

Tobacco control in practice

Article 8:

Protection from exposure to tobacco smoke: the story of Hungary

Case studies on implementation of the WHO Framework Convention on Tobacco Control in the WHO European Region



Tobacco control in practice

Article 8:

Protection from exposure to tobacco smoke: the story of Hungary

Abstract

Hungary has been party to the WHO Framework Convention on Tobacco Control since 2005. In recent years, the Government of Hungary has adopted and implemented a series of strong tobacco-control measures. The most important of these are the smoking ban in indoor public places and some outdoor public places, the significant tax increase on cigarettes, the inclusion of combined warnings (text and pictures) on cigarette packages, and the drastic reduction in the number of stores selling tobacco products.

This case study focuses on the most important of these measures, namely, the smoking ban, which has resulted in decreases in the rates of smokers among the population and the rate of cigarette smoking; in addition, it has had a positive impact on employment in the hospitality industry and hospitality venues, and on the incomes of the hospitality industry and accommodation services.

Keywords

Case studies Smoke-free policy Smoking, tobacco Tobacco use

Address requests about publications of the WHO Regional Office for Europe to: Publications WHO Regional Office for Europe UN City, Marmorvej 51 DK-2100 Copenhagen Ø, Denmark Alternatively, complete an online request form for documentation, health information, or for permission to quote or translate,

on the Regional Office web site (http://www.euro.who.int/pubrequest).

© World Health Organization 2014

All rights reserved. The Regional Office for Europe of the World Health Organization welcomes requests for permission to reproduce or translate its publications, in part or in full.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either express or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use. The views expressed by authors, editors, or expert groups do not necessarily represent the decisions or the stated policy of the World Health Organization.

Contents

Acknowledgements	vi
Contributors	vii
Background	1
WHO FCTC Article 8 on protection from exposure to tobacco smoke	1
The process towards a smoke-free Hungary	3
2008–2009	3
2009–2010	4
February–March 2011	4
April 2011	4
Measures that contributed to the success of smoke-free legislation	5
Evaluation: impact of smoke-free legislation	7
Law enforcement and compliance	7
Indoor air quality	7
Exposure to second-hand smoke	7
Changes in patterns of adult smoking	8
Changes in patterns of youth smoking	8
Use of Tobacco Imitative Electronic Products (TIEPs)	8
Public attitudes and support	8
Hospitality industry	. 9
Conclusions	.11
Smoke-free Hungary: a success story	.11
Ongoing smoking-related challenges in Hungary	.11
References	13
Bibliography	.16

Acknowledgements

The authors of the report would like to extend special thanks to the staff of the WHO Regional Office, Division of Noncommunicable Diseases and Health Promotion, and the WHO Country Office, Hungary, for their support in developing the case study.

Contributors

This case study on the process towards a smokefree Hungary was conducted in February 2014 by the following team of experts from the National Institute for Health Development, Budapest (Focal Point for Tobacco Control in Hungary) and the Ministry of Human Resources, Budapest.

Ms Eszter Balku, Statistican and Epidemiologist, National Institute for Health Development, Budapest

Ms Balku has been working in the National Institute for Health Development since 2011. She worked as an analyst on the adult survey in 2012, on the youth surveys in 2012 and 2013 and on the assessment conducted in 2013 to determine the impact of the Act on Protection of Non-Smokers (PNS Act).

Mr Tibor Demjén, Head, Hungarian Focal Point for Tobacco Control, National Institute for Health Development, Budapest

Mr Demjén has been working for the National Institute for Health Development since 1989. He was Manager of the Public Awareness Project on Indoor Tobacco Smoke Exposure in 1996 and two World Bank programmes, namely the Tobacco Control Programme of the National Public Health Programme on Tobacco and the Alcohol Policy Development Programme in 2000. He is a member of the Hungarian delegation of the WHO Framework Convention on Tobacco Control (WHO FCTC) and National Counterpart for the WHO Tobacco-Free Initiative. Mr Demjén has also represented Hungary on the Regulatory Committee established under Article 10 of Directive 2001/37 EC on the approximation of the laws and the Expert Group on Tobacco Policy established under Commission Decision C(2014)3509 of 4 June 2014, working on the implementation of the Tobacco Products Directive (Directive 2014/40/EU). Since 2005, he has been Head of the Focal Point for Tobacco Control, which was established upon the request of the State Secretariat for Health Care in the Ministry of Human Resources to plan and coordinate measures relating to tobacco control in accordance with WHO FCTC.

Mr Tamás Joó, personal assistant to the Minister of State for Health at the Ministry of Human Resources of Hungary, Budapest

In 2012, Mr Joó participated in the survey on the social burden of smoking and was responsible for economic issues. He is, inter alia, responsible for the continuous monitoring of smoking-related issues.

Ms Zsófia Kimmel, Health Promotion Specialist, National Institute for Health Development, Budapest

Ms Kimmel has been working at the National Institute for Health Development, Budapest, since April 2013. Her main duties are to supervise the collection of social, economic and health indicators related to tobacco consumption, conduct research and implement smoking-prevention activities targeting youth. She has participated in the evaluation of the national adult population surveys and the implementation process of the Global Youth Tobacco Survey carried out in Hungary in 2013.

Dr Péter Varsányi, Medical Expert, National Institute for Health Development, Budapest

Dr Varsányi has been working at the National Institute for Health Development, as medical expert since 2012. His main field of expertise is the epidemiology and prevention of noncommunicable diseases. Within the case study, he worked on the health impact assessment of the PNS Act.

Dr József Vitrai, Senior Researcher, National Institute for Health Development, Budapest

Dr Vitrai graduated in biology at Eötvös Lóránd University and was awarded a doctorate in 1983. He defended his PhD dissertation analysing health inequalities in Hungary at the University of Pécs in 2011. He played an initiating role in the adaptation of a modern national health monitoring system for use in Hungary: in 2000 and 2003 he led the National Population Health Surveys, and in 2012 and 2013 he took part in the preparation and evaluation of the smoking surveys. Together with colleagues, he has published several health reports. Since 2000, he has taken part in developing the National Health Information Strategy, the Health Care Development Strategy, and the Injury Prevention and Public Health Policy and Sectoral Strategy. In recent years, he has been working on the performance assessment of the national healthcare system and involved in the evaluation of various national and international projects, programmes and tenders.

The case study was conducted under the Biennial Collaborative Agreement between the WHO Regional Office for Europe and the Hungarian Government for the 2014–2015 biennium.

Background

(Tibor Demjén, Zsófia Kimmel, József Vitrai, Péter Varsányi, Eszter Balku)

Box 1 shows some important smoking-relevant data from Hungary.

