WOMEN AND SMOKING IN THE EU

European Institute of Women's Health Policy Brief 2017

Smoking in the EU: The Basics

Smoking is the leading cause of preventable death and disease in Europe for women and men.[1,2,3] Tobacco can lead to a variety of non-communicable diseases (NCDs), including lung cancer, cardiovascular disease, and diabetes; diseases which account for 86% of deaths and 77% of the disease burden in the WHO Europe region.[4]

In Europe 28% of adults smoke, and 16% of all deaths are attributed to tobacco use–both global highs.[5] Despite increased tobacco control policies, tobacco use remains shockingly prevalent throughout the EU.

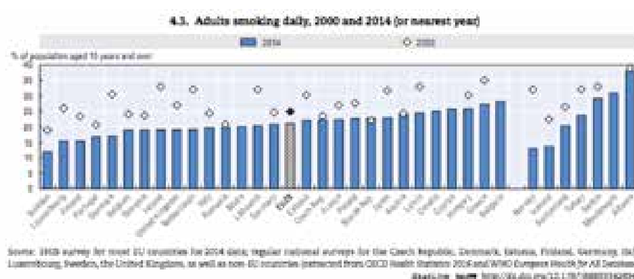

Figure 1: Adults smoking daily, 2000 and 2014 (or nearest year)

While smoking has traditionally been a male habit, its popularity among younger women has been increasing, with potentially disastrous consequences for their future health. Smoking from an early age leads to nicotine addiction, keeping younger people smoking longer and increasing the adverse side effects.[6] In the past, social constraints suppressed tobacco use in women; however, with increased gender equality, social pressures to refrain from tobacco use have considerably diminished. Although overall smoking prevalence is lower among women than men, this gap has been narrowing across the EU due to a decrease in smoking male and an alarming increase in the number female smokers in many countries. Indeed some EU Member States have higher rates of smoking in young women than in young men.[7]

In 2014 the rates of current smokers in Europe (aged 15 years and older) ranged from 16.7% in Sweden to 34.7% in Bulgaria. Additionally, the rates of passive smoking varied for people aged 15 years and older, from 5.9% in Sweden to 64.2% in Greece.[8] In the EU-28 the prevalence of women smoking is highest in Bulgaria, Croatia, Cyprus, Greece, and Hungary with 21-22% of women smoking daily.[9]

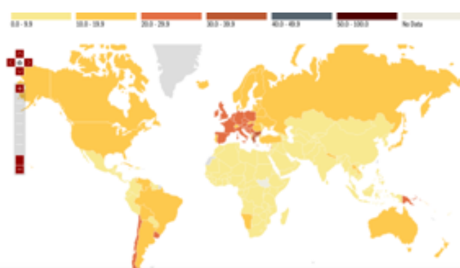

Figure 2: Percentage of adult females who smoke daily, age ≥15, 2013 [112]

According to a 2012 Eurobarometer Report, Europeans smoke approximately 14.2 cigarettes per day on average. Surprisingly, this number is almost unchanged since 2009. Additionally, most smokers (43%) smoke 11-20 cigarettes every day, which corresponds to about one pack per day, though this number is currently decreasing.[10]

Although EU countries have some of the highest average levels of tobacco consumption, overall tobacco use has decreased by 16% since 2000 (see *Figure 1*).[11] Nevertheless, some gender-specific data shows the rates in some EU countries for women are stagnant, and even increasing in some cases.[12]

The Tobacco Disease Burden: Why Gender Matters

Tobacco is the leading cause of premature mortality in Europe, harming nearly every organ in the body. Over half of smokers die prematurely at an average of 14 years earlier than non-smokers.[13] Tobacco Atlas estimates that approximately 176 million adult women worldwide smoke daily. While smoking has steadily decreased worldwide since 1980, the prevalence of smoking in women is higher in high-income countries–particularly in Europe (see *Figure 2*).[14]

Women who smoke have an increased risk of cardiovascular, respiratory diseases, cancers, osteoporosis, reproductive health problems, and various other illnesses compared to non-smoking women (see *Figure 3*).[15]

