WOMEN AND SMOKING IN THE EU

Gender and Chronic Disease Policy Briefings - World No Tobacco Day 2013

Smoking in the EU: The Basics

Smoking is the leading cause of preventable disease and death in Europe for women and men.[3,4]

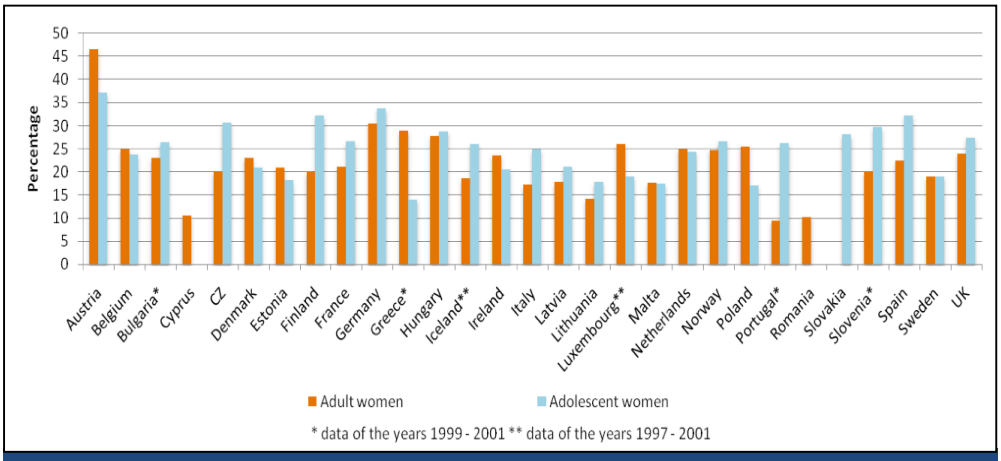

Figure 1: Percentage of adult women and adolescent women smoking (where available), 2002–2005[1]

During the last two decades, smoking has become more popular among younger women with potentially disastrous consequences for their future health. Although overall the smoking prevalence is lower among women than men, the smoking gap has been narrowing across the EU-27 due to a decrease in male and alarming increase in female smokers in many countries.

In the past social constraints kept down tobacco use in women. However, with increasing gender equality, women became empowered to enter the labour market, exercise their freedom to spend their own money as they choose. These societal changes have made women a prime target for the promotional activities of the tobacco industry. Today, combining both daily and occasional smokers, female prevalence has reached 46.5% in Austria and is averaging 21% across Europe.[5]

Large variations in smoking rates occur throughout the WHO European region. In the EU-27 the overall rate of women smoking is highest in Austria, Bulgaria and Greece. The increase of women smoking has been particularly pronounced in Eastern Europe, after the fall of Communism and the privatisation of tobacco sales. [6]

