

COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 30 June 2009
SEC(2009) 894

COMMISSION STAFF WORKING DOCUMENT

**Accompanying document to the proposal for a Council Recommendation
on smoke-free environments**

ANNEXES TO IMPACT ASSESSMENT

{COM(2009) 328 final}
{SEC(2009) 894}

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ANNEX I – MANDATE OF THE IMPACT ASSESSMENT INTER-SERVICE STEERING GROUP

COMMISSION OF THE EUROPEAN COMMUNITIES

Health and Consumer Protection Directorate-General

Directorate C - Public Health and Risk Assessment
C6 – Health measures

Brussels, 21 December 2007
SANCO C6

Inter-Service Group for the Impact Assessment on a proposal for a Council Recommendation on Smoke-free environments

Mandate

1. ISSUE AT STAKE

Exposure to environmental tobacco smoke (ETS) is a source of widespread excess morbidity and mortality in the EU. Chronic exposure to second-hand smoke has been established as a cause of many of the same diseases caused by active smoking. According to conservative estimates, passive smoking killed 79,000 adults in the EU-25 in 2002.

Exposure to ETS imposes significant costs on the economy, including the direct costs relating to increased healthcare expenditure and the indirect costs linked to productivity losses. The overall economic burden on EU-27 has yet to be estimated.

National legislation differs widely across the Member States. Recently, comprehensive smoke-free laws have been adopted in Ireland, Italy, Malta, Sweden, UK, Lithuania, Finland, Estonia, France and Slovenia. However, not all governments have made attempts to better protect their citizens from tobacco smoke while a number of others have encountered serious difficulties in introducing and/or implementing comprehensive smoke-free legislation.

Hospitality sector has proved the most contentious area of regulation. This is of particular concern given the exceptionally high concentrations of ETS in bars and restaurants.

The obstacles to introducing effective smoke-free measures are similar in many Member States, including the opposition from tobacco and hospitality industries, fear of negative economic impact (e.g. on the hospitality sector, government's

revenues from tobacco taxes or tobacco-related employment), misconceptions regarding smoke-free regulations (difficult to enforce, unpopular), non-compliance with existing requirements etc.

At EU level, the issue of smoke-free environments has so far been addressed in non-binding resolutions and recommendations which called on Member States to ensure protection from second-hand tobacco smoke. In addition, a number of occupational health and safety directives set out general requirements covering all risks to workers health and safety together with some specific restrictions on smoking in the workplace, e.g. requiring ventilation and protection of non-smokers in rest rooms and rest areas; banning smoking in areas where carcinogens and mutagens are handled, or requiring employers to protect pregnant and breast-feeding staff.

In January 2007, the Commission launched a Green Paper consultation on the best way to promote smoke-free environments in the EU. The great majority of contributors expressed support for further EU action. An EU Recommendation and binding EU legislation were the two most popular policy options, favoured by around 40% of institutional respondents each.

At international level, the WHO Framework Convention on Tobacco Control (FCTC) creates a legal obligation to provide protection from exposure to tobacco smoke in indoor workplaces, public transport and indoor public places. The second Conference of the Parties to the Convention in July 2007 adopted guidelines on smoke-free environments formulating the "golden standard" that every Party should aim to achieve within five years of the FCTC entry into force for that Party.

2. DECISION OF THE COMMISSION

Based on the outcome of the Green Paper consultation, the Commission intends to adopt a follow-up Communication with a proposal for measures in the fourth quarter of 2008. An EC proposal for a Council Recommendation on smoke-free environments is included in the Commission's Agenda Planning (reference n° 2008/SANCO/005). The intention of the Recommendation is to encourage and facilitate the introduction of smoke-free laws at national and, where appropriate, sub-national level, to transpose the FCTC guidelines on smoke-free environments into the EU context and to monitor/evaluate the progress towards smoke-free throughout the EU.

3. THE IMPACT ASSESSMENT

The Impact Assessment on the foreseen Commission initiative on smoke-free environments will follow the set of logical steps recommended in the European Commissions Impact Assessment Guidelines SEC (2005)791.

The Impact Assessment Inter-service Steering Group (ISSG) will accompany the preparation of the Impact Assessment. Its main tasks are described below. Three meetings of the ISSG are expected to take place in the course of 2007-2008.

An external contractor is contributing to the Impact Assessment.

3.1. Consultation of interested parties

Gathering opinions and information from interested parties is important for a policy-development process.

In addition to the Green Paper consultation, three stakeholder consultation meetings are scheduled for 2008. The Commission may also consult the Member States on different elements of the Impact Assessment through the Council Working Party on Public Health.

<p>The Steering Group should contribute to identifying the relevant sectors within their policy areas and the main topics of consultation.</p>
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3.2. Assess and analyse the problem

One of the main objectives of the Impact Assessment will be to assess and analyse the social (health), economic and environmental burden related to exposure to second-hand tobacco smoke, its root causes as well as the evolution of the problem.

<p>The Steering Group should contribute to the analysis of the problem by identifying information and data from projects conducted in the framework of major EU programmes, Commission sources, Member States, international organisations, stakeholders and the scientific community.</p>
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3.3. Identify objectives

The overall objectives identified in the SANCO Scoping Paper are to improve public health through reductions in tobacco-related illness and mortality and to reduce healthcare expenditure for treating tobacco-related diseases. The specific objectives include reduced exposure to second-hand smoke and reduced rates of active smoking. The operational objective is to create a political environment for decisive and clear smoke-free action at Member States' level, in line with the international obligations under the FCTC.

The Steering Group should contribute to the definition and refinement of the identified objectives so that they correspond with the problem definition and meet the SMART criteria.

3.4. Identify the options

The next step of the IA will be to establish which policy options and delivery mechanisms are most likely to achieve the established objectives.

The policy options available are:

1. No change of the status quo
2. Coordination and exchange of best practices between Member States
3. Commission Recommendation
4. Council Recommendation
5. Binding EU legislation

The Steering Group should contribute with their expertise in order to better define and, if need be, adjust the shortlist of options for further analysis.

3.5. Analyse the impacts

The analysis of impacts involves trying to predict, across a range of different policy areas, the likely consequences (both intended and unintended) of the short-listed policy options.

The Steering Group should contribute with their expertise to the identification of the main social (health), economic and environmental impacts of each option, who will be affected and over what timescale.

3.6. Compare the options

Once the relevant impacts have been analysed, the next step will be to compare the options according to various criteria with a view to facilitating the choice of the most preferable alternative or mix of options.

The Steering Group should contribute to comparing the strengths and weaknesses of each of the policy options in relation to the main objective(s) and taking into account the principles of proportionality and subsidiarity.

3.7. Evaluation

Within the framework of the Impact Assessment analysis, an attempt should be made to define some core indicators for the main policy objectives and to outline the monitoring and evaluation arrangements envisaged.

The Steering Group should contribute to identifying the key indicators as well as possible monitoring and evaluation strategy.

4. TIMETABLE

1st meeting of the ISSG	14 December
Start of contractor's work on the IA	Mid-December
Problem definition received from the contractor	18 February
2 nd meeting of the ISSG	22 February
Summary of the report received from the contractor and distributed to ISSG members	10 March
Stakeholder consultation	Mid March
Draft report received from the contractor	14 April
3 rd meeting of the ISSG	4 th week of April
Final report received from the contractor and distributed to ISSG	Mid-May
Final IA distributed to ISSG members	Beg. June
Submission to the IA Board	Mid-June
Meeting with the IA Board	9 July
Opinion of IA Board	End July
Evaluation by IA Board completed	End August
Launch of inter-service consultation	Beg. September
Translation	Beg. October
Launch of the written procedure	Beg. November
Adoption by the College	Mid-November

ANNEX II – GREEN PAPER CONSULTATION

On 30 January 2007, the Commission published a **Green Paper "Towards a Europe free from tobacco smoke: policy options at EU level"**(COM(2007) 27 final) to launch a broad public consultation on the best way to promote smoke-free environments in the EU. This was preceded by informal consultation with selected stakeholders in April-May 2006 which helped define the Green Paper questions.

The Green Paper examined the health and economic burdens associated with passive smoking, public support for smoking bans, and the measures taken so far at national and EU level. The Commission invited the stakeholders' views on the scope of measures to tackle passive smoking and the most appropriate form of EU intervention.

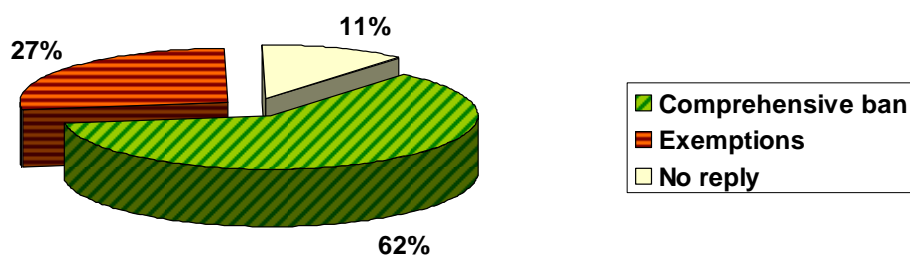
The Commission received more than **300 contributions** from a wide range of stakeholders, including EU Institutions, Member States' authorities, the health sector, tobacco-related organisations, the social partners and individuals.

Public authorities	Health-related organisations	Tobacco-related organisations	Social partners	Other
EU Institutions 2	NGOs 45	Manufacture 22	Inter-sectoral 7	Individuals 140
National govts 18	Research 14	Distribution 5	HORECA 7	MEPs 2
National parliaments 4	Healthcare professionals 18	Growing 2	Other 1	Other industry 1
Regional and local 13	Pharmaceutical industry 4	Smokers' NGOs 4		
		Trade unions 2		
37	81	35	15	143

The governments of 17 EU Member States as well as the governments of three EFTA States replied to the consultation. The Employment, Social Policy, Health and Consumer Affairs (EPSCO) Council held a public debate on the possible options for EU action to promote smoke-free environments on 31 May 2007. In addition, the European Parliament adopted a resolution on the Green Paper on 24 October 2007.

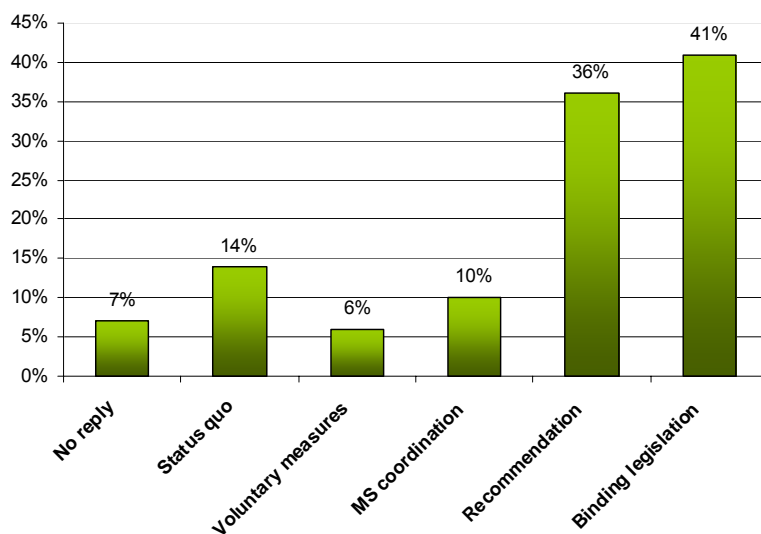
The great majority of contributors welcomed the Green Paper as a timely addition to the EU and global debate on smoke-free policies and expressed support for further efforts to promote smoke-free environments throughout the EU.

Scope of smoke-free policies



Over 60% of institutional respondents (including 13 Member States) believed that the best option is a **comprehensive ban** on smoking in all enclosed workplaces and public places, with only minimum exemptions for places that are de facto somebody’s homes, such as designated rooms in nursing homes or mental health settings. A quarter of respondents (including four Member States) favoured different types of **exemptions**, e.g. for hospitality venues or separate smoking areas.

Policy options



As for the desirable level of EU involvement in promoting smoke-free environments, an EU Recommendation and binding EU legislation were the two most popular policy options with around 40 % support each. One in eight respondents opted for more than one policy options, either in parallel or over time. The need to take into account and support the FCTC guidelines on smoke-free environments was also emphasised.

The EP resolution urged the Member States to introduce comprehensive bans on smoking within two years and invites the Commission to table an appropriate legislative proposal in case of unsatisfactory progress.

In the EPSCO Council, the majority of Member States were of the opinion that the EU's role in promoting smoke-free environments should be mainly to support and coordinate national efforts, e.g. through a Council Recommendation.

All the replies to the Green Paper and the summary report are published on Commission's website.¹

Building on the support received in the Green Paper consultation, the Commission decided to put forward a follow-up initiative on smoke-free environments by the end of 2008. This would assist Member States in implementing comprehensive smoke-free laws in line with the FCTC guidelines.

GREEN PAPER QUESTIONS

- (1) Which of the two approaches suggested in Section IV would be more desirable in terms of its scope for smoke-free initiative: a total ban on smoking in all enclosed public spaces and workplaces or a ban with exemptions granted to selected categories of venues? Please indicate the reason(s) for your choice.
- (2) Which of the policy options described in Section V would be the most desirable and appropriate for promoting smoke-free environments? What form of EU intervention do you consider necessary to achieve the smoke-free objectives?
- (3) Are there any further quantitative or qualitative data on the health, social or economic impact of smoke-free policies which should be taken into account?
- (4) Do you have any other comments or suggestions on the Green Paper?