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 to men.[16] Further, women's risk for smoking-related health complications increases with age; women who continue to smoke after age 40 increase their risk of smoking-related hazards ten-fold.[17]

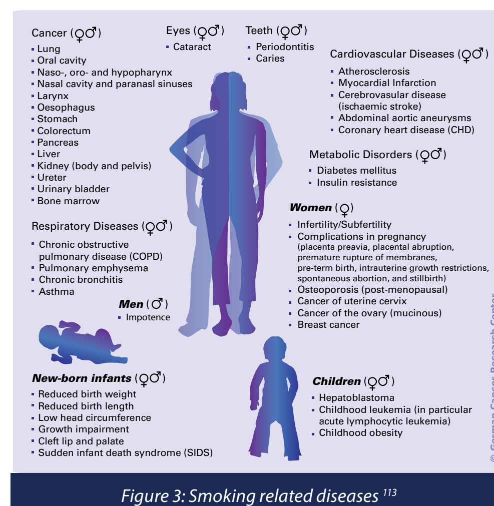

Figure 3: Smoking related diseases [113]

Women smoke for different reasons, become addicted to nicotine more rapidly, have more difficulty quitting, and experience more severe withdrawal symptoms than men.[18] In a Yale University study published in the Journal of Neuroscience in 2014, researchers found that smoking-

induced dopamine activation occurs differently in the brains of men and women smokers. Their findings align with the existing literature indicating that men typically smoke for the reinforcing drug effect, while women tend to smoke for other reasons such as mood improvement, stress management, and out of habit. This may explain why some smoking cessation techniques, such as nicotine patches, are less effective in women. These neurobiological deviations have previously eluded researchers, and so the Yale team advocates gender-specific medications and approaches to smoking cessation.[19]

Smoking and Lung Cancer

Historically, lung cancer has mostly affected men. However, this gap has been narrowing due to the increase in the number female smokers. For women, 80% of lung cancer is smoking-related. While the incidence of lung cancer is levelling off or decreasing in men, it is increasing among women.[20] In fact, lung cancer kills more women worldwide than breast, ovarian, and uterine cancer combined.[21]

Figure 4: Toxic, carcinogenic, and irritating substances in tobacco smoke [114]

In Europe, lung cancer causes 20% of all cancer-related deaths, the highest of any cancer.[22] Lung cancer rates for European women rose by 9% in 2015, while breast cancer and colon cancer were predicted to drop 10% and 8% respectively.[23] A recent study funded by Macmillan Cancer Support estimates that the number of women living with lung cancer in the UK will almost quadruple over the next 30 years, with the increase mainly due to the ageing population.[24]

Despite lung cancer's strong association with tobacco use, one in five women who develops the disease has never smoked. While lung cancer rates are decreasing in men, they are staying relatively stable in women–except for young, never-smoking women in whose case rates of lung cancer are on the rise.[25] The risk of non-smoking women developing lung cancer appears to be two- to three-times greater, suggesting that other factors such as passive smoking play a role. [26,27,28]

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 the cells of the cervix and therefore may contribute to the development of cervical cancer. Smoking also makes the immune system less effective in fighting human papillomavirus (HPV) infections, which places smoking girls at a higher risk of developing cervical cancer.[29]

Smoking, Cardiovascular Disease (CVD), and Stroke

Smoking and exposure to second-hand smoke both increase a women's risk of heart disease and stroke. Exposure to smoke 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.[30] Researchers at the University of Minnesota and Johns Hopkins University, when reviewing 30 years of research covering nearly four million people, found that women who smoked had a 25% higher risk of developing CVD than men who smoked. For each additional year of smoking, a woman's risk of developing CVD increased by 2%. Smoking resulted in an estimated 2.3-fold increased risk of heart attack compared to 1.8-fold risk in men.[31,32]

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 because exposure to high levels of nicotine can compromise the effectiveness of insulin (the hormone that lowers blood sugar levels).[33] 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 consequences of diabetes.[34] In the highest risk group—those who smoke two packs or more per day - men who smoked were 45% more likely than non-smoking males to develop type 2 diabetes; women who smoked to the same level were 74% more likely than non-smoking women to develop type 2 diabetes when controlling for other factors.[35]