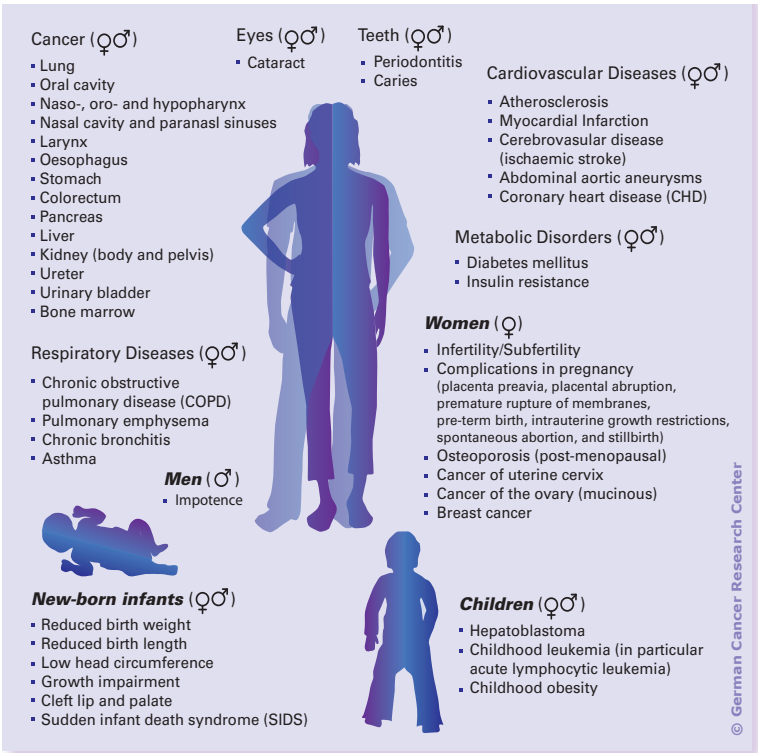

Figure 2: Smoking related diseases[2]

The Tobacco Disease Burden: Why Gender Matters

About 1/3 of EU citizens smoke: up to 50% of women smoke in some countries.[7] Annually, smoking costs the EU €98-130 billion in health expenses.[8] Tobacco is the leading cause of premature mortality in Europe, harming nearly every organ in the body. Over half of smokers die prematurely. Smoking is a major risk factor for developing many chronic diseases. (See *Figure 2)*. Women who smoke have an increased risk of cardiovascular, respiratory and airways diseases, many different cancers, osteoporosis; reproductive health problems and various other diseases compared to non-smoking women.[9]

Research indicates that women are as vulnerable to the harmful effects of tobacco smoke as are men, if not more so. For certain diseases like chronic obstructive pulmonary disease (COPD) the risk to women from smoking is higher than in men.[10]

Women smoke for different reasons and are more vulnerable to tobacco smoke. They become addicted to nicotine more rapidly, have more difficulty quitting and experience more severe withdrawal symptom than men.[11]

Smoking and Lung Cancer

Historically, lung cancer has mostly affected men. However, this gap has been narrowing due to an increase in female smokers. While the incidence of lung cancer is levelling off or decreasing in men, it is increasing among women. [13]

In Europe, lung cancer causes 20% of all cancer-related deaths, the highest of any cancer.[7] Cancer of the lung/bronchus is the third most common cancer among women. Lung cancer death has overtaken that of breast in Poland, the UK and Ireland. A recent study funded by Macmillan Cancer Support estimates that in the UK death from lung cancer is expected to quadruple in women in the next 30 years.[14]

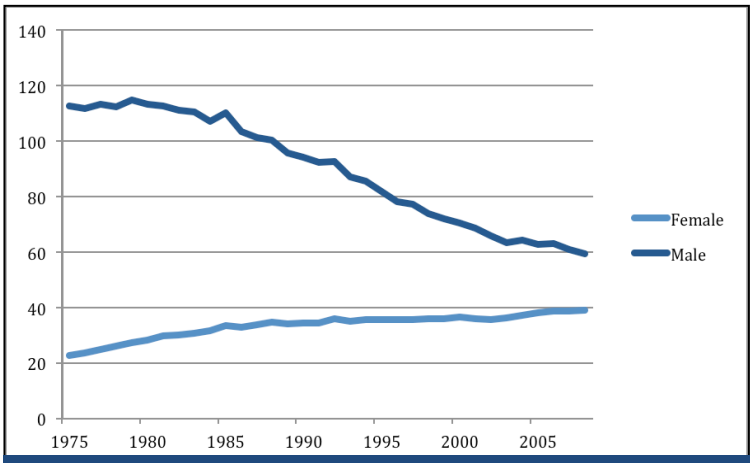

Figure 3: Age-standardised incidence rates of lung cancer per 100,000 residents, UK[12]

A high percentage of lung cancer in women is smoking-related. Despite lung cancer's strong association with tobacco use, one in five women who develops the disease has never smoked. Non-smoking women appear to be at two to three times greater risk for developing lung cancer, suggesting that other factors such as passive smoking play a role. [15, 16, 17]

Smoking, HPV infection and Cervical Cancer

According to the American Cancer Society, women who smoke are about twice as likely as non-smokers to get cervical cancer. Researchers believe that tobacco by-products damage the DNA of cervix cells and may contribute to the development of cervical cancer. Smoking also makes the immune system less effective in fighting HPV infections, which places smoking girls more at risk of developing cervical cancer.[18-20]