¹ http://ec.europa.eu/health/ph_determinants/life_style/Tobacco/smoke_free_en.htm

LIST OF INSTITUTIONAL CONTRIBUTORS TO THE GREEN PAPER

Public authorities

European institutions		
	European Parliament	EU
	Council	EU
National governments		
1.	Ministry of Health, Family and Youth of Austria	AT
2.	Belgian Government	BE
3.	Ministry of Health	BG
4.	Ministry of Health	CZ
5.	Federal Government of Germany	DE
6.	Danish Government	DK
7.	Standing Committee of the EFTA States	EEA EFTA
8.	Ministry of Health and Consumer Protection	ES
9.	Ministry of Social Affairs	EE
10.	French Government	FR
11.	Ministry of Health	HU
12.	Ministry of Health	IE
13.	Ministry of Health	LV
14.	Ministry of Health	MT
15.	Dutch Government	NL
16.	Ministry of Health	PL
17.	Ministry of Health	SI
18.	Ministry of Social Affairs	SE
19.	Department of Health	UK
National parliaments		
1.	Bundesrat	DE
2.	Danish Parliament's Health and European Affairs Committee	DK
3.	French Senate	FR
4.	Social Affairs Committee of the Swedish Parliament	SE
Regional and local authorities		
1.	Regional Management of the Waldviertel	AT
2.	Provincial Administration for Health, Hospitals and Personnel of Styria	AT
3.	Committee for Welfare, Public Health and Family of the Flemish Parliament	BE
4.	Bavarian State Ministry for the Environment, Health and Consumer Protection	DE
5.	Municipality of Illingen	DE
6.	Government of Aragon (Department of Health and Consumer Protection)	ES
7.	Swedish Association of Local Authorities and Regions	SE
8.	Fresh Smoke Free North East (SFNE)	UK
9.	Smoke Free Derwentside	UK
10.	Smoke-free Bristol (SFB)	UK
11.	Smoke Free Norfolk	UK
12.	Cheshire & Merseyside Tobacco Alliance	UK
13.	Heart of Mersey	UK

Health-related organisations

Health NGOs and health promotion		
	Framework Convention Alliance (FCA) and the Global Smokefree Partnership (GSP)	International
	Smoke Free Partnership (SFP)	EU
	European Network for Smoking Prevention (ENSP)	EU
	International Network of Women Against Tobacco Europe Board – INWAT-Europe	EU
	European Federation of Allergy and Airways Diseases Patients' Associations (EFA) and International Primary Care Respiratory Group (IPCRG)	EU
	Association of European Cancer Leagues (ECL)	EU
	European Public Health Alliance (EPHA)	EU
	European Heart Network (EHN)	EU
	European Union of Nonsmokers (EUN)	EU
	l'Union Européenne des Non-Fumeurs (UEN)	EU
	My Lungs (Moje Pluca)	BA
	(Association for a Smoke-Free Environment (RookVrij vzw – Vereniging voor een rookvrije leefomgeving)	BE
	Cyprus National Coalition for Smoking Prevention	CY
	Bundesvereinigung für Gesundheit	DE
	German Cancer Aid (Deutsche Krebshilfe)	DE
	Smoke-Free Forum (Forum Rauchfrei)	DE
	Berlin Non-Smokers' Alliance (Nichtraucherbund Berlin e.V.)	DE
	Non-Smokers' Initiative for Germany (Nichtraucher-Initiative Deutschland)	DE
	German Lung Foundation (Deutsche Lungenstiftung)	DE
	Association for Tobacco Prevention in Aragon (Asociación para la Prevención del Tabaquismo en Aragón, APTA)	ES
	INWAT-España	ES
	Afectados por el Tabaco/ No Fumadores (AFECTA)	ES
	Nofumadores.org	ES
	Spanish Association Against Cancer (Asociación Española Contra el Cancer)	ES
	ASH Finland	FI
	Cancer Society of Finland	FI
	Finnish Heart Association	FI
	Pulmonary Association Heli	FI
	French Cancer League	FR
	Paris Without Tobacco	FR
	French Alliance Against Tobacco	FR
	Public benefit Association of Patients Cured with Oxygene	HU
	Hungarian Foundation of Health Prevention	HU
	Health 21 Hungarian Foundation	HU
	Generatio 2020 Egyesület	HU
	Alleanza per la salute mentale - Brescia (Alliance for Mental Health – Brescia)	IT
	Dutch cancer Society, Netherlands Heart Foundation, Dutch Asthma Foundation and STIVORO	NL
	Dutch Nonsmokers Association Clean Air Nederland	NL
	(Portuguese Confederation on Smoking Prevention (Confederação Portuguesa	PT

	de Prevenção do Tabagismo, COPPT)	
	Slovenian Coalition for Tobacco Control	SI
	Action on Smoking and Health (ASH)	UK
	ASH Scotland	UK
	British Heart Foundation	UK
	Association for Nonsmokers' Rights (ANSR)	UK
	The Roy Castle Lung Cancer Foundation	UK
Scientific institutions		
1.	European Respiratory Society (ERS)	EU
2.	Europe Region of the International Union against Tuberculosis and Lung Disease	EU
3.	Austrian Nicotine Institute (ARGE)	AT
4.	German Cancer Research Center (DKFZ)	DE
5.	Deutsche Gesellschaft für Pneumologie und Beatmungsmedizin (German Pneumology Society)	DE
6.	Hellenic Thoracic Society	EL
7.	Finnish Institute of Occupational Health	FI
8.	Italian Society of Respiratory Medicine (SiMER) and Italian Federation Against Pulmonary Diseases and Tuberculosis (FIMPST).	IT
9.	Italian Interdisciplinary Scientific Association for Research in Lung Disease (AIMAR)	IT
10.	Dutch Society of Pulmonologists (NVALT)	NL
11.	National School of Public Health, Universidade Nova de Lisboa	PT
12.	Portuguese Society of Pneumology (Sociedade Portuguesa de Pneumologia)	PT
13.	National Institute of Public Health of the Republic of Slovenia	SI
14.	Cancer Research UK	UK
Professional organisations		
1.	European Network of Quitlines	EU
2.	European Medical Students' Association (EMSA)	EU
3.	European Pharmaceutical Students' Association (EPSA)	EU
4.	European Pharmaceutical Union (EPU)	EU
5.	Pharmaceutical Group of the European Union (PGEU)	EU
6.	NÖ Landeskliniken-Holding (Lower Austrian Provincial Clinics Holding)	AT
7.	German Medical Association (Bundesärztekammer)	DE
8.	German Medical Action Group Smoking or Health	DE
9.	Balearic Islands Health Services (IB – Salut)	ES
10.	Doctors Against Smoking network in Finland (DAT)	FI
11.	Health Professionals against Tobacco	SE
12.	British Psychological Society (BPS)	UK
13.	Royal College of Physicians (RCP)	UK
14.	Royal College of Physicians of Edinburgh (RCPE)	UK
15.	Royal College of Nursing (RCN)	UK
16.	Royal College of General Practitioners (RCGP)	UK
17.	Faculty of Public Health of Royal College of Physicians (FPH)	UK
18.	British Medical Association (BMA)	UK
Pharmaceutical industry		
1.	Johnson and Johnson	International
2.	Association of the European Self-Medication Industry (AESGP)	EU

3.	Novartis	International
4.	Pfizer	International

Tobacco-related organisations

Manufacturers		
1.	Confederation of European Community Cigarette Manufacturers (CECCM)	EU
2.	European Cigar Manufacturers Association (ECMA)	EU
3.	European Smoking Tobacco Association (ESTA)	EU
4.	Groupement des Industries Europeennes du Tabac (GITES)	EU
5.	International Smokeless Tobacco Company's	International
6.	Philip Morris International (PMI)	International
7.	British American Tobacco, Cyprus	CY
8.	Association of the German Smoking Tobacco Industry (Verband der Deutschen Rauchtobakindustrie)	DE
9.	Federal Association for the Cigar Industry (Bundesverband der Zigarrenindustrie- BdZ)	DE
10.	Tobacco Manufacturers Association of Denmark (Tobaksindustrien)	DK
11.	Estonian Tobacco Manufacturers Association	EE
12.	Spanish Association of Tobacco Companies (Asociacion Empresarial del Tabaco)	ES
13.	Finnish Tobacco Industries' Federation	FI
14.	Hungarian Association of Tobacco Industry	HU
15.	Irish Tobacco Manufacturers Advisory Committee	IE
16.	Lithuanian Tobacco Manufacturers' Association	LT
17.	Latvian Tobacco Manufacturers Association	LV
18.	British American Tobacco Malta Ltd.	MT
19.	Nederlandse Vereniging voor de Sigarenindustrie (Dutch Association of Cigar Industry)	NL
20.	Ritmeester Cigars	NL
21.	Gallaher Norway AS and Gunnar Stenberg AS.	NO
22.	Tobacco Manufacturers' Association	UK
Wholesalers and retailers		
1.	European Tobacco Wholesaler Association	EU
2.	Confédération Européenne des Détaillants en Tabac (CEDT) (European Confederation of Tobacco Retailers)	EU
3.	Interbranch organisation for the tobacco retail trade (NSO)	NL
4.	Belangenvereniging Tankstations, BETA Association of petrol station operators	NL
5.	The Imported Tobacco Products Advisory Council (ITPAC)	UK
Growers		
1.	Regional Union of Tobacco Growers in Grudziadz (change name)	PL
2.	Regional Union of Tobacco Growers in Augustow	PL
Trade unions		
1.	Federation of the Trade Unions of the Tobacco Industry Employees (FZZPPT)	PL
2.	Tobacco Workers Alliance (TWA)	UK

Smokers' NGOs		
1.	Austrian Smokers Network	AT
2.	Netzwerk Rauchen – Forces Germany e.V	DE
3.	Smoker's Society	HU
4.	Freedom Organisation for the Right to Enjoy Smoking Tobacco (FOREST)	UK
Social partners		
Inter-sectoral organisations		
1.	European Association of Craft, Small and Medium-sized Enterprises (UEAPME)	EU
2.	Austrian Federal Chamber of Labour	AT
3.	Austrian Chamber of Commerce (WKO)	AT
4.	Confederation of German Employers' Associations (Bundesvereinigung der Deutschen Arbeitgeberverbände, BDA)	DE
5.	Confederation of Danish Industries	DK
6.	Confederation of Hungarian Employers and Industrialists	HU
7.	National Association of Entrepreneurs and Employers	HU
Hospitality sector		
1.	European Federation of Food Agriculture and Tourism Trade Unions (EFTAT)	EU
2.	HOTREC - Hotels, Restaurants & Cafés in Europe	EU
3.	Federació Catalana de Locals d'Oci Nocturn (FECALON)	ES
4.	Trade Association of Hungarian Caterers	HU
5.	Equilibrium Association	PL
6.	ARESP® – Associação da Restauração e Similares de Portugal	PT
7.	SLTA - Scottish Licensed Trade Association	UK
Other		
1.	Danish Employers Association for the Financial Sector (FA)	DK
Other		
MEPs		
1.	Jörg Leichtfried MEP	AT
2.	Alyn Smith MEP	UK
Other industry		
1.	European Alliance for Technical Non-smoker Protection (EATNP)	EU

ANNEX III– TARGETED STAKEHOLDER CONSULTATION

As part of the Impact Assessment exercise, DG SANCO organised two stakeholder consultation meetings (one with business organisations, the other with civil society and social partners) on 19th March 2008. The meeting was jointly facilitated by the contractor and DG SANCO. The purpose of the stakeholder meeting was to seek input from various stakeholders, in order to make the research process as transparent as possible and obtain valuable information from stakeholders directly, information that is not always available through other data sources. During the meeting the contractor presented interim study results in addition to the study’s methodological approach. DG SANCO presented the five policy options under consideration in the Impact Assessment. Finally, the contractor conducted an exercise to systematically collect expert knowledge and opinion on the likely effects of the proposed policies on various key inputs to the analysis.

Invitations were sent to the main stakeholders at EU level but all “spontaneous applications” from interested national organisations were also accepted. A background document was sent out to all registered participants, which included information on the objectives of the stakeholder consultation, the problem definition and methodological approach, and description of policy options.

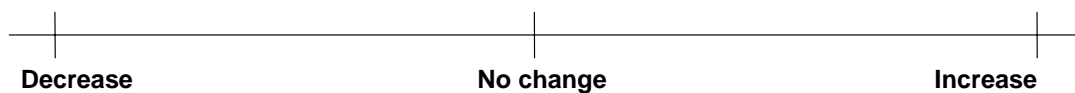
In total 38 stakeholders attended the two meetings, and following the meetings DG SANCO received a total of 27 written responses from various organisations.

The sections below contain the consultation questions, the list of all invited organisations, the minutes of the stakeholder meetings and the summary of the written contributions received thereafter.

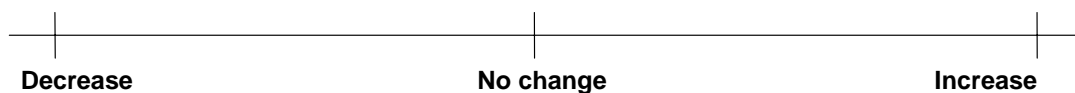
CONSULTATION QUESTIONS

- 1) Is the description of the problem and its consequences adequate?
 - a. Are there any important aspects of the problem and consequences that have not been addressed or been addressed insufficiently?
 - b. Has the problem been defined adequately in terms of ETS prevalence?
 - c. Has the problem been defined adequately in terms of ETS morbidity?
 - d. Has the problem been defined adequately in terms of ETS mortality?
 - e. Has the problem been defined adequately in terms of ETS health care costs?
 - f. Has the problem been defined adequately in terms of ETS non-health care costs?
 - g. Are you aware of any more recent evidence or data sources that are worth investigating in order to further sharpen the problem definition?
- 2) Are the available policy options adequately identified and analysed? Are there any other EU actions that should be considered?

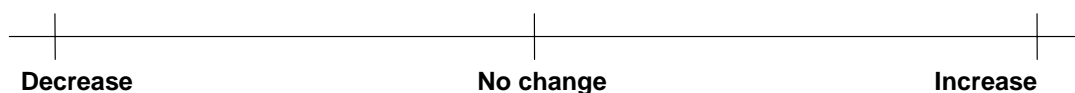
Uptake of smoking



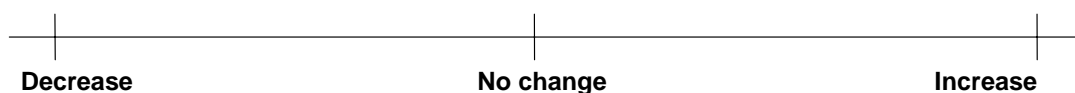
Mortality, morbidity and disability from ETS



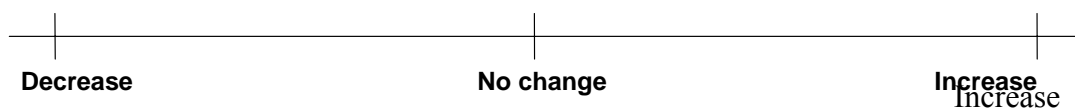
Social acceptability of smoking



Support for smoke-free policies

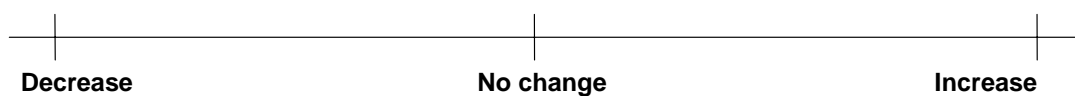


Possible other impacts (please specify)

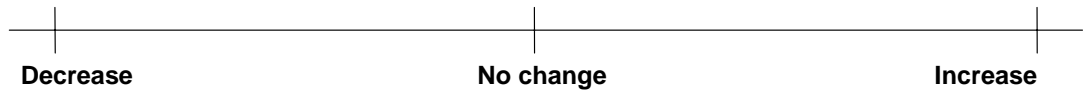


Economic impacts

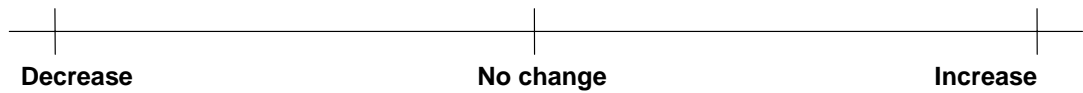
Healthcare expenditure on tobacco-related diseases (e.g. lung cancer, COPD etc)



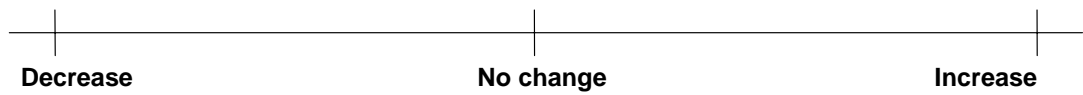
Workers' productivity (e.g. lost wages, sick leave, etc)



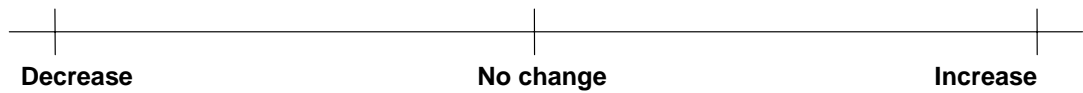
Cleaning and maintenance costs



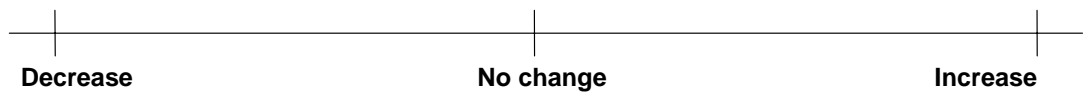
Hospitality industry revenues and employment



