

The Changing Landscape of tobacco smoking and use of nicotine products: Epidemiological challenges

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Outline



- Tobacco use traditional and modern health/equity concerns
- Advances in tobacco control (FCTC) and global use trends, esp SSA
- New Landscape – Tobacco Industry interference and new products
- E-cigarettes and epidemiological challenges
- Conclusion



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Tobacco Use – A Global Health Challenge



- Leading cause of preventable deaths – 1.3 billion users and 8 million die annually (WHO, 2023).
- About 70% of lung cancers are attributable to smoking.
- Tobacco use is linked to various other cancers, cardiovascular diseases, and respiratory illnesses (80% COPD linked to smoking).
- If the current rate of tobacco use persists, it is projected to cause 18 million additional cases of TB and 40 million excess TB-related deaths between 2010 and 2050 (Basu et al., 2011).
- The excess mortality rate among smokers living with HIV is on average three times higher
- Overwhelming costs due to treatment of tobacco-related diseases, straining health systems resources (~\$2trillion globally).



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Tobacco's Role in Health Inequities



Tobacco and Vulnerable Populations:

- Disproportionate burden on low- and middle-income countries (LMICs).
- Higher prevalence among marginalized groups (socioeconomic, racial/ethnic disparities)



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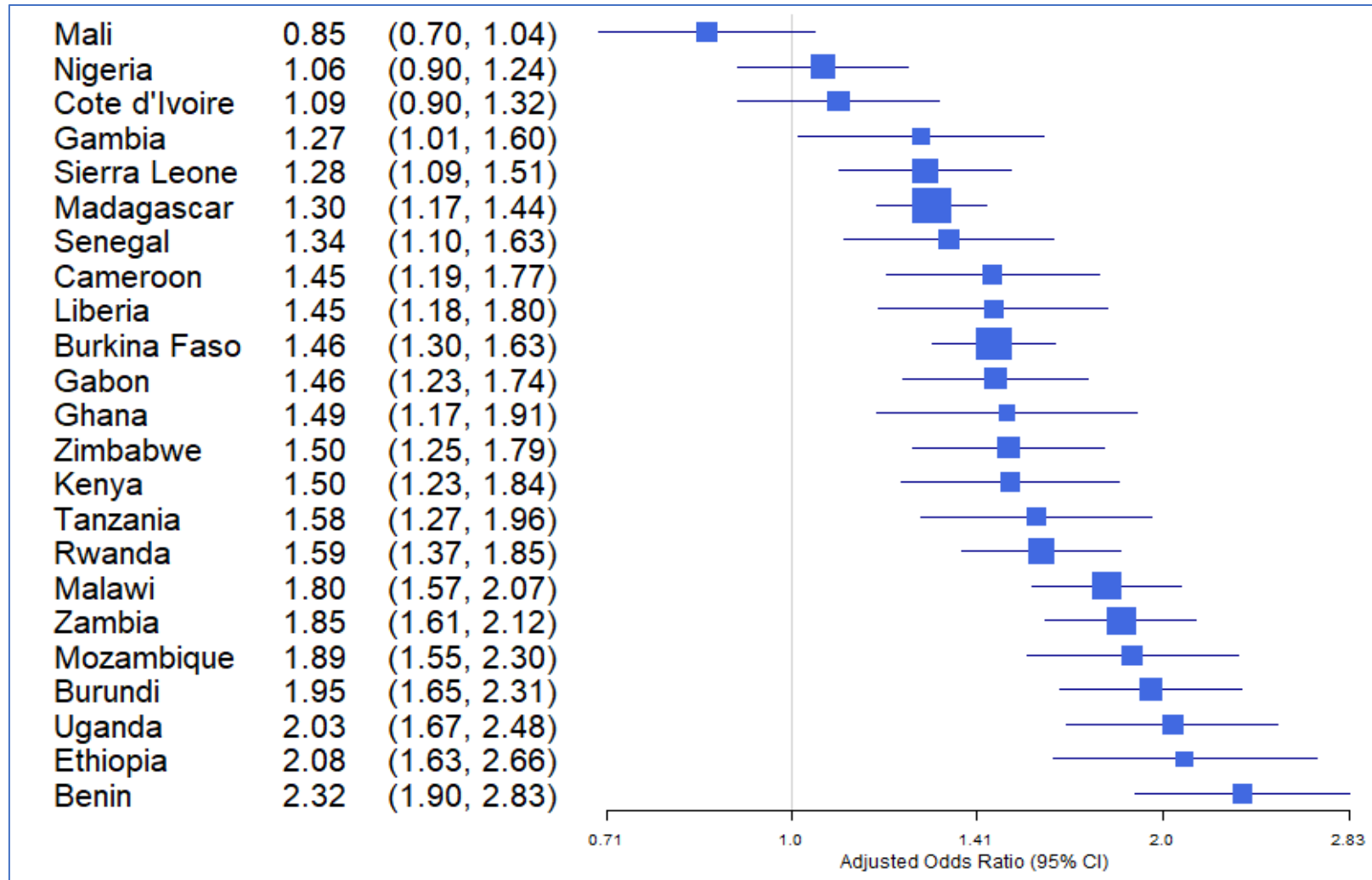
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Smoking more concentrated among low SES in SSA



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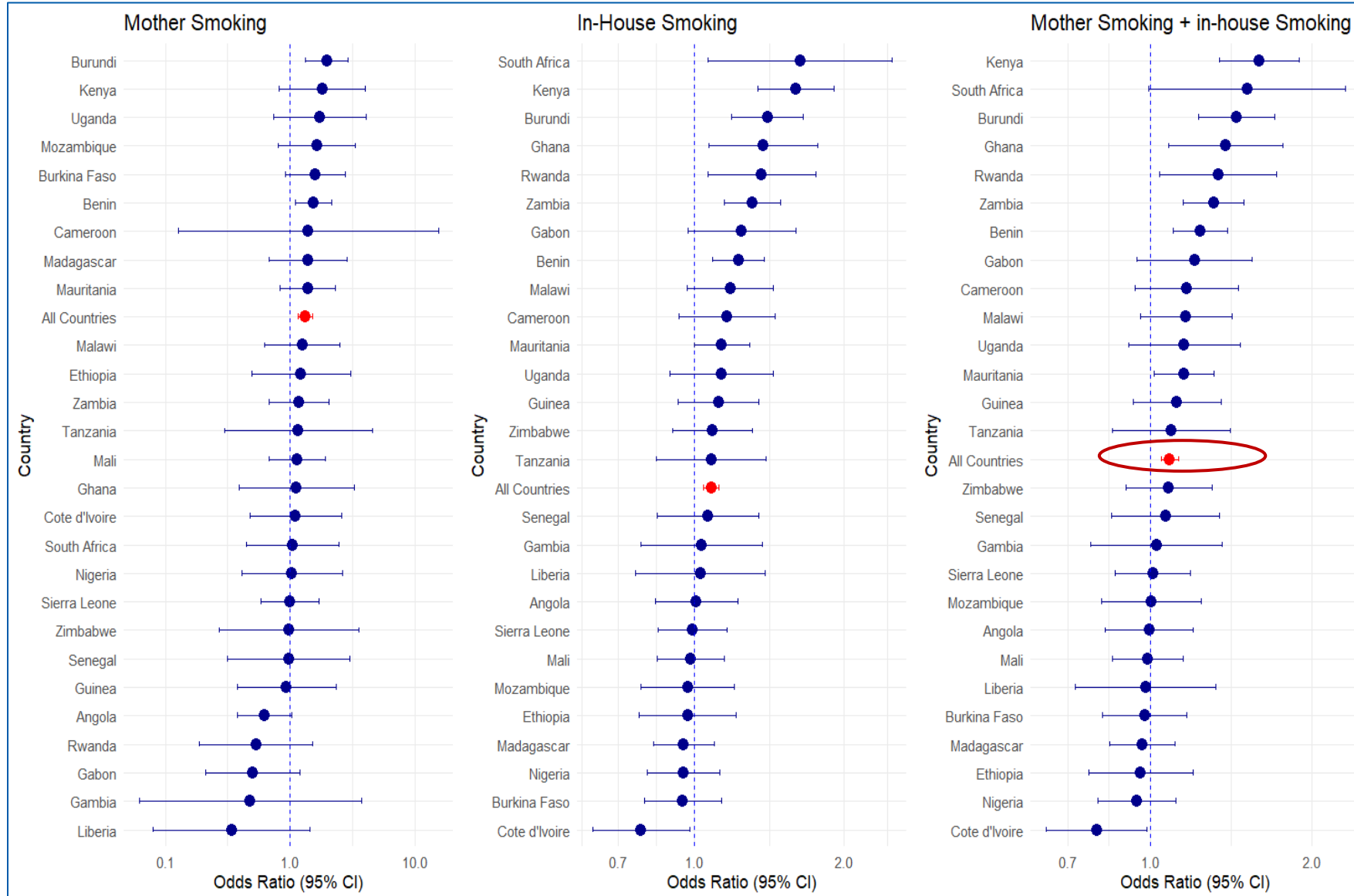
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Child exposure to tobacco smoke and stunting in SSA