Box 1. Smoking-relevant data, Hungary		
Population (2011) ^a		9 938 000
Introduction of the Protection of Non-smokers Act (PSN Act) in Hungary ^b		1999
Ratification by Hungary of the WHO Framework Convention on Tobacco Control $(\mbox{FCTC})^{\rm c}$		2005
Latest major amendment to the PSN Act ^d	1	January 2012
Smoking prevalence (2013) ^e		
	Men:	25%
Adults	Women:	16%
	Total:	21%
Youth (aged 13–15)	Boys:	33%
	Girls:	28%
	Total:	31%
Cigarette consumer prices (per pack, 2013) ^r		US\$ 3.8–4.0
	Imported:	US\$ 3.8–4.1

Source(s): ^a Population census, 2011 (1); ^b Act XLII on the protection of non-smokers (1999) (2); ^c WHO Framework Convention on Tobacco Control (FCTC) (3); ^d Amendment to PSN Act (2012) (4); ^eAdult Smoking Survey in Hungary (5), 2013; Global Youth Tobacco Survey in Hungary, 2013 (6); ^f Reporting instrument of the WHO Framework Convention on Tobacco Control (Hungary) (7).

WHO FCTC Article 8 on protection from exposure to tobacco smoke

WHO FCTC was adopted by the World Health Assembly in May 2003 (3) with the purpose of minimizing tobacco use and controlling its impact on public health. Currently, 177 WHO Member States are party to the Convention. Hungary joined the Convention in April 2004 and ratified it via Act III in 2005 (8).

At its second session in July 2007, the Conference of the Parties (COP 2) adopted guidelines for the implementation of WHO FCTC Article 8 on the protection of non-smokers from the detrimental effects of second-hand smoke (9). These guidelines (9) are in line with the *Council recommendations of 30 November 2009 on smoke-free environments* of the European Union (EU) (10), which aim to support EU Member States in meeting their obligations to WHO FCTC (3), requiring them to take effective measures to protect the population, especially children, from exposure to second-hand smoke. Since there is no safe level of exposure to second-hand smoke (11), and filtering devices cannot offer sufficient protection (12), these measures need to provide complete protection.

At this point, Hungary already had relevant legislation in place, namely, Act XLII on the protection of nonsmokers (PNS Act) of 1999 (2). However, the protection it provided from exposure to second-hand smoke did not meet the requirements of WHO FCTC Article 8 (3) or the EU recommendations (10) as smoking was still permitted in many public places. Therefore, on 26 April 2011, an amendment strengthening the PNS Act was introduced in an effort to minimize exposure to second-hand smoke (Box 2) (4). The amendment came into effect on 1 January 2012 with a three-month grace period (4).

Box 2. Amendment to Act XLII of 1999 on the protection of non-smokers of 26 April 2011 (effective 1 January 2012)

The amendment provided for the following measures.

- A total ban on smoking:
 - in public-education institutions;
 - in child-care, child-welfare institutions;
 - in hospitality venues, health-care providers;
 - on public transport;
 - in enclosed workplace areas;
 - in enclosed areas of public institutions and within 5 meters of their external borderlines;
 - in public playgrounds and within 5 meters of their external borderlines;
 - in areas of railway stations that are open to the public;
 - at bus, tramway and trolley-bus stops and waiting areas, and within 5 meters of their external borderlines;
 - in underpasses open to passenger traffic and in other such public-passageway connection areas with enclosed air spaces;
 - in rooms of public institutions that are open to the public.
- The designation of smoking areas in:

(a) open air spaces:

- public institutions (yards);
- workspaces (yards);
- multipurpose health institutions (yards);

(b) enclosed air spaces:

- for prisoners and detained persons (including those with mental disorders) of penal institutions, police stations, detention centres and guarded accommodations;
- for patients in psychiatric institutions;
- for employees at workplaces where the corrected effective temperature is over 24 C° and under certain conditions defined in other legislation at workplaces and establishments where there is a risk or increased risk of fire and/or explosion;
- in hotels, guest houses and the like, provided smoking is allowed on the premises (i.e. not prohibited by other provisions under this Act or by fire regulations) and the enclosed air spaces are expressly designated for smokers.

In addition:

- depending on the decision of the owner/manager/employer, local government can decide to designate non-smoking areas in public places by decree;
- smoking areas can be designated on privately owned transport facilities (e.g. taxis, rented buses) depending on the decision of the operator;
- employers can qualify workplaces as non-smoking areas, in which case employees are not allowed to smoke anywhere in the workplace, including the yard;
- operators of public institutes can qualify them as non-smoking areas, in which case it is not necessary to designate a smoking area, even in open air spaces;
- a health-protection fine would be applicable:
 - in cases of violation of the prohibitions or restrictions related to smoking (US\$ 90-225);
 - in case of non or inappropriate execution of the obligation to designate smoking areas or in case of failure to control compliance with smoking-related prohibitions and restrictions:
 - minimum US\$ 450, maximum US\$ 1120 to the person responsible for fulfilling the obligation;

- minimum US\$ 4500, maximum US\$ 11 200 to the institution, organization, operator or company; in cases of noncompliance, a report can be made to the state health administration body or through tel.

no. 06 40 200 493, which is open 24 hours a day.

Source: Act XLII on the protection of non-smokers (4).

Legislators promoted the amendment as an enforcement of the constitutional rights to health and a healthy environment. The pressing need for the amendment was justified by unfavourable data on smoking prevalence (5), the catastrophic rates of smoking-related mortality and morbidity, and the economic burden caused by smoking in Hungary (Box 3) (13). The following report reflects Hungary's process towards becoming a smoke-free country, describing the forces that worked for and against this process and some of the short-term results of implementing the amendment to the PNS Act (4), which came into effect on 1 January 2012.

Box 3: Social burden of smoking in Hungary in 2010

Health burden

- Half a million patients were treated in Hungarian hospitals for smoking-related diseases.
- 16% of all mortalities (20 470 people) were the result of smoking-related diseases.
- On average, the lives of male and female smokers were shortened by 16+ and 19+ years, respectively.

Economic burden

- State revenue from smoking (VAT, excise tax, income tax, corporation tax, and other contributions) was over US\$ 1.73 billion.
- Direct and indirect tobacco-related costs were, however, over US\$ 2.12 billion, corresponding to a net loss of US\$ 385 million (0.29% of the gross domestic product (GDP)).

Source: The social burden of smoking in Hungary, 2012, (13).

The process towards a smoke-free Hungary

(Tibor Demjén, Zsófia Kimmel)

Box 4 highlights the main questions addressed during the case study

Box 4. Questions addressed during case study

- What was the process that led to Hungary's success in implementing WHO FCTC Article 8 (3)?
- What were the main challenges met during this process, and how were they overcome?
- What were the short-term results of the smoking ban?
- What can other countries learn from Hungary's experience?

