

CIGARETTES TO SMILES

Report by International
Oral and Public Health Experts

**The Dual Role of
Oral Nicotine Pouches
in Advancing Oral Health
and Quitting Success**



**ORAL NICOTINE
COMMISSION**

In collaboration with





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EXECUTIVE SUMMARY

THE GLOBAL HEALTH COMMUNITY KNOWS EXACTLY HOW SMOKING DESTROYS ORAL HEALTH – PERIODONTAL DISEASE, ORAL CANCER, TOOTH LOSS AND DISABILITY – YET CONTINUES TO RELY ON CESSATION METHODS THAT FAIL MORE THAN 90% OF THOSE WHO TRY TO QUIT.

With 1.27 billion smokers worldwide and oral diseases affecting 3.7 billion people, this persistent failure represents one of public health's most devastating and preventable tragedies.

Yet within this crisis lies an unexpected breakthrough. Oral nicotine pouches (ONPs) represent a transformative dual intervention, serving as highly effective cessation tools while directly improving oral health outcomes.

Unlike combustible cigarettes that release thousands of toxic chemicals or traditional smokeless tobacco laden with carcinogens, ONPs deliver nicotine without combustion, without tobacco leaf and with dramatically reduced harm.

More significantly, evidence now demonstrates ONPs may be one of the most effective smoking cessation tool available today, offering smokers a familiar oral experience and satisfying nicotine delivery, as well as being a measurable pathway to better health.

This report – the third in the Oral Nicotine Commission's five-year series – examines this unique dual role through clinical evidence, population-level success stories and emerging science that validates why the oral health community should embrace ONPs as essential tools to combat tobacco-related disease and achieving the World Health Organization (WHO)'s Global Strategy on Oral Health (2023–2030).

THE CHALLENGE

The scale of this oral health crisis demands urgent innovation. There were 3.7 billion incidences of oral disorders and 430,000 new incidences of oral cancer in 2023.

Low- and middle-income countries (LMICs) bear a disproportionate 84% of this burden, largely driven by smoking and high-risk smokeless tobacco use. In South-Central Asia, products such as gutka, khaini and betel quid account for 88% of smokeless tobacco-related oral cancers; that is 105,500 cases annually.

Despite decades of tobacco control efforts, current approaches have plateaued in their effectiveness, particularly where smoking rates remain stubbornly high and access to cessation support is severely limited.

THE OPPORTUNITY

Building on the foundational work of Prevent Disease, Save Lives (2020) and Transforming Oral Health for All (2024), this 2025 report presents measurable health gains from switching to ONPs and positions them as essential tools that address the smoking epidemic while promoting better outcomes for the very part of the body most affected by tobacco use: the mouth itself.

WHAT MAKES ONPs DIFFERENT

Unlike combustible cigarettes or traditional smokeless tobacco products laden with carcinogens, ONPs are:

- Tobacco-free:** Eliminating tobacco-specific nitrosamines that cause oral lesions and cancer.
- Combustion-free:** Avoiding tar, carbon monoxide and thousands of toxic chemicals produced by burning.
- No inhalation:** ONPs deliver nicotine without inhalation, so minimal impact on the lungs and respiratory system compared to traditional smoking.
- More than 95% less harmful** than cigarettes, representing one of the lowest-risk oral nicotine options available.
- Socially considerate and environmentally friendly:** Addressing stigma barriers, particularly for women.



THE EVIDENCE BASE

Cochrane Review (2025) validation:

The 2025 Cochrane systematic review provides the most authoritative evidence to date that ONPs offer smokers a safe transition from combustible tobacco.

Critically, the Cochrane Review found no evidence of serious health harms associated with switching to ONPs – a significant finding given Cochrane’s rigorous, globally respected methodology and reputation as the gold standard for healthcare evidence synthesis. They do highlight that this finding is based on limited evidence and that more research is needed comparing oral nicotine pouches to other active treatments (e.g. nicotine replacement therapy, NRT).

This absence of demonstrable harm, combined with cessation efficacy, establishes ONPs as a credible, evidence-based intervention that should inform clinical practice and regulatory policy worldwide.

Toxicological validation:

Multiple biomarker studies confirm 60–90% reductions in carcinogen exposure when smokers transition to non-combustible nicotine products. Health Canada’s 2023 approval of Zonnic® as a licensed nicotine replacement therapy (NRT) – the first ONP globally to achieve medicinal status – validates that ONPs can meet pharmaceutical safety standards while retaining consumer appeal.

Population-level success:

Sweden: Approaching smoke-free status with 5.3% smoking prevalence, with 61% lower male lung cancer death rates than the EU average and a 34% lower rate of total cancer deaths. The introduction of ONPs in 2016 accelerated women’s quit rates by nearly 200%.

Canada: Zonnic’s pharmaceutical approval demonstrates regulatory pathways to recognise ONPs as legitimate cessation aids.

Clinical outcomes:

The ongoing SMILE Study, conducted across Italy, Poland, Moldova and Indonesia, demonstrates that smokers switching to smokeless nicotine products display visible reductions in plaque and tooth staining. Full results of the prospective, randomised arms of the trial are not yet published.