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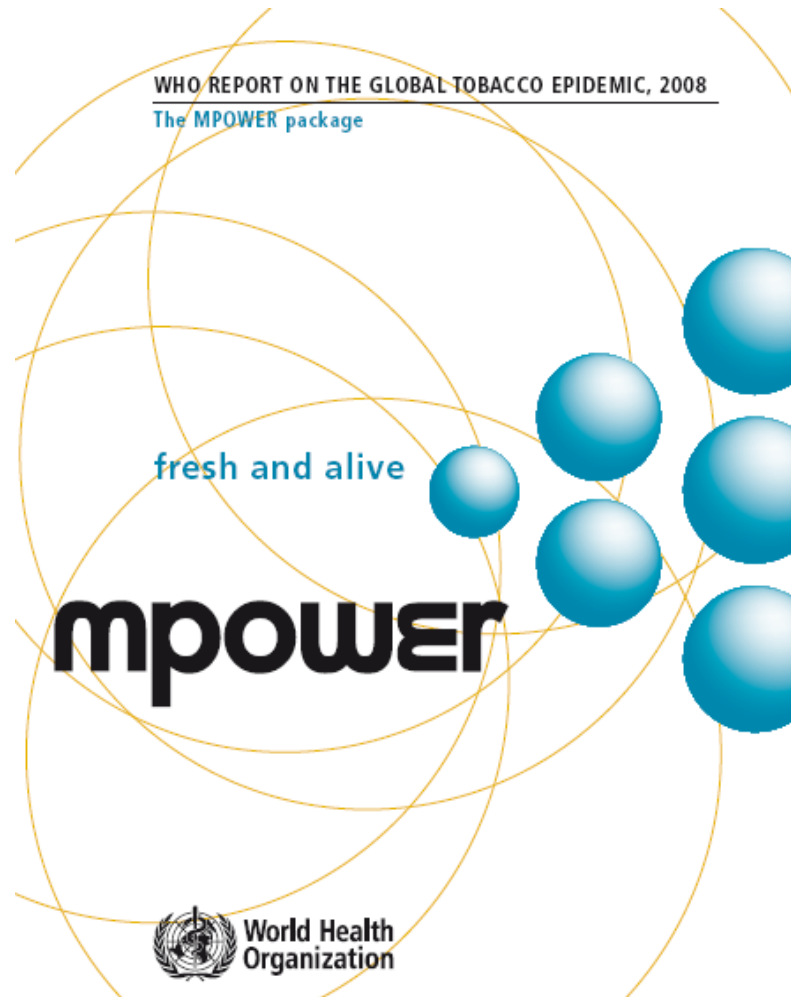
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M.P.O.W.E.R (WHO FCTC – SDG target 3.a)



- **M**onitor use & policies (and product toxicity, attractiveness and addictiveness)
- **P**rotect from SHS
- **O**ffer help to quit
- **W**arn about dangers
- **E**nforce bans on Adverts
- **R**aise taxes on tobacco

Coverage:

-182 countries, 90% of global population.



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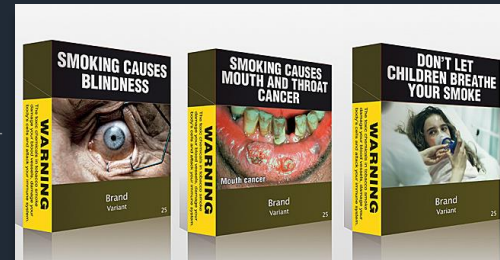
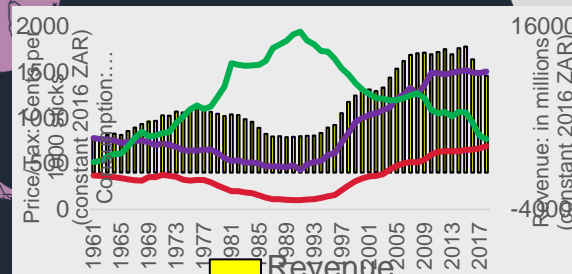
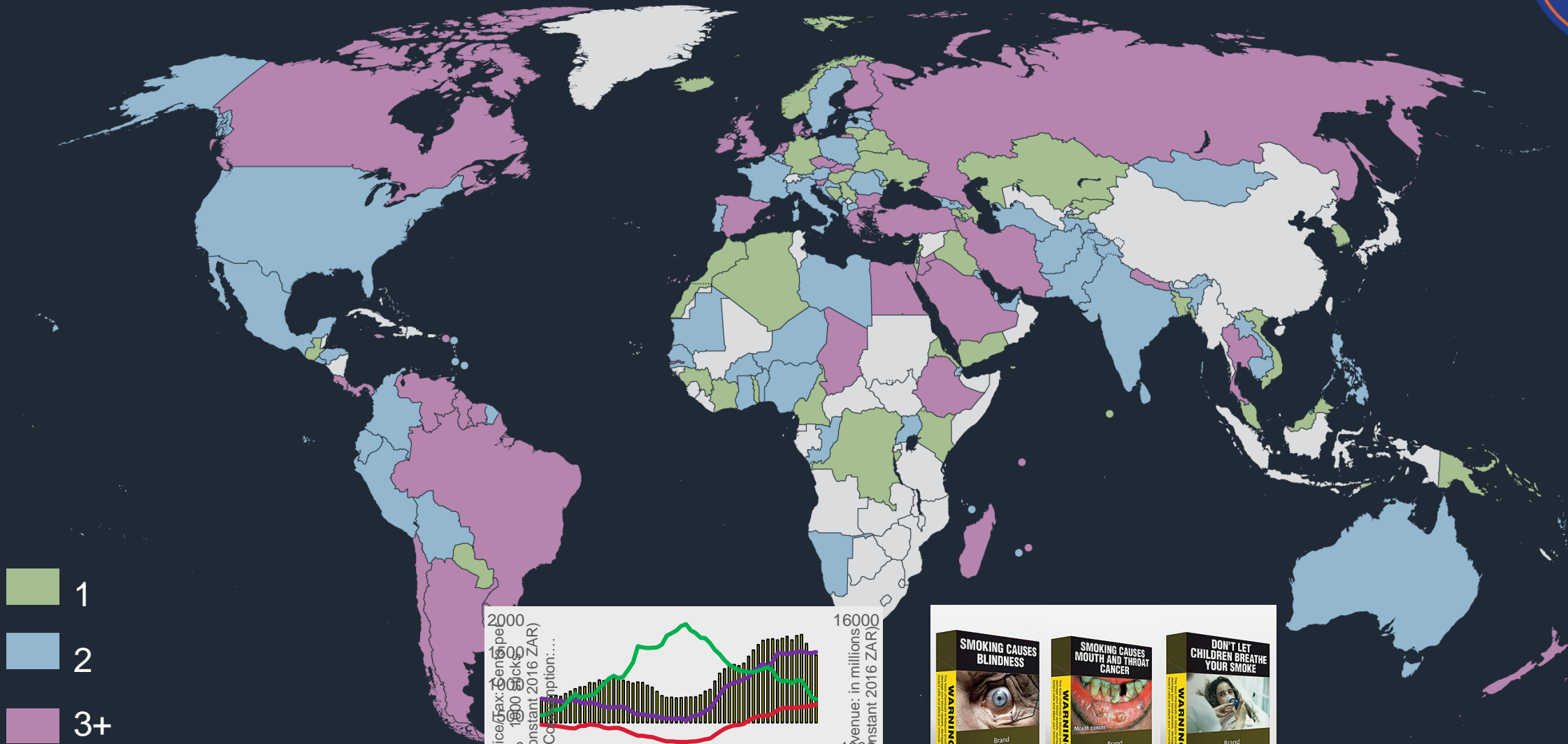
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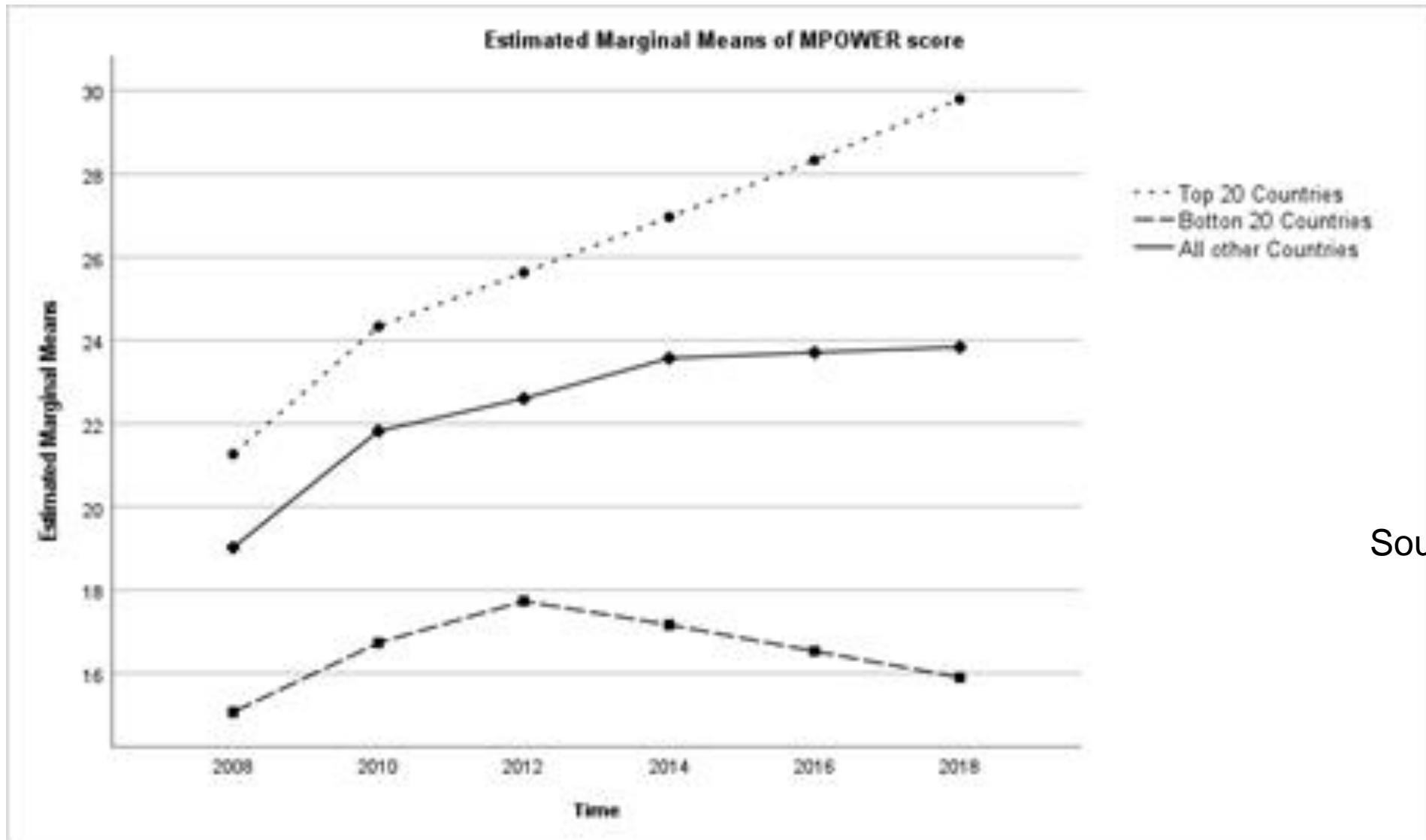
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Number of strongest tobacco control policies in place