Smoking, Cardiovascular Disease, including Stroke

Smoking and exposure to second-hand smoke increase a women's risk of developing heart disease and stroke. It is more likely to cause CVD in women than in men. The risk of CVD is especially high in women who started smoking before the age of 15.[23] It appears that women's CVD risk increases with the number of cigarettes smoked. Researchers at the University of Minnesota and Johns Hopkins University, when reviewing 30 years of research encompassing nearly four million people, found that women who smoked had a 25% higher risk of CVD than smoking men. For each additional year of smoking, a woman's extra risk increased by 2%. Smoking resulted in an estimated 2.3-fold increased risk of heart attack compared to 1.8 fold risk in men.[24,25]

Smoking, the Birth Control Pill and Early Menopause

Women who smoke and take birth control pills, increase several times their risk of heart attack, stroke, blood clots, and peripheral vascular disease. [26] Additionally, smoking may lead to an early menopause with the associated health risk for CVD and osteoporosis.

Smoking and Diabetes

Smoking increases the risk of developing type 2 diabetes for both men and women. Smoking is a health hazard for everyone but people who have diabetes face an even greater risk. The combination of high blood glucose and smoking increases damage to the blood vessels that feed the heart, brain, eyes, kidneys and peripheral nerves, speeding up the complications of diabetes.[27] In the highest risk group—those smoking two packs or more per day—men who smoked were 45% more likely than nonsmoking males to develop type 2 diabetes; women who smoked to the same level *were 74% more* likely than nonsmoking women to develop type 2 diabetes when controlling for other factors.[28]

Quitting smoking decreased the rate of type 2 diabetes 5 years after cessation in women and 10 years after cessation in men.[29] Studies also indicate that exposure to second-hand smoke increases the risk of developing diabetes when controlling for other risk factors.[30, 31]

The American Nurses' Health Study, which followed over seven-thousand women with diabetes over twenty years, found that smoking increases mortality among women with type 2 diabetes; risk increases as the average number of cigarettes smoked per day increases. The study found that smoking cessation can significantly lower the risk of death. Thus, those with diabetes should be strongly advised not to smoke.[27]

Tobacco Products Directive

The Tobacco Products Directive (2001/37/EC) is a key legal instrument of tobacco control in the EU. The Directive establishes maximum tar, nicotine and carbon monoxide yields for cigarettes. It specifies labelling provisions, bans the use of misleading descriptors and the marketing of oral tobacco in the EU, except in Sweden.[32]

In late 2012, the European Commission released a revision of the Tobacco Products Directive to replace the first Directive adopted in 2001. The new legislation proposes strengthened rules and addresses the following points:

- ***Labelling and Packaging***: All cigarette and Roll Your Own packages must contain a combined picture and text health warning covering 75% of the front and the back of the package and must carry no promotional elements. The current information on tar, nicotine and carbon monoxide, which is perceived as misleading, is replaced by an information message on the side of the pack that tobacco smoke contains more than 70 substances causing cancer. Member States remain free to introduce stricter rules for plain packaging.
- ***Ingredients***: An electronic reporting format for ingredients and emissions will be introduced. The proposal foresees a prohibition for cigarettes, roll your own tobacco and smokeless tobacco that have characterising flavours and a prohibition of products with increased toxicity and addictiveness.
- ***Smokeless tobacco***: The ban on oral tobacco products (snus) is maintained, except for Sweden, which has an exemption. All smokeless tobacco products must carry health warnings on the main surfaces of the package and products with characterising flavours cannot be sold. Novel tobacco products require prior notification.
- ***Extension of the scope of the Directive***: Nicotine containing products (e.g. electronic cigarettes) below a certain nicotine threshold are allowed on the market, but must feature health warnings; above this threshold such products are only allowed if authorised as medicinal products, like nicotine replacement therapies. Herbal cigarettes will have to carry health warnings.
- ***Cross border distance sales***: A notification for internet retailers and age verification mechanism are foreseen to ensure that tobacco products are not sold to children and adolescents.
- ***Illicit trade***: A tracking and tracing system and security features (e.g. holograms) are foreseen to ensure that only products complying with the Directive are sold in the EU. [33, 34]

The proposal will be discussed and amended by the European Parliament and the Council of Ministers. The Commission expects the legislation to be adopted in 2014 and come into effect by 2015-2016.