2008-2009

The Focal Point for Tobacco Control (Focal Point) was established by the National Institute for Health De-

velopment in 1989 with the aim of providing professional support to the Ministry of Health in conducting research and maintaining contact with national and international institutions and organizations working in the area of tobacco control (14). In 2008, the Focal Point conducted an impact assessment and cost-benefit analysis on second-hand smoke in Hungary long before the parliamentary debates on amending the PNS Act took place. The assessment produced scientific evidence on the adverse effects of second-hand smoke on health, emphasizing the fact that there is no safe exposure level to secondhand smoke (15). It also discussed the potential positive impacts of amending the PNS Act, such as, increased public support of tobacco-control policies, reduced smoking prevalence, and - perhaps most importantly - the enhanced protection of non-smokers' health.

Also in 2008, the Trade Association of Hungarian Caterers commissioned the Hungarian Academy of Sciences to conduct a study on the social and economic consequences of a smoking ban (*16*). The report on the study argued that such a ban could result in a decrease of over 10% in the income of the hospitality industry in the short term, and that owners/operators should, therefore, be given the option to introduce separate smoking and non-smoking sections in their venues, equipped with air-filtering systems. It also argued that a total smoking ban should be introduced gradually over a transitional period of at least 2–3 years.

However, the study:

- did not discuss the adverse health effects of smoking and exposure to second-hand smoke or the responsibilities that a smoking ban would place on employers;
- suggested that enforcing basic human rights is an individual choice even though, ethically speaking, this is erroneous since human rights to life and health are fundamental and should be protected; and
- presented inadequate solutions since scientific evidence indicates that air filters or separate smoking areas do not offer sufficient protection from second-hand smoke.

2009-2010

In 2009, the Working Group on Health Impact Assessment of the University of Debrecen conducted an assessment of the possible public health impacts of amending the PNS Act (17). Later that year, the parliamentary Committee on Health Affairs proposed an amendment to the PNS Act but it was not taken up in Parliament.

In 2010, there was a government change and the Committee on Health Affairs readdressed the topic of tobacco control in Hungary. The Focal Point for Tobacco Control released a summary of the national situation, including detailed information on smoking prevention and cessation support, possible solutions to protecting non-smokers from exposure to secondhand smoke, and options of regulating tobacco products, encouraging the Parliament to address the topic of tobacco control (18).

February-March 2011

In February 2011, 15 Members of Parliament from the government party, Fidesz (Hungarian Civic Union), proposed a bill to strengthen the PNS Act, provoking significant media activity. Politicians and public health experts explained the possible positive impacts of the amendment, and the Focal Point for Tobacco Control solicited different health-policy organizations, including the Alliance for Tobacco Control, for their support of the proposed amendment.

At the same time, representatives of the hospitality and tobacco industry started a media campaign to prevent adoption of the bill. Primarily, they advocated for a resolution that would permit smoking in indoor designated smoking areas equipped with ventilation. The resolution was signed by the Trade Association of Hungarian Caterers, the Hungarian Association of Tobacco Industry, the National Federation of Traders and Caterers, the Hungarian Tourist and Hospitality Employers' Association, the Smokers' Society (operating in Hungary) and the Hungarian Pipe Club Association.

In March 2011, the Hungarian National Tax and Customs Administration published a preliminary impact assessment claiming that the proposed amendment would result in a national loss of US\$ 248 000 (19,20). However, tobacco experts deduced that the assessment had been based on literature selected by the tobacco industry and its conclusions were fed into the popular media and became top news. The Committee on Health Affairs argued for amending the PNS Act on the basis of background documentation from the Focal Point for Tobacco Control, which was supported by evidence collected by WHO, and a preliminary impact assessment published by the Hungarian National Tax and Customs Administration (21), which was not in favour of the amendment. The debate in Parliament was closed and the final vote adjourned.

April 2011

On 19 April, one day before the parliamentary vote on the amendment to the PNS Act (4), representatives of the hospitality industry held a press conference, which received significant media attention. Representatives of Turkish café owners' organizations and the Croatian Chamber of Commerce and Industry were invited to present information on the deterioration of their economic indicators after the introduction of smoking bans similar to the one planned in Hungary.

The President of the Trade Association of Hungarian Caterers presented the negative impacts of European smoking bans on the hospitality industry and the results of a survey conducted by Századvég Economic Research Ltd in 2011 *(21)*. The representatives of the Hungarian hospitality industry were concerned that a smoking ban would result in decreasing income and guest flow and increasing unemployment in the hospitality sector. A "smoke and talk" cabin designed to enable smoking in restaurants and protect nonsmokers from exposure to second-hand smoke was also presented. During the press conference, it was argued that air strained by the cabin's filter system was cleaner than environmental air.

Since these claims seemed to be based on misinterpreted data, WHO issued a press release the following day (20 April 2011) modifying the information given at the press conference. At this point, it had become clear – at least to policy-makers – that much of the information presented by critics of the proposed amendment (most notably, the tobacco and hospitality industries) was not scientifically based.

Finally, on 26 April 2011, on the basis of information presented in the press release issued by WHO on 20 April 2011, the amendment to the PNS Act (4) was adopted in Parliament by majority vote (82%).

The amended Act (4) came into effect on 1 January 2012 with a 3-month grace period to allow authorities ample time to communicate the changes to the Act and provide the institutions affected sufficient preparation time. This meant that, during the first three months, the consequences of failing to comply with the amended Act (4) resulted in warnings only; fines for noncompliance first came into play on 1 April 2012, that is, after the grace period.

Measures that contributed to the success of smoke-free legislation

(Tibor Demjén)

Five important tobacco-control measures introduced around the time of the amendment (4) helped the process towards a smoke-free Hungary. These were: (1) media campaigns; (2) a significant increase in cigarette tax; (3) the requirement for pictorial warning labels on cigarette packs; (4) a drastic decrease in the number of stores selling tobacco products; and (5) improved cessation services.

With the exception of the media campaigns, these measures were implemented shortly after the amendment (4) came into force. Since they do not necessarily protect non-smokers from exposure to second-hand smoke, they would be more accurately described as measures that indirectly enhanced the impact of the amendment (4) by discouraging smoking. They were, however, explicitly aimed at maximizing its success.

Each of these measures and how they contributed to the success of the amended PNS Act (4) are described below.

Media campaigns

From January 2011 to July 2013, media campaigns to minimize exposure to second-hand smoke were conducted in several phases *(22,23)*. Passive smoking was discouraged through slogans aimed at non-smokers, such as:

- "Ne szívj tovább!" ("Don't suck it in any more!")
- "Fellélegezhetünk!" ("We can breathe freely!").