MPOWER Policy implementation slowed for most countries



Source: Hagen et al., 2022



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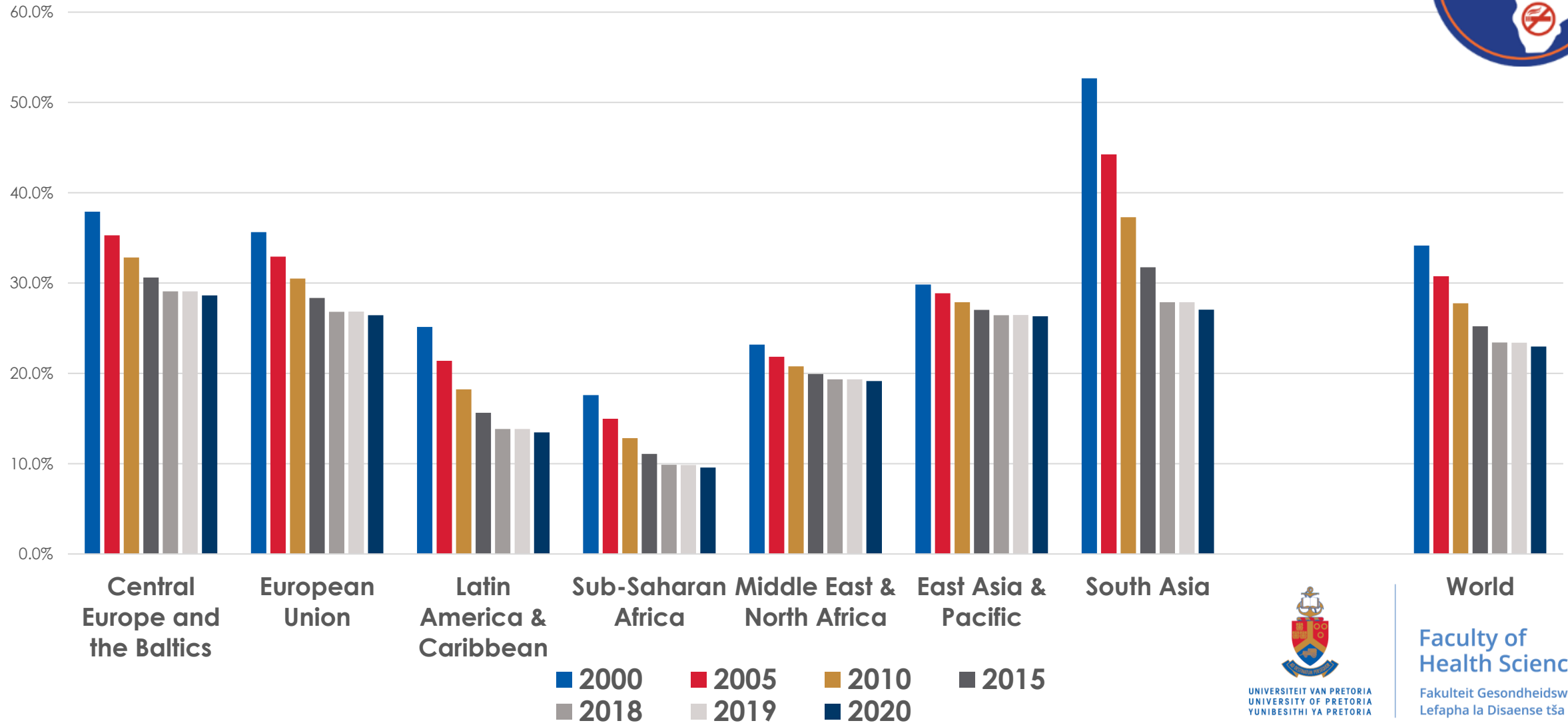
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Trends in tobacco use by region (2000-2020)



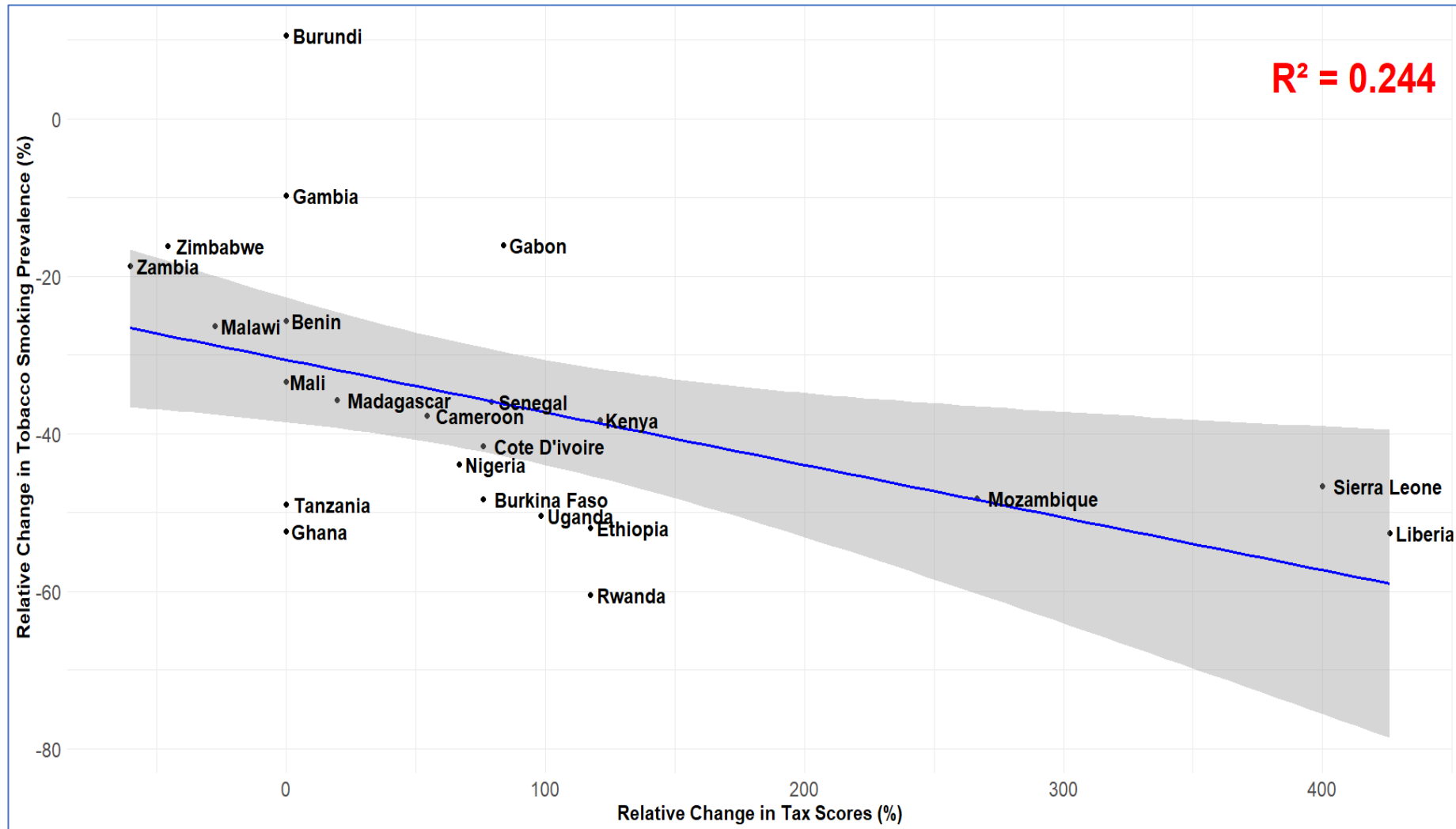
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Greater increase in excise tax scores is associated with greater decrease in weighted smoking Prevalence in SSA (2014-2022)