Figure 4: Female-targeted cigarette packing[35]

Ireland's Smoking Ban Legislation

Ireland was the first EU country to implement the smoking ban, prohibiting smoking in the workplace through the Tobacco Smoking (Prohibition) Regulations 2003. As smoking is a major cause of mortality and morbidity, the Irish ban seeks to protect employees from exposure to harmful tobacco smoke at the workplace. The law also restricted the sale of cigarettes, prohibiting the sale of packs of 10 cigarettes, only allowing the sale of packs of 20 cigarettes.[36] A year after Ireland's smoking ban was enacted, studies already showed its health benefits. For example, a study published in the *BMJ* found that the rate of respiratory problems, such as cough, had fallen by 17% in non-smoking bar workers in Ireland. By contrast, in Northern Ireland, where there was no such ban during the same period, no change was observed. Various studies found other health improvements and improvements in Irish air quality.[37-40]

Australia's Plain Packaging Laws—a Victory over the Tobacco Lobby

In 2011, Australia adopted strict tobacco control laws, being the first country in the world to legislate plain packaging. Importantly, the new Australian legislation requires plain packaging of cigarettes. It outlaws the use of logos, brand images, and promotional text on all tobacco product packaging. The law also restricts the colour, display of brand and variant name, format, material and size of tobacco packaging. The Competition and Consumer (Tobacco) Information Standard 2011 requires health warnings on all tobacco retail packaging.[41]

Tobacco manufacturers promptly challenged the Australian law, arguing that it was unconstitutional and violated intellectual property rights by removing brand names and colours. Industry experts also claimed the legislation would encourage contraband cigarette entering the market. Despite court battles, the legislation was upheld by the highest court in Australia and industry was required to follow the legislation as of 1 December 2012.[42]

Ireland and Plain Packaging—Leading the Way for Europe

The Irish Minister of Health, Dr. James Reilly, announced on 28 May 2013 that Ireland will introduce plain packets for cigarettes and other tobacco products. It is expected that the new legislation will be in place by early next year. With this decisive move, Ireland becomes the first EU country, and worldwide only the second after Australia, to introduce plain packaging.

Figure 5: Historic female-targeted ads[43]

Marketing to Women – Making smoking glamorous and fun

The tobacco industry has long targeted women in the promotion of their products, making cigarettes a symbol of gender equality, sophistication and upward mobility. The industry considers female consumers to be a lucrative, unexplored market.[46]

Women were first identified as a key market—a *"gold mine"* according to the then President of American Tobacco—during the 1920s. Companies promotional activities, such as the "Torches of Freedom" campaign, linked smoking to the feminist movement. Smoking became a sign of emancipation and breaking down taboos that had kept women in their place. Women were recruited, even paid, to smoke their "torches of freedom" during feminist movement marches, including the Easter Sunday Parade in New York.[47]

Women-only brands—like Virginia Slims by Phillip Morris with the slogan *"You've Come A Long Way Baby"*—launched in the 1960s, continued smoking's long-standing connection with the liberation movement. Recently, such campaigns have been revamped with slogans such as *"It's a woman thing"* and *"Find your voice."*[48,49]

Other campaigns like Lucky Strike brand's *"Reach for a Lucky Instead of A Sweet"* were designed to appeal to women who are conscious of their weight and calorie consumption. Since then, marketing strategies are increasingly aimed at young girls and women worldwide, adapting to changes and trends over time. "Low tar" and "light" cigarettes were launched in the 1970s; a 1978 Philip Morris document stated, "*Today women make up the majority of low tar smokers. Almost half of all women have switched to low tar."* [50]