THE LMIC IMPERATIVE

Lower and middle-income countries (LMICs) account for 83% of tobacco-related oral cancer deaths and 96.4% of all oral cancer cases caused by smokeless tobacco and areca nut. India alone represents 83,400 of the 120,000 annual oral cancer cases attributed to these products. In terms of access, affordability and consumer acceptance, ONPs offer a uniquely suited intervention for LMIC contexts:

- Minimal infrastructure requirements
- Shelf-stability and low-cost potential
- Cultural compatibility with oral product use patterns
- Elimination of the spitting associated with traditional smokeless tobacco

The magnitude of benefits from switching to ONPs is greatest where high-risk smokeless tobacco prevalence is highest and where oral disease burdens are largest.

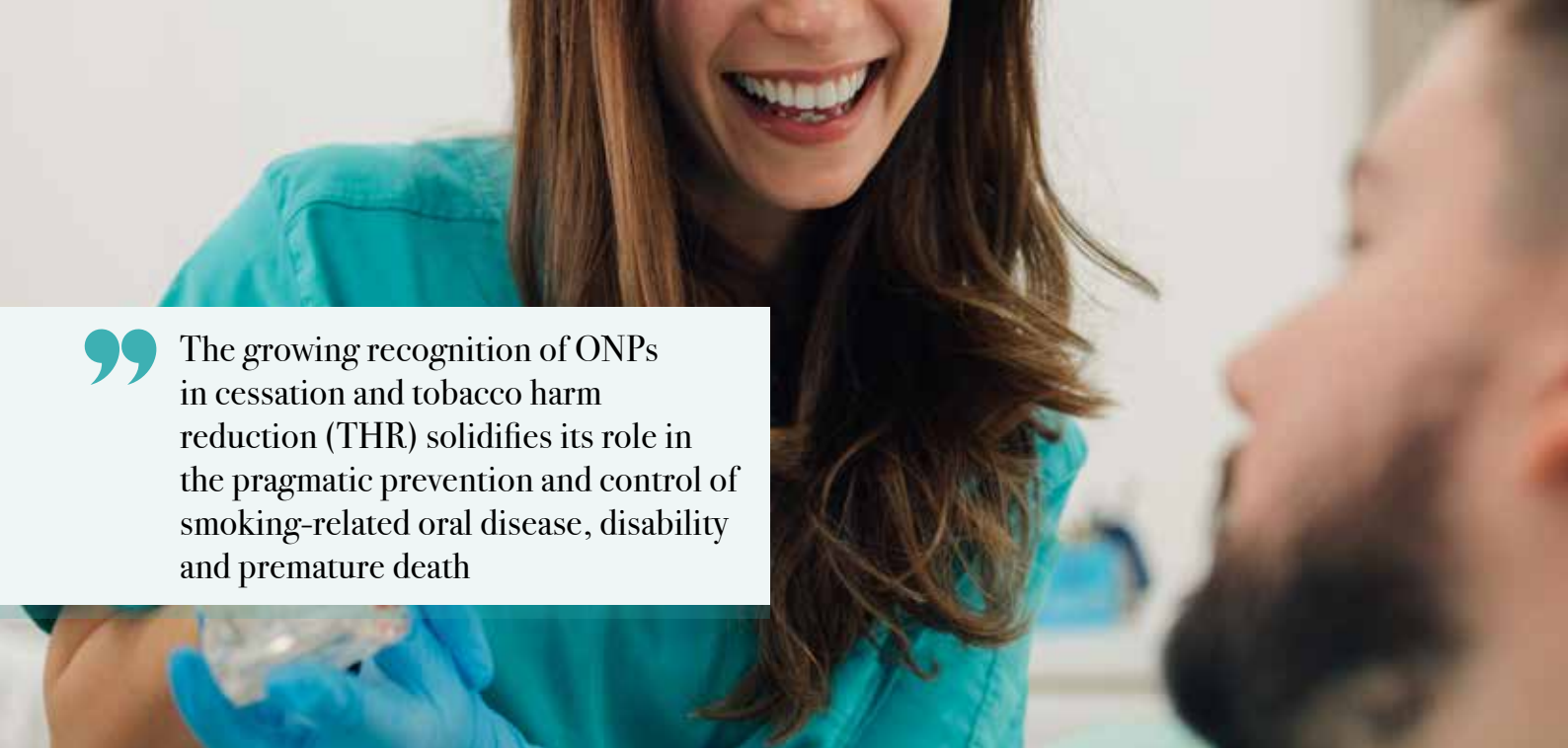


GENDER-SENSITIVE HARM REDUCTION

Women face unique barriers to cessation including dual stigma – for smoking itself and for cessation failure.

In Sweden, women ranked ONPs almost three times higher than vaping and 56% higher than nicotine gum as quit aids, citing social acceptability, cleanliness and convenience as key factors.

This approach is particularly relevant for the 70 million women in India and millions more across South-Central Asia who use high-risk smokeless tobacco products where smoking is less socially acceptable.



