, and public awareness campaigns.

An important aspect of the WHO FCTC is Article 14, which promotes tobacco use cessation,[4] including nicotine replacement therapy (NRT) as a treatment for smoking cessation. NRT includes products like patches, gums, lozenges, nasal sprays, mouth sprays and inhalers that help reduce withdrawal symptoms by providing a controlled dose of nicotine without the harmful chemicals found in cigarettes.[5] NRT is effective in helping smokers quit, increasing the rate of quitting by 50-70%. [6]

Despite strong evidence of NRT's benefits, its use in ASEAN countries is remarkably low. According to data from the Global Adult Tobacco Survey (GATS), usage rates of NRT products remain low in countries such as Indonesia, the Philippines, and Thailand.[7] As of 2021, these countries reported some of the lowest levels of NRT usage among smokers trying to quit. Some of the factors contributing to this are **the varied levels of accessibility, availability and cost coverage of NRT in the ASEAN region. Tackling these issues is needed to maximise the benefits of NRT in smoking cessation.**

OBJECTIVES

This report aims to:

01. Highlight the role of OTC availability of NRT products in advancing smoking cessation.

02. Identify gaps in smoking cessation programs in ASEAN and the benefits of integrating NRT products into these programs.

03. Evaluate the relative accessibility and availability of tobacco products compared to NRT products.

THE ROLE OF OVER-THE-COUNTER NRT PRODUCTS IN ADVANCING SMOKING CESSATION

In ASEAN, NRT products are available either with or without a prescription. Yet in most countries where products are commercially approved without a doctor's prescription, they are distributed in pharmacies and must be dispensed by a pharmacist behind the counter (BTC). This sales process is more restrictive than that of cigarettes, which are widely available.

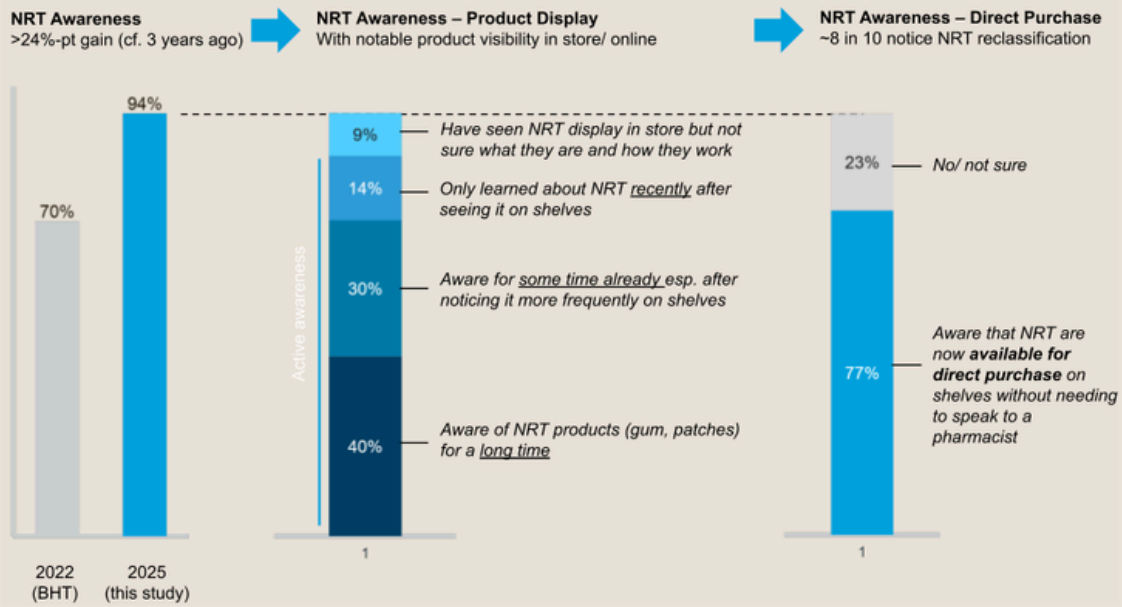
Increasing the distribution of NRT products so that they are easily accessible would benefit the public, and this can be achieved by **classifying NRT products as Over-the-Counter (OTC) or General Sales List (GSL).**

OTC availability of NRT products is an important factor in advancing smoking cessation, as it removes barriers for smokers looking for a way to quit smoking. For example, in California, NRT use increased following OTC availability, and it resulted in an immediate increase in quit attempts and smoking abstinence with the use of nicotine patches and gums. [8,9]

NRT IN MALAYSIA

Malaysia has reclassified NRT products, such as nicotine gums and patches, to OTC status since 2022.[10] This is a key policy milestone in increasing access to smoking cessation tools. This shift lowers initial access barriers and empowers more smokers to begin their quitting journey and ultimately reduce their healthcare burden.

Significant increase in NRT awareness amongst Malaysian dissonant smokers after NRT reclassification



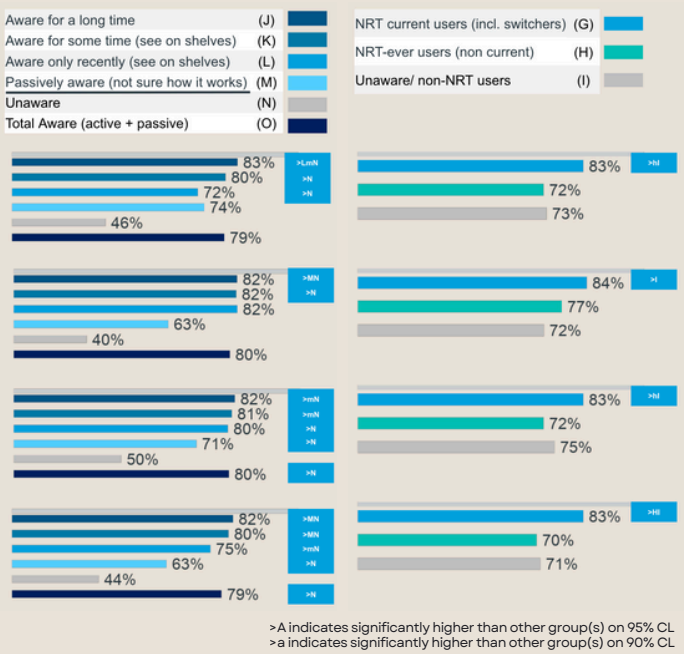
IQVIA NRT Post-Reclassification Impact Evaluation | MY | Consumer Research (2025)