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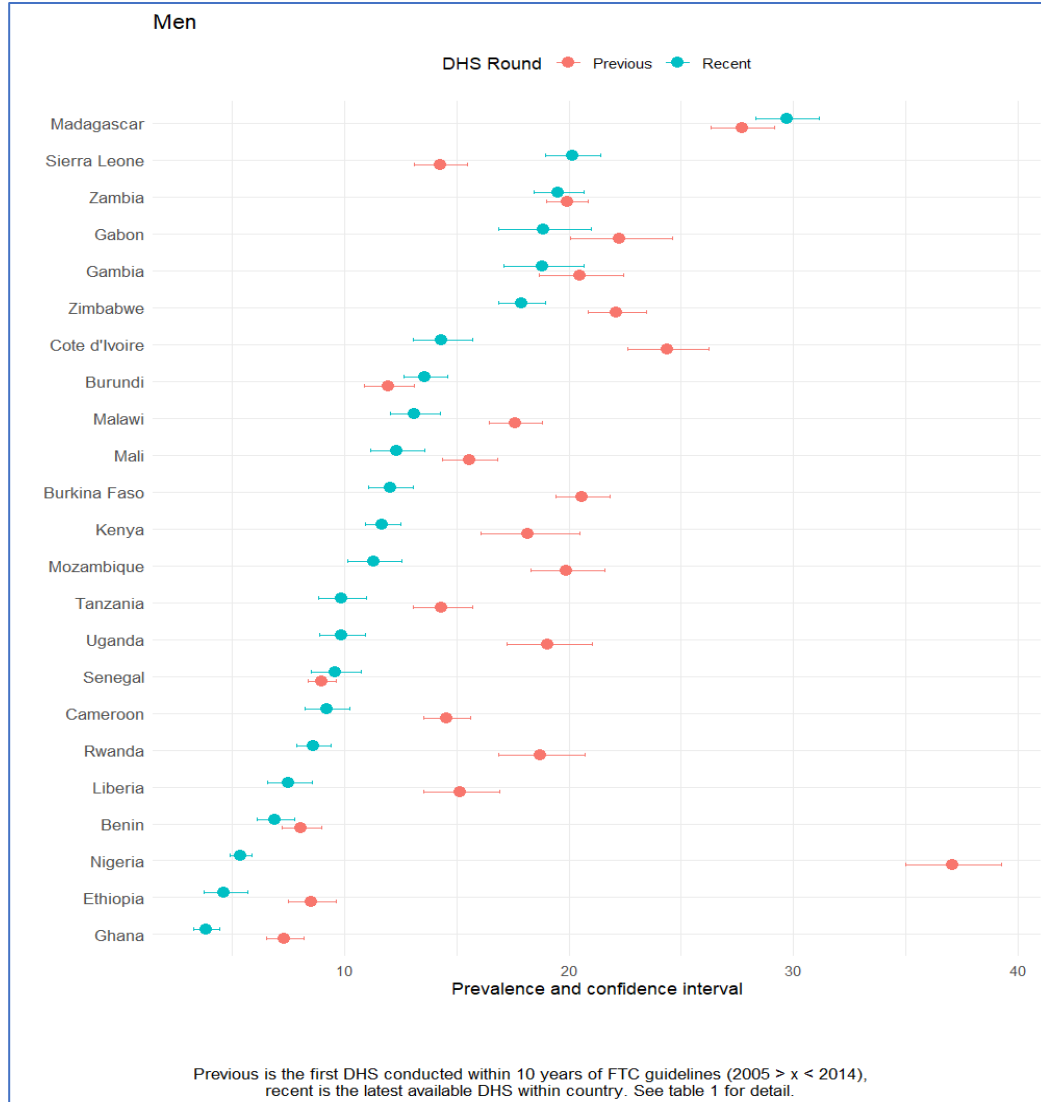
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Smoking increasing among women in SSA



Journal of Urban Health: Bulletin of the New York Academy of Medicine, Vol. 85, No. 4
 doi:10.1007/s11524-008-9286-7
 © 2008 The New York Academy of Medicine

“Coming to Town”: The Impact of Urbanicity, Cigarette Advertising, and Network Norms on the Smoking Attitudes of Black Women in Cape Town, South Africa

Chyvette T. Williams, Sonya A. Grier, and Amy Seidel Marks

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 ophoër van die Dwaalwag van die Maphelo

The Role of Big Tobacco in Modern Public Health Crises



- The shifting focus to emerging markets in LMICs.
- Tactics of the Tobacco Industry:
 - Lobbying to Influence on government policies (violating Article 5.3 of WHO FCTC).
 - Marketing to youth and vulnerable populations. and deceptive advertising of “reduced harm” products.



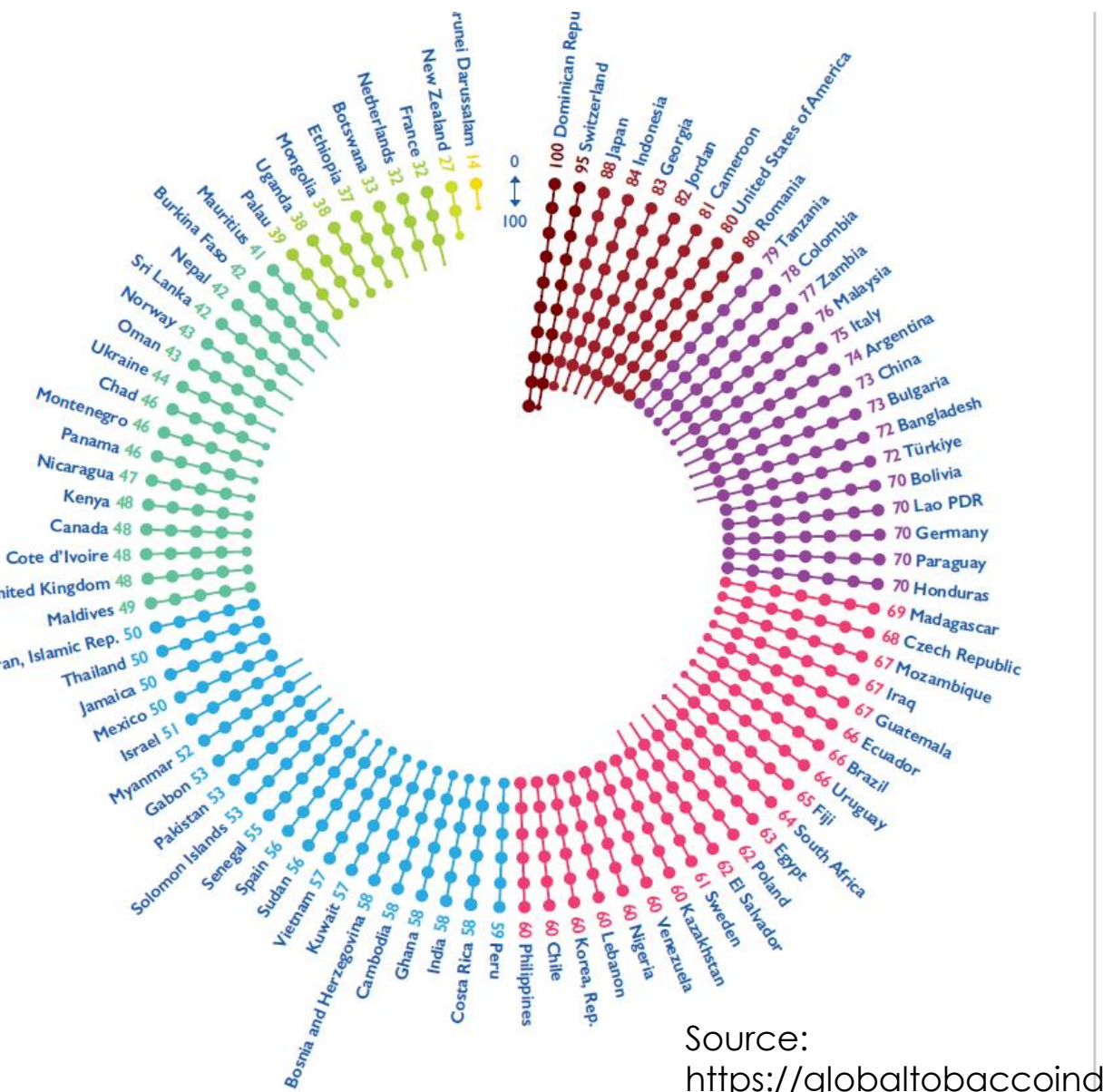
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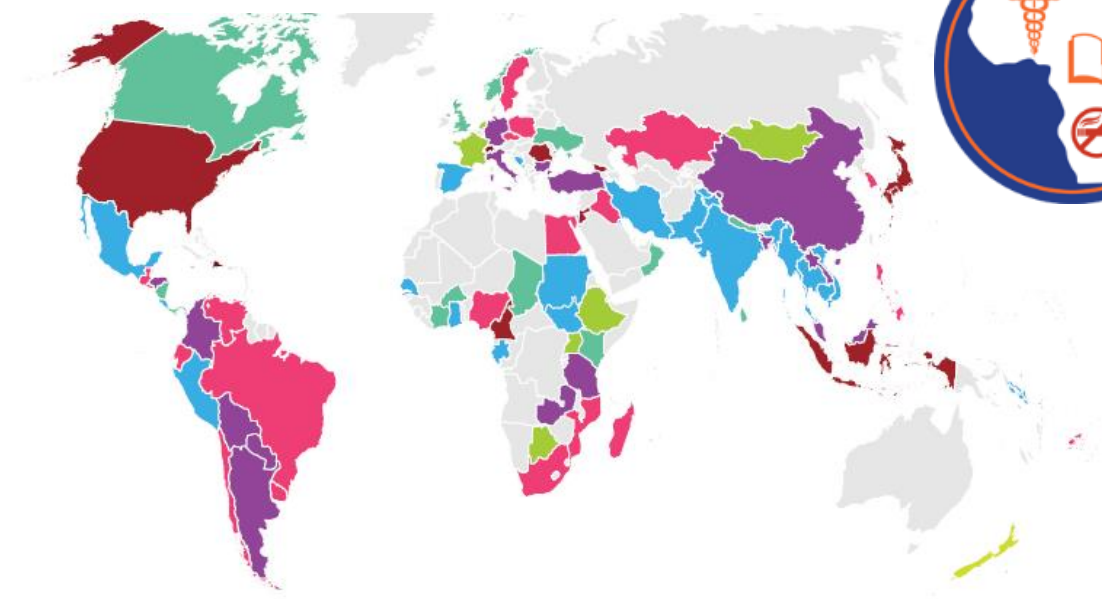
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Source: <https://globaltobaccoindex.org/report-summary>