The Industry's strategy is to make smoking more appealing through a marketing mix of price, availability and images. Strategies vary, depending on the company, the country/culture, legislative restrictions and social trends. Smoking is made to look fun, glamorous, healthy, liberated, relaxing, sexually attractive, slimming and sophisticated. Coloured packs have been demonstrated to attract children. [51]

The tobacco industry employs various tactics to promote smoking among women and young girls, including:

- Combining non-tobacco products with brand names;
- Female-targeted branding includes light or slim cigarettes;
- Free samples and discounting;
- Loyalty schemes, including coupons, to encourage regular purchasing;
- Paid use of cigarette brands in movies and on television;
- Promotional material at point of sale and product displays;
- Specialised pack design and branding;
- Sponsorship of sporting and art events; and
- Websites promoting companies, brands and smoking.[52]

Figure 6: Recent female-targeted ads[44]

Tailoring tobacco control interventions for women

Smoking is more common in lower socio-economic groups. Women on average are poorer than men, with a lower employment status, and oftern are still economically dependent. Increasingly, they are heading single parent and low-income households. Their lower-paid work may expose them to a smoking environment through part-time house or hospitality work. Maternal smoking has a devastating effect on their offspring, causing miscarriages, birth defects and premature births. Smoking cessation programmes for vulnerable women must offer a way out of breaking the cycle of deprivation and tobacco dependency.[53, 54]

The duration of smoking is the strongest predictor of risk for lung cancer.[55] Women who quit smoking by the age of forty can extend their lives by ten years.[56] Despite the recognised benefits of smoking cessation, few anti-smoking initiatives have taken a gender-based approach reaching out to women. Such programmes could better tackle and counteract the industry's aggressive marketing activities aimed at women.

Figure 7: Female-targeted smoking cessation campaign[45]

Article 11 of the World Health Organization's Framework Convention on Tobacco Control (WHO FCTC) recommends to use clear and varied pictorial health warnings with messages on the packaging and banning misleading language such as "light," "low tar" and "mild." The warnings have been shown to be effective in encouraging smokers to stop and deter new smokers from starting. Pictorial warnings are useful in people with low literacy or language skills or those who do not speak the native tongue of a country. Since such labelling has been found to reduce the appeal of smoking, it is an increasingly important tool for counteracting tobacco companies' promotional messages directed at young girls. Labelling restrictions and health warnings help combat the alluring, seductive images conjured up by the tobacco industry to expand their market by encouraging women and young girls to smoke.[57]

Smoking in Young Girls

Europe's youth has the highest smoking rates in the world, with higher rates among lower socio-economic groups and rising rates in the young female population.[59]

The gender gap in smoking is narrowing: in 14 out of 26 EU countries, girls out-smoke boys. Combining both daily and occasional smokers, the prevalence reached 46.5% in Austria and was above 20% in the majority of European countries for which data are available.[60] Smoking has become more popular among younger women; this will have negative consequences for their future health.

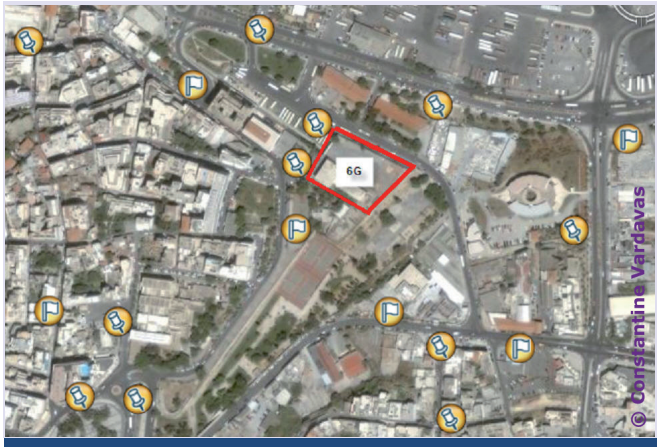

Figure 8: Density of tobacco sale and advertisements around a Greek secondary school[58]

Young girls are more likely to smoke than boys, particularly in Northern and Western European countries. Between 2002-2005, more girls than boys smoked in Italy, Sweden, Finland, the Czech Republic, France, Spain, Denmark, Ireland, the UK, Norway, Belgium, the Netherlands, Hungary, Germany, Austria, Greece, Portugal, and Slovenia.[61]