It also provides an opportunity to assess the impact of accessibility on smoking cessation efforts, offering valuable insights for other ASEAN member states when shaping their cessation policies. Following NRT's OTC reclassifications, 77% of smokers are more likely to try products such as nicotine gums and patches to quit smoking. In comparison, 78% said it would help make the quitting process more normal and acceptable. [1]

Increased NRT accessibility will make quitting process more acceptable, especially resonating amongst those aware of NRT and current NRT users

NRT Product Availability & Accessibility

The availability of NRT products (e.g., gum, patches) to be purchased directly has made/ will make it more likely for me to try/ use it in my quitting attempt.	**77%**
NRT product display on shelves has encouraged/ will encourage more people around me to quit smoking through increased awareness of the products.	**78%**
Wider availability of NRT has made/ will make the process to quit smoking more normal and acceptable.	**78%**
Since it has become easier for me to get NRT products (e.g., gum, patches) directly on shelves in stores, I have considered / would consider using them to quit smoking.	**76%**



>A indicates significantly higher than other group(s) on 95% CL
>a indicates significantly higher than other group(s) on 90% CL

IQVIA NRT Post-Reclassification Impact Evaluation | MY | Consumer Research (2025)

ASEAN LAGS BEHIND

Other ASEAN countries, including Singapore, **have not** taken similar steps. A consumer study in Singapore looking at the likelihood of smokers using NRT products if they are reclassified as front-of-counter, found that 59% of respondents would be more encouraged to quit smoking through NRTs. [11]

By following Malaysia's example, Singapore and the rest of ASEAN can remove barriers through the OTC availability of NRT products and advance smoking cessation in the region.

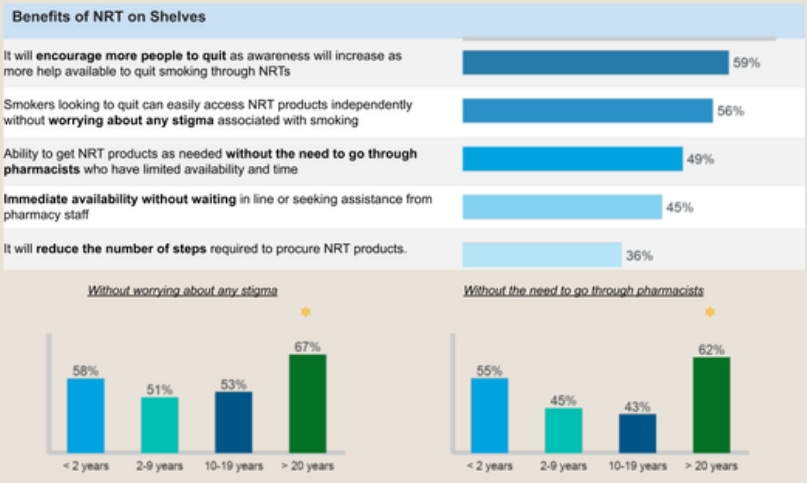
Highly appreciative of NRT availability on shelves, smokers (esp. chronic smokers) can access the products more easily without going through pharmacists, further reducing any stigma associated with smoking

Overwhelmingly positive reception of NRT being displayed on shelves

Base: Total Respondents N=476

Q4.4. If NRT products are easily available on shelf would it enable the process of quitting/ be easier to quit smoking?

Q4.6. What do you think could be possible benefits if NRT products were available on the shelves in front of the counters in pharmacies



Number of quit attempts in past 1 year, by Smoking Duration
The longer smokers have been smoking, the lower the quit attempts made

Significantly higher than other group(s) on 90% CL

IQVIA NRT Post-Reclassification Impact Evaluation | MY | Consumer Research (2025)

GAPS IN SMOKING CESSATION PROGRAMS IN ASEAN

Nicotine is the substance that makes cigarettes addictive, which is why so many smokers struggle to quit. However, nearly all the harmful health effects associated with smoking–such as cancer, heart disease, and respiratory illnesses–are caused by the other toxic components in cigarettes, not nicotine itself.[12] **Nicotine fuels dependence, but the delivery system of combustible tobacco causes the most harm.**

NRT is a cornerstone of evidence-based smoking cessation strategies, proven to significantly increase the likelihood of quitting when combined with behavioural support.[13] While some countries have made NRT products available through public health channels or subsidies, others face significant barriers, including:

01. Limited access and support

02. High costs

03. Regulatory hurdles

04. A lack of public or clinical awareness

NRT is included in the WHO's List of Essential Medicines, highlighting its importance in treating tobacco dependence.[14] In many ASEAN countries, however, NRT is either not included in essential medicine lists or remains unaffordable for low-income smokers, limiting its reach and impact.[15]

Despite ASEAN member states' commitment to implementing Article 14 of the WHO FCTC, significant gaps remain in how these smoking cessation programs are implemented.[16] While tobacco control laws exist in much of the region, practical support for smokers is often inconsistent and inadequate.[17] As public awareness of smoking-related harm increases, more people are actively attempting to quit, with the most common methods being pharmacological treatments such as NRT, behavioural therapies, or a combination of the two.[18] This underscores the urgency to strengthen smoking cessation efforts across ASEAN. Identifying critical gaps in the implementation and development is necessary to ensure comprehensive tobacco control.