The lower the score, the better the ranking



LEAST INTERFERENCE



MOST INTERFERENCE



Landscape of New Tobacco & Nicotine Products



Categories of Products:

- E-cigarettes (vapes)
- Heated tobacco products (HTPs)
- Other novel nicotine delivery systems (e.g. Oral Nicotine Pouches)



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Emerging tobacco and nicotine products:



What are they?

Open System
(refill Tank) E-
cigarette



Closed System
(prefilled Pod) E-



Heated Tobacco
Product
(HTP)



Oral Nicotine pouch



Keeps evolving



Waterpipe/
Hookah/Hubbly/
Shisha



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Modern Health Challenges Linked to Tobacco & Nicotine products



- Persistent Influence of Tobacco on NCDs:
- Increase in cases of heart disease, cancer, and respiratory conditions.
- Effects on other modern health crises like diabetes and mental health.
- Smokers have a higher risk of severe outcomes from COVID-19, including hospitalization and death.

Emerging Trends:

- Dual use of tobacco and electronic cigarettes (vaping)
 - impact on public health.



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Industry Promoting Harm Reduction and Youth event sponsorship promoting e-cigarettes with cigarettes



thesouthafrican.com/lifestyle/entertainment/vuse-inspired-live-streaming-event-slikour-nine-hastie/



Pierre Johnson speaking to Smash Afrika on set at Vuse Inspired Live.



g Zulu, left, and Mduduzi on stage at Vuse Inspired Live performing 'Inhlupheko'.

← Post

1,6K

Africa Harm Reducti... Ad

As #Kenya moves forward with the current Tobacco Control Bill, access to safer alternatives for Kenyans who want to quit smoking derails. 🇰🇪 @Josephmagero

ahra.info/coffeechat-wit...

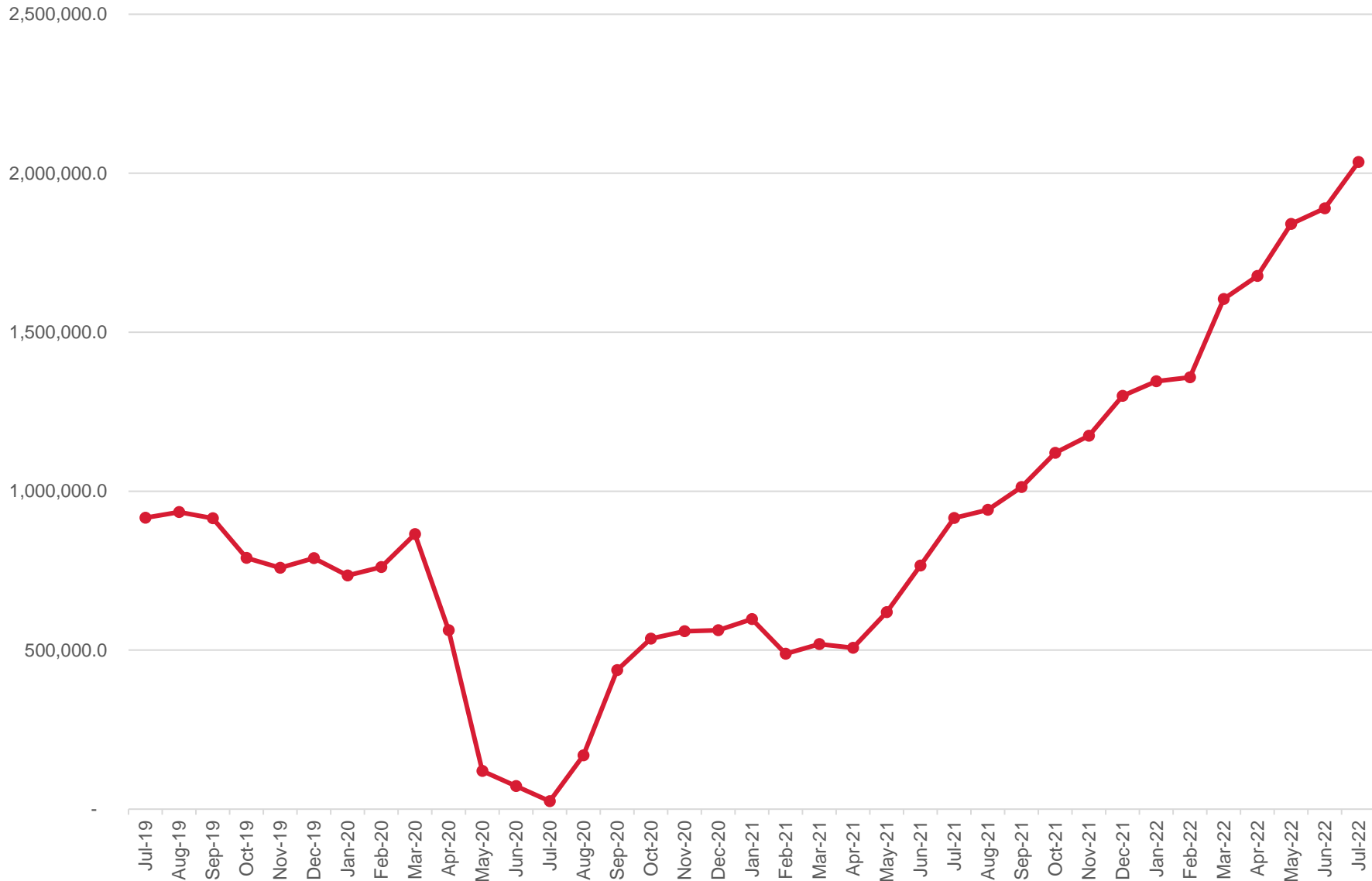
#HarmReduction #THR #THRWorks #SmokingCessation #SaferAlternatives #THRInKenya

Ministry of Health and Nakumicha

Post your reply



Three-year trends in SA e-cig volume (ml) sales



MORE FROM US



Rapidly Emerging Challenge



E-cigarettes can also be used to accommodate other psychoactive substances, including marijuana