People were informed about the most important elements of the amended PNS Act (4) through various websites and short video broadcasts in the media. These addressed the rationale for the amendment (4), those it would affect, and ways in which they would be affected, among other issues, and special attention was paid to the different target groups, such as employers, employees, teachers, people working in health care and the hospitality industry, young people, and people using public transport.

The media campaigns also represented an important tool for securing public support. To maximize their success, the short videos mentioned above starred well-known people likely to influence the target groups. Websites made use of humorous illustrations, pictures and animations. Information was also disseminated, for example, in printed form, and by means of giant posters displayed in public places.

In addition, HORECA (hotels, restaurants, cafés) – the sector of the food service industry that consists of establishments that prepare and serve food and beverages – promoted non-smoking in entertainment and hospitality venues. It used the same style as that used by the tobacco industry, that is, direct, on-thespot promotion by hostesses who demonstrated the harmful effects of smoking by measuring the content of carbon monoxide in the breath exhaled by smokers present in the venues. Information materials, health quizzes and vitamin desks were also used to encourage non-smoking as part of a healthier lifestyle.

Taxation

In 2011–2013, excise tax on cigarettes increased several times in Hungary. This had an impact on cigarette consumption, resulting in a reduced number of active smokers and, thus, reduced levels of exposure to second-hand smoke. Increasing the tax rates and retail prices of tobacco, while discouraging smoking, can reinforce the impact of smoking bans, such as the amended PNS Act in Hungary *(4).*

Pictorial warning labels

All tobacco products produced from September 2012, a few months after the amended PNS Act (4) came into force, were required to have pictorial warning labels on the packaging, and from January 2013, only tobacco products with pictorial warning labels could be sold on the legal market. The tobacco industry was required to use all of the 42 combined¹ warnings proposed by EU, rotating them annually in accordance with the given rules (24). Six of these warnings also required the display of website contact details (in Hungary: www.leteszemacigit.hu) and the telephone number of the cessation services (in Hungary: 06 40 200 493) through which breaches of the smoke-free legislation may be reported.

The requirement for pictorial warning labels was supported by nearly 80% of the Hungarian population.

Pictorial warning labels on the packaging of tobacco products can encourage smoking cessation and enhance public support of tobacco-control measures and compliance to smoking bans.

Reducing the sale of tobacco to youth

In September 2012, the Parliament adopted the Act on reducing smoking prevalence among young people and retail of tobacco products, also known as the "Tobacco Shop Law" (25). According to the Law (25), tobacco may only be sold in supervised tobacco stores, where customers must be above 18 years of age, the aim being to limit the availability of tobacco products and, thus, reduce smoking among young people.

Before the adoption of the Tobacco Shop Law (25), it was possible to purchase tobacco products from over 40 000 outlets. As a result of the Law (25), as of 1 July 2013, only 7000 supervised tobacco stores are eligible to sell tobacco products, a decrease of 83%.

Furthermore, the Law (24) requires tobacco retailers to check the ages of customers. In cases of noncompliance, the Hungarian Authority for Consumer Protection can impose fines of between US\$ 67 (minimum) and US\$ 8.9 million (maximum). The Law (25) also prohibits the display of pictures or illustrations advertising tobacco products on the outer walls of tobacco stores; it also requires that tobacco products on sale in the stores are not able to be seen from outside the stores and, therefore, store fronts may not be transparent.

As a result of these measures, it has become more difficult for young people to purchase tobacco products. According to the results of the national youth tobacco survey for 2012, 45% of young people bought cigarettes in shops; this rate had decreased significantly to 20% by 2013 *(5)*.

Cessation services

The range of cessation services in Hungary has significantly widened in recent years. The National Methodological Centre for the Promotion of Smoking Cessation was established at the National Korányi TB and Respiratory Institute in October 2012, financed by EU funds. The Methodological Centre set up a free-of-charge quitline through which qualified psychologists and doctors provide information and advice.

In 2013, a group-counselling network was set up to provide help in smoking cessation, involving 90 tuberculosis institutes throughout the country. Such centres provide individual and group counselling, and communicate information on smoking cessation to professionals and the public.

The involvement of tuberculosis institutes in smoking cessation complements the work of the call centre at the Methodological Centre and led to the creation of a smoking-cessation network, which includes 161 tuberculosis institutes. The results of the Adult Smoking Survey conducted in 2012 and 2013 show a 5% increase in the rate of smokers who quit between 2012 and 2013. Reasons for quitting given by those who had smoked for at least a year were: own health protection (58%); high cigarette prices (15%); and the ban on smoking in public places (1%) (5).

¹A combined health warning consists of a text warning and a corresponding photograph or illustration.

Evaluation: impact of smoke-free legislation

(Tibor Demjén, Zsófia Kimmel, József Vitrai, Péter Varsányi, Eszter Balku, Tamás Joó)

A board of governors, led by the Focal Point, was established by the Minister of State for Health at the Ministry of Human Resources of Hungary in April 2012 to plan measures to implement the amended PNS Act (4) and monitor action taken. The Board met regularly to discuss timely issues, such as providing correct information to the public and affected industries, monitoring compliance, and measuring changes in attitudes towards smoking, smoking habits and exposure to second-hand smoke. In addition, a group of experts from the National Institute for Health Development was set up by the Focal Point to assess the impact of the amended PNS Act (4).

An impact assessment was carried out in 2012–2013 to provide information on the short-term impact of the amendment (4). This resulted in data on enforcement and compliance, indoor air quality, exposure to second-hand smoke (in public places and in the home), the hospitality industry, smoking patterns and public attitudes towards the amendment (4). The results are discussed below.

Law enforcement and compliance

A number of control measures were taken by staff members of the Public Health Policy Administration Services of the National Public Health and Medical Officers Service and the public health institutes to check for adherence to the amendment (4), recorded the results according to the template indicated in the amendment. In January–March 2012, a total of 6024 units were visited of which only 318 (5.27%) were noncompliant.

Thus, only a short period after implementation of the amendment (4), when the only consequence of non-compliance was to be issued with a warning, there was already quite a high level of compliance.

The largest number of control visits (6792) was made in April 2011, immediately after the 3-month grace period had expired: only 1.43% of the units visited were found to be noncompliant. During 2012, out of a total of 55 947 units visited, just 0.41% were found to be noncompliant. Fines issued for noncompliance in 2012 and 2013 amounted to a total of US\$ 78 000. In other words, in 2012 enforcement of the amended PNS Act (4) was strong and compliance was high.

Indoor air quality

Measurements of indoor air quality in hospitality venues across various districts of Budapest were taken before and after implementation of the amendment to the PNS Act (4). Those taken after implementation of the Act (4) revealed particulate matter of less than 2.5 μ m (PM2.5), which clearly demonstrated a significant improvement in the indoor air quality and, thus, minimal exposure to second-hand smoke (Fig. 1).