The trend of young girls out-smoking boys began in the 1990s. Smoking is one way for girls to resist the "good girl" image and a way to transition from childhood into adulthood. Young girls, who are more susceptible to stress and depression than young men, use smoking to deal with these mental health issues. Additionally, young girls and women, consider smoking as a slimming tool. One in four girls who smoke says that smoking curbs their appetite, helping them keep thin.[62]
Female celebrities are regularly captured in photographs smoking. The tobacco industry supports on-line videos portraying smoking as sexy. Tobacco marketing companies hold events at nightclubs and sponsor underground discos. Yet, few smoking cessation campaigns target young girls effectively; some efforts have even backfired, increasing rates of smoking among young, rebellious girls.[63]

Smoking and Reproductive Health

A DG Research funded study states that *"Smoking during pregnancy is one of the biggest yet avoidable causes of illness and death for both mother and infant. Nonetheless, epidemiological studies show that between 11% and 30% of pregnant women smoke or are passively exposed to tobacco smoke."*[64]

Smoking, particularly the carbon monoxide (CO) and nicotine from cigarettes, negatively impacts on both maternal and foetal health. Nicotine and CO reduces foetal oxygen supply. In addition, nicotine increases foetal blood pressure. Moreover, due to placental characteristics, nicotine and CO levels in the foetus are significantly higher than those found in the mother.[65]

Women who smoke during pregnancy are at elevated risk of:

- Stillbirth
- Perinatal mortality
- Ectopic pregnancy
- Placental abruption (placenta detachment from uterine wall before delivery)
- Placenta previa (placenta covering of the uterine opening)
- Premature labour: accounts for 15% of premature labour.[66, 67, 68]

Infants born to mothers who smoke while pregnant are at increased risk of:

- Behaviour disturbances
- Birth defects
- Decreased respiratory function
- Infant mortality
- Low birth-weight & underweight during infancy
- Sudden Infant Death Syndrome (SIDS)

Children exposed to smoking in utero are also at increased risk of asthma, respiratory infection, adult emphysema, infant colic, long-term growth impairment, intellectual disability, reproductive organ issues, etc.[69, 70, 71, 72]

Research finds that pregnant women who did not smoke themselves but were exposed to smoke at work or home had a 23% increased risk of stillbirth and 13% increased risk of having a baby with defects compared to women who were not exposed to passive smoking during pregnancy. Exposure to more than 10 cigarettes a day was sufficient for increased risk.[73]

There is no risk-free level of exposure to passive smoking.

Passive Smoking and Environmental Smoke Health Impacts

The short-term effects of passive smoking include cough, dizziness, eye irritation, headache, nausea and sore throat. Adults with asthma exposed to secondhand smoke have declined lung function. Passive smoking affects the heart of non-smokers.[74]

Effects of Passive Smoking on Women

Smoking related diseases increase in women who were exposed to passive smoking over a long time. In 2002, the International Agency for Research on Cancer (IARC) reviewed studies of secondhand smoke exposure and cancer, finding that exposure to passive smoking as a cause of lung cancer in those that never smoked; exposure to secondhand smoke increases the lung cancer risk by 20-30% and coronary heart disease by 25-35% in people who have never smoked.[75]

Effects of Passive Smoking on Children

Studies find that children whose parents smoke get sick more often than children of non-smoking parents. Children exposed to environmental smoke are at increased risk of impaired lung growth and suffer from more bronchitis and pneumonia than those brought up in a non-smoking home environment. Also, wheezing, coughing and ear infections ear tube damage as well as drainage issues are more common in children regularly exposed to secondhand smoke than those not exposed. [76]