The American Nurses' Health Study, which followed over seven thousand women with diabetes over 20 years, found that smoking increases mortality among women with type 2 diabetes; this 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 are strongly advised not to smoke.[36,37]

Smoking and Reproductive Health

Smoking during Pregnancy

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.[38] Women in the lowest socioeconomic groups are 6-7 times more likely to smoke during pregnancy than women in higher socioeconomic groups. Largely due to the carbon monoxide (CO) and nicotine from cigarettes, smoking negatively impacts both maternal and foetal health. Nicotine and CO reduces foetal oxygen supply. In addition, nicotine increases foetal blood pressure, and due to placental characteristics, nicotine and CO levels in the foetus are significantly higher than those found in the mother.[39]

Women who smoke during pregnancy are at elevated risk of the following:[40,41,42,43]

- Stillbirth
- Perinatal mortality
- Ectopic pregnancy
- Placental abruption (placenta detachment from uterine wall before delivery)
- Placenta previa (placenta covering of the uterine opening)
- Premature labour (smoking is estimated to account for 15% of premature labours)

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

- Behavioural disturbances
- Malformations (i.e. musculoskeletal defects, facial defects, limb reduction, missing/extra digits)
- Decreased respiratory function
- Infant mortality
- Low birth-weight and underweight during infancy
- Sudden Infant Death Syndrome (SIDS)
- Childhood Obesity

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, and other illnesses.[44,45,46,47,48]

Research finds that pregnant women who did not smoke but were exposed to smoke at work or at 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 this increased risk.[49]

Smoking, the Birth Control Pill and Early Menopause

Women who smoke and take oral birth control are at an elevated risk of heart attack, stroke, blood clots, and peripheral vascular disease.[50,51] Nicotine alone causes high blood pressure and increased heart rate, which put stress on the blood vessels. When taking the birth control pill, oestrogen adds to this stress on the vessels. This risk increases with age and heavy smoking (15 or more cigarettes per day), particularly among women over the age of 35.[52] Additionally, smoking may lead to early menopause with the associated health risk for CVD and osteoporosis.

Smoking across the Lifespan

Europe's youth has the highest smoking rates in the world, with 25% of 15-24-year-olds smoking. This figure varies greatly depending on the country. It is estimated that 40% of French 17-year-olds smoke, one of the highest rates in Europe.[53] The EU average for 15-year olds smoking once per week is 14% for both boys and girls and is as high as 20% for Bulgaria, Croatia, Hungary and Italy.[54]

Smoking in adolescence increases the risk of developing cardiovascular problems, respiratory illnesses, and cancer. Young smokers are less physically fit, have reduced lung function, and daily smoking is associated with developing mood and anxiety disorders. Not only does tobacco have immediate harmful effects on young people, most regular smokers started before the age of 20.[55] This underscores the necessity of interventions to prevent young people from starting to smoke in the first place.

Smoking rates also vary based on social factors, with higher rates among lower socio-economic groups and rising rates in the young female population.[56,57] Between 2013 and 2014, approximately 1-2% more 15-year-old girls than boys smoked in Denmark, France, Germany, Hungary, Italy, Malta, the Slovak Republic, Spain, Sweden, and the UK. This gender difference rose to 5-9% in Bulgaria, the Czech Republic, and Luxembourg.[58,59]

The trend of young girls smoking more than boys began in the 1990s. Smoking is one way for girls to resist the "good girl" image and marks a transition from childhood into adulthood. Some young women consider smoking a slimming tool. One in four girls who smoke say that smoking curbs their appetite, helping them to keep thin. [60]

Peer influence is the most common reason people start smoking. 79% of smokers and ex-smokers say that they started when they saw friends smoking and 21% cited seeing their parents smoking.[61]

Young smokers are a responsive to policies aimed to reduce tobacco consumption such as clean indoor-air laws, excise taxes, and restrictions on youth access to tobacco.[62] In the Eurobarometer Report, 28% of young people themselves that health warnings on tobacco packages are effective in stopping youths from smoking; however, 61% of smokers and ex-smokers ages 15-24 said the health warning did not impact their attitude and behaviours towards tobacco.[63]