Exposure to second-hand smoke

As the results of the Adult Smoking Survey conducted in 2012 and 2013 show, the levels of exposure of non-smokers to second-hand smoke had dropped to below 10% in all the public indoor spaces, apart from those in health-care institutions where a subtle increase (4%) was observed. This is a significant reduction compared to 2012, when levels of exposure to second-hand smoke were far higher, for example, 46.5% in bars and clubs and 44.5% in pubs.

As for private spaces, 66% of smokers and 12% of non-smokers were exposed to smoke in their own homes in 2012. By 2013, these rates had decreased to 36% and 9% respectively. The exposure of youth to second-hand smoke in the home, however, remained close to 45%.

Thus, overall, the rates of exposure of smokers and non-smokers to smoke in enclosed public spaces and the home have decreased.

The rates of exposure of non-smokers to secondhand smoke at outdoor transport stops and waiting areas have also decreased but, surprisingly, between 2012 and 2013, the rates in playgrounds and underpasses increased to 20% and 43%, respectively. This may reflect difficulties in enforcing compliance in these particular areas.

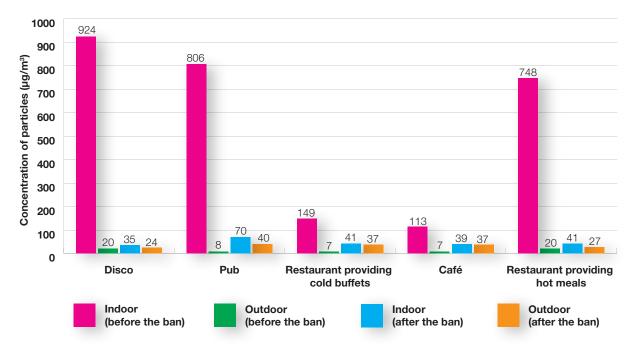


Fig. 1. Indoor air quality in hospitality venues before and after implementation of the amendment to the PNS Act

Source: A nemdohányzók védelméröl szóló törvény szigorításának hatása budapesti vendéglátóhelyek beltéri levegöminöségére [Indoor air quality in hospitality venues before and after prohibition of smoking] (26).

Changes in patterns of adult smoking

Surveys of adult smoking patterns involved data from 1500 adults over 17 years of age (Fig. 2).

Between 2012 and 2013, cigarette consumption decreased among adults from 12.3 billion to 8.3 billion and the rate of daily smokers decreased from 28% to 19%.

These changes, though encouraging, were most likely due to combinations of the various tobacco-control measures introduced around that time.

Changes in patterns of youth smoking

Among youth aged 13–15 years, the rate of experimentation with tobacco dropped significantly between 2012 and 2013, that is from 57% to 46% (Fig. 3), and the rate of young people buying tobacco products in shops decreased by over 50% (from 45% to 20%).

These results, though encouraging, most likely also reflect a combination of tobacco-control measures taken around this time, including the adoption of the "Tobacco Shop Law" (25). However, the rates of chil-

dren under the age of 10 experimenting with smoking increased considerably between 2012 and 2013 from 10% to 22%.

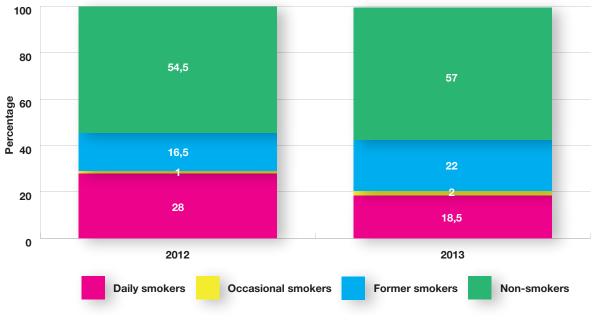
Use of Tobacco Imitative Electronic Products (TIEPs)

Between 2012 and 2013, prevalence of the use of Tobacco Imitative Electronic Products (TIEPs) among adults (TIEP) increased from 2% to 3.7%; among youth, it decreased from 13% to 9%.

Public attitudes and support

Smokers and non-smokers alike were in favour of restrictions on smoking in health-care, publiceducation and other public institutions, as well as in playgrounds.

In 2013, the majority of non-smokers and a high rate of smokers were in agreement with the smoking ban: 45% of smokers and 72% of non-smokers supported a smoking ban in pubs, and 53% of smokers and 78% of non smokers supported a smoking ban in discos. Support of a smoking ban in workplaces was even stronger: 86% of non-smokers and 70% of smokers were in favour. Fig. 2. Rates of daily, occasional and former smokers, and of non-smokers, adults >17 years, Hungary, 2012 and 2013



Source: Adult Smoking Survey 2013 (5).

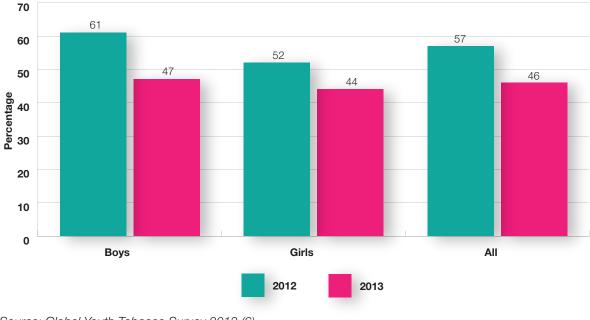
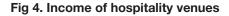


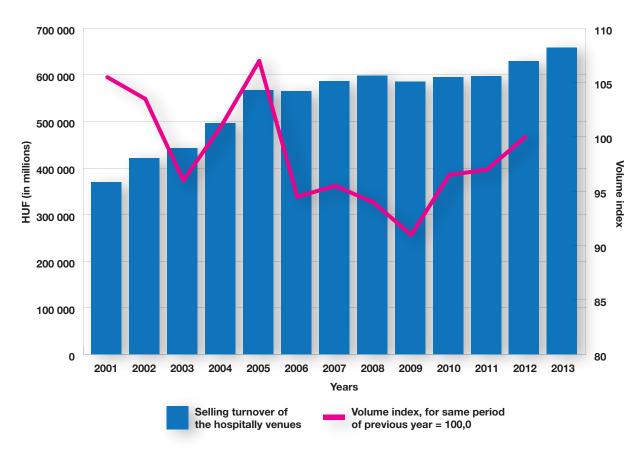
Fig. 3. Rates of youth, aged 13–15 years, having tried tobacco products, Hungary, 2012 and 2013

Source: Global Youth Tobacco Survey 2013 (6).