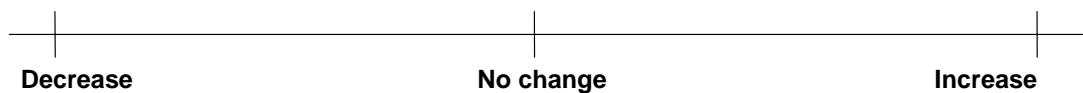
Tobacco industry revenues and employment:



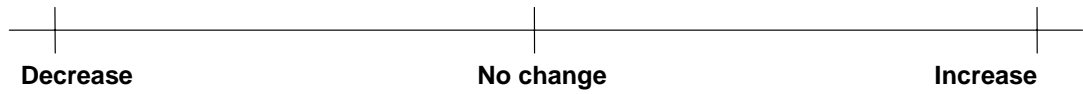
Pharmaceutical industry revenues and employment:



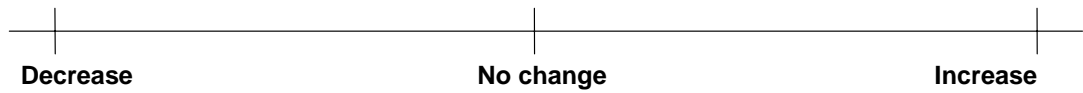
Retail sector revenues and employment:



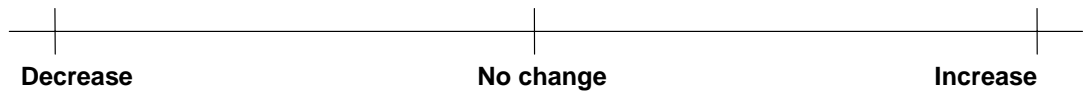
Other sectors' revenues and employment



Implementation and enforcement costs

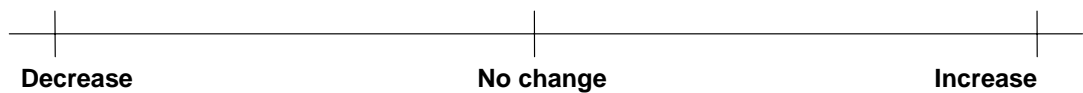


Possible other impacts (please specify)

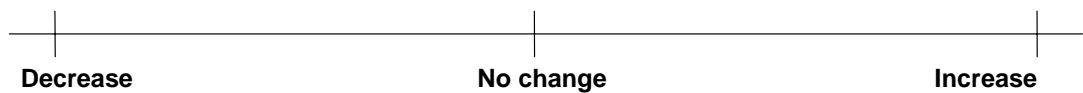


Environmental impacts

Indoor air pollution



Possible other impacts (please specify)



- 4) Please further quantify these effects (to the extent possible) the effects of the five policy options on the main inputs to the model.

Overall exposure to ETS

	2006	2008	2013				
	EB data	Current estimate	Policy 1	Policy 2	Policy 3	Policy 4	Policy 5
<i>Indoor workplaces and offices (QB 31b.1)</i>							
- EU average	19%	15.4%					
- 25 th percentile	11%	8.5%					
- 75 th percentile	23%	19.1%					
<i>Restaurants and bars (QB 31b.5)</i>							
- EU average	39%	24.0%					
- 25 th percentile	21%	6.2%					
- 75 th percentile	47%	41.0%					

Workers' exposure to ETS

	2006	2008	2013				
	EB data	Current estimate	Policy 1	Policy 2	Policy 3	Policy 4	Policy 5
<i>Offices (QB 31b.1 cross-tabulated with QB31a)</i>							
- EU average	32%	25.5%					
- 25 th percentile	17%	13.0%					
- 75 th percentile	40%	32.7%					
<i>Restaurants and bars (QB 31b.5 cross-tabulated with QB31a)</i>							
- EU average	70%	43.0%					
- 25 th percentile	33%	17.6%					
- 75 th percentile	87%	71.5%					

ETS exposure at home (any exposure; exposure assumed to be unaffected by smoking bans)

	2006	2008	2013				
	EB data	Current estimate	Policy 1	Policy 2	Policy 3	Policy 4	Policy 5
<i>Exposure to ETS at home (QB 30)</i>							
- EU average	43%	43.4%					
- 25 th percentile	34%	32.8%					
- 75 th percentile	49%	51.0%					

- 5) Is there any supplementary data on the social (health), economic or environmental aspects of the problem which should be taken into account?

ORGANISATIONS INVITED TO TARGETED CONSULTATION

I. EU AND INTERNATIONAL EXPERTS, CIVIL SOCIETY AND SOCIAL PARTNERS

EU AGENCIES

1. Eurofound - European Foundation for the Improvement of Living and Working Conditions
2. OSHA - European Agency for Safety and Health at Work
3. EMEA - European Medicines Evaluation Agency

INTERNATIONAL ORGANISATIONS

4. WHO Tobacco Free Initiative
5. WHO Regional Office for Europe
6. FCTC Secretariat

HEALTH AND ENVIRONMENT STAKEHOLDERS:

Members of EU Health Policy Forum

7. Assembly of European Regions (AER)
8. European Consumers Organisation (BEUC)
9. Standing Committee of European Doctors (CPME)
10. Association of European Cancer Leagues (ECL)
11. European Disability Forum (EDF)
12. European Federation of Allergy and Airways Diseases Patients' Associations (EFA)
13. European Federation of Nurses Associations (EFN)
14. European Heart Network (EHN)
15. European Network for Smoking Prevention (ENSP)
16. European Patients' Forum (EPF)
17. European Public Health Alliance (EPHA)
18. European Public Health Association EUPHA
19. EuroHealthNet
20. European Hospital and Healthcare Federation (HOPE)
21. Pharmaceutical Group of the European Union (PGEU)

Members of Consultative Forum on Environment and Health

22. International Network on Children's Health, Environment and Safety (INCHES)
23. European Academy of Allergology and Clinical Immunology (EAACI)
24. European Environmental Bureau
25. Green Facts Foundation asbl
26. European Respiratory Society (ERS)
27. European Centre for Ecotoxicology and Toxicology of Chemicals (ECETOC)
28. European Public Health Alliance Environment Network (EEN)
29. European Federation of Allergy and Airways Diseases Patients' Associations (EFA)
30. European Federation of Environmental Health (EFEH)
31. (European) Society for Research on Environment and Health (European SREH)

Other stakeholders' associations

32. Framework Convention Alliance (FCA) and the Global Smokefree Partnership (GSP)
33. European Smoke-free Partnership (SFP)
34. International Network of Women Against Tobacco Europe Board – INWAT-Europe
35. European Union of Nonsmokers (EUN)

36. Europe Region of the International Union against Tuberculosis and Lung Disease
37. European Network of Quitlines
38. European Pharmaceutical Union (EPU)
39. European Association of Service Providers for Persons with Disabilities (EASPD)
40. Confederation of Family Organisations in the EU (COFACE)
41. International Union Against Cancer (UICC)
42. Action on Smoking and Health (ASH)

SOCIAL PARTNERS

Inter-sectoral organisations

43. European Trade Union Confederation (ETUC)
44. Confederation of European Business (BusinessEurope)
45. European Association of Craft, Small and Medium-Sized Enterprises (UEAPME)
46. European Centre of Enterprises with Public Participation and of Enterprises of General Economic Interest (CEEP)

47. Association of European Chambers of Commerce and Industry (EUROCHAMBRES)

Hospitality sector organisations

48. EFTAT: European Federation of Food Agriculture and Tourism Trade Unions
49. HOTREC – Hotels, Restaurants and Cafés in Europe

SELF-INVITED

50. Vlaams Instituut voor Gezondheidspromotie vzw
51. Fondation contre les affections respiratoires et pour l'éducation à la sante (F.A.R.E.S.)
52. German Cancer Research Center
53. German Medical Association Action Group on Smoking or Health (GMASH)
54. International Health and Social Affairs Office Veneto Region - Brussels Representation
55. NHS Health Scotland
56. Cancer Research UK
57. Forest (Freedom Organisation for the Right to Enjoy Smoking Tobacco)

II. INDUSTRY

TOBACCO-RELATED ORGANISATIONS

1. Confederation of European Community Cigarette Manufacturers (CECCM)
2. British American Tobacco (BAT)
3. Japan Tobacco International (JTI)
4. Imperial Tobacco Ltd. (ITL)
5. European Cigar Manufacturers Association (ECMA)
6. European Smoking Tobacco Association (ESTA)
7. Groupement des Industries Européennes du Tabac (GITES)
8. International Smokeless Tobacco Company's
9. Philip Morris International (PMI)
10. European Tobacco Wholesaler Association (EU)
11. European Confederation of Tobacco Retailers (ECTR)

Self-invited

12. ESTOC – European Smokeless Tobacco Council

PHARMACEUTICAL INDUSTRY

13. Association of the European Self-Medication Industry (AESGP) (brings together all NRT producers)
14. Johnson and Johnson
15. GlaxoSmithKline
16. Pfizer
17. Novartis

OTHER

18. European Alliance for Technical Non-smoker Protection (EATNP)
19. European Federation of Cleaning Industries (FENI)
20. European Insurance and Reinsurance Federation (CEA)
21. The European Association of Event Centres (EWC)
22. The European Engineering Industries Association (ORGALIME)

Self/invited

23. Smoke Free Systems AG
24. Asecos GmbH

MINUTES FROM THE STAKEHOLDER CONSULTATION MEETING



COMMISSION OF THE EUROPEAN COMMUNITIES

Health and Consumers Directorate-General

Directorate C - Public Health and Risk Assessment
C6 - Health Law and International

Brussels,
SANCO/C6/ (2008)

Minutes from the Stakeholders consultations on Smoke-Free Environment

Brussels, 19 April 2008

This meeting with stakeholders is an integral part of the ongoing Impact Assessment supporting the Commission's smoke-free initiative scheduled for end 2008. It follows an open online consultation performed through the Green Paper in 2007 and should inform the IA in particular regarding the assessment of the impacts.

Two separate meetings took place, one with the business representatives in the morning, and the other with the health experts, civil society and social partners in the afternoon. The second meeting was split into two meetings (see below). The meetings were chaired by Thea Emmerling (C6) with also unit 02 present and Evi Hatziandrea and Han de Vries from RAND.

RAND has been commissioned to assess the economic and social impacts of ETS within EU-27 and examine the likely impacts of five policy options.

RAND presented briefly its methodological approach to the stakeholders. They also underlined that they aim in particular to develop figures on mortality rates post 2002 for the EU as well as figures regarding the cost of mortality in the EU which is currently only available for the US.

DG SANCO (A Jassem) presented the policy options being considered. These are:

- 1) No change from the status quo
- 2) Open method of coordination
- 3) Commission recommendation
- 4) Council recommendation
- 5) Binding EU legislation

The five Policy options are not mutually exclusive. They can complement each other either in parallel or over time.

Industry stakeholders (morning session):

PARTICIPANTS' LIST

Name	Organisation
Fürste Cynthia	BAT
Verna Florian	JTI
Massimiliano Di Domenico	Japan Tobacco International
Pederiva Antonella	CECCM
Bulk Johan	ECMA
Gueroult Perinne	ESTA
Decourchelle Jean-Marie	GITES
Doms Kristof	PMI
Zenner Carsten	Tobacco Wholesaler
Triglia Flaminia Consuelo	ECTR
Treven Stina	Smoke Free Systems (EATNP?)
Koch Hubert	ASECOS
Hatziandreu Evi	Rand
de Vries Han	Rand
Emmerling Thea	SANCO C6
Jassem Anna	SANCO C6
Holl Michaela	SANCO 02
Stiernon Christophe	SANCO 02
(illegible)	Independence/democracy group in the EP

Regarding the suggested RAND modelling approach, the stakeholders insisted on the fact that smokers and non-smokers should be examined separately as the burden on smokers is much larger. In order not to inflate the ETS prevalence figures, smokers should be excluded from the model.

The representative from the IND group in the EP questioned the fact that ETS prevalence is based on Eurobometer data which is self-reported .

The JTI representative pointed out that the ETS prevalence figure for Italy was relatively high even after the introduction of the ban in the country. RAND replied that the Eurobometer is the only source of comparable EU-wide data on exposure but

added that also studies based on cotinine or CO₂/nicotine measurements are examined.

On healthcare costs, it was criticised that the focus is primarily on US data, in addition dating back to 10 years ago. RAND said that they hope to collect and receive more recent evidence and take it into account.

The participants requested that a glossary is included in the Impact Assessment report as the industry defines certain terms (such as prevalence/incidence) differently.

The manufacturers of technological equipment to reduce ETS insisted on the fact that smoke-free policies should be goal-driven rather than determine the way to achieve this goal (=ban on smoking). In this context, they criticised the fact that the consultation document started from the assumption that only a ban can guarantee protection from ETS and did not look into technology-based solutions that could possibly achieve the same level of non-smokers' protection. It was also pointed out that the document did not properly differentiate between national policies based on a total ban (e.g. UK, Ireland) and policies leaving room for technological solutions (Sweden, Italy, some German Länder). This was complemented by another intervention that asked for a clear overview of the national policies currently in place or about to be implemented. A representative from ASECOS drew attention to the ongoing efforts in Germany to develop standards and testing guidelines for such technologies in order to ensure that they fulfil the stated pollution reduction. A representative of Smokefree systems pointed to the negative economic impact due to absenteeism of smoking employees when a total ban is imposed (8 billion euros a year apparently). SANCO asked for data regarding costs and benefits of technology based ETS protection.

Tobacco industry expressed disappointment that the consultation document only looked at different policy instruments rather than the scope of a smoke-free initiative (full ban indoors vs smoking ban with exemptions). The question of the role of the stakeholders in this IA consultation was raised, as the decision on a total ban had apparently already been taken. Thea Emmerling responded that the IA report will take into account, to the extent possible, the stakeholders' views but at the same time will build on the outcome of the Green Paper consultation, which demonstrated a strong support for comprehensive smoke-free policies. She also explained that the choice of the policy instrument would have an impact on the exact content of the policy (e.g. Council Recommendation could have a wider scope than binding EU legislation). BAT representative referred to a declaration by the previous Commissioner in reply to an MEP question to include the technological solutions in the IA. SANCO said that there were very few peer-reviewed studies on this issue but invited the participants to submit any relevant data. A representative from Smoke-free systems pointed to the potential costs resulting for policy option 5 (directive based on employment rules) if MS that are already advanced had to revise their legislation.

A representative from PMI pointed out, that also option 1 (status quo) would be quite beneficial given the ongoing dynamics at national level and FCTC guidelines.

Health and social stakeholders (afternoon session):

PARTICIPANTS' LIST

Name	Organisation
Sylvie Jacquet	Eurofound
Luk Joossens	ECL
Grogna Francis	ENSP
Escuin Susana	EPHA
Gilljam Hans	EuroHealthNet
(Chave John) "Darnica Minos"	PGEU
Berteletti Kemp Florence	SFP
Amos Amanda	INWAT
Huydts Marijke	EUN
Peeters Annemie	Vlaams Instituut
Pettiaux Michel	F.A.R.E.S.
Pötschke-Langer Martina	DKFZ
Wiebel Friedrich	GMASH
Ronfini Franceso	Office Veneto Region
Smith Rebekah	BusinessEurope
Hoffmann Helen	UEAPME
Vallini Marc	HOTREC
Crowley Grainne	Cancer Research UK
Logstrup Susanne	EHN
May Uwe	AESGP
Wojciechowski Krzysztof	Johnson and Johnson
Jenewein Joerg	GlaxoSmithKline
Sophie Crousse	GlaxoSmithKline
Hollingsworth Andrew	Novartis
Hatziandreu Evi	Rand
De Vries Han	Rand
Palkonen Susanna	EFA

Emmerling Thea	SANCO
Jassem Anne	SANCO
Holl Michaela	SANCO 02
Stiernon Christophe	SANCO 02

Clark Simon	Forest
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The health and social stakeholders unanimously objected to the presence of a representative of the smokers' NGO Forest. The first suggestion of the chair was to discontinue the whole meeting as a meaningful discussion was not possible under these circumstances. The only possibility to avoid the dissolution was to split the meeting in two provided that both sides agreed, which was case.