Little information exists on smoking prevalence among older people in Europe. However, one study of 17 European countries estimates that 8.6% of women over the age of 65 smoke. Smoking is most prevalent among older women in Northern Europe. Overall, no specific pattern with education and age was evident in women as it is with men (see *Figure 5*).[64]

Smoking cessation has a major positive impact on human health, even in older smokers. For both men and women, the reason for smoking cessation was most frequently given as experiencing smoking-related illnesses (39.8%). Other reasons included knowing the harmful effects of smoking (19.5%), and following physician's advice (9.5%). However, only 0.3% of respondents cited smoke-free legislation as a reason to quit. As a population not typically targeted by tobacco control policies, legislation is desperately needed for this vulnerable age group. Additionally, only 5% of ex-smokers cited the cost of tobacco as a reason to quit, indicating that prices are not currently high enough to greatly impact consumption.[65]

Although women benefit greatly from smoking cessation at any age, the most common reason for smoking cessation among the elderly is due to illness. These "ill quitters" are at a high risk of morbidity and mortality because they quit only after symptoms of a harmful tobacco-related disease have begun.[66] More research on smoking prevalence and cessation techniques for older women is urgently needed.

The Issue of Second-Hand Smoke

Tobacco smoke contains more than 7,000 chemicals, hundreds of which are toxic and 70 of which are linked to cancer (see *Figure 5*).[67] Second-hand smoke is a combination of the smoke from the burning end of the cigarette (sidestream smoke) and the smoke breathed out by the smoker (mainstream smoke). Sidestream smoke is four times more toxic than mainstream smoke, although it is inhaled in a diluted form.[68]

The short-term effects of passive smoking include coughing, dizziness, eye irritation, headache, nausea, and sore throat. Long-term, second-hand smoke has been linked to heart disease, stroke, and lung cancer. A non-smoker's passive smoke exposure increases the risk of developing heart disease by 25-30% and can have immediate adverse effects on cardiovascular functioning.[69]

Effects of Passive Smoking on Women

Incidence of smoking-related diseases rises in women who are exposed to second-hand smoke over a long period. This issue is particularly prevalent in southern and eastern European countries where more men smoke. The risk of developing acute arteriosclerosis, heart disease, and stroke is raised 25-30% from exposure.[70]

Pregnant women and their babies are at risk when exposed to second-hand smoke. Women subject to passive smoking experience some of the same risks as pregnant smokers, such as low-birth weight, premature birth, learning or behavioural deficiencies, decreased lung development, and Sudden Infant Death Syndrome (SIDs).[71]

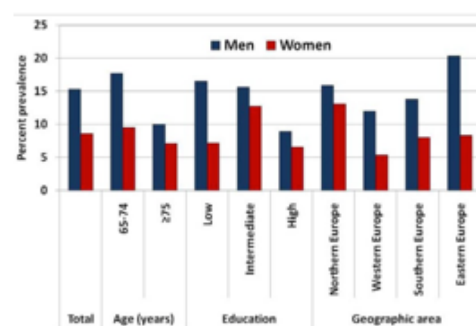

Figure 5: Smoking prevalence (%) among the elderly (≥65 years) in 17 European countries, overall and according to age, level of education and geographic area [115]

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 developing asthma, and having impaired lung growth. They are also more likely to suffer from bronchitis and pneumonia than those brought up in a non-smoking home environment. In addition, wheezing, coughing, ear infections, and drainage issues are more common in children regularly exposed to second-hand smoke than those who are not.[72]

Benefits of Smoke-Free Environments

Ireland was the first EU country to implement a smoking ban, prohibiting smoking in the workplace through the Tobacco Smoking (Prohibition) Regulations 2003. As smoking is a major cause of morbidity and mortality, the Irish ban seeks to protect employees from exposure to harmful tobacco smoke at the workplace. A violation of the law can cost up to €3,000.[73] 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 as well as improvements in Irish air quality.[74,75,76,77]

In November 2009, the Commission put out a recommendation on smoke-free environments. The recommendation aimed to enhance smoke-free laws and protect citizens from exposure to tobacco in public areas, workplaces, and on public transportation. Although it strengthened cooperation at an EU-level, countries still differ in terms of their smoke-free legislation and the degree of enforcement. [78]