A. SMOKING CESSATION SUPPORT SERVICES

Smoking cessation support services play a vital role in helping individuals overcome nicotine addiction and permanently quit smoking. These services encompass a range of interventions, including behavioural counselling, quitlines, digital platforms, mobile applications, and pharmacological aids such as NRT.[4] Except for Brunei, most of the region's nations have set up national quitlines.[19] For instance, Thailand's national quitline has served as a model for the region by providing free counselling and assistance, yet low public awareness and scarce resources remain persistent.[20]

Malaysia's mQuit program is a collaborative approach that integrates public and private sector efforts to provide nationwide cessation services.[19] All ASEAN countries except Indonesia have established cessation clinics and implemented NRT products in healthcare facilities.[19] One of the FCTC's demand reduction strategies is the encouragement of tobacco cessation and appropriate treatment for tobacco dependency.[21]

It is important to integrate NRT products in smoking cessation programs as the products are proven to double the chances of quitting compared to individuals who are not using them.[22] NRT can be used in combination with other cessation medications like Bupropion.[23]

Bupropion is only accessible in a few countries, including the Philippines, Singapore, and Vietnam. Thailand approved Cytisine as a prescription medication in December 2023, then switched it to over-the-counter status in the first quarter of 2024 as an additional cessation medication,[24] a lower-cost alternative with growing global use.[19,25] This limited access to a broader range of cessation medications restricts treatment options for many smokers, especially in low- and middle-income ASEAN countries, and highlights the need for improved policy support, faster regulatory pathways, and regional cooperation to expand the availability of proven cessation aids.

Smoking Cessation Support Services Available in ASEAN

Country	Established National Quitlines	Accessibility of Complementary Cessation Medication
Malaysia	Yes	No
Brunei Darussalam	No	No
Philippines	Yes	Bupropion
Singapore	Yes	Bupropion
Thailand	Yes	Cytisine
Vietnam	Yes	Bupropion

NRT AND BEHAVIOURAL SUPPORT

In addition to reducing withdrawal symptoms such as irritability, anxiety, and cravings, NRT helps individuals better concentrate on the behavioural and psychological changes needed to quit smoking successfully.[26] Combining nicotine replacement therapy with behavioural support greatly improves the chances of quitting successfully. When using NRT products, selecting the appropriate product and dosage based on individual needs and preferences is essential.[27]

Consistent use is key to effectiveness, and many individuals benefit from guidance to ensure proper adherence.[28] NRT works best when integrated into a comprehensive smoking cessation plan that includes behavioural support, counselling, and, when needed, additional medication management. When behavioural support approaches are used complementarily, it leads to higher rates of long-term success in quitting smoking compared to using either method individually.[13]

Smoking cessation training in the ASEAN region is often limited to higher education and specialised institutions, making it less accessible to community-level healthcare workers. While some countries have strong programs, others lack standard training systems. There is also a shortage of skilled trainers, which limits the reach and quality of cessation support. These gaps lead to uneven services and missed chances to help people quit smoking.[19]

Ultimately, NRT not only supports smoking cessation but also contributes to improved health outcomes. By helping individuals quit smoking, NRT can lead to better respiratory function and reduce the severity and progression of chronic respiratory diseases such as chronic obstructive pulmonary disease (COPD) and asthma.[29]

This, in turn, can ease the burden on national healthcare systems, enhance workforce productivity, support economic progress, and improve the overall quality of life within the population.

These health improvements further highlight the value of integrating NRT into cessation programs, especially for individuals with smoking-related health conditions. Incorporating NRT products into smoking cessation initiatives enables healthcare providers to equip individuals with essential resources and support, thereby facilitating smoking cessation and promoting better health outcomes.[30]

B. NRT COST COVERAGE BY PUBLIC FUNDING

Research shows that over-the-counter access to NRT products encourages more quit attempts and leads to more people using them regularly.[31] Multiple studies have been published on the effectiveness of NRT products on smoking cessation. Up to 60% more people quit smoking when they use NRT products.[31]

However, most NRT products are expensive or inaccessible to some parts of the region, especially in rural populations. In certain parts of the region, the cost of a full NRT course may exceed the monthly disposable income of many low-income households. Enhancing NRT uptake among low-income individuals requires removing barriers to entry and improving provider-patient interactions regarding cessation treatment options.[32] The cost coverage of NRT by public funding is an avenue that may enhance access to NRT, especially among low-income individuals.

Extent of NRT Cost Coverage by Public Funding

Country	2023	2020	2018
Malaysia	Fully	Fully	Fully
Brunei Darussalam	Fully	Fully	Fully
Philippines	None	Partially	None
Singapore	Partially	Partially	Partially
Thailand	None	None	None

Data Extracted from WHO 33

According to the table shown, there is no regional standard in ASEAN for NRT accessibility, and cost coverage varies significantly. Malaysia and Brunei Darussalam have consistently provided full public funding for NRT from 2018 to 2023. This reflects a strong commitment to integrating cessation support into national tobacco control efforts. Singapore has maintained partial funding, suggesting moderate support but potential out-of-pocket barriers for lower-income groups. In 2020, Singapore's Ministry of Health announced pilot programs offering full subsidies for NRT to eligible smokers enrolled in smoking cessation initiatives at public healthcare institutions. The pilot programs offered behavioural support, follow-up for a year, and a three-month supply of NRT. Still, the subsidies were limited and not extended to all primary care services.[34]

Singapore's limited NRT funding may be due to systemic barriers, such as low awareness among health professionals and a siloed approach to smoking cessation and mental health services.[35]

The Philippines initially had no funding in 2018, improved to partial coverage in 2020, but then regressed to no coverage in 2023, indicating instability or deprioritisation in cessation funding. Thailand, though a regional leader in tobacco control, has not provided public funding for NRT, highlighting a key treatment gap. However, its Government Pharmaceutical Organisation (GPO) recently introduced Cytisine, a more affordable cessation drug, to expand quitting support.[36] As it is a low-cost treatment,[25] this mitigates the lack of cost coverage.