Smoke-free Partnership stressed the paramount importance of workers' protection and asked that data on exposure in the workplace be included in the IA. Health stakeholders acknowledged that it is difficult for policies to regulate home exposure. On the other hand, a representative of Business Europe questioned whether it is feasible to distinguish between mortality/morbidity triggered by ETS exposure at home and at work.

INWAT-Europe stressed the socio-economic inequalities in smoking and exposure to second-hand smoke - and referred to Scottish research which showed that the impact of smoke-free legislation was biggest among the most disadvantaged groups, which had fewer smoking restrictions prior to the ban. DKFZ and INWAT-Europe also pointed to the gender specificities of active and passive smoking - according to the Scottish data, $\frac{3}{4}$ of death from passive smoking prior to the ban were in women. This is apparently also confirmed by the WHO data.

Regarding the home exposure, it was emphasised that Scottish research showed that smoking has not displaced from work to home after a ban, but that on the contrary a ban helped also to reduce ETS prevalence at home. These findings are consistent with data from IE, NZ and US.

DKFZ pointed to the fact that in a federal country like Germany, ETS prevalence varies considerably across the country, with different laws in place at regional level.

On the economic burden, RAND explained that they used US data as there is no published evidence from Europe. They asked for data on healthcare costs of cardiovascular diseases, lung cancer and COPD as well as any data on non-healthcare costs (e.g. the cost of the time lost while smoking during working hours). Several participants pointed to additional evidence and promised to submit data in writing.

It was suggested that the mortality figures should be put into perspective (e.g. ETS deaths = 1 plane crash per day) and/or compared with the burden of other comparable hazards such as exposure to toxic substances.

Pharmaceutical industry highlighted the importance of cessation policies as a flanking measure and referred to the EP resolution on the Green Paper.

Smoke-free partnership and INWAT-Europe pointed out that whichever policy option is chosen as a result of the Impact Assessment, it should be equipped with a transparent monitoring and evaluation mechanism.

Regarding the preferred policy option, no clear picture emerged. The majority of participants seemed to be in favour of binding legislation, referring also to the EP resolution which called for such legislation. Others pointed to possible negative impacts if more advanced national legislation would need to be adjusted and/or the fact that a recommendation could establish not only a minimum standard for working protection, but also a gold standard for a more comprehensive policy.

One participant (HOTREC) expressed preference for action at national level given the EU level competences for health and the subsidiary issue.

A representative of **FOREST** (a UK-based smokers' lobby) had a separate brief discussion with SANCO and RAND after the afternoon session.

He started by questioning the review of literature as performed by RAND and referred to a comprehensive, however contested study carried out for the tobacco industry in 2001 which came to very different conclusions as far as passive smoking is concerned. RAND responded by explaining that their review included summary studies that are being referred to and published in scientific peer-reviewed journals and government reports. The study at stake is not referred to separately.

The FOREST representative argued that smoking bans accelerate existing negative economic trends in hospitality sector and mentioned that some pubs and bars in the UK went out of business and promised to submit data supporting this thesis.

He claimed that the concept of freedom of choice is forgotten and the interest of the citizen is not taken into consideration during this consultation without an involvement of smokers interest groups. He therefore was grateful for having been given the opportunity to explain his concerns and promised to follow up by submitting data.

He did not question the need for ETS legislation in principle, but pointed out that total bans are too strict and more flexible options (e.g. Spain) are to be favoured.

Procedural issues:

The participants of both sessions said that it was very difficult to rank the policy options and their likely impacts, as they do not have enough knowledge on the

different options and understanding of what exactly the content and scope of each option would be.

It was agreed with all participants that any further evidence, data etc. can be submitted to the SANCO functional mailbox by 7 April.

End

SUMMARY OF WRITTEN CONTRIBUTIONS

This section summarises the written contributions to the consultation based on the type of organisation. Many institutions reiterated their responses to the Green Paper “Towards a Europe free from tobacco smoke: policy options at EU level”.

1. Health-related organisations

Health NGOs and health promotion

The largest number (14) of written responses to the stakeholder consultation were received from health promotion organisations, including NGOs, scientific institutions and public administration bodies

Nine health organisations provided a coordinated reply arguing that a combination of a strong Council Recommendation (policy option 4) based on article 8 guidelines and a revision of the existing directives based on the Framework Directive on workplace safety and health 89/391/EEC, including in particular, extending the scope of the Carcinogens and Mutagens Directive 2004/37 (policy option 5) to cover tobacco smoke would have the biggest potential to support and/or strengthen comprehensive smoke-free legislation at national level and thus reduce exposure to tobacco smoke and related health and economic burden. While six of these organisations assumed that the effectiveness of option 4 and 5 would be similar, the other three thought that a Council Recommendation on its own would have less impact. Policy options 1 to 3 (continuing current work, Open Method of Coordination and Commission Recommendation) would have no impact on the key measures identified. The cost for industry sectors were not a primary concern for these organisations, but it was argued that the hospitality industry is not adversely affected by smoke-free legislation while spending on tobacco products is redirected to other goods and services in more labour intensive sectors.

Two organisations argued strongly in favour of binding legislation as the only viable policy option. Moreover, one health organisation felt that classifying tobacco smoke as a carcinogen would be the most important basis for policy options 3 to 5.

One health NGO felt that more attention should be given in the report to the “likely beneficial impact of reducing ETS on inequalities in health in Europe. A number of respondents provided further evidence, e.g. on the costs of treating cardiovascular and respiratory diseases, social effects of Scottish smoke-free legislation and workers' exposure to tobacco smoke across the EU.

Pharmaceutical industry

The pharmaceutical industry felt that the revision of binding EU legislation (such as Directive 67/548/EEC on Dangerous Substances in order to classify tobacco smoke as a carcinogen and the Directive on Workplace Safety and Health 89/391/EEC) complemented by a strong Council Recommendation, tackling wider tobacco-control

issues, would be the best way to reduce tobacco-related burden. Moreover, smoke-free policies can be the most effective when they are complemented by effective flanking policies, such as awareness raising campaigns and increased access to smoking cessation services and therapies.

All, except one health organisation completed answers to question 3 and 4 of the stakeholder consultation.

2. Tobacco-related organisations

Manufacturers

The majority of tobacco manufacturers expressed support for an EU-wide ban with exemptions in order to accommodate the interests of those who do not wish to be exposed to ETS and those who wish to smoke in venues.

It was argued that business owners should have a role in deciding how to implement solutions that work best for their customers. In this context, it was felt the Commission should review the cost effectiveness of various options, including the technological approaches (such as ventilation) for reducing exposure to ETS in its impact assessment.

One respondent questioned the health risks of second-hand smoke to non-smokers, arguing that the concentration of chemicals contributed to indoor air by smoking is very low (below the threshold for responses to chemical exposure). It was also claimed that the proper assessment of the epidemiological studies leads to a conclusion that “persons exposed to ETS have no greater incidence of disease than non-exposed persons”

It was argued that while there may be an initial, sharp decrease in cigarette consumption over the few weeks around the implementation of the ban, sales recover after a few months and return back to original levels to follow a long-term trend of gradual decline.

The additional studies suggested to be incorporated in to the impact assessment related to the economic impact of smoking bans on hospitality sector, impacts on smoking behaviour and cigarette sales volumes, and the effectiveness of ventilation.

Overall no tobacco-related organisations completed quantitative answers to stakeholder questions 3 and 4, pointing out that it is difficult to comment on the “efficiency” of policy options without clearer indications of their policy content. However, the major EU-level association of cigarette manufacturers, supported by the associations of cigars and smoking tobacco, provided some qualitative comments on the two questions.

It was argued that – given the FCTC process and the existing EU provisions on ETS - policy 1 (the “status quo”) is likely to have an impact on exposure to ETS which is similar to the expected impact of the four other policy options. Should a total smoking ban be considered, all policy options would decrease exposure to ETS in

workplaces and public places but would increase exposure at home, since smokers would have fewer opportunities to smoke in public places. All policy options would also impact negatively on revenue and employment in drinking establishments as well as workers productivity due to smoking breaks outside the building.

Smokers' NGOs

The Smokers NGO expressed concern that the policy options had less to do with “protecting” non-smokers from the effects of ETS and more to do with the “denormalisation” of smoking. This group felt that people should have the right to smoke in some public places and proprietors should have the right to accommodate adults who choose to smoke without inconveniencing those who do not wish to smoke or socialise in a smoking environment. The group argued that the Impact Assessment should examine the social and humanitarian impact a comprehensive ban would have on smokers as well as technological solutions for controlling ETS.

3. Social partners

There were two written responses from inter-sectoral employer organisations and one response from employer organisation in the hospitality sector. Continuing current EU programmes and awareness-raising campaigns (option 1) was the preferred policy option for all three organisations. They were opposed to binding EU legislation on the grounds that the issue of second-hand smoke is best addressed at Member States' level, depending on existing national arrangements and culture. It was also argued that passive smoking is a public health concern and not that of health and safety at work.

The three organisations felt it was not possible to respond the stakeholder consultation questions (3 and 4) in a meaningful way because giving an “expert guess” is too subjective and the policy content of the different policy options is not clear enough.

4. Producers of technical equipment

The two other industry groups that responded to the consultation were pro-technical solutions alliance group and a manufacturer of smoking stations and cabins. These groups felt that smoking stations and cabins are effective at protecting non-smokers from ETS and creating smoke-free workplaces, and precipitate a general decrease in smoking.

These two submissions are discussed in more detail in Annex V.

Stakeholder ratings on the effects of the five policy options on ETS exposure

In question 4 stakeholders were presented with tables showing the estimated 2008 ETS prevalence across the EU-27. Separate estimates were provided for each of the different venues. Stakeholders were asked to fill out a table with their estimates for 2013 average ETS prevalence for each of the five policy options.

Of the 15 responses, all were received from health-related organisations. The average stakeholder ratings on the percent reduction in ETS prevalence ratio compared to the baseline are shown in the table below.

Table 1: Stakeholder ratings on percent reduction in ETS prevalence ratio compared to baseline

Venue	Stakeholders ratings on percent reduction in ETS prevalence ratio compared to baseline				
	Policy 1 No change status quo	Policy 2 Open method of coordination	Policy 3 Commission recommendati on	Policy 4 Council recommendati on	Policy 5 Binding legislation
overall exposure - indoor workplaces and offices	0%	-1%	-2%	-66%	-81%
overall exposure - bars and restaurants	-1%	-2%	-5%	-70%	-89%
workers' exposure - indoor workplaces and offices	0%	-1%	-1%	-66%	-89%
workers' exposure - bars and restaurants	0%	-1%	-2%	-75%	-94%
exposure at home	0%	-1%	-3%	-12%	-20%

List of written contributions

Health-related organisations (17)

Health NGOs and health promotion

European Foundation for the Improvement of Living and Working Conditions (EUROFOUND)

International network of Women Against Tobacco Europe Board (INWAT)

Flemish Institute for Health Promotion (VIG)

German Smoke-Free Alliance

Smoke Free Partnership

European Network for Smoking Prevention (ENSP)

European Heart Network (EHN)

European Federation of Allergy and Airways Diseases Patients' Associations (EFA) and International Primary Care Respiratory Group (IPCRG)

Association of European Cancer Leagues

European Union of Non-smokers

European Public Health Alliance (EPHA)

Stockholm Centre of Public Health

German Cancer Research Centre

Veneto Region, Health Department

Pharmaceutical industry

Pfizer

Association of the European Self-Medication Industry (AESGP)

Tobacco-related organisations (6)

Manufacturers

European Smoking Tobacco Association (ESTA)

European Cigar Manufacturers Association (ECMA)

Imperial Tobacco Limited

Confederation of European Community Cigarette Manufacturers (CECCM)

Groupement des Industries Europeennes du Tabac (GITES)

Smokers' NGOs

Freedom Organisation for the Right to Enjoy Smoking Tobacco (FOREST)

Social partners (3)

Inter-sectoral organisations

BusinessEurope - The Confederation of European Business

European Association of Craft, Small and Medium-sized Enterprises (UEAPME)

Hospitality sector

HOTREC – Hotels, Restaurants & Cafes in Europe

Other (2)

Other industry

European Alliance for Technical Non-smoker Protection (EATNP)

Smokefree Systems

ANNEX IV – REGULATORY FRAMEWORK

A) FRAMEWORK CONVENTION ON TOBACCO CONTROL (FCTC)

The WHO's Framework Convention on Tobacco Control (FCTC), ratified by 26 Member States and the Community, creates a legal obligation for all Parties to adopt and implement effective measures to protect people from exposure to tobacco smoke in all indoor workplaces, public transport and indoor public places.

The second Conference of the Parties to the Convention in July 2007 adopted comprehensive guidelines on protection from exposure to tobacco smoke formulating the "golden standard" that every Party should aim to achieve within 5 years of the Convention's entry into force for that Party.

Article 8 of the FCTC

Protection from exposure to tobacco smoke

1. Parties recognize that scientific evidence has unequivocally established that exposure to tobacco smoke causes death, disease and disability.
2. Each Party shall adopt and implement in areas of existing national jurisdiction as determined by national law and actively promote at other jurisdictional levels the adoption and implementation of effective legislative, executive, administrative and/or other measures, providing for protection from exposure to tobacco smoke in indoor workplaces, public transport, indoor public places and, as appropriate, other public places.

Ratification of the FCTC (situation on 19 June 2008)

The European Community signed the FCTC on 16 June 2003, on the first possible occasion, and deposited its instrument of ratification on 30 June 2005.

Member State	Signature	Ratification notified	Ratification expected
European Community	16/06/2003	30 June 2005	
Austria	23/08/2003	15 September 2005	
Belgium	22/01/2004	1 November 2005	
Bulgaria	22/12/2003	07 November 2005	
Cyprus	24/05/2004	26 October 2005	
Czech Republic	16/06/2003		Not yet ratified
Denmark	16/06/2003	16 December 2004*	

Member State	Signature	Ratification notified	Ratification expected
Estonia	08/06/2004	27 July 2005	
Finland	16/06/2003	24 January 2005	
France	16/06/2003	19 October 2004	
Germany	24/10/2003	16 December 2004	
Greece	16/06/2003	27 January 2006	
Hungary	16/06/2003	07 April 2004	
Ireland	16/09/2003	07 November 2005	
Italy	16/06/2003	02 July 2008	
Latvia	10/05/2004	10 February 2005	
Lithuania	22/09/2003	16 December 2004	
Luxembourg	16/06/2003	30 June 2005	
Malta	16/06/2003	24 September 2003	
Poland	14/06/2004	15 September 2006	
Portugal	09/01/2004	08 November 2005	
Romania	25/06/2004	27 January 2006	
Slovakia	19/12/2003	04 May 2004	
Slovenia	25/09/2003	15 March 2005	
Spain	16/06/2003	11 January 2005	
Sweden	16/06/2003	7 July 2005	
The Netherlands	16/06/2003	27 January 2005	
United Kingdom	16/06/2003	16 December 2004	

Complete list: <http://www.who.int/tobacco/framework/countrylist/en/>

B) EU PROVISIONS RELATING TO EXPOSURE ENVIRONMENTAL TOBACCO SMOKE

BINDING LEGISLATION

At EU level, a number of occupational health and safety Directives set out requirements covering most risks to workers' health and safety, general risk prevention and some specific restrictions on smoking at the workplace.