17 EU countries have comprehensive smoke-free laws in place. Ireland, the UK, Greece, Bulgaria, Malta, Spain, and Hungary have the strongest smoke-free laws with a **complete ban** on smoking in enclosed public places, on public transport, and

in workplaces, with only limited exceptions allowed.[79] The UK currently leads the way with the strictest bans and some experts have identified a correlation in the UK of a reduction in the number of heart attacks to smoking bans.[80]

From ventilated patios, to designated smoking rooms, to simply not smoking in the presence of non-smokers, policies addressing smoking vary substantially across EU Member States. Strong legislation promoting smoke-free environments is beneficial for smokers and non-smokers alike, and continued implementation and enforcement of smoke-free provisions is crucial to tackle the negative health effects associated with tobacco consumption.

EU Tobacco Control

Over the last decade, the EU has issued several recommendations and directives to combat tobacco use in the region.

The tobacco industry once specifically targeted women by equating cigarette use as a symbol of gender equality, sophistication, and upward mobility. Smoking was a sign of women's liberation by breaking taboos that once restricted women. Women-only brands launched in the 1960s continued smoking's long-standing connection with the feminist movement. Companies continued to target women by making smoking look stylish (see *Figure 6*).

The industry's strategy was to make smoking more appealing through a marketing mix of price, availability, and images. Women were subject to marketing schemes such as feminine pack branding, light or slim cigarettes, weight reduction promotion, equating smoking with sex appeal, as well as other techniques.[81] The product marketing was often misleading and concealed the harmful effects associated with consumption. This type of advertising exploited the addictiveness of their product and left a lasting impact on attitudes towards smoking. Today, the EU is working to tighten restrictions on tobacco companies.

Tobacco Advertising Directive

The Tobacco Advertising Directive (2003/33/EC) represents a major restriction on marketing by tobacco companies in the EU. While tobacco advertising on television has been banned since the 1990s, this directive extended the scope to include print-media, radio-broadcasts, and the internet.

The Directive defines the parameters of advertising and marketing, and it prohibits cross-border sponsorship of events and activities. Member States were required to comply by July 2005. In October 2005, the Commission sent out letters of formal notice to 12 Member States regarding failed compliance, instructing them to adopt transposition measures and communicate them to the Commission. Worried about potential negative economic implications, Germany challenged the legality of the directive. On 12 December 2006, the European Court of Justice upheld the ruling, mandating compliance with the Directive.[82]

Figure 6: Former tobacco advertising targeting women [116]

In 2008, the Commission submitted a report on the implementation of the Directive. The report concluded that the "laws to transpose the Directive are in place and well-implemented." [83] However, tobacco promotion intensified in local merchandising at points of sale. This creates the risk of inconsistent interpretation and implementation of the provisions of the Directive and must be addressed if existing legislation is not to be undermined

Tobacco Products Directive

The Tobacco Products Directive (2014/40/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 extensively standardizes packaging, bans the use of misleading descriptors, requires formal reporting of ingredients, and severely restricts marketing of tobacco in the EU.[84]

In February 2014, the European Parliament approved the revision of the Tobacco Products Directive. In 2016, the European Council upheld the validity of the directive. May 20, 2017 was the deadline for the exhaustion of products and officially made the sale of prohibited materials illegal.

Currently, tobacco products sold in the European Union are regulated and restricted in the following ways:

- **Labelling and Packaging:** All cigarette and roll-your-own packages must contain a combined picture and text health warning covering 65% of the front and the back of the package and must carry no promotional elements. The former information on tar, nicotine, and carbon monoxide, which was perceived as misleading, must be replaced by an information message on the side of the pack that tobacco smoke contains more than 70 substances that cause cancer. Member States remain free to introduce stricter rules for plain packaging.
- **Ingredients:** An electronic report for ingredients and emissions is required of companies. All tobacco products, including cigarettes, roll-your-own tobacco, and smokeless tobacco are prohibited from having characterising flavours. Products with increased toxicity and addictiveness are also prohibited.
- **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.