Overall, nations that provide complete coverage, like Malaysia and Brunei, are examples of best practices, particularly when it comes to incorporating NRT into public healthcare. Special consideration should be given to vulnerable groups who are at greater risk of developing strong nicotine dependence.[37] Despite the cost coverage under Malaysia's public healthcare system, NRT options are mostly limited to patches and gums, which are not always available in all clinics. This restricts access to effective support for smokers trying to quit.[38]

Most NRT products remain costly for many Malaysians. Due to high living costs, people often avoid buying them and instead rely on government-run clinics for prescribed treatment.[39] However, another barrier is that these clinics typically operate only during weekday office hours, making it difficult for working adults to attend regular counselling sessions and adhere to treatment plans, causing them to either avoid or buy insufficient amounts of prescribed treatment.

In countries like Thailand and the Philippines, the lack of funding creates financial barriers for smokers, particularly those from low-income backgrounds. Partial funding in Singapore may still leave some populations underserved, especially if NRT prices are high in private markets. NRT products become relatively more expensive when there is a lack of demand due to the inadequacy of awareness campaigns regarding the usefulness of these products.

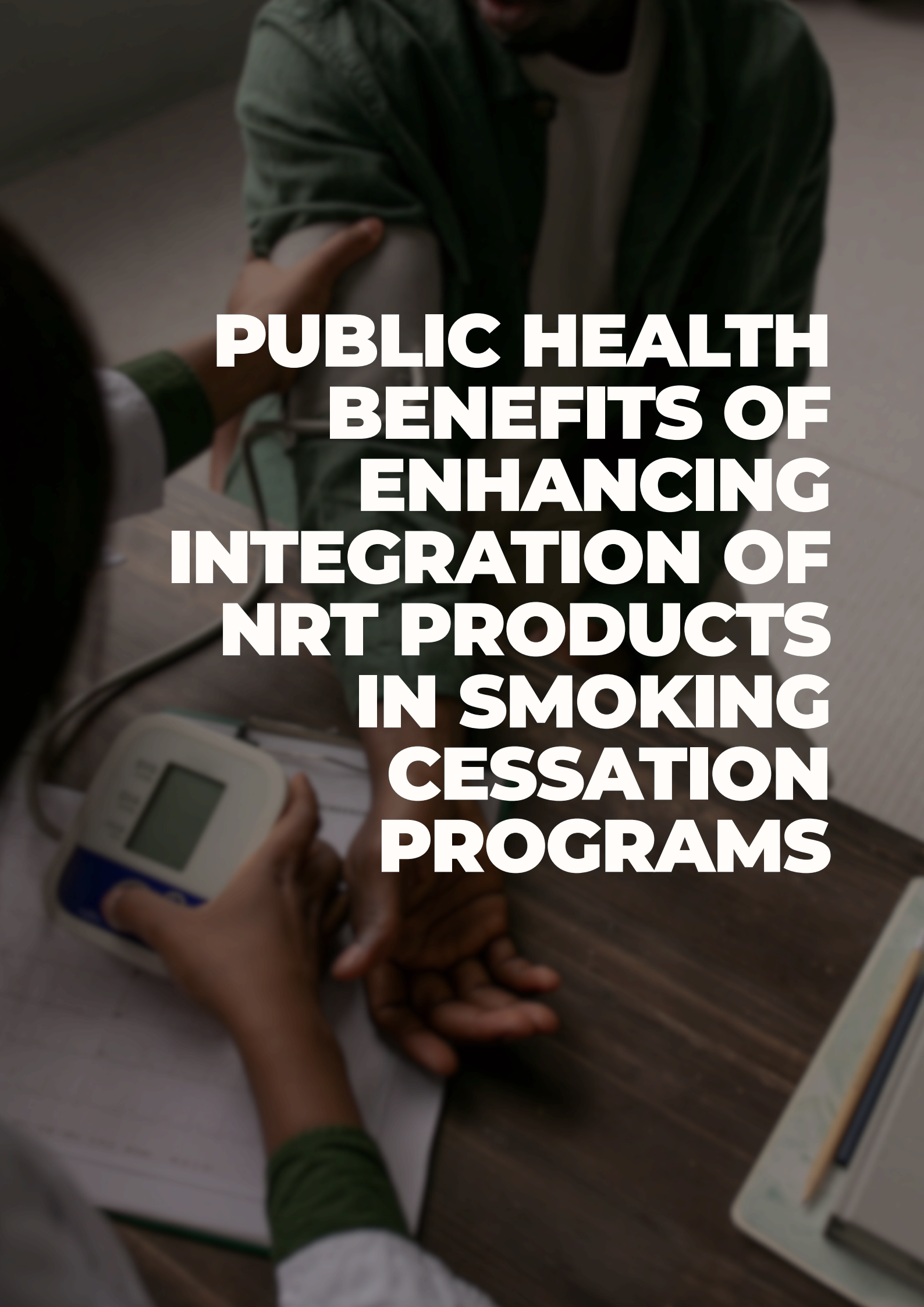
C. ASEAN SAFETY DATA REGULATION

Regulatory inconsistency across ASEAN nations presents a significant barrier to expanding access to nicotine replacement therapy (NRT). A key issue is the lack of harmonised policies around safety data requirements, which complicates over-the-counter access and product registration. For pharmaceutical and consumer health products such as NRT, safety data includes adverse event reporting, post-market surveillance, toxicology studies, clinical trials, and risk-benefit assessments. While regulatory authorities across ASEAN are expected to follow Good Pharmacovigilance Practices (GVP), the implementation varies widely.

For instance, Singapore's Health Sciences Authority (HSA) has a mature framework for evaluating and monitoring product safety, including robust post-market surveillance.[40] In contrast, Indonesia's National Drug and Food Agency (BPOM) is still developing its systems, leading to inconsistent regulatory expectations.[41] This lack of alignment results in duplicated efforts for manufacturers, delayed product approvals, and ultimately limited access to essential cessation tools.