The Health and Safety Framework Directive 89/391/EEC² requires the employer to ensure the health and safety of workers in every aspect related to work and to evaluate the risks to the health and safety of workers at work. ETS should therefore be considered as included in the risk assessment and appropriate preventive measures should be implemented, where necessary.

Several other health and safety at work Directives lay down restrictions on smoking at work. The Workplace Directive 89/654/EEC³, the Mineral and Extractive Industries drilling Directive 92/91/EEC⁴ and the Mineral and Extractive Industries surface and underground works Directive 92/104/EEC⁵ require measures to be introduced for the protection of non-smokers against discomfort caused by tobacco smoke in rest areas and rest rooms. The Carcinogens and Mutagens Directive 2004/37/EC⁶ provides for the use of "no smoking" signs in areas where workers are exposed, or likely to be exposed, to carcinogens or mutagens and prohibits smoking in these areas. Directive 83/477/EEC⁷ on the protection of workers from the risks related to exposure to asbestos at work introduces an obligation to constitute areas where there should be no smoking when the risk assessment identifies the concentration of asbestos fibres in the workplace air at a level equal to, or above, the reference value. The Pregnant and Breastfeeding Workers Directive 92/85/EEC⁸ lists chemicals classified as carcinogenic (R45) and carbon monoxide among chemical agents in respect of which the employer should assess the nature, degree and

² Council Directive on the introduction of measures to encourage improvements in the safety and health of workers at work, OJ L 183, 29.6.89, p.1.

³ Council Directive concerning the minimum safety and health requirements for the workplace, OJ L 393, 30.12.89, p.1.

⁴ Council Directive concerning the minimum requirements for improving the safety and health protection of workers in the mineral-extracting industries through drilling, OJ L 348, 28.11.92 p.9.

⁵ Council Directive on the minimum requirements for improving the safety and health protection of workers in surface and underground mineral-extracting industries, OJ L 404, 31.12.92 p.10.

⁶ Directive of the European Parliament and the Council on the Protection of workers from the risks related to exposure to carcinogens or mutagens at work, OJ L 229, 29.6.2004, p.23.

⁷ Council Directive on the protection of workers from the risks related to exposure to asbestos at work, OJ L 263, 24.9.83, p.25.

⁸ Council Directive on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding, OJ L 348, 28.11.92, p.1.

duration of exposure of pregnant workers and workers who have recently given birth or are breastfeeding. This should be followed by further action by the employer to ensure that the exposure of these workers to such risks is avoided. Lastly, the Explosive Atmospheres Directive 99/92/EC⁹ requires measures to be introduced to prevent the ignition of explosive atmospheres.

NON-BINDING LEGISLATION

The **1989 Council Resolution** 89/C 189/01¹⁰ on smoking in public places invited Member States to:

1. Ban smoking in all forms of public transport;
2. Ban smoking in enclosed premises open to the public which form part of the following public or private establishments:
 - a) Establishments where services are provided to the public, whether for a charge or free, including the sale of goods;
 - b) Hospitals, establishments where health care is given and all other medical establishments;
 - c) Establishments where elderly persons are received;
 - d) Schools and other premises where children or young people are received or housed;
 - e) Establishments where higher education and vocational training are given;
 - f) Enclosed establishments used for entertainment (cinemas, theaters, etc.) ; radio and television studios open to the public;
 - g) Enclosed establishments where exhibitions are held;
 - h) Establishments and enclosed places where sports are practised;
 - i) Enclosed premises of underground and railway stations, ports and airports.

⁹ Directive of the European Parliament and Council on minimum requirements for improving the safety and health protection of workers potentially at risk from explosive atmospheres, OJ L 23, 28.1.2000.

¹⁰ OJ C 189, 26.7.1989, p. 1-2.

The 2002 Council Recommendation 2003/54/EC¹¹ on the prevention of smoking and on initiatives to improve tobacco control called on Member States to implement legislation and/or other effective measures in accordance with national practices and conditions at the appropriate governmental or non-governmental level that provide protection from exposure to environmental tobacco smoke in indoor workplaces, enclosed public places, and public transport. Priority consideration should be given to, inter alia, educational establishments, health care facilities and places providing services to children.

¹¹ OJ L 22, 25.1.2003, p. 31–34.

C) MEMBER STATES' SMOKE-FREE REGULATIONS ON SMOKE-FREE ENVIRONMENTS

Austria

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
<p>Smokers and non-smokers should, if possible be given separate offices. If this is not possible, smoking should be banned.</p> <p>In addition, smoking is banned except for separate smoking rooms in offices which have contact with customers.</p>	<p>Smoking rooms allowed providing that smoke is not penetrating the general non-smoking area.</p>	<p>Smoking banned altogether In trains, smoking rooms allowed providing that smoke is not penetrating the general non-smoking area.</p>	<p>Smoking rooms allowed providing that smoke is not penetrating the general non-smoking area.</p>	<p>Smoking banned altogether for children up to the age of 18: In other facilities possibility of smoking rooms providing that smoke is not penetrating the general non-smoking area.</p>	<p>No restrictions</p>	<p>The Tobacco Act entered into force in Jan. 2005. The Act sets out a ban on smoking in all "publicly accessible rooms" (understood as all enclosed spaces accessible to the general public including means of transport and private offices which have contact with clients).</p> <p>In most public places, it is possible to create a separate smoking room provided that smoke is not penetrating the general non-smoking area. Such smoking rooms are expressly prohibited in educational or other facilities where children and adolescents are supervised, accommodated or sheltered.</p> <p>There are no sanctions for non-compliance.</p> <p>Hospitality sector is currently exempt from the Tobacco Act and subject to a voluntary agreement with the Ministry of Health, Family and Youth.</p> <p>Smoking in workplaces is regulated by the Health and Safety at Work Act, which stipulates that smokers and non-smokers should, if possible be given separate offices. If this is not possible, smoking should be banned.</p>

						<p>In July 2009, the parliament approved an amendment of the Tobacco Act, introducing a partial smoking ban in hospitality venues as of January 2009. In venues larger than 80 m² smoking will be allowed only in separate smoking rooms which do not occupy more than 50% of the surface. Businesses smaller than 50 m² will be able to decide to allow smoking throughout while business between 50 and 80m² will be able to allow smoking if they can prove that it is not possible to arrange for a separate smoking room.</p> <p>The revision envisages fines for both business owners and guests.</p>
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Federal Act No 167 amending the Federal Act on the manufacture and marketing of tobacco products and advertising for tobacco products and the protection of non-smokers (Tobacco Act)

Published on 30 December 2004

The National Council has decided that:

The Federal Act on the manufacture and marketing of tobacco products and advertising for tobacco products and the protection of non-smokers (Tobacco Act), BGB1 No 431/1995, as last amended by Federal Act BGB1 I No 74/2003, shall be amended as follows:

3. *In § 1 Z 10 the full-stop at the end of the clause shall be replaced with a comma. The following Z 11 shall be inserted:*

‘11. “public place” shall mean any place which may be entered at all or certain times by a group of persons who are not restricted a priori, including the movable installations of public and private buses, trains, airplanes and boats.’

7. *The text and heading of § 13 shall read:*

‘Protection of non-smokers

§ 13. (1) Without prejudice to provisions of labour law and the provisions under § 12, the smoking ban shall apply to rooms in public places.

(2) As an exception to the ban under (1), rooms may be designated in establishments covered by (1) comprising a sufficient number of rooms in

which smoking is permitted, provided that tobacco smoke does not drift into the area designated for the smoking ban and therefore does not breach the smoking ban.

(3) The exception under (2) shall not apply to schools or other establishments in which children or young people are supervised, admitted or accommodated.

(4) (1) shall not apply to

1. the hotel and restaurant industry;
2. businesses under § 111 (2) Z 2, 3, 4 or 5 GewO;
3. events within the meaning of § 2 (1) z 25 GewO;
4. tobacconists.'

8. The following § 13a shall be inserted after § 13:

§ 13a. (1) Smoking bans in accordance with §§ 12 and 13 shall be identified by means of the smoking ban notice "No smoking" in rooms and establishments covered by the smoking ban.

(2) Instead of the smoking ban notice under (1), smoking bans in accordance with §§ 12 and 13 may also be identified by means of no-smoking symbols clearly showing the existing smoking ban.

(3) Smoking ban notices under (1) or the no-smoking symbols under (2) shall be affixed in a sufficient number and size for them to be seen clearly throughout the room or establishment.'

10. The following § 14a shall be inserted after § 14:

§ 14a. Any person who breaches the obligation to identify smoking bans, provided that this action does not form the basis of a case punishable according to the jurisdiction of the courts or is not subject to other administrative provisions entailing more stringent penalties, thereby commits an administrative infringement and shall be penalised with a fine of up to 720 euro.'

Health and Safety at Work Act – summary of relevant provisions

Protection of non-smokers

To the extent permitted by the type of operation, non-smokers must be protected against the effects of tobacco smoke. In offices and similar work rooms (e.g. bays reserved to foremen), smokers and non-smokers must, if possible, be given separate spaces. If this is not possible, smoking must be banned. Smoking is banned in sanitary and changing rooms.

Belgium

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
In workplaces, smoking allowed in separately ventilated rooms intended exclusively for smoking	Smoking banned altogether	Smoking banned altogether	Smoking banned altogether	Smoking banned altogether	In restaurants, smoking allowed in separately ventilated rooms where no eating allowed In bars, smoking allowed in ventilated areas	Royal decree of 13 th December 2005 banning smoking in public places and Royal decree of 19 January 2005 protecting workers against tobacco smoke <u>As of 1 Jan. 2006:</u> 1) Ban on smoking in all enclosed public places without the possibility of creating smoking areas. 2) Ban on smoking in all enclosed workplaces, except for bars and restaurants. The employer may install a separate, ventilated room destined exclusively for smoking with the employees' agreement. <u>As of Jan. 2007,</u> smoking in restaurants and other catering establishments is allowed only in separate, ventilated rooms where food is not be permitted and whose surface cannot exceed ¼ of the total surface. Non-food and snack-food venues which have less than 30% of their sales from food servings continue to be exempt (at least 50% of the surface has to be reserved for non-smokers, except in establishments below 50m ²).

Legal provisions

19 JANVIER 2005. - Arrêté royal relatif à la protection des travailleurs contre la fumée de tabac

Article 1^{er}. Le présent arrêté s'applique aux employeurs et aux travailleurs, ainsi qu'aux personnes y assimilées, visés à l'article 2, § 1^{er}, 1°, a) à d) et 2°, de la loi du 4 août 1996 relative au bien-être des travailleurs lors de l'exécution de leur travail.

Art. 2. Le présent arrêté ne s'applique pas :

1° dans tous les lieux fermés où sont présentées à la consommation des denrées alimentaires et/ou des boissons et où il est autorisé de fumer, en application des articles 2, § 2, et 3, § 1^{er}, de l'arrêté royal du 15 mai 1990 portant interdiction de fumer dans certains lieux publics; 2° dans les lieux fermés de toutes les institutions de services sociaux et des prisons, qui sont à considérer comme des espaces privés, et où les résidents et non-résidents peuvent fumer sous les conditions qui leur sont fixées; 3° dans les habitations privées, à l'exception des espaces destinés exclusivement à un usage professionnel et où des travailleurs sont occupés.

Art. 3. Pour l'application du présent arrêté, on entend par :

1° la loi : la loi du 4 août 1996 relative au bien-être des travailleurs lors de l'exécution de leur travail; 2° espace de travail : a) tout lieu de travail, qu'il se trouve dans une entreprise ou un établissement, ou en dehors de ceux-ci, et qu'il se trouve dans un espace ouvert ou fermé, à l'exception de l'espace à ciel ouvert; b) et tout espace ouvert ou fermé dans l'entreprise ou l'établissement, où le travailleur a accès; 3° équipements sociaux : les installations sanitaires, le réfectoire et les locaux destinés au repos ou destinés aux premiers soins; 4° fumoir : local où il est autorisé de fumer et qui est exclusivement destiné à cet effet; 5° le Comité : le Comité pour la prévention et la protection au travail ou, à défaut, la délégation syndicale ou, à défaut, les travailleurs eux-mêmes conformément aux dispositions de l'article 53 de la loi.

Art. 4. Tout travailleur a le droit de disposer d'espaces de travail et d'équipements sociaux exempts de fumée de tabac.

Art. 5. § 1^{er}. L'employeur interdit de fumer dans les espaces de travail, les équipements sociaux, ainsi que dans les moyens de transport qu'il met à la disposition du personnel pour le transport collectif du et vers le lieu de travail.

§ 2. Par dérogation à l'interdiction visée au § 1^{er}, il est possible de prévoir un fumoir dans l'entreprise, après avis préalable du Comité. Ce fumoir est efficacement ventilé. Le règlement d'accès à ce fumoir pendant les heures de travail est fixé après avis préalable du Comité. Ce règlement ne peut pas causer d'inégalité de traitement entre les travailleurs.

Art. 6. L'employeur prend les mesures nécessaires pour veiller à ce que les tiers qui se trouvent dans l'entreprise soient informés des mesures qu'il applique en vertu du présent arrêté.

Full text at: http://www.juridat.be/cgi_loi/loi_F.pl?cn=2005011939

13 DECEMBRE 2005. Arrêté royal portant interdiction de fumer dans les lieux publics

Article 1er. Pour l'application du présent arrêté on entend par :

1° fumer : le fait de fumer des produits à base de tabac ou des produits similaires;

2° lieu fermé : lieu isolé de l'environnement par des parois, pourvu d'un plafond;

3° lieu accessible au public : lieu dont l'accès n'est pas limité à la sphère familiale;

4° Etablissement Horeca : tout lieu ou local accessible au public, quelles que soient les conditions d'accès, dont l'activité principale et permanente consiste à préparer et/ou servir des repas et/ou des boissons pour consommation sur place ou non, et ce même gratuitement;

5° boissons contenant de l'alcool éthylique : les boissons visées à l'article 16 de la loi du 7 janvier 1998 concernant la structure et les taux des droits d'accise sur l'alcool et les boissons alcoolisées;

6° débit de boissons : établissement Horeca dont l'activité principale et permanente consiste à servir des boissons, parmi lesquelles des boissons contenant de l'alcool éthylique, pour consommation sur place, sans que le service des boissons soit conditionné à la consommation d'un plat préparé.

7° friterie : lieu dont l'activité principale consiste à préparer et servir pour consommation immédiate et dans des récipient jetables, des repas cuits ou réchauffés dans la graisse ou l'huile de friterie exclusivement. Le lieu doit être aménagé ou conçu de telle sorte qu'il autorise à un nombre maximum de personnes, à fixer par le Ministre, de consommer simultanément;

8° fumoir : local fermé où il est permis de fumer;

9° Ministre : le Ministre ayant la Santé publique dans ses attributions.

Art. 2. Il est interdit de fumer dans les lieux fermés accessibles au public.

A l'intérieur et à l'entrée de chaque lieu visé à l'alinéa 1er, des signaux d'interdiction de fumer conformes au(x) modèle(s) fixé(s) ou approuvé(s) par le Ministre de la Santé publique doivent être apposés de telle sorte que toutes les personnes présentes puissent en prendre connaissance.

Il est interdit de fumer dans les débits de boissons et autres établissements Horeca situés dans un lieu fermé accessible au public, s'ils ne sont pas isolés de ce lieu par des parois, un plafond et une porte.

Tout élément susceptible d'inciter à fumer ou qui porte à croire que fumer est autorisé, est interdit dans les lieux visés au premier et deuxième alinéas.

Art. 3. § 1er. Nonobstant les dispositions de l'article 2, l'exploitant d'un débit de boissons, qu'il s'agisse d'une personne physique ou d'une personne morale, peut installer une zone clairement délimitée dans laquelle il est permis de fumer selon les formes et les conditions prévues aux paragraphes suivants.