- **Electronic Cigarettes:** Nicotine-containing products (e.g. e-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 must carry health warnings.
- **Cross border distance sales:** Countries can prohibit cross border sales of tobacco products, which often grants access to products not in compliance with the directive, particularly to younger consumers. If a country opts for a ban, companies are prohibited from supplying their product to that country. If no cross-border ban is put in place, a company must register in both the country where they are located and the country they are selling to.

In May 2016, Commissioner Andriukaitis made the following statement: "From today, all EU countries must comply with the Tobacco Products Directive, whose measures for tobacco production the EU internal market aim to reduce the numbers of tobacco users with a particular focus on discouraging young people from taking up smoking and to ensure that citizens across the EU are fully aware of the harmful effects of tobacco use." [85]

The Irish Minister of Health, Dr James Reilly, announced on 28 May 2013 that Ireland would introduce plain packets for cigarettes and other tobacco products. On 28 March 2017, Irish Minister of State for Health Promotion Marcella Corcoran Kennedy signed legislation that came into full effect on September 30th. All logos and branding must be removed from cigarette packaging to make warnings more prominent and the packaging less attractive and misleading. With this decisive move, Ireland becomes the fourth country worldwide, behind Australia, the UK, and France to introduce plain packaging.[86] Because many smokers say the brand is highly important to their choice in purchase, this regulation limits competitive branding schemes by tobacco companies.

Excise Duties on Tobacco Products

The EU tobacco tax directive (2011/64/EU) established an absolute minimum tax of €90 per 1000 cigarettes or an excise tax account of 60% of the weighted cost of the cigarettes. The minimum excise tax on fine-cut tobaccos, used for roll-your-own cigarettes, was moved to 43% of the retail price, with steady increases planned until 2020 when the tax reaches 50%.[87] This mandate makes tobacco taxes uniform across Member States, but allows countries to go further if they choose. Based on recent evidence, the WHO recommends a 70% tax on the retail price of tobacco products, with increases continuing to match inflation and income growth. The WHO believes that taxes at that level will effectively control tobacco consumption.

The minimum excise taxes count as a win from a regulatory perspective, but great disparities among cigarette retail prices (CPRs) still exist. For example, CRPs on packs of 20 ranged from Int$ 1.02 (Kazakhstan) to Int$ 10.56 (Ireland) in 2012. This variation leads to cross-border purchasing and/or illicit trade.[88] While intentional cross-border purchasing is low among EU citizens (7%), of those who did engage in the practice, 60% reported the reason being a cheaper price.[89]

Tobacco Control Interventions for Women

The outcome of smoking cessation programs is similar for both men and women, but the predictors of successful abstinence vary by sex/gender.[90] In other words, the process by which people quit smoking is sex/gender-specific, and so cessation services must also be tailored to meet the unique needs of both men and women.

For example, the Spanish province of Catalonia developed a Smoke Free Pregnancy Programme to aide women in smoking cessation during pregnancy. This programme effectively targets pregnant women by offering a support system. In a 2013 review of the programme, researchers found that 14.8% of pregnant smokers quit at their first visit and 39.5% by their third trimester.[91] A similar plan in Sweden, called Smoke-free Children, addressed smoking during pregnancy by training midwives and nurses to include cessation discussions in relation to maternal health during appointments. At the same time, public debate focused on smoking prevention and the harmful effects of tobacco for women and their babies. At the start of the programme, 20% of pregnant women smoked and that number was cut in half by the end of the programme.[92] A third cessation programme called Give It Up for Baby in the UK uses monetary incentives to help pregnant women to quit smoking. The programme offers women from disadvantaged communities cessation support and grocery store vouchers in exchange for quitting smoking. While these cessation programmes benefit expectant mothers and their children, some of these studies showed that women restarted the habit once their baby was born.