Passive smoking can also trigger asthma attacks in children, so children exposed to secondhand smoke have increased severity and frequency of asthma attacks. Children whose parents smoke are more likely to develop new cases of asthma than children of non-smokingers.[77] Not only does childhood exposure to second-hand smoke pose risk to children's health, this danger already starts during the gestational period. Studies have recently found that smoking during pregnancy increases the risk of asthma in children even when children were not exposed to asthma allergens after birth. Children exposed to smoking in the womb were two-thirds more likely to have asthma by the age six compared to children whose mothers did not smoke during pregnancy. Smoking only during the first trimester—in cases where women quit smoking for the second and third trimester—was linked to higher asthma risk in children as well (see also previous section: Smoking and Reproductive Health).[78]

Third-hand smoke contains toxins from tobacco smoke that remain on clothing, in hair, cars, on furniture or in carpets a long time after someone has finished smoking a cigarette. Third-hand smoke exposure during pregnancy can cause serious damage to infant lung development, damage that may be significantly worse than postnatal exposure to secondhand smoke as these toxins build up over time. This exposure can also lead to the development of asthma and other respiratory ailments later in life.[79, 80]

World Health Organization Framework Convention on Tobacco Control

The WHO Framework Convention on Tobacco Control (WHO FCTC) was enacted in February 2005. By 2010, 46 EU Member States and the European Community had ratified the Treaty.[81]

The WHO FCTC highlighted that tobacco use in women and girls is on the increase and calls for gender-sensitive tobacco control strategies to focus on reversing smoking in women and young girls through empowering them to stop smoking. The EIWH encourages EU Member States urgently to adopt and enforce gender-sensitive tobacco control policies in their countries.

The WHO FCTC preamble states:

"Deeply concerned about the escalation in smoking and other forms of tobacco consumption by children and adolescents worldwide, particularly smoking at increasingly early ages," [82] and

"Alarmed by the increase in smoking and other forms of tobacco consumption by women and young girls worldwide and keeping in mind the need for full participation of women at all levels of policy-making and implementation and the need for gender-specific tobacco control strategies." [83]

Gender should be considered during implementation of all articles of the WHO FCTC. With the increase of smoking among women and young girls, particular attention should be devoted to Article 11 and Guidelines (packaging and labelling), Article 12 (health education, communication and public awareness), Article 13 and Guidelines (tobacco advertising, promotion and sponsorship) and Article 14 (cessation services and support) to prevent young women and girls from smoking and to encourage, as well as support, young women and girls who smoke to stop doing so. [84]

Steps for Policy Action

1) **Improve existing EU data collection to track smoking prevalence and its impact on women's health.**
Annually collect data on the prevalence of smoking, disaggregating data by gender and age in order to fully understand trends. At the EU-level, set up a robust comparable monitoring system to track smoking prevalence by age and gender across the 27 Member States.

2) **Make women themselves and the public health community aware that smoking is on the increase in young girls and women and that this will have disastrous consequences for their future health. Involving women, develop effective anti-smoking programmes, targeting girls and young women as a priority in all EU countries.**
Europe's youth has the highest smoking rate in the world and young girls are beginning to out-smoke boys. Smoking is an addiction that once started is hard to stop. Active as well as passive smoking destroys the health of women and increases their chronic disease burden over the years.

3) **Implement gender-sensitive tobacco control policies and interventions according to the WHO Framework Convention on Tobacco Control, taking account of socio-economic factors and vulnerable groups, including pregnant women, young mothers and their children.**
Make young women aware that smoking is not only dangerous to their own health, but also the health of their children growing up in a smoking environment. Develop effective programmes that offer support rather than blame to young women in their efforts to stop smoking. Smoking cessation campaigns should reach out with convincing messages to women during prenatal care when they may be most receptive to advice.

4) **Ensure that the revision of the EU Tobacco Products Directive provides for plain packaging, bans the use of slim packages that specifically appeal to young girls, and includes strong health warnings.**
This is an opportunity for all of Europe to follow Australia's and Ireland's leadership to take stringent tobacco control measures. Urgent and concerted action is needed to stop the next generation of smokers from starting.

5) **Regulate electronic cigarettes under the pharmaceutical legislation and build an evidence base for their quality, safety and efficacy as a smoking cesssation tool.**
Inhalation into the lungs delivers substances as quickly into the bloodstream as injections. As a result, electronic cigarettes must be regulated to ensure their safe use throughout the European Union.

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