Hospitality industry

Contrary to arguments presented by the tobacco and hospitality industries in Hungary, the number of hospitality venues (restaurants, confectioneries, drink shops, music clubs) increased between 2011 and 2012 by approximately US\$ 142 million, and the income of the hospitality industry actually grew (Fig. 4). Guest flow and income from accommodation charges were also measured and found to have increased after the implementation of the amended PNS Act (4) (Fig. 5).





Source: Hungarian Central Statistical Office (27).

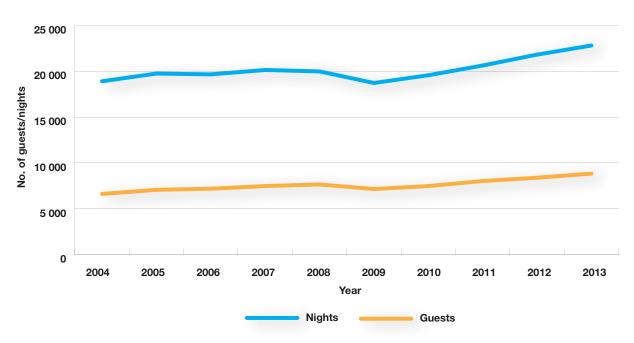


Fig. 5. Guest flow of accommodation establishments

Source: Hungarian Central Statistical Office (27).

10

Conclusions

(Tibor Demjén)

Smoke-free Hungary: a success story

Smoke-free legislation in Hungary has been an overall success. Levels of enforcement and compliance have been high, the amended PNS Act (4) has been well supported by both smokers and non-smokers, air quality has significantly improved and exposure to second-hand smoke in public places has been reduced. Furthermore, based on public-opinion polls, the opinions of employer and employee associations, and data from the authority² controlling compliance with the Act (4), high-level support of the measure has not declined in the two years following its implementation. These positive outcomes comprise an important message for other countries planning a smoking ban similar to that implemented in Hungary.

Combining the smoking ban and other effective tobacco-control measures, such as media campaigns, taxation, pictorial warning labels on tobacco products, a restriction of the number of shops selling tobacco products, and smoking-cessation services, maximized the success of the ban and led to a significant decrease in the rates of adult daily smokers and youth (aged 13–15 years) experimenting with tobacco.

The short-term economic impacts of the ban were also favourable; if anything, the number of hospitality venues and the income of the hospitality industry have increased. This outcome sends an important message to hospitality industries in countries where the possible introduction of a smoking ban is perceived as a concern.

Ongoing smoking-related challenges in Hungary

Tobacco control is complex, one of its most important aspects being to reduce social acceptance of smoking. It is possible that through tobacco-free legislation, smoking will become unacceptable as a social behaviour over time and result in changes in smoking-related behaviour. The new social norms would lower the prevalence of smoking, and, in turn, tobacco-related morbidity and mortality with a positive effect on health economics. However, these predicted long-term impacts remain to be assessed.

² National Public Health and Medical Officer Service; the Police; Közterület Felügyelet (services controlling public places). The use of (TIEP) appears to be increasing among adults in Hungary and this is a concern. Their unregulated use, especially in public places, could reverse the long-term impacts of the amended PNS Act (4) and renormalize smoking. In Hungary, (TIEPs with cartridges containing nicotine in the liquid) are qualified as medicine under the 2005 Act XCV on medicines for human use and in amendments to other acts regulating the pharmaceutical industry (28). However, as they are not regulated under the amended PNS Act (4), their potential use by the public is an ongoing concern.

The increase in numbers of children under 10 years of age who experiment with tobacco also requires attention. One possible explanation is that smoking was banned in educational institutions before the amendment of the PNS Act (4) so that schools were not significantly affected by it.

Other concerns include the reported unchanged or increased rates of exposure to second-hand smoke in playgrounds and underpasses, and the unchanged rates of exposure of youth to second-hand smoke in the home. Before the amendment of the PNS Act (4), smoking was permitted in playgrounds and underpasses. After the media campaigns, non-smokers have become more aware of the places covered by the smoking ban, but changes in smoking patterns in private spaces, such as the home - which cannot be regulated by law - reflect the necessity to change the social norms regarding smoking. Therefore, there may be a reduction in the exposure of young people to second-hand smoke in the home in the long-term. It is encouraging to see that the exposure of adults to second-hand smoke in the home has already decreased somewhat.

Box 4 lists action that, according to the Hungarian experience, can lead to successful tobacco-control.

Box 4. Checklist for success in tobacco control

- Identify and map the institutions and organizations likely to communicate actively about, and protest against, a smoking ban, and analyse possible arguments, based on possible conflicts of interest.
- Long before and during the legislative process, conduct impact assessments, collect relevant data, and summarize professional arguments and views, based on national and international experiences.
- Actively communicate these findings to political decision-makers and the public.
- Cooperate with and request support from national and international professional bodies.
- Implement smoking bans with a grace period to allow proper communication of the changes to those affected and give them time to prepare.
- Maximize public acceptance of and compliance with the smoking ban through extensive media coverage and other effective tobacco-control measures, before and after implementation of the smoking ban.

References

- Population Census 2011. Budapest: Hungarian Central Statistical Office; 2012 (http://www.ksh. hu/docs/eng/xftp/idoszaki/nepsz2011/enepszelo2011.pdf, accessed 18 June 2014).
- 1999 évi XLII. törvény a nemdohányzók védelméről és a dohánytermékek fogyasztásának, forgalmazásának egyes szabályairól 1999 [Act XLII on the protection of nonsmokers]. Magyar Közlöny Lap- és Könyvkiadó Kft. 2008 (http://njt.hu/cgi_bin/njt_doc. cgi?docid=40547.62247, accessed 10 July 2014).
- WHO Framework Convention on Tobacco Control. Geneva: World Health Organization; 2003 (http://whqlibdoc.who.int/publications/2003/9241591013.pdf?ua=1, accessed 7 June 2014; Hungarian version available at: http:// www.fokuszpont.dohanyzasvisszaszoritasa.hu/ hu/content/evsz-dohanyzas-ellenorzesi-keretegyezmeny-iranyelvek-jegyzokonyvek-jelentesek, accessed 7 June 2014).
- 1999 évi XLII. törvény a nemdohányzók védelméről és a dohánytermékek fogyasztásának, forgalmazásának egyes szabályairól 1999 [Act XLII on the protection of non-smokers]. Magyar Közlöny. 2011;48 (http://www.fokuszpont.dohanyzasvisszaszoritasa.hu/sites/default/ files/nvt_20130701_tol_hatalyos.pdf, accessed 18 June 2014; in English: http://www.fokuszpont.dohanyzasvisszaszoritasa.hu/sites/default/ files/Act_XLII_of_1999_on_the_protection_of_ non_smokers_01.08.2013.pdf, accessed 10 July 2014).
- Balku E et al. Felnőtt Dohányzás Felmérés 2013 [Adult Smoking Survey 2013]. Budapest: National Institute for Health Development; 2014 (http:// www.fokuszpont.dohanyzasvisszaszoritasa.hu/ sites/default/files/17_evnel_idosebb_lakossag_ dohanyzas_felmeres_II_honlapra_20140128_ v2.pdf, accessed 6 June 2014).
- Nemzetközi Ifjúsági Dohányzás Felmérés 2013 [Global Youth Tobacco Survey 2013]. Budapest: National Institute for Health Development; 2014 (http://www.fokuszpont.dohanyzasvisszaszoritasa.hu/sites/default/files/GYTS_2013_tenylap_20140528.pdf, accessed 19 June 2014).