These challenges are echoed in the TechSci Research report, which identifies regulatory hurdles as a key barrier to NRT market growth globally, particularly in regions like ASEAN, where fragmented approval systems slow innovation and raise costs.[41]

Efforts like the ASEAN Joint Assessment [41] and the ASEAN Pharmaceutical Regulatory Framework (APRF) show promise in promoting regulatory convergence.[42] The APRF, in particular, aims to improve access to high-quality, safe, and effective pharmaceutical products by streamlining practices. However, it has not yet been fully applied to smoking cessation products. Models like the EU's EudraVigilance system offer potential lessons.[43] By centralising adverse reaction data and enabling regional data sharing, the EU has created a more integrated pharmacovigilance environment. [44] ASEAN would need considerable investment and coordination to achieve similar functionality, but aligning safety data standards under the APRF would be a crucial step toward increasing NRT availability and affordability in the region.



PUBLIC HEALTH BENEFITS OF ENHANCING INTEGRATION OF NRT PRODUCTS IN SMOKING CESSATION PROGRAMS

As smoking remains one of the most preventable causes of death, fully integrating NRT products into national smoking cessation programs can significantly reduce the number of premature deaths. Tobacco use is often mistakenly framed as a personal choice, but the data tells a different story. **In 2020, 79.9% of Malaysian smokers had attempted to quit, and 85.2% expressed a desire to quit.[45] Similarly, in Indonesia, over 60% of smokers reported wanting to quit, and more than 40% had already tried, yet many were unsuccessful. [46]**

Despite the availability of smoking cessation programs and products in both countries, access is often limited or conditional. As a result, the success rate of sustained quitting remains low. To reverse this trend, public health efforts must focus on promoting evidence-based solutions, such as NRT, while also regulating misleading alternatives. Without this shift, smokers with a genuine intention to quit will continue to face unnecessary barriers, and many will fail despite their best efforts.

A. RAISING QUIT RATES THROUGH NRT INTEGRATION

Currently, most ASEAN countries offer NRT products either behind-the-counter (BTC) or by prescription. Yet availability alone has not translated into widespread use. Due to misinformation, lack of awareness, and affordability issues, many smokers are unaware of the proven effectiveness of NRT in helping them quit.

Governments have a responsibility to bridge this gap by ensuring that NRT is not only available but also understood and accessible to those who need it most. Investing in infrastructure and policies that make NRT affordable and accessible will raise quit rates and reduce smoking-related harm across the region. This is particularly important for highly dependent smokers who often experience high quitting failure rates and may benefit more from combination NRT, which provides enhanced support for cessation.

According to a study conducted in Hong Kong, using combined nicotine replacement therapies (NRTs) increased smoking abstinence rates to 23.6%, compared to just 17.6% for those using a single NRT product.[12]

NRT is designed to deliver nicotine in a slow, controlled manner, helping to reduce cravings without exposing users to the dangerous chemicals found in cigarettes. Unlike cigarettes and e-cigarettes, which deliver large, rapid doses of nicotine to the brain, NRT products release nicotine slowly and in smaller amounts, reducing their addictive potential. A substantial body of evidence confirms that NRT is a safe, effective, and well-accepted method for smoking cessation as outlined by the WHO and various countries' clinical practice guidelines.[47, 48, 49] It should be the first-line recommendation for anyone seeking to quit smoking.

Health professionals are strongly encouraged to recommend NRT to their patients, as it has consistently demonstrated the highest success rates among cessation aids. One of the most comprehensive analyses to date—a Cochrane Library review of 133 randomised controlled trials involving over 64,000 participants—found that any form of NRT increases

the likelihood of quitting by 55% compared to placebo or no treatment. Real-world programs reinforce these findings. In an evaluation of a national quitline service, researchers found that the introduction of free NRT products significantly improved outcomes.[50] The 7-day point prevalence abstinence rate at six months increased from 10.3% to 14.9% after free NRT became available—a substantial gain, even in a setting that already offered other cessation support tools.[50] **This demonstrates a critical point: even when behavioural interventions are in place, the addition of accessible NRT products measurably improves quit rates. To maximise public health impact, NRT must not only be available—it must be promoted, subsidised, and seamlessly integrated into national cessation strategies.**

B. LONG-TERM SUPPORT FOR SUCCESSFUL QUITTING

Beyond increasing quit rates, the integration of NRT plays a critical role in supporting long-term behavioural change among smokers. Quitting smoking is not only a physical battle against nicotine dependence—it's also a psychological and behavioural challenge. One of the main aims of smoking cessation products is to reduce the symptoms of withdrawal and craving that a smoker would get from trying to quit "cold turkey" without any outside assistance.

According to a study that used real-time assessment to test the effect of nicotine patches on withdrawal and craving during smoking abstinence, participants who used active nicotine patches experienced noticeably fewer cravings and withdrawal symptoms than those given a placebo.[51] High-dose NRT was particularly effective in preventing the mood disturbances and concentration issues that often occur during the quitting process.[51]

For individuals who want to quit smoking, one of the biggest obstacles is managing withdrawal symptoms and cravings, both of which are major contributors to relapse. NRT products are designed to address this challenge by delivering controlled doses of nicotine, helping to ease the transition away from cigarettes completely. Regardless of how nicotine-dependent someone is, NRT can provide an appropriate dose to ease withdrawal symptoms. Since NRT products are available in various strengths, users can progressively taper down their nicotine intake, eventually leading to complete cessation. This step-down approach allows smokers to quit completely without the intense physical symptoms that often accompany abrupt cessation.

C. REDUCTION IN TOBACCO-RELATED MORTALITY

According to the WHO, tobacco-related deaths have claimed approximately 3.1 million lives in the South-East Asian region alone.[52] Globally, tobacco-attributable deaths have surged from an estimated 300,000 in 1950 to nearly 8 million in 2019, with the ASEAN region accounting for almost 10% of these fatalities.[53] These deaths are not inevitable—**they are entirely preventable**. A key solution lies in effective smoking cessation strategies, particularly through the widespread integration of proven tools like NRT. Unlike tobacco, there is no credible evidence linking NRT to life-threatening diseases.[49] Its safety and efficacy are well established. By making NRT widely available and accessible, governments can significantly increase quit rates—and in doing so, reduce the long-term toll of tobacco-related illness and death across the region.