§ 2. La possibilité d'installer une zone clairement délimitée dans laquelle il est permis de fumer est accordée :

— soit à l'exploitant d'un débit de boissons qui certifie sur l'honneur, ou apporte la preuve à l'aide d'une attestation dont le modèle a été fixé par le Ministre, que, pour cet établissement, la part des achats de produits destinés à la fabrication et à la vente de repas n'excède pas un tiers des achats totaux de boissons et de denrées alimentaires;

— soit à l'exploitant de plusieurs établissements qui certifie sur l'honneur ou apporte la preuve à l'aide d'une attestation dont le modèle est fixé par le Ministre, que, pour cet établissement, la part des ventes de repas n'excède pas un tiers des ventes totales de denrées alimentaires;

— soit à l'exploitant d'un débit de boissons qui certifie sur l'honneur qu'il sert uniquement les repas légers prévus à l'article 2, § 2, 1°, de l'arrêté royal du 13 juin 1984 instaurant les conditions d'exercice de l'activité professionnelle de restaurateur ou de traiteur-organisateur de banquets dans les petites et moyennes entreprises du commerce et de l'artisanat.

§ 3. Cette possibilité est également ouverte à toute personne qui crée ou reprend un nouvel établissement sur la base d'une estimation :

— dans le cas où il crée ou reprend un établissement, de la part des achats de produits destinés à la fabrication et à la vente de repas par rapport aux achats totaux de boissons et de denrées alimentaires;

— dans le cas où il crée ou reprend plusieurs établissements, de la part des ventes de repas par rapport aux ventes totales de denrées alimentaires.

§ 4. La zone réservée aux fumeurs doit être établie de manière à réduire au maximum les inconvénients de la fumée vis-à-vis des non-fumeurs.

Sa superficie doit être inférieure à la moitié de la superficie totale du local dans lesquels des plats préparés et/ou des boissons sont servies à la consommation, sauf si cette superficie totale est inférieure à 50 mètres carrés.

Un ou plusieurs signaux d'interdiction de fumer, conformes aux modèles fixés par le Ministre, doivent être apposés dans les espaces réservés aux non fumeurs, de manière telle que toute personne présente puisse en prendre connaissance.

§ 5. Le Ministre peut fixer des conditions complémentaires auxquelles doivent répondre les débits de boissons où il est autorisé de fumer. Ces conditions sont relatives à :

— l'installation d'un système d'aération garantissant un débit minimal de renouvellement d'air;

§ 6. Nonobstant les dispositions du § 1er, ne bénéficie pas de l'autorisation d'installer une zone clairement délimitée dans laquelle il est permis de fumer :

— l'exploitant d'un débit de boissons qui est situé dans un lieu fermé accessible au public, si l'établissement n'est pas isolé du lieu par des parois et un plafond;

— l'exploitant d'un débit de boissons situé dans une enceinte sportive.

Art. 4. Nonobstant les dispositions de l'article 2, l'exploitant d'une friterie peut installer une zone où il est autorisé de fumer qui répond aux conditions de l'article 3, §§ 4 et 5.

Art. 5. § 1er. Nonobstant les dispositions de l'article 2, un fumoir répondant aux conditions du § 2 du présent article peut être installé dans les établissements Horeca où il est interdit de fumer en vertu du présent arrêté.

§ 2. Le fumoir doit être clairement identifié comme local réservé aux fumeurs et seules des boissons peuvent y être servies.

Le fumoir doit être muni d'un système d'extraction ou d'épuration d'air.

Le fumoir doit être installé de manière à réduire au maximum les inconvénients de la fumée vis-à-vis des non-fumeurs et ne peut être une zone de transit.

La superficie du fumoir ne peut excéder un quart de la superficie totale du local dans lequel des plats préparés et/ou des boissons sont servies à la consommation.

Le Ministre fixe des conditions complémentaires auxquelles doit répondre le fumoir.

Art. 6. L'exploitant et le client, chacun pour ce qui le concerne, d'un établissement visé aux articles 2, 3, 4 et 5 est responsable du respect des dispositions du présent arrêté.

Art. 7. Toute infraction au présent arrêté est recherchée, poursuivie et punie conformément à la loi du 24 janvier 1977 relative à la protection de la santé des consommateurs en ce qui concerne les denrées alimentaires et autres produits.

Art. 8. Sans préjudice de l'article 9, l'arrêté du 15 mai 1990 portant interdiction de fumer dans certains lieux publics est abrogé.

Art. 9. Le présent arrêté entre en vigueur le 1er janvier 2006.

Par mesure transitoire, les établissements Horeca visés aux articles 3, 4 et 5 peuvent satisfaire aux dispositions de l'arrêté royal du 15 mai 1990 jusqu'au 1er janvier 2007.

Bulgaria

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking allowed in ventilated smoking rooms	Smoking banned altogether in some public places (e.g. cultural institutions). In others, allowed in ventilated smoking rooms	Smoking banned altogether. In passenger trains, less than half of the carriages may be designated to permit smoking. In vessels, smoking allowed in ventilated smoking rooms	Smoking allowed in ventilated smoking rooms	Smoking banned altogether	In venues of more than 60 seats, smoking is allowed in separated and ventilated halls In smaller venues, smoking allowed in ventilated smoking areas	The Decree of Council of Ministers No. 329/08.12.2004 entered into force in Jan. 2005. In indoor workplaces and public places smoking is only allowed in ventilated smoking rooms and is banned altogether in educational facilities and most of public transport. Smoking in pubs, bars and restaurants is permitted in zones or halls for smoking equipped with ventilation systems. Having initially rejected the Ministry of Health proposal for a full smoking ban in Feb.2007, in November 2008 the Cabinet agreed to such a ban as of June 2010. The proposal is now being discussed by the parliament.

Legal provisions

THE HEALTH LAW

Published in SG 70/10 August 2004, effective as of 1st of January 2005.

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Art. 56.(1) Smoking shall be prohibited in the covered public places, including the public transport and the public working premises.
(2) The Council of Ministers shall determine with an ordinance the conditions and the order, under which will be admitted as exception smoking in detached zones of the places of para 1.

ORDINANCE

on the Conditions and the Order of Permitted Smoking as an Exception in Separated Enclosed Areas of Indoor Public Places and Indoor Places of Employment

Adopted on 8 December 2004

CHAPTER I GENERAL PROVISIONS

Art. 1. The present Ordinance shall define the conditions and order under which smoking as an exception shall be permitted in separated enclosed areas of indoor public places, inclusive of means of public transport, and indoor places of employment.

Art. 2. No exceptions from the smoking prohibition shall be permitted in:

1. nursery schools, kindergartens, schools and places of extra-curriculum educational forms- clubs, circles, schools etc.;
2. Institutions of higher education;
3. Cultural institutions- cinemas, theatres, concert halls, galleries, cultural centers, libraries etc.
4. Internet clubs
5. Areas in premises for production and trade with foodstuffs in which preservation, preparation, production, cooking and trade with foodstuffs is being effected, exclusive of integrated halls for on-premises consumption.
6. Buses, trolley cars, trams, subway-cars , mini-buses for rout taxis and taxicabs both for the passengers and the driver of the vehicles;
7. subway terminals;
8. Bulgarian passenger airplanes;
9. Elevators in all buildings
10. Premises with separated places of work.

Art. 3. Indoor public places of smoking permitted as an exception in the separated enclosed areas, shall be the buildings of general access- administrative institutions, places of accommodation, means of shelter, halls of on-premises consumption in catering and entertainment establishments, medical and health institutions, sports, commercial and other facilities as well as some means of public transport.

CHAPTER II

Conditions and Order of Permitted Smoking as an Exception in Separated Enclosed Areas of Indoor Public Places and Indoor Places of Employment

Art.4. (1) Smoking in indoor public places under art. 3 shall be permitted provided it is done in the separated enclosed areas.

(2) Separated enclosed area in the sense of paragraph 1 shall be:

1. Specifically designated enclosed area provided mechanical ventilation and permanent sign on the door "Smoking place" is secured.
2. Part of the commercial area of catering and entertainment establishment of seating capacity less then 60 seats.

Art.5. (1) The areas under art.4, paragraph2, section 1 must meet the following conditions:

1. they are to have mechanical ventilation providing 10 fold air exchange per hour through sucking in that shall continually work throughout the establishment's working hours and as an exception, at technical impossibility for installing mechanical ventilation, natural ventilation shall be used.

2. they are to be designated by ordinance of the person using the establishment.

(2) The person using the establishment shall provide the effective functioning and maintenance of the mechanical ventilation.

(3) Corridors, lobbies, stairway platforms and sanitary and hygiene areas cannot be designated for smoking areas.

Art. 6. (1) In the smoking area, separated under art.4, para. 2, section 2, the number of seats shall not exceed half of the seating capacity in the catering and entertainment establishment.

(2)The tables in the area under art. 1 shall be designated with sign "Table for smokers".

Art. 7. (1) In catering and entertainment establishments of more than 60 seats, smoking shall be permitted in the separated hall designated with permanent marking "Hall for smokers".

(2) The number of smoking seats shall not exceed half of the seating capacity in the establishment.

Art. 8. Catering and entertainment establishments with separated smoking area, as well as smoking halls, must have mechanical inflow ventilation that is to provide fresh air exceeding 40 m³ per hour and that shall work continuously during the working hours of the establishment.

Art. 9. In the areas, separated under art. 4, para.2 and art. 7, para. 1, no person aged under 18 shall be allowed.

Art. 10. (1) In the places of accommodation and means of shelter smoking shall be permitted in less than half of the number of rooms.

(2) The doors of non-smoker rooms shall have permanent marking.

Art. 11. (1) In passenger trains less than half of the carriages may be designated as carriages of permitted smoking.

(2) A carriage for which the booking tickets are sold shall not be designated for smoker carriage if it is the only one.

(3) The non-smoker carriage shall bear permanent marking.

(4) In sleeping-cars and wagon lids, as well as in trains with only one carriage, compartments for smokers shall be designated and smoking shall be prohibited in the passages and sanitary and hygiene areas of the carriage.

(5) In the restaurant-cars an area under art.4, para.2, section 2 shall be separated as the number of seats in the smoking area must not exceed half of the total seating capacity.

Art. 12. Smoking is permitted at the railway terminals, sea ports and airports only in areas meeting the requirements under art. 5.

Art. 13. (1) Smoking in the enclosed areas of vessels is permitted only in areas meeting the requirements under art. 5.

(2) In the vessels, cabins for smokers shall be designated and they shall not exceed half of the total number of cabins.

Art. 14. In buildings with separated working places, the employers may designate special smoking areas meeting the requirements under art. 5 by ordinance.

Art. 15. (1) Persons who use establishments under art. 3 and employers under art. 14. shall secure the effectiveness measurement of the mechanical ventilation by an accredited laboratory.

(2) The measurement reports shall be kept at the site and shall be presented at the inspection to the state health inspectors.

Art. 16. The below persons shall bear the responsibility for observing the requirements of the present Ordinance:

1. persons keeping the establishments under art. 2 and 3;

2. Persons staying in the indoor public places;
3. Employers
4. Workers and officials in the indoor working premises.

ADDITIONAL PROVISION

§ 1. In the sense of the Ordinance:

“separated working place” is the place in the premises at which the worker or official performs services or they have access to in connection with the executed work.

TRANSITIONAL AND FINAL PROVISIONS

§2. Persons using the existing as per 01 of January 2005 buildings under art. 3 and the employers under art. 14 shall undertake the required actions for measurement under art. 15, para.1 until 30 of June, 2005.

§ 3. The control of the Ordinance obedience shall be carried out by the state health inspectors.

§ 4. The Ordinance have been issued on the grounds of art. 56, para. 2 of Health Law.

§ 5. The Ordinance shall come into force on 01 of January, 2005.

Czech Republic

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Ban on smoking in the presence of non-smokers	Smoking allowed in ventilated designated areas	Smoking banned altogether	Smoking banned altogether except for ventilated areas in psychiatric and detox wards	Smoking banned altogether	Smoking allowed in ventilated designated areas	<p>Act No 379/2005 on protective measures against damage caused by tobacco products, alcohol and other addictive substances bans smoking entered into force in Jan. 2006.</p> <p>In most public places, including bars and restaurants, smoking is allowed in ventilated designated areas and is banned altogether in education and healthcare facilities and means of public transport.</p> <p>In addition, Act No 262/2006, Labour Code, lays down the obligation for employees not to smoke at the workplace or on other premises where non-smokers are also exposed to the effects of smoking.</p> <p>In Jan. 2008, the Health Committee of the Parliament voted for the total ban of smoking in all enclosed public places, including bars and restaurants. The second reading in the Chamber of Deputies took place in February. Three other options (exemption for venues below 100 m², smoking and non-smoking areas divided by a wall, decision left to individual owners) were listed as possible options in addition to the original total-ban proposal. The third reading (vote) is scheduled for September, following which the bill will be submitted for the approval of the Senate (upper chamber).</p>

Legal provisions

379/2005 Coll.

**ACT of 19 August 2005
on measures for protection against harm caused by tobacco products, alcohol and other dependency producing substances and on
amendment to related laws**

Amendment: 225/2006 Coll.

Section 8

(1) It shall be prohibited to smoke:

a) in public areas, consisting in enclosed premises accessible to the public, means of public transport, publicly accessible premises of buildings related to public transport, platforms, shelters and waiting rooms for public road and railway transport and municipal public transport, except for structurally separated premises reserved for smoking which are ventilated to areas outside the building at all times when persons are present,

b) in the internal and external spaces of all types of schools and educational facilities,7)

c) in common catering facilities operated on the basis of inn-keeping activities,5) unless such facilities have special premises reserved for smokers that are designated by a clearly visible sign “Area reserved for smoking” or in a similar manner and that have adequate ventilation according to the requirements stipulated by the special regulation;4)

d) in enclosed entertainment areas, such as cinemas, theatres, exhibition and concert halls, and also in sports halls and premises where working meetings are held, except for special, structurally separated premises reserved for smoking with adequate ventilation according to the requirements stipulated by the special regulation;4)

e) on inner premises of health-care facilities of all types, except for enclosed psychiatric departments or other facilities for treatment of addictions, on premises that are structurally separated and are ventilated to areas outside the building at all times when persons are present.

(2) In buildings of State authorities, bodies of territorial administrative units, facilities established by the State or a territorial administrative unit providing public services, and financial institutions including their common catering facilities, the persons entrusted with their management

shall be obliged to ensure that citizens are protected in these buildings against harm caused by smoking. This shall in no way prejudice the provisions of paragraph 1 above.

(3) Premises reserved for smokers must be designated by their operator by a clearly visible sign “Area reserved for smoking” or in a similar manner.

(4) At least half of the cars in each train of the public railway transport system must have no premises reserved for smoking.

**Labour Code
No. 262/2006 Coll.**

§106(4)

[The employee shall] (...) not smoke at workplaces and other premises where non-smokers are also exposed to the effects of smoking.

Cyprus

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Employer should ensure that non-smoking employees are protected	Smoking allowed in designated smoking areas	Banned altogether all public transport vehicles, incl. taxis, as well as private cars that carry passengers below 16 years old.	Smoking allowed in designated smoking areas	Smoking allowed in designated smoking areas	Smoking allowed in designated smoking areas	<p>Under the protection of Health (Control of smoking) Law of 2002 {N.75(I)/2002}, smoking is banned completely in all public transport.</p> <p>Smoking in public places is allowed in designated smoking areas with adequate air expulsion system. The same rules apply to hospitality venues – however establishments which have more than one room shall designate one room for those who wish to smoke.</p> <p>In workplaces, employers – having consulted employees – set out in writing a policy in smoking which protects employees who do not smoke or do not wish to smoke in the workplace.</p>

Legal provisions

**No 75(I) of 2002
ACT PROVIDING FOR THE TAKING OF MEASURES TO COMBAT SMOKING**

Ban on smoking in enclosed areas

10.-(1) No person may smoke in a no-smoking area, except in a special area especially put aside for smokers and which has an adequate system to expel the air.