- Reporting instrument of the WHO Framework Convention on Tobacco Control (Hungary). Budapest: Ministry of Health; 2014 (http:// www.fokuszpont.dohanyzasvisszaszoritasa.hu/ sites/default/files/REPORTING_INSTRUMENT_ HU_18_04_2014.pdf, accessed 18 June 2014).
- 2005. évi III. törvény az Egészségügyi Világszervezet Dohányzás-ellenőrzési Keretegyezményének kihirdetéséről [Act III ratifying WHO FCTC, 2005]. Magyar Közlöny. 2005:28 (http://www. fokuszpont.dohanyzasvisszaszoritasa.hu/sites/ default/files/2005_III_torveny_EVSZ_DK_kihirdeteserol.pdf, accessed 18 June 2014).
- WHO Framework Convention on Tobacco Control. Guidelines for implementation. Geneva: World Health Organization; 2013 (http://apps.who.int/iris/bitstre am/10665/80510/1/9789241505185_eng. pdf?ua=1, accessed 12 July 2014).
- Council recommendation of 30 November 2009 on smoke-free environments (2009/C 296/02). Official Journal of the European Union. 2009;C296:4-14 (http://eur-lex.europa.eu/Lex-UriServ/LexUriServ.do?uri=OJ:C:2009:296:0004: 0014:EN:PDF, accessed 7 June 2014).
- How tobacco smoke causes disease: the biology and behavioral basis for smoking-attributable disease. A report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, 2010 (http://www.cdc.gov/tobacco/ data_statistics/sgr/2010/index.htm, accessed 7 June 2014).
- Institute for Health and Costumer Protection activity report 2003. Brussels: European Commission; 2004 (http://publications.jrc.ec.europa. eu/repository/bitstream/1111111118781/1/ EUR%2021198%20EN.pdf, accessed 18 June 2014).
- Vitrai J et al. A dohányzás társadalmi terhei Magyarországon, 2012 [The Social Burden of Smoking in Hungary, 2012]. Budapest: National Institute for Health Development; May 2012 (http://www.fokuszpont.dohanyzasvisszaszoritasa.hu/sites/default/files/dohanyzas_tarsadalmi_ terhe_OEFI_2012_.pdf, accessed 18 June 2014).

- Tobacco Control in Hungary [website]. Budapest: National Institute for Health Development; 2010 (http://www.fokuszpont.dohanyzasvisszaszoritasa.hu/, accessed 7 June 2014).
- 15. Demjén T, Böti E, Nagy E. A nemdohányzók fokozottabb védelme érdekében tervezett jogszabály változtatások lehetséges hatásainak vizsgálata és előzetes költség-haszon becslése a javasolt intézkedések figyelembevételével a nemzetközi tapasztalatok alapján [Monitoring of the possible effects and provisional cost-benefit estimation of the aggravation of the Act for the Protection of Non-smokers by taking account the recommended measures based on international experiences]. Budapest: National Institute for Health Development; 2008 (http://www.fokuszpont.dohanyzasvisszaszoritasa.hu/sites/default/ files/nemdoh_vedelme_hatastanulmany_OEFI_ DF_2008.pdf , accessed 12 July 2014).
- 16. A zárt nyilvános vendéglátóhelyeken történő dohányzás magyarországi betiltásának nemzetközi környezete, lehetséges társadalmi és gazdasági hatásai [National settings and possible social and economic consequences of the Hungarian smoking ban at enclosed public areas]. Budapest: Hungarian Academy of Sciences; 2008 (http://www.eski.hu/new3/politika/kovesi/ kovesi_listaz.php?id=13932, accessed 7 June 2014).
- 17. Balázs A, Molnár Á, Ádány R. A nemdohányzók védelméről szóló törvény tervezett módosításának egészséghatás vizsgálata [Health impact assessment of the amendment of Act XLII of 1999 on the protection of non-smokers and certain regulations on the consumption and distribution of tobacco products]. Debrecen: University of Debrecen; 2010.
- Tájékoztató az Országgyűlés Egészségügyi Bizottsága részére [Tobacco Control in Hungary, 2010. Summary for Committee on Health Affairs of the Parliament]. Budapest: National Institute for Health Development; 2010 (http:// www.fokuszpont.dohanyzasvisszaszoritasa. hu/sites/default/files/doh_vissz_parl_eu_bizottsag_reszere_oefi_df_20110225.pdf, accessed 7 June 2014).
- Corporate Responsibility Consulting Ltd. Smoking gun: is the smoking ban a major cause of the decline of the British pub? London: Corporate Responsibility Consulting Ltd; 2010 (http:// takingliberties.squarespace.com/storage/Smoking%20Gun%20final1.pdf, accessed 7 June 2014).