D. CUTTING SECONDHAND SMOKE AT THE SOURCE

Secondhand smoke is the smoke exhaled by a smoker or released from a burning cigarette. There are more than 7,000 chemicals in commercial tobacco smoke, including hundreds of chemicals that are toxic and about 70 that can cause cancer.[54] Figure 1 shows the common chemicals and toxins that are found in commercial tobacco products, which are also used in the production of other toxic items. According to the Centres for Disease Control (CDC), there is no acceptable safe level of second-hand smoke one can be exposed to. Even brief exposure to second-hand smoke can cause coronary heart disease, stroke, and lung cancer in adults who do not smoke.[54]

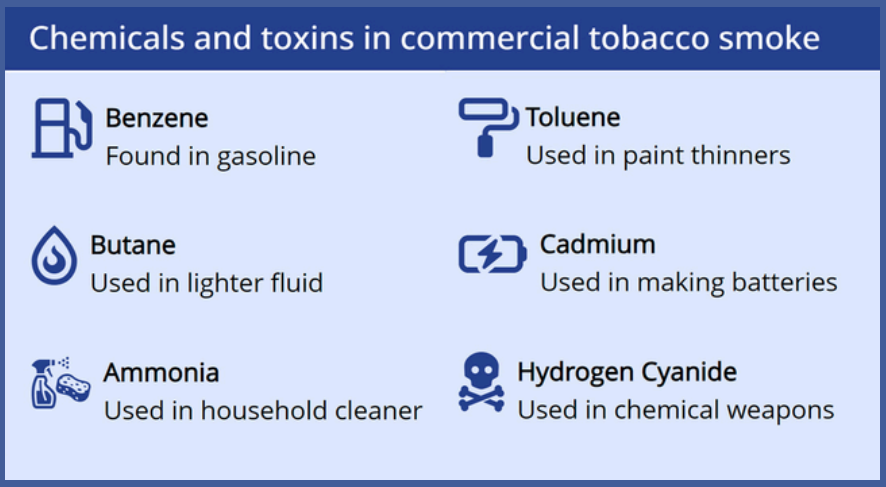


Figure 1: https://www.cdc.gov/tobacco/secondhand-smoke/index.html

Infants and young children are particularly vulnerable to the harmful effects of secondhand smoke due to their developing bodies. Exposure increases their risk of serious health issues, including sudden infant death syndrome (SIDS), respiratory infections like pneumonia and bronchitis, ear infections, more frequent and severe asthma attacks, persistent respiratory symptoms, and reduced lung development.[54]

The integration of NRT into smoking cessation programs can sharply reduce secondhand smoke exposure in two critical ways. NRT enables smokers to manage their nicotine addiction without releasing harmful smoke into their environment. Another key benefit of NRT is that it significantly boosts quit rates, leading to fewer smokers and less secondhand smoke exposure over time.

E. ADVANCING HEALTH EQUITY THROUGH NRT ACCESS

Smoking disproportionately affects people from low-income backgrounds. Research consistently shows that individuals living in poverty are more likely to smoke, start younger, and have a harder time quitting. A study that looked at demographic and socioeconomic indicators and their relation to smoking prevalence in Thailand shows that individuals with lower annual household incomes, particularly those living below the poverty line, had higher smoking rates across both genders.[55]

A similar study done in Vietnam also shows that smoking prevalence was disproportionately higher among individuals in lower wealth quintiles, indicating a significant wealth-related gradient in smoking behaviour.[56]

Many factors contribute to the fact that people from lower-income groups tend to smoke more and face struggles in quitting.

Socially disadvantaged groups tend to start smoking at a younger age and engage in heavier smoking compared to more advantaged populations.[57] This early initiation and increased consumption contribute to higher dependence and make cessation more challenging. Furthermore, those who come from low-income groups generally struggle with financial stress and challenging living conditions. Many individuals from low-income backgrounds begin smoking as a coping mechanism to manage the stress of financial hardship.

Limited access to education and health information often means that the full range of smoking's health risks is not well understood, making the urgency to quit less apparent. Compounding this issue are structural barriers, such as limited access to cessation resources, lower health literacy, and fewer support systems, which make it significantly harder for low-income individuals to quit successfully.

While the long-term health and financial cost of smoking is high, the immediate cost of quitting can feel out of reach. NRT products, though effective, can be expensive for someone struggling to meet daily needs. Many low-income smokers face a tough choice: continue smoking, or go without help trying to quit. Making NRT products more accessible changes that equation. When available through public health programs or at subsidised rates, NRT offers a practical, affordable way for disadvantaged populations to break free from tobacco addiction.

On a personal level, using NRT is cost-effective. Over time, the expense of nicotine patches or gum is far less than the ongoing cost of cigarettes. For governments, subsidising NRT is not just an investment in public health—it's a long-term cost-saving strategy. Helping people quit reduces the burden of tobacco-related diseases like cancer, heart disease, and respiratory illness, which place enormous strain on public healthcare systems. By integrating NRT into smoking cessation initiatives, governments can help close the equity gap, reduce smoking rates among marginalised groups, and cut future healthcare costs.

ADDRESSING THE AVAILABILITY & ACCESSIBILITY OF TOBACCO PRODUCTS COMPARED TO NRT PRODUCTS IN ASEAN

Despite offering significant health benefits, obstacles preventing NRT products from being used effectively are their relative availability and accessibility compared to tobacco products. Tobacco products generally have greater accessibility than NRT due to wider distribution channels, making them more pervasive as a product.[58] This disparity undermines cessation efforts and perpetuates tobacco dependence.