(2) Anyone responsible for a no-smoking area in which the provisions of (1) above are being contravened shall be considered responsible for this contravention unless it can be demonstrated that he or she took all reasonable measures to prevent smoking in this area.

(3) Anyone contravening the provisions of (1) and (2) above shall be guilty of an offence and, if convicted, shall be liable to a fine not exceeding one thousand pounds or a prison term not exceeding six months, or the two punishments in conjunction.

Ban on smoking on public transport

11.-(1) Smoking by any person shall be banned on all public transport vehicles.

(2) Anyone contravening the provisions of (1) above shall be guilty of an offence and, if convicted, shall be liable to a fine not exceeding one thousand pounds or a prison term not exceeding six months, or the two punishments in conjunction.

Ban on smoking in private vehicles transporting persons aged under sixteen years

12.-(1) No person may smoke in a private vehicle transporting persons aged under sixteen years.

(2) Anyone contravening the provisions of (1) above shall be guilty of an offence and, if convicted, shall be liable to a fine not exceeding one thousand pounds or a prison term not exceeding six months, or the two punishments in conjunction.

Smoking in restaurants, cafes, etc.

13.-(1) Anyone who runs or owns any restaurant, café-restaurant, cafeteria, bar or café, discotheque, night club or any other similar venue may:

(a) set aside an area specifically for smokers and ensure that:

(i) sufficient area is provided for people who smoke or wish to smoke and that such areas are fitted with an air-expulsion system;

(ii) no person may smoke in areas designated for people who do not smoke or do not wish to smoke, and

(b) if a restaurant, café-restaurant, bar etc. has more than one room, set aside at least one of these rooms for people who smoke or who wish to smoke.

(2) Owners or person running the venue referred to in (1) above must:

(a) (i) place signs in areas for non-smokers, clearly and legibly showing that smoking is forbidden, and

(ii) place in conspicuous positions in all other others signs showing clearly and legibly the general warnings laid down on the dangers of smoking and

(b) install in areas for smokers adequate systems to expel the air.

(3) Anyone contravening the above provisions shall be guilty of an offence and, if convicted, shall be liable to a fine not exceeding one thousand pounds or a prison term not exceeding six months, or the two punishments in conjunction.

Smoking in workplaces

14.-(1) Every employer must, after consulting the employees who may be affected or their representatives, set out in writing and implement a policy on smoking in every workplace, based on the principle that employees who do not smoke or do not wish to smoke at the workplace must be protected from smoke at the workplace.

(2) The policy referred to in (1) above must in particular meet the following conditions:

(a) In each work place, the employer shall ensure that a copy of the policy on smoking is placed in a conspicuous place and, if required, that each employee, applicant or employee representative is provided with a copy of the policy, and

(b) in each work place, the employer shall ensure that clear and legible signs are placed in conspicuous places showing the areas where smoking is forbidden or allowed.

(3) The provisions of this Article shall not prevent an employer from allowing smoking in enclosed areas with an adequate air-expulsion system where only workers who are smokers are located and who request, in writing, that they be allowed to smoke in such an area.

(4) Anyone contravening the provisions of this Article shall be guilty of an offence and, if convicted, shall be liable to a fine not exceeding one thousand pounds or a prison term not exceeding six months, or the two punishments in conjunction.

Denmark

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
<p>Smoking may be allowed in workplaces which serve as a workplace for one person at a time</p> <p>Possibility of smoking rooms and booths</p>	<p>Possibility of smoking rooms and booths</p>	<p>Smoking banned altogether</p> <p>On passenger ships, possibility of smoking rooms and booths</p>	<p>Hospitals and similar institutions may permit patients and their family members to smoke in extraordinary circumstances</p>	<p>Smoking banned altogether</p> <p>In educational institutions for adolescents 16 years and older that also serve as dwellings, adolescents may be allowed to smoke in designated smoking rooms and in their own rooms.</p>	<p>Possibility of smoking rooms and booths where food and drinks are not served</p> <p>Pubs below 40m2 that do not serve food are exempt.</p>	<p>Smoke-Free Environments Act entered into force on 15 August 2007.</p> <p>The Act allows bans smoking as a general rule, with the following exemptions:</p> <ol style="list-style-type: none"> 1. It is permitted to establish ventilated smoking booths and rooms at workplaces, at educational institutions for adolescents 16 years and older, in places to which the public has access and at hospitality establishments. The explanatory memorandum accompanying the Smoke-free Act states that the smoking booth typically has a ceiling and is enclosed by three sidewalls, the fourth side being open. It either purifies the air through high-quality dust and gas filters which lead the cleaned air back into the booth, or is equipped with a mechanical extraction system which leads the polluted air out. 2. Smoking may be permitted in rooms that solely serve as a workplace for one person. 3. Smoking may be permitted at small pubs with a bar-room floor space (excluding the bar) not exceeding 40 m2 if the establishment does not serve food. <p>Fines only for employers</p> <p>The new law will be evaluated in 2009-2010.</p>

Legal provisions

Ministry of the Interior and Health, Denmark
 Act No. 512 of 6 June 2007
 Smoke-free Environments Act

Part 1

Purpose, scope, etc.

§1. The purpose of the Act is to promote smoke-free environments with the aim of preventing harmful health effects of environmental tobacco smoke and to prevent involuntary exposure to environmental tobacco smoke.

§2. This Act shall apply to:

- 1) workplaces, including offshore installations;
- 2) institutions and schools for children and adolescents;
- 3) other educational institutions;
- 4) indoor rooms to which the public has access;
- 5) means of public transport and taxis; and
- 6) hospitality establishments.

Subsection 2. Subsection 1 includes Danish ships, aircraft registered in Denmark and aircraft registered in other countries that operate under a Danish operating permit, regardless of whether the ship or aircraft is located outside Danish territory. The Act shall not apply, however, to ships based in the Faroe Islands or Greenland or to aircraft from airline companies based in the Faroe Islands or Greenland.

§3. A special room for smoking shall be defined in this Act as a special room with good opportunities for natural or artificial ventilation. The room may not serve as a passage or contain functions used by other people.

Subsection 2. A smoking booth shall be defined in this Act as a detached unit with a natural or artificial ventilation system.

Part 2

General provisions

§4. In rooms etc. that are governed by this Act, smoking shall be prohibited indoors, unless the other provisions of this Act state otherwise.

§5. Each employer shall prepare a written policy on smoking that shall be accessible to all the employees of the workplace.

Subsection 2. The smoking policy shall contain at least the following:

- 1) information on whether and where smoking is permitted at the workplace;
- 2) information on the consequences of violating the smoking policy of the workplace.

Part 3

Workplaces, institutions, schools etc.

Indoor workplaces

§6. Smoking shall be prohibited indoors at workplaces, cf. §4.

Subsection 2. It may be decided that smoking is permitted in work rooms that solely serve as a workplace for one person at a time.

Subsection 3. It may be decided to arrange special rooms for smoking or smoking booth in which smoking is permitted.

Institutions and schools for children and adolescents

§7. At child-care centres, primary and lower secondary schools, leisure centres and the like that mainly have enrolled children and adolescents

younger than 16 years, children, adolescents and students shall be prohibited from smoking on the property of the institution.

Subsection 2. For residential institutions, accommodation facilities, boarding schools, continuation schools and the like that mainly have enrolled adolescents 15–16 years old and older and that also serve as dwellings for these adolescents, it may be decided that the adolescents are allowed to smoke in designated smoking rooms and in their own rooms.

§8. For people not governed by §7, smoking shall be prohibited on the outdoor areas of the institution to which children and adolescents have access.

Subsection 2. It may be decided to arrange special rooms for smoking or smoking booths where the relevant people are permitted to smoke.

Other educational institutions

§9. At educational institutions not governed by §7, it may be decided that students may smoke in rooms that are made available as a studying space and are only used by one student at a time.

Subsection 2. It may be decided to arrange special rooms for smoking and smoking booths in which students are permitted to smoke.

Special workplaces

§10. Hospitals and similar institutions may permit patients and their family members to smoke in extraordinary circumstances.

§11. At nursing homes, residential institutions for adults, accommodation facilities for adults with special needs and similar institutions, each resident may decide whether smoking is permitted in the room or dwelling that serves as the resident's private home.

Subsection 2. Residents may be instructed not to smoke in their room or dwelling during the time in which employed staff are present.

§12. In private homes in which a publicly funded service in the form of personal or practical help is delivered, residents may be instructed not to smoke during the time in which employed staff are present as a condition for receiving this service.

§13. In drop-in centres and similar facilities for socially vulnerable people in which there is only one room for users, it may be decided that smoking is permitted.

§14. In the institutions of the Danish Prison and Probation Service, the detainee or prisoner may decide whether smoking is permitted in the room of the detainee or prisoner.

Subsection 2. Detainees and prisoners may be instructed not to smoke in their rooms during the time in which a staff member is present.

Subsection 3. The Minister for Justice shall lay down more detailed regulations governing the matters specified in subsection 2.

§15. In municipal family child care and in other family child care regulated by a municipality, cf. §24 and §25 of the Act on Social Services, smoking shall be prohibited in the home in which family child care is provided and in other rooms used for child care during the operating hours of the family child care.

Subsection 2. Rooms that are primarily designed as the rooms in which the children play and are otherwise present will be required to be free of environmental tobacco smoke at all times.

§16. For workplaces in private dwellings in which the employer works in the home and in which external employees work, §6 shall apply.

Subsection 2. If the rooms in which work takes place serve as private dwelling space, smoking shall be permitted when the external employee is not at work.

§17. It may be decided that smoking is permitted on ships in rooms that serve as a private dwelling for one person at a time.

Part 4

Public space etc.

§18. Smoking shall be prohibited in indoor rooms to which the public has access, cf. §4.

Subsection 2. It may be decided that special rooms for smoking and smoking booths will be arranged in which smoking may take place.

§19. In hotel rooms, cabins on ships and similar rooms that host overnight guests on a commercial basis, it may be decided that the guests are permitted to smoke.

§20. In means of public transport and taxis, smoking shall be prohibited indoors, cf. §4.

Subsection 2. On passenger ships, it may be decided that special rooms for smoking and smoking booths will be arranged in which smoking is permitted.

Part 5

Hospitality establishments

§21. Smoking shall be prohibited indoors at hospitality establishments, cf. §4.

Subsection 2. A hospitality establishment shall be defined as a room in which food or beverages are served to be consumed at or near the place at which the sales take place.

Subsection 3. It may be decided that special rooms for smoking and smoking booths will be arranged in which smoking is permitted.

Subsection 4. Food and beverages shall be prohibited from being served or brought into the special rooms for smoking or smoking booths at hospitality establishments. Each hospitality establishment may decide, however, to permit guests to bring their beverages into the special rooms for smoking or smoking booths.

§22. It may be decided that smoking is permitted indoors at small hospitality establishments (pubs) that:

- 1) have a licence to serve alcohol;
- 2) do not serve food;
- 3) have floor space not exceeding 40 m²; and
- 4) have tables and chairs on the floor space.

Subsection 2. Small hospitality establishments (pubs) located in the same building as another hospitality establishment shall be governed by subsection 1 if the small hospitality establishment (pub) has an independent entrance from the street and if it appears to be an independent small hospitality establishment (pub) to the customers.

Part 6

Provisions on supervision

§23. Each employer, owner, restaurant manager, supervisor and leaseholder shall ensure that smoking solely takes places in accordance with the provisions of this Act.

§24. The enforcement of compliance with this Act and the rules established pursuant to this Act shall be supervised by the Danish Working Environment Authority, cf. §79a of the Working Environment Act; the Danish Maritime Authority, cf. §20a of the Act on Safety at Sea; and the Minister for Transport and Energy, cf. §150f of the Air Navigation Act and §66a of the Offshore Safety Act.

Part 7

Employee relationships

§25. An employee's violation of the prohibition on smoking at a workplace shall be handled in accordance with the rules applying to the employee's other conditions of employment.

Part 8

Provisions on penalties

§26. A fine shall be imposed on anyone who:

1) violates §5; or

2) violates an order issued pursuant to §79a, subsection 1 of the Working Environment Act, §20a, subsection 1 of the Act on Safety at Sea, §150f, subsection 1 of the Air Navigation Act or §66a, subsection 1 of the Offshore Safety Act.

Subsection 2. A fine shall be imposed on any employer, owner, restaurant manager, supervisor or leaseholder who permits smoking indoors in violation of the rules in this Act.

Subsection 3. Companies and the like (legal persons) may be penalized in accordance with the rules of Part 5 of the Criminal Justice Act.

Full text in English at: http://www.sum.dk/artikler_sum_uk/Files/Fil1/4203.pdf

Estonia

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking allowed in smoking rooms or areas	In some public places smoking banned altogether (e.g. shops), in others (cultural institutions, sport and recreational facilities). In others allowed in smoking rooms or areas	Smoking banned altogether In trains and passenger ships, smoking allowed in designated rooms or areas	Smoking allowed in designated rooms or areas	Smoking banned altogether except the premises of institutions of higher education in designated rooms or areas	Smoking allowed only in separately ventilated and negatively pressurised smoking rooms where no food is served	The tobacco law of May 2005 entered into force in June 2005 except the provisions relating to hospitality sector which entered into force in June 2007. In workplaces and most public places, there is a possibility of creating a separately ventilated smoking room or smoking area. Smoking in bars and restaurants is only allowed in in enclosed smoking rooms with separate ventilation systems.

Legal provisions

Tobacco Act

Passed 4 May 2005

§ 29. Places where smoking is prohibited

Smoking is prohibited:

- 1) in rooms of children's social welfare institutions and their designated territories;
- 2) in rooms of pre-school child care institutions, nursery-primary schools, primary schools, basic schools, upper secondary schools, vocational educational institutions, hobby schools, open youth centres or youth or project camps and their designated territories;
- 3) in rooms of pharmacies;
- 4) in industrial premises and warehouses of enterprises;
- 5) in sales areas of shops and mobile shops;
- 6) in catering establishments, except rooms provided for in subsection 31 (1) of this Act;
- 7) in enterprises where services specified in clause 3 (2) 4) of the Trading Act or other services are offered, in rooms open for clients (except in

accommodation establishments);

8) in space intended for sports;

9) in changing rooms and lavatories if not in private use;

10) in public transport shelters, passenger waiting rooms and passenger terminals;

11) in vehicles used for the provision of passenger service, except in vehicles specified in clause 30 (2) 6) of this Act;

12) in the immediate vicinity of tanker vessels, petrol storage tanks or petrol pumps;

13) in the vicinity of flammable or combustible substances, at a site with flammable or combustible storage areas, places where dangerous goods are loaded, in the vicinity of consignments ready to be loaded, near standing transport units and in transport units;

14) in the territory of an explosive substances store, at a distance of up to twenty metres from the place where explosive substances are stored on board a ship, in the rooms of a pyrotechnic articles store or in the vicinity of ammunition containing explosive substances;

15) in the workings of a mine, lamp rooms and battery-charging rooms and at a distance of up to twenty metres from a portal;

16) upon loading of cartridges in the vicinity of propellant, in weapons magazines, weapons stores and weapons rooms;

17) in forests and other areas covered with vegetation during a fire hazard period;

18) in pedestrian tunnels;

19) corridors and stairwells of apartment buildings, and other rooms which are in common use in apartment buildings;

20) in other places prescribed by legislation.