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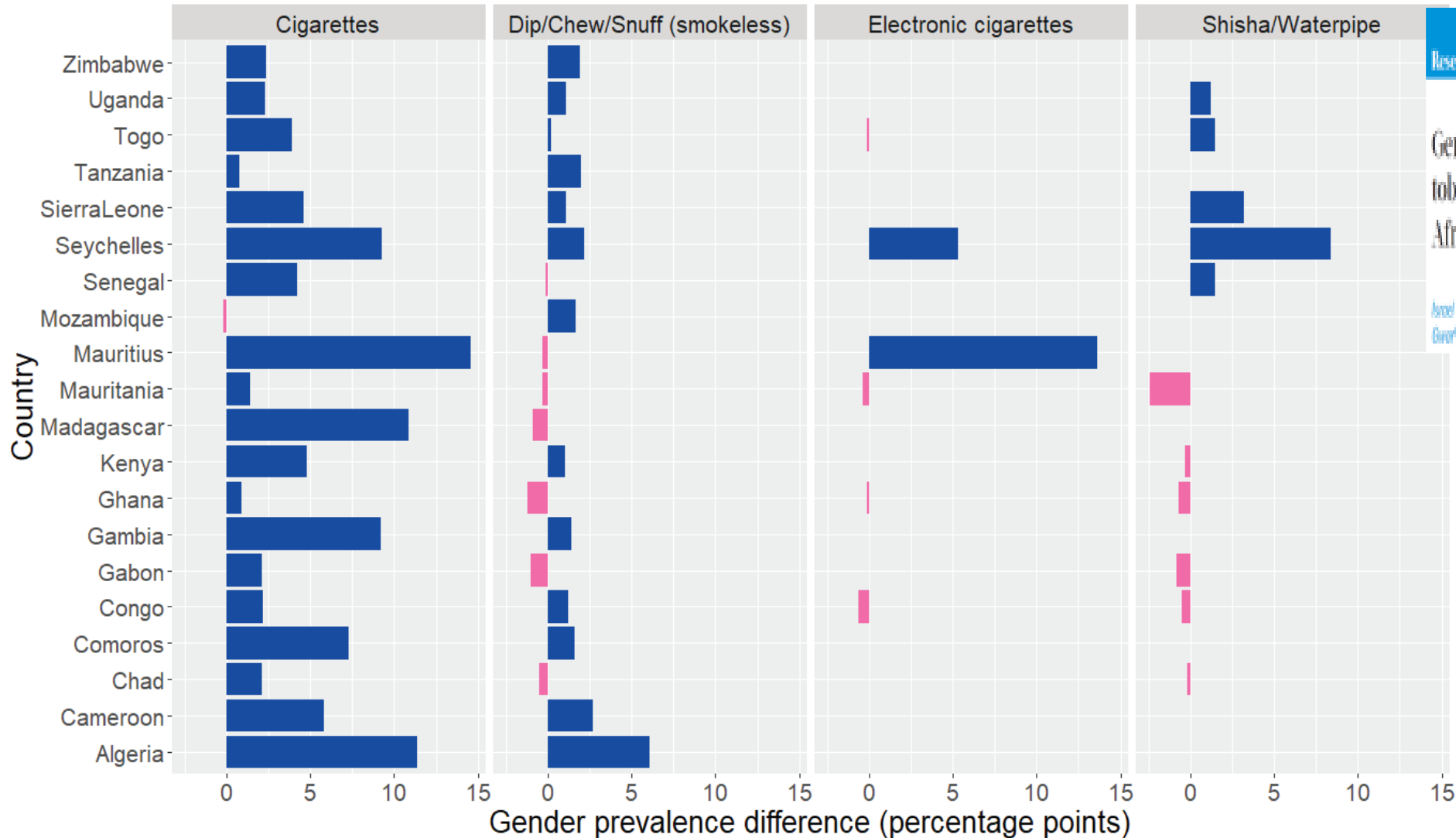
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Gender disparities in adolescent use of tobacco/nicotine products differ by product type



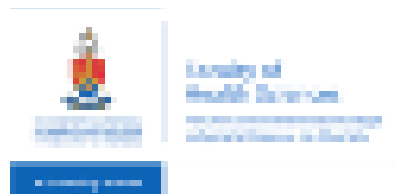
Research Paper Tobacco Related Diseases

Gender differences in use of cigarette and non-cigarette tobacco products among adolescents aged 13-15 years in 20 African countries

Israel T. Agaku¹, Rose Salentic², Adriana Dragkovic³, Gilbert Njie⁴, Candace K. Jones⁵, Salsani Odini⁶, Tina Tsahuridu⁷, Joy Gwar⁸, Constantine L. Vasilopoulos⁹, Oluwakan Ayo-Pasaf¹⁰

Legend
■ Boys higher
■ Girls higher

Source: Agaku et al. 2024



Data Collection and Surveillance Challenges



- **Diverse Product Landscape:** Complexity in tracking usage
- **Standardization Issues:** Lack of uniform definitions and measurements
- **Longitudinal Data Needs:** Importance of long-term studies



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Health Impact Assessment



- **Uncertain Risk Profiles:** Limited knowledge of long-term effects
- **Exposure Variability:** Differences in nicotine (free-base vs. Nic salts) and other chemical exposure
- **Research Gaps:** Current knowledge and areas for further study



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Changing Patterns of Use



- **Demographic Differences:** Usage among youth vs. older populations
- **Dual and Poly-Use:** Challenges in assessing health impacts
- **Data Trends:** Key statistics and trends



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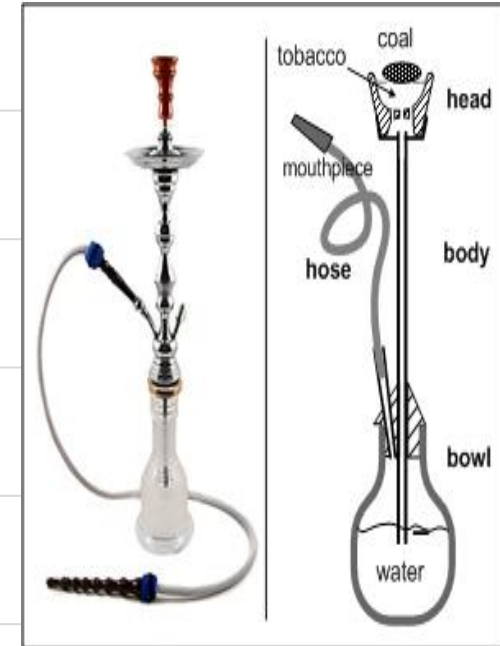
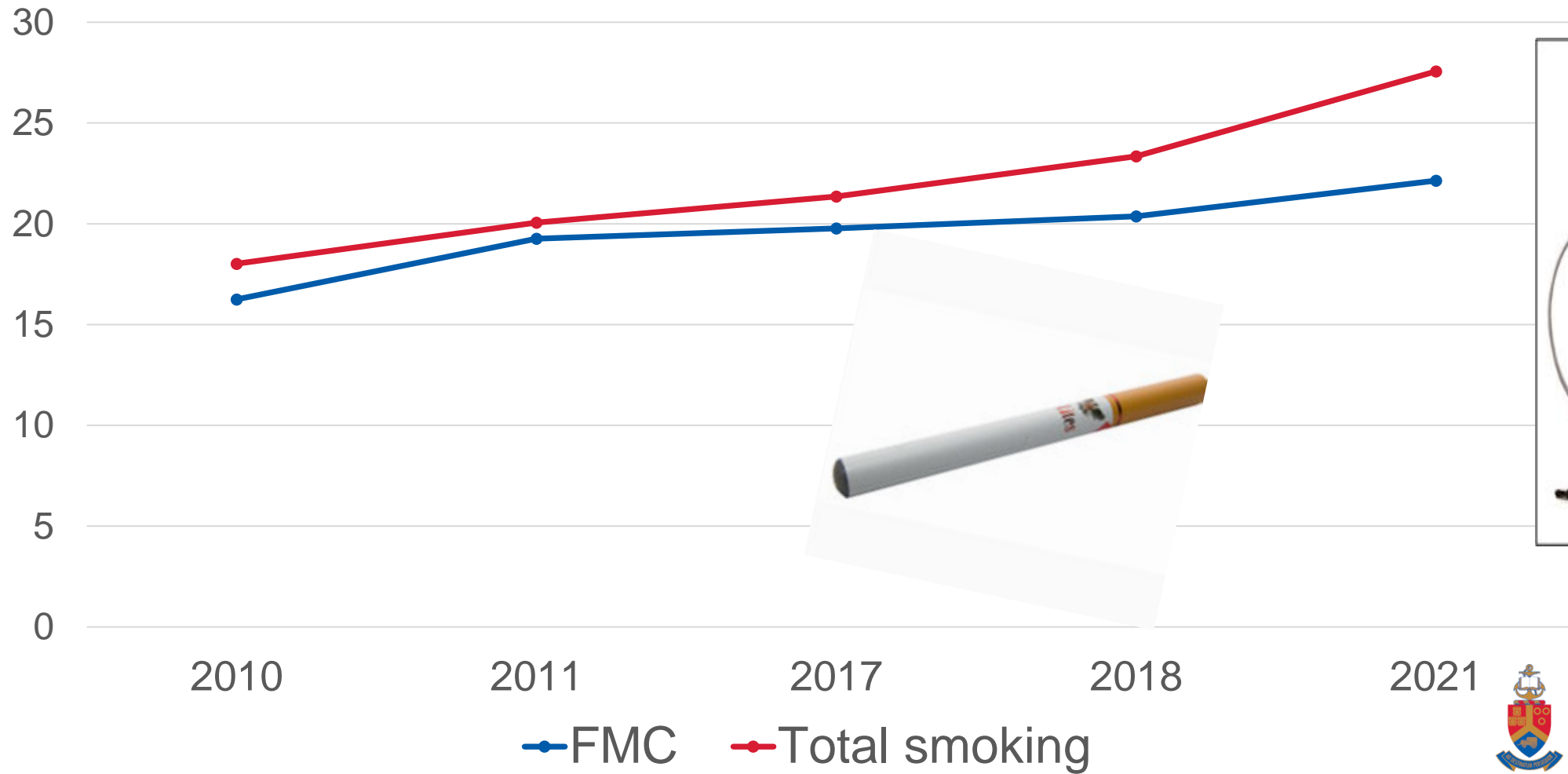
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Trends in combustible tobacco use 2010-2022