Tobacco products are widely available across retail environments in ASEAN, with minimal restrictions on purchase or visibility in many countries. In contrast, NRT products face multiple barriers, from limited distribution to regulatory classification.

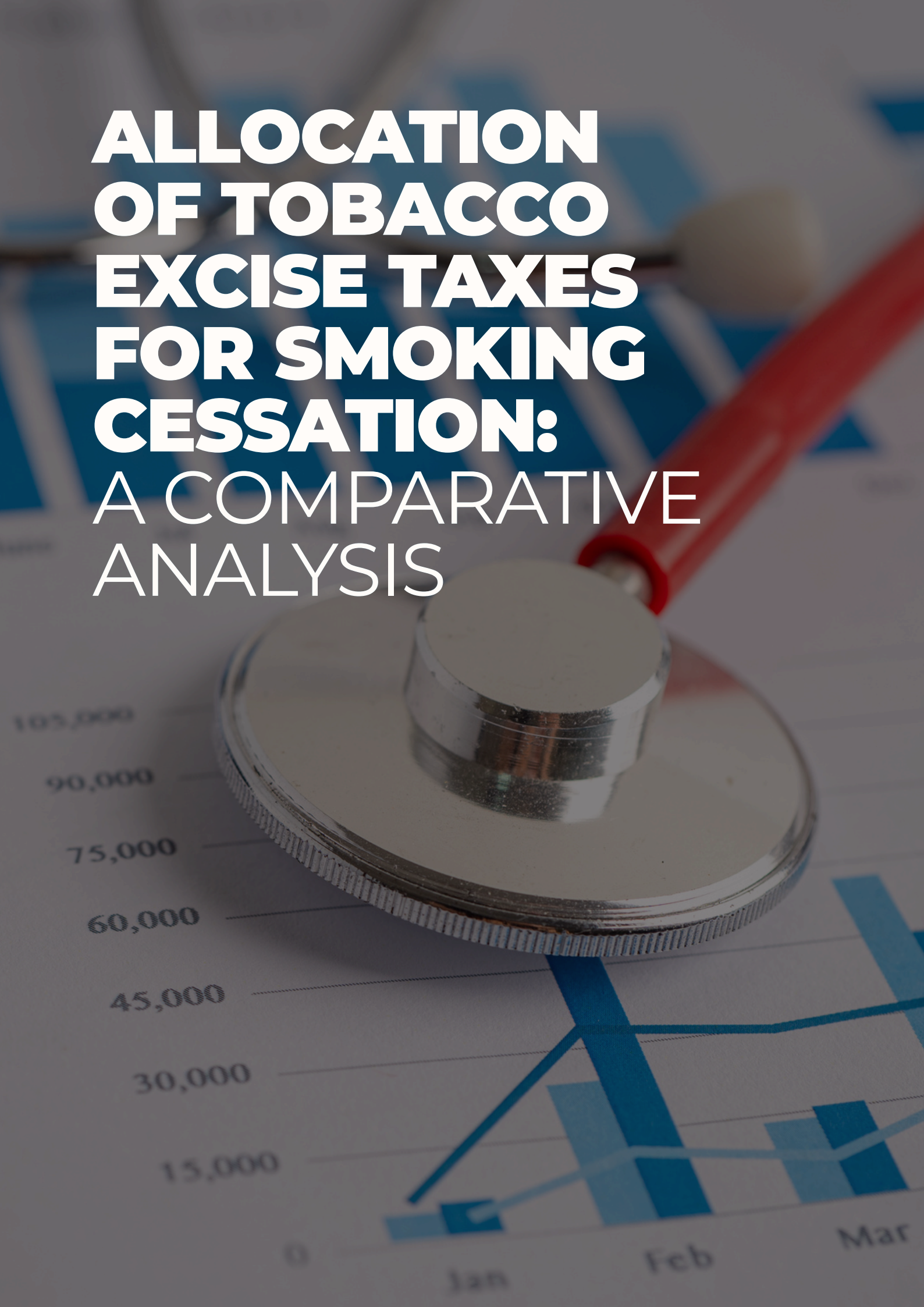
Before reclassification, nicotine gum and patches were classified under Group C of the Poisons List in Malaysia. A registered pharmacist could dispense these products without requiring a prescription from a registered medical practitioner.

However, their supply was required to be recorded in the Prescription Book per the Poisons Regulations 1952. Since then, they have also been available over-the-counter (OTC).[10] While reclassifying NRT products to OTC status marks a commendable policy shift, tobacco products remain prevalent at retail stores and experience less scrutiny, especially during point-of-sale.

This pattern is echoed across Thailand and Singapore, despite having policies aimed at minimising barriers to access NRT products.[19] The state of smoking cessation in Indonesia and the Philippines, however, is more precarious due to the limited availability of NRT products in each country.[19]

Ultimately, increasing the availability and accessibility of NRT products through over-the-counter (OTC) access is only effective when accompanied by strong regulatory measures, such as implementing point-of-sale restrictions on tobacco products. Singapore has enforced a point-of-sale display ban on tobacco products since 2017, while Malaysia has begun a phased implementation.[59, 60] This type of regulatory tool is a promising and complementary strategy that must be widely adopted across the region.