Societal Burden of Tobacco

The Commission estimates that tobacco consumption costs EU public healthcare systems approximately €25 billion per year.[93] Smoking takes a toll on worker costs and productivity by increasing the rates of absenteeism due to illness, making insurance premiums more expensive, increasing accidents during work time, and early retirement. In addition, smoking by workers imposes passive smoking risks on non-smoking colleagues. Comparative studies on smoking cessation have shown that stopping smoking can reduce the risk of absence from work and increase productivity, performance, and wages.[94]

According to a statement by Commissioner Andriukaitis, a 2% reduction in tobacco consumption would save the EU an estimated €506 million in annual healthcare costs.[95]

Tax revenues from tobacco products can fund healthcare programs, educational campaigns, and cessation services, as recommended by the WHO's 2010 World Health Report. Examples of tax revenue use include funding smoking quitlines, enforcing smoke-free policies, helping transition tobacco farmers to alternative crops, or generally financing the country's health system.[96]

E-cigarettes

While traditional tobacco consumers still vastly outnumber the users of e-cigarettes, the Commission's impact assessment concludes that the electronic cigarette market is growing rapidly (see *Figure 7*).[97] In Ireland, e-cigarette sales grew by 428% in 2013, while tobacco sales dropped by 6%.[98]

The tobacco industry strongly lobbied against e-cigarette regulations in the latest Tobacco Products Directive. The Directive currently requires all manufacturers to disclose ingredients, report all topological data, and provide descriptions of their production process. In addition, e-cigarettes and their refill cartridges have a nicotine limit, and all advertising is banned.[99] Member states are welcome to adopt more restrictions.

Those who oppose regulations argue that e-cigarettes are an effective cessation tool and are healthier than combustion cigarettes. An independent review commissioned by Public Health England estimates that e-cigarettes are 95% less harmful than regular cigarettes.[100] Although e-cigarettes do not have all the carcinogenic ingredients found in other traditional cigarettes, nicotine is extremely addictive and the long-term effects of e-cigarettes are not known.[101] Proponents for stricter regulations argue that e-cigarettes can attract former smokers to restart the habit and the industry targets a younger market.[102] However, existing research shows that e-cigarette use is mostly confined to current or former smokers and not first-time smokers.

The Eurobarometer report shows that e-cigarettes use is most prevalent among 15-24 year olds, with 16% using them as a cessation tool. Overall, users report a 30-35% in smoking cessation and reduction.[103]

No notable differences among gender currently exist with respect to e-cigarette use. However, since the e-cigarette market is expanding quickly, it is crucial that gender-specific research on these alternatives to traditional cigarettes be conducted.

World Health Organization Framework Convention on Tobacco Control

The WHO Framework Convention on Tobacco Control (WHO FCTC) provides a foundation for countries to implement effective tobacco control policies. Every EU country has now adopted the WHO FCTC[104]. Its preamble highlights concerns about the increase in tobacco consumption by children and adolescents worldwide and in particular points to the rise in tobacco consumption by women. Participation of women at all-levels of policy-making and implementation, as well as tobacco control strategies that directly target women are advocated in order to tackle the rise in smoking among this group.

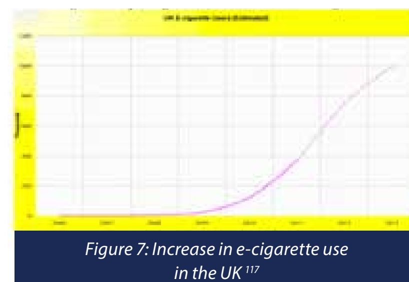

Figure 7: Increase in e-cigarette use in the UK [117]

To aid in this fight against global tobacco use, the WHO introduced MPOWER. It constitutes a six-pronged strategy:[105]

- **MONITOR tobacco use and prevention policies:** Effective tracking of tobacco use by countries offers crucial information on the patterns of tobacco use and exposure to policy makers and public health officials.
- **PROTECT people from tobacco smoke:** Because there is no safe level of tobacco exposure, the WHO states that clean air is a basic human right. Providing smoke-free environments protects business patrons, pregnant women, children, the sick, and workers.
- **OFFER help to quit tobacco use:** Smoking cessation is essential in reducing smoking prevalence. The WHO notes that countries should enact cessation support services.
- **WARN about dangers of tobacco use:** Few smokers understand the full extent of the health risks of tobacco, and so graphic pictures and text warnings bring more awareness to consumers.
- **ENFORCE bans on tobacco advertising, promotion, and sponsorship:** Strong legislation to control tobacco advertising reduces the industry's harmful promotion of their products that exploits their addictiveness.
- **RAISE taxes on tobacco:** Tobacco tax increase is the single most effective way of reducing consumption. High tobacco taxes lower consumption among existent smokers and deters potential new smokers.