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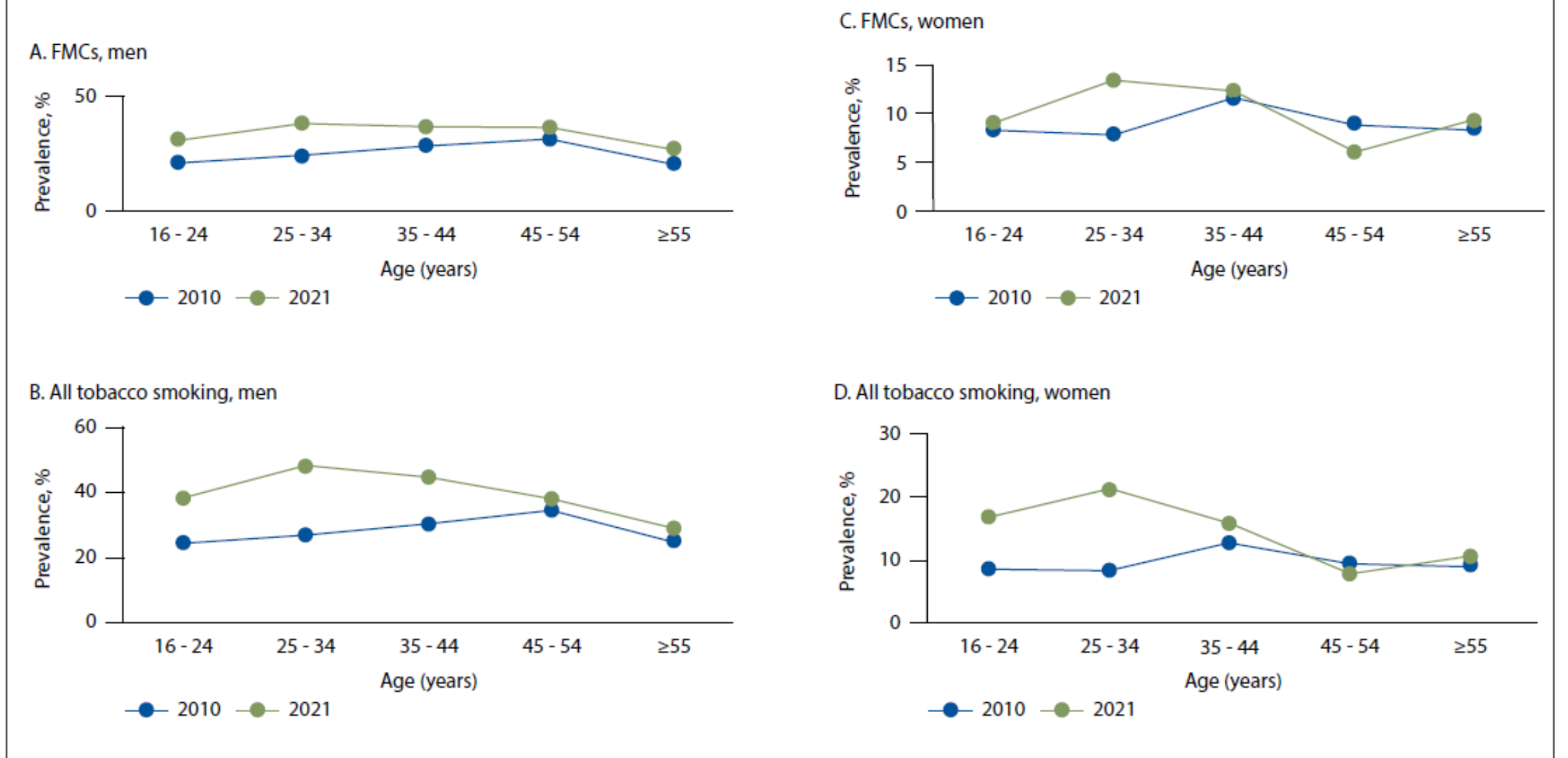


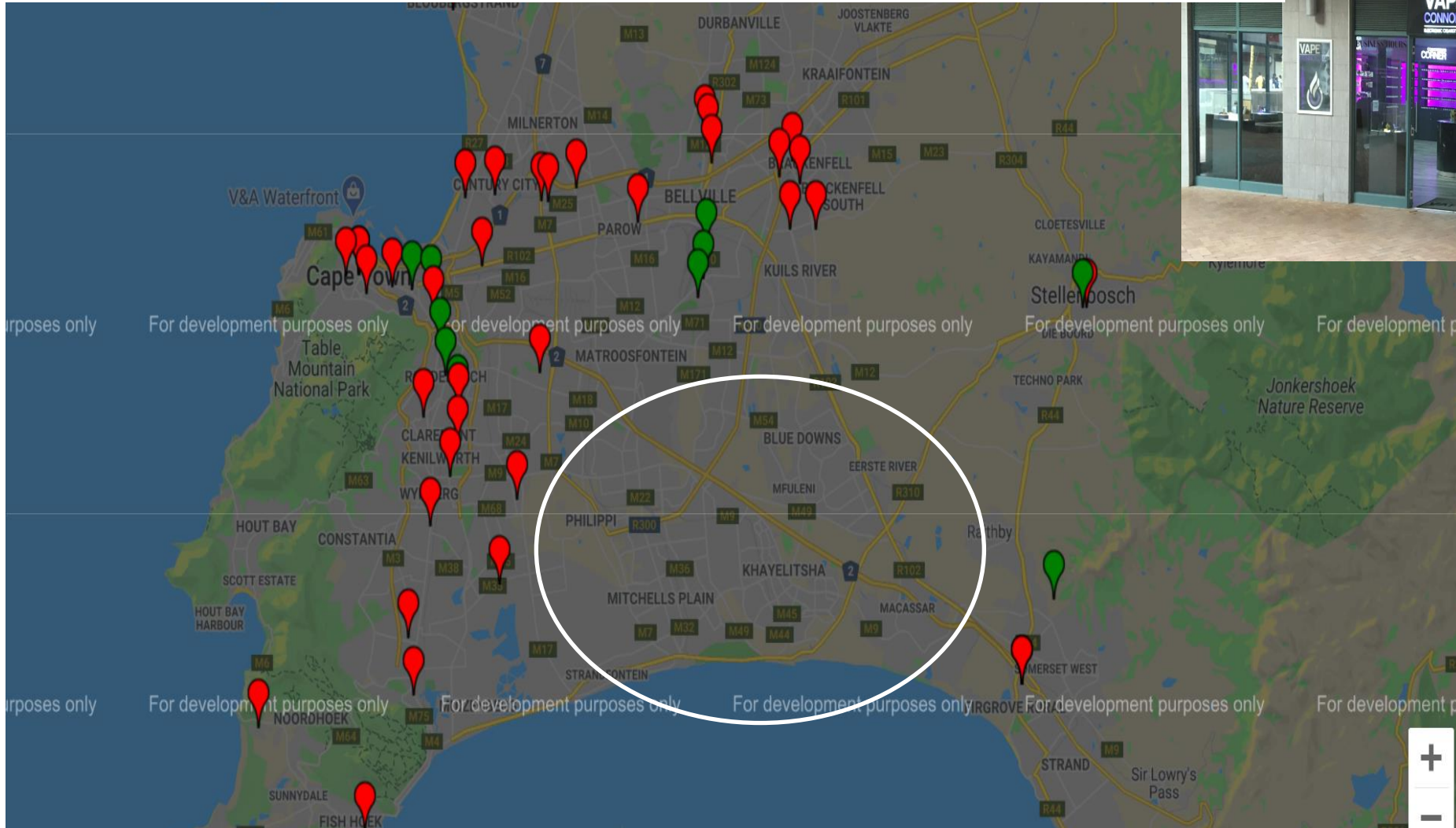
Fig. 2. Age-specific prevalence of FMC smoking and all forms of tobacco smoking among men and women in 2010 v. 2021. (FMC = factory-manufactured cigarette.)

Source: Kali & Ayo-Yusuf, 2024 (*S Afr Med J* 2024;114(6b):e1535.
<https://doi.org/10.7196/SAMJ.2024.v114i6b.1535>)



Geospatial spread of e-cigarette vape shops in South Africa and the relationship with tobacco product use among adults

Israel T. Agaku^{a,b,*}, Catherine O. Egbe^{c,d}, Olalekan A. Ayo-Yusuf^e



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Regulatory and Policy Implications - Context



Continued efforts to support normalization



Best in class employer and processes



ALP and charitable contributions



RRPs



- **Regulation Variability:** Differences in global regulatory approaches
- **Marketing and Accessibility:** Impact on youth and non-smokers
- **Examples of Policies:** Overview of regulatory measures (e.g., bans, restrictions)