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THE POLICY GAP

Nicotine, in the form of NRTs such as patches and gum, has been on the WHO’s list of essential medicines since 2009.

Despite mounting evidence, the WHO Framework Convention on Tobacco Control (FCTC) and the Global Strategy on Oral Health (2023–2030) lack explicit reference to harm reduction.

The WHO’s failure to distinguish between combustible and non-combustible products, treating 95% safer alternatives the same as cigarettes, perpetuates preventable disease and death.

On 12 November 2025, WHO published the WHO Position on Tobacco Control and Harm Reduction. In response, Prof Jean-Francois Etter, a former Professor of Public Health from Switzerland, argues that “enough is enough” and that WHO wrongly equates independent harm reduction advocates with tobacco industry front groups, dismisses clear evidence that non-combustible products are significantly less harmful than cigarettes and suggests that all nicotine products are equally toxic and addictive.

Harm reduction strategies are explicitly mentioned in Article 1(d) of the FCTC and should not be delegitimised. Etter warns that the WHO’s call for prohibition and restrictions on alternatives such as e-cigarettes risks protecting the cigarette market, fueling illicit trade, and ultimately increasing smoking-related disease and death - an outcome he views as detrimental to the mission of global public health.

Precautionary bans on ONPs in France, Belgium and Germany risk creating unregulated black markets while protecting cigarette sales, as evidenced by

events in Australia, where 39.4% of cigarette sales shifted to illicit channels following excessive taxation and restrictions on access to vaping products.

The contrast is stark: while Cochrane, the world’s most trusted source of evidence for healthcare decision-making, finds no serious harms from ONPs and confirms their cessation efficacy, regulatory bodies continue to restrict or ban these products, condemning millions to continued smoking and its devastating health consequences.

The growing recognition of ONPs in cessation and tobacco harm reduction (THR) solidifies its role in the pragmatic prevention and control of smoking-related oral disease, disability and premature death, while reducing the immense costs borne by health systems and societies.

By eliminating combustion and toxic exposures, these products substantially lower risks to oral health compared with continued smoking, supporting healthier gums, teeth and mucosa and thereby improving quality of life across populations.

To realise these benefits, THR must be embedded within global and national policy frameworks: the WHO and governments should adopt risk-proportionate regulation, establish clear product standards, deploy affordability levers to ensure equitable access and integrate THR into cessation services as complementary tools. Policies must also be gender-sensitive, recognising different patterns of tobacco use and barriers to quitting. Such measures will accelerate declines in smoking prevalence, safeguard oral health and deliver sustainable public health gains.

POLICY RECOMMENDATIONS FOR ORAL HEALTH AND THR INTEGRATION

Adopt risk-proportionate regulation

- Differentiate non-combustible THR products such as ONPs from smoked tobacco
- Ensure regulatory frameworks reflect relative risk profiles to incentivise substitution away from cigarettes

Establish clear product standards

- Mandate quality, safety and labelling requirements for oral nicotine pouches
- Guarantee consistency in nicotine delivery and minimise harmful constituents

Introduce affordability levers

- Apply differential taxation aligned with risk, making less harmful options, such as ONPs, more accessible and affordable than cigarettes
- Support equitable access across socio- economic groups to reduce oral health disparities

Integrate THR into cessation services

- Position ONPs as complementary tools within national quit-smoking programmes
- Train dental and medical professionals to advise patients on THR options for oral health protection

Ensure gender-sensitive approaches

- Address distinct patterns of tobacco use among men and women
- Tailor THR interventions to overcome gender-specific barriers to cessation and oral healthcare

Highlight oral health benefits

- Promote THR as a means to prevent and control smoking-related oral disease, disability and premature death
- Emphasise cost savings for health systems through reduced treatment needs and improved population oral health outcomes

CONCLUSION

ONPs represent a legitimate, effective harm reduction tool capable of delivering measurable improvements in both cessation rates and oral health outcomes, without causing serious health harms.

The 2025 Cochrane Review’s safety findings, combined with Sweden’s population-level success, biomarker evidence showing dramatic toxicant reductions, the ongoing SMILE Study’s clinical validation and Canada’s pharmaceutical approval of Zonnic establish an evidence base that meets the highest standards of scientific rigour.

For 3.7 billion people suffering from oral diseases, the 1.27 billion smokers worldwide, and particularly the millions in LMICs using toxic oral tobacco products, ONPs offer something unprecedented: a pathway to better health that acknowledges the real-world barriers to cessation while delivering tangible harm reduction.

With the oral disease burden rising, cessation rates stagnating and health inequalities widening, risk-proportionate regulation of ONPs represents an essential component of 21st century public health policy. It could save millions of lives and dramatically reduce the global disease burden of oral disease, disability and premature death.

This report provides the evidence base, policy frameworks and strategic roadmap needed to transform oral health through harm reduction. What we need now is for policymakers to follow the science, learn from the real-world experience of countries such as Sweden and prioritise health outcomes over the outdated orthodoxies that have left so many smokers behind.



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