The EU's recommendations and directives are strong measures coinciding with FCTC. It is crucial that Member States be held accountable for their implementation of these directives and be encouraged to put in place more extensive tobacco control policies.

In 2015, the WHO reported on the global tobacco epidemic following the FCTC. The organisation indicated that the number of people protected by at least one MPOWER measure had tripled since 2007. While this progress shows growth in global commitment to tobacco control, without significant taxation, tobacco will remain affordable to billions of smokers worldwide.[106]

Among all the MPOWER measures, the WHO reports that "raising taxes on tobacco is the most effective way to reduce tobacco use."[107] Tobacco price increases are widely accepted by EU citizens. Based on a 2010 survey of 18 EU countries, three in four non-smokers and about one in three smokers supported a 20% price increase of tobacco products. Support was

generally higher among those in countries with a history of stronger tobacco control. Because most people understand the grave health risks of smoking, a price increase is generally accepted as an effective way to curb consumption. The WHO states that "in high income countries, a 10% increase in prices will reduce consumption by about 4%."[108]

The 2012 Eurobarometer Report echoes this sentiment. In 2012, prior to the Tobacco Products Directive, 76% of EU citizens supported the picture warnings on labels, however, only 33% of smokers and ex-smokers said that health warnings on products had an impact on their attitudes and behaviours surrounding tobacco. Roughly one quarter of EU citizens think that health warnings will dissuade young people from smoking, while 70% do not think this is the case. 37% of respondents think this is 'definitely not' the case.[109]

Among smokers and ex-smokers in the EU, only 9% said that health warnings encouraged them to quit, while 65% said they did not have any impact. When asked about the importance of specific aspects of purchasing tobacco, 23% of EU citizens reported the packaging as 'important,' while 65% reported the price as 'important.' Additionally, 70% of respondents said that the brand is 'important.' These EU averages point to the significance of raising prices of and taxes on tobacco products and for plain packaging.[110]

An increase in tobacco prices decreases consumption, which will directly impact the health of EU citizens. In France, the continued increase in cigarettes prices from 1974 to 2009 correlates with a reduction in the number of deaths from lung cancer (see *Figure 8*).[111]

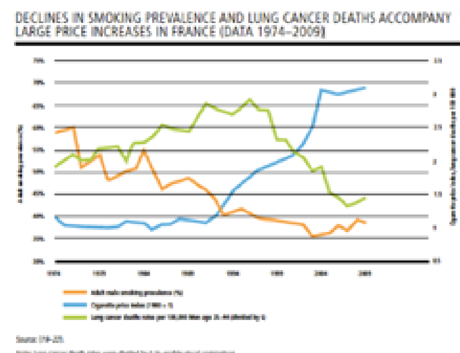

Figure 8: Declines in smoking prevalence and lung cancer deaths accompany large price increases in France (Data 1974-2009) [118]

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 sex/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 sex/gender across the 28 Member States.

2. **Make women and the public health community aware that smoking prevalence is rising among young girls and women and that this will have disastrous consequences for their future health. Involving women to 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 smoke more than boys. Smoking is an addiction that once started is hard to stop. Active as well as passive smoking severely impairs the health of women and increases their chronic disease burden over the years.

3. **Implement and strengthen tobacco control policies and interventions according to the WHO Framework Convention on Tobacco Control, such as increasing taxes on all tobacco products, expanding areas covered by smoke-free legislation, and enforcing stricter compliance to existent directives.**
   By increasing taxes, not only will tobacco consumption go down, but countries can effectively repurpose that money to aid in cessation campaigns and fund healthcare.

4. **Increase accessibility to sex- and gender-specific smoking cessation programmes throughout all Member States, particularly to 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. 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.

5. **Ensure that the revision of the EU Tobacco Products is implemented by Member States. Ensure that it is continually evaluated and updated to ensure that it most effectively combats the smoking epidemic among both men and women across Europe, including reducing inequities.**

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