- Kuneman DW, McFadden MJ. Economic losses due to smoking bans in California and other states. Lovell, ME: The Smoker's Club; 2005 (http://kuneman.smokersclub.com/economic. html, accessed 7 June 2014)
- 21. Közvélemény-kutatási eredmények, Nemdohányzók védelméről szóló törvényjavaslat hatása, annak megítélése a vendéglátóhelyek tulajdonosainak körében [Survey about judgement of the amendment of the PNS act in the hospitality sector]. Budapest: Századvég Economic Research Ltd; 2011. (http:// www.euroastra.info/files/Szazadveg_kutatas_Doh%C3%A1nyz%C3%A1s_a_vend%C3% A9gl%C3%A1t%C3%B3iparban_20110419.pdf, accessed 7 June 2014).
- 22. Ne Szívj tovább! [Do not suck it in anymore!]. [website].Budapest: Origo Média és Kommunikációs Szolgáltátó Zrt.; 2012 (http://neszivj. postr.hu/, accessed 18 July 2014).
- Fellélegezhetünk! [We can breathe freely!]. Budapest: Play! Média Kft.; 2012 (http://fellelegezhetunk.hu/web/, accessed 18 July 2014).
- 24. Combined warning editing. Guidance document. Brussels: European Commission; 2006 (http:// www.fokuszpont.dohanyzasvisszaszoritasa.hu/ sites/default/files/EU_guidance_document_combined_warning.pdf, accessed 7 June 2014).
- 2012. évi CXXXIV. törvény A fiatalkorúak dohányzásának visszaszorításáról és a dohánytermékek kiskereskedelméről [Act on reducing smoking prevalence among young people and retail of tobacco products]. Magyar Közlöny.
 2012;125 (http://www.kozlonyok.hu/nkonline/ MKPDF/hiteles/MK12125.pdf, accessed 13 July 2014).
- 26. Beregszászi T et al. A nemdohányzók védelméről szóló törvény szigorításának hatása budapesti vendéglátóhelyek beltéri levegőminőségére [Indoor air quality in hospitality venues before and after prohibition of smoking]. Népegészségügy. 2012;90:3 (http://www.fokuszpont.dohanyzasvisszaszoritasa.hu/sites/default/files/Indoor_air_ quality_in_hospitality_venues_before_and_after_%20prohibition_%20of_%20smoking_2012. pdf, accessed 19 June 2014).
- 27. Hungarian Central Statistical Office [online database]. Budapest, Hungarian Central Statistical Office, 2014 (http://www.ksh.hu/docs/hun/xstadat/xstadat_evkozi/e_oga008.html , accessed 13 July 2014).

 2005. évi XCV. törvény az emberi alkalmazásra kerülő gyógyszerekről és egyéb, a gyógyszerpiacot szabályozó törvények módosításáról [2005 Act XCV on medicines for human use and the amendment of other acts regulating the pharmaceutical industry]. Magyar Közlöny. 2005;100 (http://net.jogtar.hu/jr/gen/hjegy_doc. cgi?docid=A0500095.TV, accessed 13 July 2014).

Bibliography

- Balku E et al. Felnőtt Dohányzás Felmérés, 2012 [Adult Smoking Survey, 2012]. Budapest: National Institute for Health Development; 2013. (http://www.fokuszpont.dohanyzasvisszaszoritasa.hu/sites/default/files/17_evnel_idosebb_lakossag_dohanyzas_felmeres_honlapra_20131009. pdf, accessed 19 June 2014).
- Nemzetközi Ifjúsági Dohányzás Felmérés 2012 (ténylap) [Global Youth Tobacco Survey 2012 (fact sheet)]. Budapest; National Institute for Health Development; 2013 (http://www.fokuszpont.dohanyzasvisszaszoritasa.hu/sites/default/ files/0_IDF_Tenylap_Mo_VEGLEGES_20130211. pdf, accessed 6 June 2014).
- Elektronikus cigaretta GYIK [Electronic cigarettes FAQ]. Budapest: National Institute for Health Development; 2013 (http://www.fokuszpont. dohanyzasvisszaszoritasa.hu/sites/default/ files/0_e-cigi_CSAK_GYIK.pdf, accessed on 13 July 2014).
- Centers for Disease Control and Prevention. Smoking-attributable mortality, years of potential life lost, and productivity losses – United States, 2000–2004. Morbidity and Mortality Weekly Report. 2008;57(45):1226–28.
- International Agency for Cancer Control (IARC), World Health Organization. IARC Handbooks of Cancer Prevention. Tobacco control. Volume 13. Evaluating the effectiveness of smoke-free policies. Lyon: International Agency for Cancer Control; 2009 (http://www.iarc.fr/en/publications/ pdfs-online/prev/handbook13/handbook13-0. pdf, accessed 6 June 2014).
- Lin H-H, Ezzati M, Murray M. Tobacco smoke, indoor air pollution and tuberculosis: a systematic review and meta-analysis. PLOS Medicine. 2007;4(1):20 (http://www.plosmedicine.org/ article/info%3Adoi%2F10.1371%2Fjournal. pmed.0040020, accessed 6 June 2014).
- 7. Ezzati M, Riboli E. Behavioral and dietary risk factors for noncommunicable diseases. New

England Journal of Medicine. 2013;369:954– 64 (http://www.ncbi.nlm.nih.gov/pubmed/24004122, accessed 6 June 2014).

- Michael J et al. Smoking vs other risk factors as the cause of smoking-attributable deaths: confounding in the courtroom. JAMA. 2000;284:706–12 (http://jama.jamanetwork. com/article.aspx?articleid=192965, accessed 6 June 2014).
- Michael J et al. 50-year trends in smoking-related mortality in the United States. New England Journal of Medicine. 2013;368(4):351–64 (http:// www.ncbi.nlm.nih.gov/pubmed/23343064, accessed 14 June 2014).
- Sims M et al. Short term impact of smoke-free legislation in England: retrospective analysis of hospital admissions for myocardial infarction. British Medical Journal. 2010;340:c2161 (http:// www.bmj.com/content/340/bmj.c2161, accessed 6 June 2014).
- Sitas F et al. Differences among the coloured, white, black, and other South African populations in smoking-attributed mortality at ages 35–74 years: a case-control study of 481 640 deaths. The Lancet. 2013;382(9893):685–93 (http://www.thelancet.com/journals/lancet/article/ PIIS0140-6736(13)61610-4/abstract, accessed 14 June 2014).
- The health consequences of involuntary exposure to tobacco smoke. A report of the Surgeon General. Rockville, MD: United States Department of Health and Human Services; 2006 (http://www.ncbi.nlm.nih.gov/books/NBK44324/ pdf/TOC.pdf, accessed 14 June 2014).
- 13. Willi C et al. Active smoking and the risk of type 2 diabetes: a systematic review and metaanalysis. JAMA. 2007;298:2654–64 (http://jama. jamanetwork.com/article.aspx?articleid=209729, accessed 14 June 2014).

The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

Member States

Albania Andorra Armenia Austria Azerbaijan Belarus Belgium Bosnia and Herzegovina Bulgaria Croatia Cyprus **Czech Republic** Denmark Estonia Finland France Georgia Germany Greece Hungary Iceland Ireland Israel Italy Kazakhstan Kyrgyzstan Latvia Lithuania Luxembourg Malta Monaco Montenegro Netherlands Norway Poland Portugal Republic of Moldova Romania **Russian Federation** San Marino Serbia Slovakia Slovenia Spain Sweden Switzerland Tajikistan The former Yugoslav Republic of Macedonia Turkey Turkmenistan Ukraine United Kingdom Uzbekistan

World Health Organization Regional Office for Europe Scherfigsvej 8, DK-2100 Copenhagen Ø, Denmark Tel.: +45 39 17 17 17. Fax: +45 39 17 18 18. E-mail: contact@euro.who.int Website: www.euro.who.int