ALLOCATION OF TOBACCO EXCISE TAXES FOR SMOKING CESSATION: A COMPARATIVE ANALYSIS



A key recommendation of Article 14 of the WHO FCTC is to designate sustainable funding for tobacco cessation programs and tobacco dependence.[4] This can be done by allocating the revenue raised from tobacco taxes. For example, the state of California in the United States has dedicated 20% of new tobacco tax revenues to comprehensive tobacco control programs, which have gradually led to considerable reductions in smoking prevalence.[61]

Comparative Table: Tobacco Excise Taxation in ASEAN Countries

Country	Tobacco Tax Rate (% of Retail Price)	Tax Earmarking for Health	Smoking Cessation Funding
Philippines	71.32%	Yes	Strong
Thailand	78.6%	Yes (2% surcharge)	Moderate to strong
Singapore	67.5%	No	Limited
Malaysia	58.6%	No	Limited
Indonesia	63.5%	Partial (2% to local government)	Weak

Data Extracted from SEATCA, WHO [62, 63]

Making NRT products available over the counter (OTC) and linking them to tobacco excise tax allocation can greatly improve access to smoking cessation support. By using a portion of tobacco tax revenue to subsidise OTC NRT, governments can make these products more affordable, especially for low-income groups. This allows more people to start quitting without needing a doctor's visit, which is important for those with limited access to healthcare. To truly reduce tobacco use, NRT should be made as accessible and convenient as cigarettes. Supporting this through excise funding helps reduce smoking-related illnesses and eases the burden on national healthcare systems. Overall, investing excise funds in OTC NRT promotes equity, encourages self-initiated quitting, and strengthens long-term health and economic outcomes.

POLICY RECOMMENDATIONS

Tobacco use remains one of the most preventable causes of death in the ASEAN region, but effective solutions, such as NRT, are not reaching enough people. Although NRT is clinically proven to increase quit rates, its use remains limited due to access, affordability, and regulatory barriers.

The most impactful and immediately actionable step governments can take is to reclassify all NRT products for OTC sale. Removing the prescription or behind-the-counter requirement makes NRT more accessible to smokers who are motivated to quit but deterred by logistical barriers.

To effectively advance smoking cessation and reduce tobacco-related harms in ASEAN, the following policy recommendations should be pursued:

1. GRANT ALL NRT PRODUCTS OTC STATUS

- Expand OTC access to all forms of NRT across ASEAN, ensuring they are available in public health institutions, and retail and community pharmacies
- This will eliminate smokers' main barrier to quitting, that is restricted access, and empower them to take independent, timely steps towards quitting.

2. INTEGRATE NRT INTO SMOKING CESSATION PROGRAMS

- Integrate NRT into programs to mitigate cost, increase availability and awareness.
- Although ASEAN countries have pledged to strengthen tobacco control under the WHO FCTC, cessation support services remain inconsistent and underused across the region.
- Integrating NRT into these programs would significantly boost usage and quit rates, since NRT combined with counselling doubles the likelihood of quitting compared with unaided attempts.
- Many existing cessation services are underutilised due to low awareness or limited operating hours but OTC availability of NRT ensures continuous access and helps overcome these barriers.

3. IMPLEMENT ROBUST PUBLIC AWARENESS CAMPAIGNS

- A widespread but mistaken belief is that nicotine itself causes smoking-related diseases, rather than the harmful byproducts of tobacco combustion, thus preventing many smokers from using NRT.
- Public campaigns are essential to correct these myths, explaining that NRT delivers controlled nicotine without the dangerous toxins in cigarette smoke.
- Campaigns should highlight the health and financial benefits of quitting, share success stories, and position NRT as a safe, normal, and accessible tool for smokers.
- When paired with over-the-counter access, awareness efforts empower smokers to attempt quitting on their own initiative, amplifying the overall impact of reforms.

4. ADDRESS REGULATORY GAPS THAT DELAY NRT ACCESS

- Harmonise safety data and approval requirements across ASEAN to speed up access to new and existing NRT products.
- Having consistent regulatory frameworks for NRT across ASEAN prevents unnecessary delays and lowers cost for manufacturers.
- Simplify and streamline the registration of OTC NRT products by referencing the WHO essential medicines status and global approvals.
- This avoids duplicative requirements, reduces manufacturing costs, and ensures more affordable prices for consumers.

5. EXPAND NRT ACCESS TO RETAIL AND COMMUNITY CHANNELS

- In ASEAN, cigarettes are widely available in convenience stores, supermarkets, and kiosks, while nicotine replacement therapy (NRT) products are restricted to pharmacies or government clinics, creating an uneven playing field that makes quitting difficult.
- Expanding accessibility of gums, patches, lozenges, and sprays in grocery stores, convenience outlets, as well as online platforms, with safeguards, will increase visibility and make it easier for smokers to choose quitting over continuing.
- Community health organisations and NGOs can further expand access of NRT products by distributing them in rural or underserved areas, ensuring equitable access.

6. EARMARK TOBACCO TAXES TO SUPPORT NRT UPTAKE

- Ensure that NRT becomes more affordable than cigarettes by adjusting excise taxes and using part of tobacco revenues to subsidise OTC NRT in public or retail channels.
- If NRT were cheaper than cigarettes, smokers would have a clear financial incentive to switch from smoking to cessation support.
- California and the Philippines show that earmarking excise revenues can successfully fund quitlines, awareness campaigns, and subsidised NRT.

The path forward is clear. OTC access to NRT should be key to ASEAN's measures in tobacco control. It is a practical, scalable, and evidence-based step that can increase quit attempts, reduce smoking prevalence, and ultimately save lives.

Malaysia has shown the way. The rest of ASEAN has an opportunity to follow with bold, simple reforms that empower individuals to quit smoking on their terms.

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APPENDICES

Appendix A: Annual Economic Costs of Tobacco Use in ASEAN

ASEAN Member State	Economic Cost (Local Currency)	Purchasing Power Parity Conversion Factor[64]	International $
Malaysia	RM 18,395,071,483 [65]	1.4	13,139,336,773.57
Indonesia	Rp 288,054,294,795,929 [66]	4819.80	59,764,781,691.34
Myanmar	K 1,334,635,182,096 [67]	435	3,068,126,855.39
Phillipines	₱ 261,328,947,321 [68]	19.3	13,540,359,964.82
Vietnam	₫161,245,083,230,161 [69]	6802.5	23,703,797,608.26
Thailand	฿ 216,445,140,613 [70]	10.7	20,228,517,814.30
Singapore	S$3,674,919,292 [71]	0.8	4,593,649,115
Brunei	B$ 167,870,793 [72]	0.5	335,741,586
Total			138,374,311,408.68

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