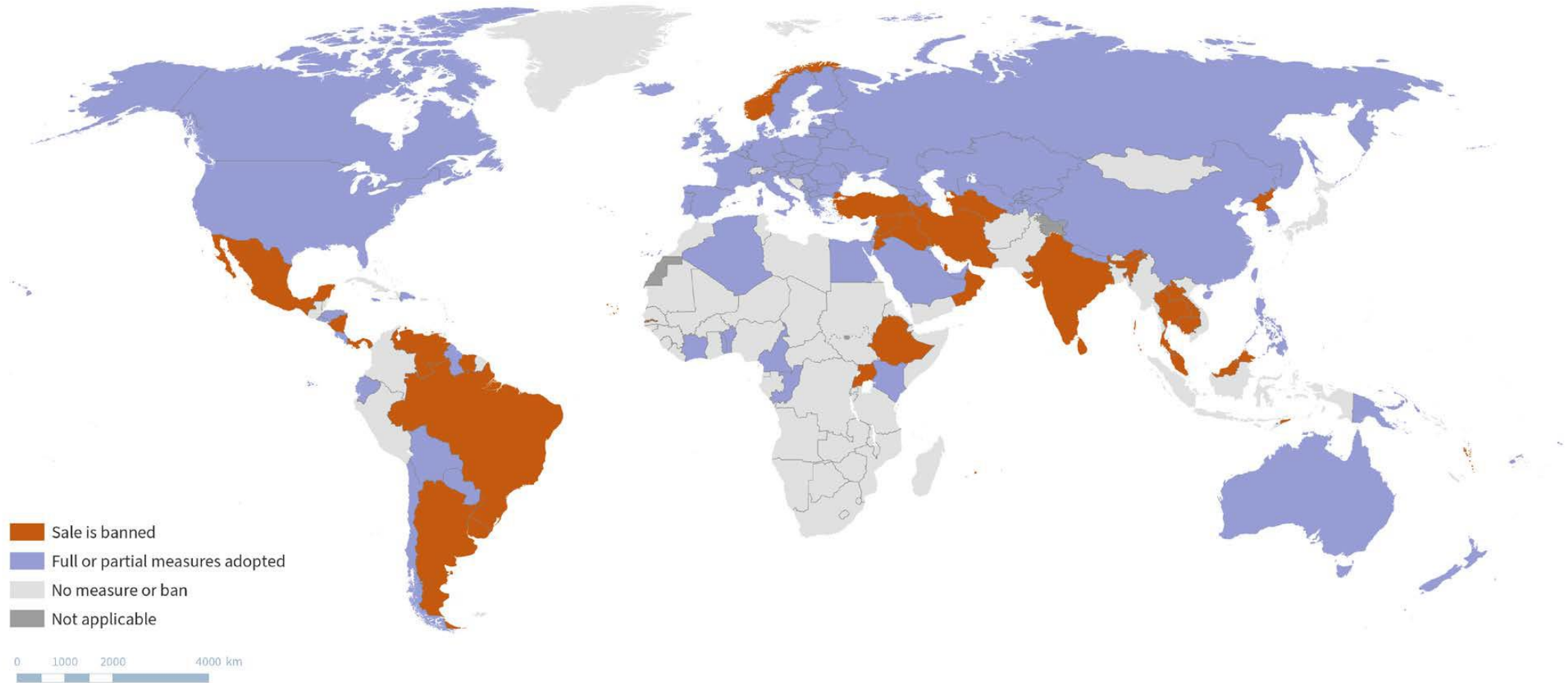
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E-cigarettes regulation – 42 countries banned indoor use



Public Health Communication and Perception



- **Risk Perception:** Public understanding vs. actual risk
- **Misinformation:** Challenges in public health messaging
- **Harm Reduction Debate:** Use of new products in smoking cessation strategies

Condition 1 (control): Fully branded packs with usual imagery, brand names, and flavour descriptions



Condition 2: White standardized packs with usual brand names and flavour descriptions



Condition 3: White standardized packs with coded brand names and limited flavour descriptions

Taylor et al, 2024



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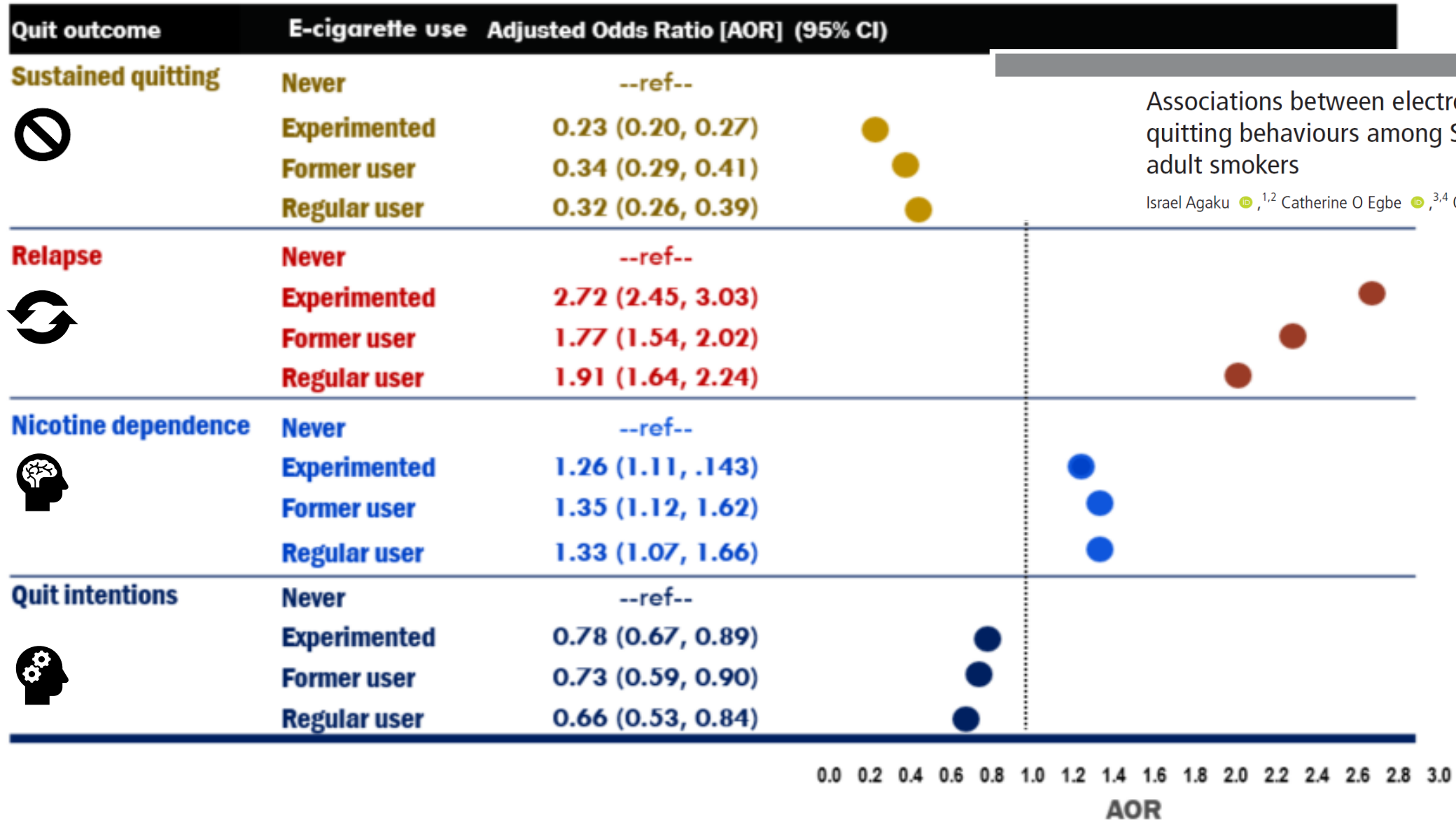
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E-cigarette use and sustained quitting, smoking relapse, nicotine dependence and quit intentions (2018 SA online Survey N~18,000).



Original research



Associations between electronic cigarette use and quitting behaviours among South African adult smokers

Israel Agaku ,^{1,2} Catherine O Egbe ,^{3,4} Olalekan Ayo-Yusuf ⁵

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Research and Ethical Considerations



Special communication

Hidden flaws in e-cigarette industry-funded studies

Eric K Soule ,^{1,2} Matthew E Rossheim,³ Melvin D Livingston,⁴ Cassidy R LoParco,⁵
Kayla K Tillett,³ Thomas Eissenberg ,² Steve Sussman⁶

Tob Control: first 1

- **Ethical Challenges:** Research on youth and vulnerable populations
- **Conflicts of Interest:** Influence of industry funding on research
- **Need for Independent Research:** Ensuring unbiased data



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Conclusion and Future Directions



- Tobacco use continues to be a significant public health challenge, driving modern health crises.
- Despite advances, the influence of tobacco on global health remains persistent due to industry interference, emerging tobacco & nicotine products, and socio-economic inequities - all posing unique epidemiological challenges.
- Achieving a tobacco-free future (Endgame) requires a comprehensive, multi-sectoral approach.

Estimated impact of a tobacco-elimination strategy on lung-cancer mortality in 185 countries: a population-based birth-cohort simulation study

Julia Rey Brandariz, Harriet Rumgay, Olalekan Ayo-Yusuf, Richard Edwards*, Farhad Islami*, Shiwei Liu, Mónica Pérez-Ríos*, Paulo César Rodrigues Pinto Corrêa*, Alberto Ruano-Ravina*, Isabelle Soerjomataram*

Summary

Background The tobacco-free generation aims to prevent the sale of tobacco to people born after a specific year. We aimed to estimate the impact of eliminating tobacco smoking on lung-cancer mortality in people born during 2006–10 in 185 countries.



EMBARGO
03.10.2024

Lancet Public Health 2024
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- WCE – Travel support
- Africa Capacity Building Foundation (ACBF)

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