§ 30. Places where smoking is restricted

(1) In the cases not specified in § 29 of this Act, the possessor of a room or a restricted area shall, at the discretion thereof, decide whether smoking is allowed in the room or restricted area, taking account of subsections (3) and (4) of this section and § 31 of this Act.

(2) In the following places, smoking is allowed only in a smoking room or smoking area:

1) the premises of state and local government agencies;

2) the premises of institutions of higher education;

3) the premises of cultural institutions;

4) the premises of recreation centres;

5) the premises of agencies or enterprises providing health services;

6) local trains, long-distance trains and passenger ships;

7) rooms where a game of chance, betting or a totalizator is organised;

8) the office premises and other public premises of enterprises;

9) sports halls and sports facilities and recreational facilities.

(3) A smoking room is a room located in a building or a vehicle to which the following requirements apply:

1) the room is designated with verbal information which permits smoking or with a corresponding symbol;

2) information "Suitsetamine kahjustab tervist!" [Smoking harms health!] is displayed in the room in Estonian in a visible place and in reasonable size;

3) the room is negatively pressurised;

- 4) air outflow in the room is not less than 8.4 litres/second per square metre, and if the room is not used, the air outflow may be reduced to 25 per cent of the normal air exchange;
- 5) the air outflow ventilation system is separate and continuous or connected to other continuously operating air outflow systems by a separate duct.

(4) A smoking area is an area located in a building or a vehicle without barriers which has a local ventilation system and to which the following requirements apply:

- 1) the area is designated with verbal information which permits smoking or with a corresponding symbol;
- 2) information "Suitsetamine kahjustab tervist!" [Smoking harms health!] is displayed in the room in Estonian in a visible place and in reasonable size;
- 3) an effective ventilation system ensures the movement of air directly into the outdoor environment.

§ 31. Smoking in catering establishments

(1) It is allowed to smoke in a catering establishment only in smoking rooms prescribed for smoking or in the immediate vicinity of the sales premises of the catering establishment on a seasonal extension located outdoors.

(2) Catering, where food is sold together with its preparation and serving or just its serving for consumption on the premises shall not be provided in a smoking room specified in subsection (1) of this section.

(3) A seller has the right not to serve any persons who ignore the prohibitions and restrictions established regarding smoking in catering establishments and has the right to request that such persons leave.

Full text in EN: <http://www.legaltext.ee/et/andmebaas/tekst.asp?loc=text&dok=X90018&pg=&tyyp=&query=&ptyyp=&keel=en>

Finland

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
<p>Smoking banned on the joint and public premises of workplaces and the areas accessible to clients except for designated smoking rooms. In any other premises at the workplaces, employers are to ensure that employees are not involuntarily exposed to tobacco smoke.</p>	<p>Smoking allowed in designated smoking rooms</p>	<p>Smoking allowed in designated smoking rooms</p>	<p>Smoking allowed in designated smoking rooms</p>	<p>Smoking banned altogether</p>	<p>Smoking allowed in separately ventilated smoking rooms where no food or drink is served</p> <p>Exemption for restaurants of over 50m² on international vessels</p>	<p>The Tobacco Act banned smoking in indoor public premises and public transport as of 1977 and in indoor workplaces as of 1995 except for designated smoking rooms.</p> <p>In workplaces, smoking is banned in joint and public premises as well as in areas which have contacts with clients except for designated smoking rooms. In any other premises at the workplaces, employers are to ensure that employees are not involuntarily exposed to tobacco smoke.</p> <p>Environmental tobacco smoke has been classified as a carcinogen in 2000.</p> <p>The smoking ban has been extended to bars and restaurants as of June 2007. Smoking is only allowed in separately ventilated smoking rooms where no food or drink is served. The requirements for the construction, ventilation, supervision and maintenance of the smoking rooms were set out by the Decree of Ministry of Social Affairs and Health (964/2006).</p> <p>Establishments had the possibility to apply for a two-year transition period (provided that arrangements are put in place so that tobacco smoke does not spread to smoke-free areas). Some 500 establishments were able to obtain a partial exemption from the law until June 2009.</p>

Legal provisions

ACT ON MEASURES TO REDUCE TOBACCO SMOKING No. 693/1976

Issued in Helsinki on 13 August 1976.

NB. Provisions amended by Act 700/2006 enter into force on 1 June 2007.

CHAPTER 2 – Scope of application

Section 2 (23.10.1992/953)

For the purposes of this Act,

10) *indoor premises* means closed indoor premises with ceiling, floor and walls, or premises of which it is possible to construct closed premises by installing an additional level and which are intended for housing, staying, as waiting space or for working; (21.7.2006/700)

11) *work premises* means indoor or outdoor premises where people work; (21.7.2006/700)

12) *smoking area* means a separate room placed on indoor premises that has been approved by the building inspection authority; (21.7.2006/700)

13) *smoke-free area* means indoor premises or part thereof where smoking is prohibited; (21.7.2006/700)

14) *joint premises of the workplace* means facilities for rest and eating meals, sanitary premises as well as other premises intended for the staff or being in their joint use, corridors, halls and staircases as well as indoor premises intended for convening together; (21.7.2006/700)

15) *public premises of the workplace* means indoor premises to which the public has unrestricted access; (21.7.2006/700)

16) *premises intended for clients or customers of the workplace* means indoor premises reserved for clients or customers or being at their disposal. (21.7.2006/700)

CHAPTER 5 – Protecting the population from health harms caused by ambient tobacco smoke (19.8.1994/765)

Section 11 a (21.7.2006/700)

Ambient tobacco smoke is a carcinogen. The provisions laid down in this Act and in occupational safety and health legislation are applied in regard to protecting from it at work.

Section 12 (21.7.2006/700)

Smoking is prohibited

1) on the indoor premises of day-care centres for children and of educational institutions intended for students, and in their outdoor areas primarily intended for persons under the age of eighteen;

2) on the indoor premises of government agencies and authorities and comparable public bodies intended for the public and clients;

- 3) at public events arranged indoors to which the public has unrestricted access;
- 4) inside public means of transport; and
- 5) on the joint and public premises of workplaces and on their indoor premises intended for clients and customers unless otherwise provided below.

If an establishment allows smoking in the restaurant's outdoor serving area or elsewhere in an outdoor area in the establishment's possession, the establishment shall see to it that tobacco smoke does not spread through an open window, door or other opening or ventilation to the indoor premises of the restaurant.

Section 13 (19.8.1994/765)

The proprietors of indoor premises or public means of transport referred to in section 12 and the organisers of public events may, however, allow smoking in a room intended for this purpose or in part of the facilities or space as long as no tobacco smoke can enter those indoor premises where smoking is prohibited. A separate room or other space for smoking shall not, however, be located in conjunction with indoor premises primarily used by persons under the age of eighteen.

Contrary to what is provided in section 12, paragraph 1 (2), (4) and (5) smoking may be allowed in rooms for accommodation of customers in hotels and corresponding establishments as well as in restaurants on board a vessel in international maritime traffic whose serving area is not larger than 50 m². On premises with a larger serving area, an area of maximum 50 per cent may be reserved for smokers. In that case it has to be seen to it, however, that tobacco smoke does not spread to the area where smoking is prohibited. The restaurant facilities in a hotel and restaurant complex that are open at the same time are regarded as one and the same restaurant. By serving area is meant an area reserved for eating the food or drinking the drinks served there. (21.7.2006/700)

Contrary to what is provided in section 12, subparagraphs 2 and 5, smoking can be allowed in rooms for accommodation in hotels and corresponding establishments, as well as in restaurants and corresponding establishments whose serving area is not larger than 50 m². On premises with a larger serving area, an area of maximum 50 per cent may be reserved for smokers. In that case it has to be seen to it, however, that tobacco smoke does not spread to the area where smoking is prohibited. The restaurant facilities in a hotel and restaurant complex that are open at the same time are regarded as one and the same restaurant. By serving area is meant an area reserved for eating the food or drinking the drinks served there. (9.4.1999/487)

Following negotiation with employees or their representative, employers are required to prohibit or restrict smoking so that employees are not involuntarily exposed to tobacco smoke on any work premises at the workplace where smoking is not prohibited under section 12, subparagraph 5.

What is provided in section 12, subparagraph 5, and in paragraph 3 of this section on the prohibition and restriction of smoking on common and work premises at workplaces shall not apply to any work premises which are located in the home of the worker or the business entrepreneur or

other professional, or to other work premises in the exclusive use of persons belonging to the same family and others living in the same household.

The proprietors of indoor premises and organisers of public events referred to in section 12 above, or the proprietors of space intended for smoking referred to in paragraph 1 of this section shall put up signs indicating where smoking is prohibited and where smoking is allowed. Further provisions concerning such signs and their placement may be laid down by decree.

Section 13 a (19.8.1995/765)

Any person who smokes in a means of public transport or on indoor or outdoor premises where this is prohibited under the provisions of section 12 or 13, and who does not discontinue such smoking despite being asked to do so, may be removed from the means of public transport or indoor or outdoor premises by the proprietor of the vehicle or a member of the transport personnel, the organiser of the public event or the proprietor of the indoor or outdoor premises in question or his or her representative, unless such removal can be considered unreasonable.

Section 13 b (21.7.2006/700)

Smoking can be allowed on the indoor premises of restaurants only in a separate smoking area approved for smoking. In that case it must, however, be seen to it that tobacco smoke does not spread to the area where smoking is prohibited. It is prohibited to serve food or drink, or to eat or drink in the smoking area.

Section 13 c (21.7.2006/700)

It is prohibited to work in the smoking area except for work that is necessary for the keeping of order, fire and rescue services and work that is necessary for safety. The smoking area may be cleaned only after the area has been carefully aired, taking into account what is otherwise provided by statute regarding the occupational safety and health of employees.

Section 13 d (21.7.2006/700)

The smoking area must be reasonably large in proportion to the size of the restaurant's serving area or the number of places for customers. Provisions of the Land Use and Building Act (132/1999) and provisions issued in virtue of it apply to the construction and maintenance of and repairs and alterations to the smoking area.

The establishment shall draw up a self-control plan specifying how the functionality of the smoking area is ensured and how the conditions and order in the smoking area can be supervised from outside it.

Further provisions on the minimum and maximum size of the smoking area or on the proportion of the area to the size of the restaurant's serving

area or number of places for customers may be issued by Government decree.

Further provisions on the requirements for the structure and functionality of the smoking area as well as on the drawing up, content and implementation of the self-control plan required of the establishment as referred to in paragraph 2 may be issued by decree of the Ministry of Social Affairs and Health.

Section 13 e (21.7.2006/700)

The occupational safety and health authorities, the municipal supervisory authority referred to in section 14 a and, as necessary, the police shall notify the authority granting licence to serve alcoholic beverages referred to in section 21 of the Alcohol Act (1143/1994) of any violation of the provisions on the smoking area and the building inspection authority of any violation of the provisions and regulations on construction and maintenance of or repairs and alterations to the smoking area. The occupational safety and health authority and the municipal supervisory authority referred to in section 14 a shall notify each other of any violation of the above-mentioned provisions and regulations.

Full text available at: <http://www.finlex.fi/en/laki/kaannokset/1976/en19760693.pdf>

**Decree of the Ministry of Social Affairs and Health No 964
concerning smoking rooms in restaurants and other catering establishments
Issued in Helsinki on 3 November 2006
By decision of the Ministry of Social Affairs and Health**

pursuant to Section 13(d)(4) of Act 693/1976 of 13 August 1976 on measures to reduce smoking, as amended by Act 700/2006, , the following is enacted:

Section 1

Structure of the smoking room

The smoking room shall be air-tight.

The top of the door shall be at least 400 millimetres from the ceiling.

Access to the smoking room shall be arranged in such a way that no tobacco smoke can escape.

Section 2

Ventilation

Smoking rooms shall always be under lower air pressure. Air may enter a smoking room only via a door from an adjacent room or ventilator.

The flow of extracted air from the smoking room shall be at least 30 cubic decimetres per second per square metre of floor. However, the flow through the door opening shall be at least 180 cubic decimetres per second per square metre of the opening. The ventilator must be positioned in such a way that the air is extracted efficiently from all parts of the smoking room. The extracted air shall be led via a separate channel to a point above the roof of the structure.

Section 3

Monitoring

It shall be possible to monitor the smoking room from outside.

The smoking room or extraction channel shall be fitted with a fixed measuring device so that the extraction flow from the room can be monitored from outside the room.

The ventilation of the smoking room shall be checked regularly and the findings recorded.

Section 4

Maintenance

A plan shall be drawn up for the use and maintenance of the smoking room. The plan shall show clearly the values planned, the points which need to be inspected and maintained, and how frequently maintenance is required. The plan shall also include a self-monitoring plan and a use and maintenance guide.

Section 5

Entry into force

This Regulation shall enter into force on 1 June 2007

The provisions of Section 2(3) shall not apply to restaurants which were built prior to the entry into force of this Regulation.

The measures necessary to implement this Regulation may be launched prior to the date of its entry into force.

France

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking allowed in separately ventilated rooms in which no services are provided	Smoking allowed in separately ventilated smoking rooms in which no services are provided	Smoking allowed in separately ventilated smoking rooms in which no services are provided	Smoking banned altogether	Smoking banned altogether, incl. outdoor areas of educational and childcare facilities	Smoking allowed in separately ventilated smoking rooms in which no services are provided	<p>A decree banning smoking in places for collective use and considerable strengthening the provisions under the 1991 Loi Evin was issued on 16 Nov. 2006. A ban on smoking in enclosed workplaces and public places entered into force as of February 2007 and in hospitality venues as of January 2008.</p> <p>In workplaces and most public places, there is a possibility to create separately ventilated smoking rooms in which no service is to be provided. The smoking room should not occupy more than 20% of the overall surface of the establishment and should not exceed 35 m².</p>

Legal provisions

Code de la santé publique

Article L3511-7

Il est interdit de fumer dans les lieux affectés à un usage collectif, notamment scolaire, et dans les moyens de transport collectif, sauf dans les emplacements expressément réservés aux fumeurs.

Un décret en Conseil d'Etat fixe les conditions d'application de l'alinéa précédent.

Décret n° 2006-1386 du 15 novembre 2006 fixant les conditions d'application de l'interdiction de fumer dans les lieux affectés à un usage collectif

NOR: SANX0609703D

Article 1

La section 1 du chapitre Ier du titre unique du livre V de la troisième partie du code de la santé publique est remplacée par les dispositions suivantes :

« Section 1

« Interdiction de fumer

dans les lieux affectés à un usage collectif

« Art. R. 3511-1. - L'interdiction de fumer dans les lieux affectés à un usage collectif mentionnée à l'article L. 3511-7 s'applique :

« 1° Dans tous les lieux fermés et couverts qui accueillent du public ou qui constituent des lieux de travail ;

« 2° Dans les moyens de transport collectif ;

« 3° Dans les espaces non couverts des écoles, collèges et lycées publics et privés, ainsi que des établissements destinés à l'accueil, à la formation ou à l'hébergement des mineurs.

« Art. R. 3511-2. - L'interdiction de fumer ne s'applique pas dans les emplacements mis à la disposition des fumeurs au sein des lieux mentionnés à l'article R. 3511-1 et créés, le cas échéant, par la personne ou l'organisme responsable des lieux.

« Ces emplacements ne peuvent être aménagés au sein des établissements d'enseignement publics et privés, des centres de formation des apprentis, des établissements destinés à ou régulièrement utilisés pour l'accueil, la formation, l'hébergement ou la pratique sportive des mineurs et des établissements de santé.

« Art. R. 3511-3. - Les emplacements réservés mentionnés à l'article R. 3511-2 sont des salles closes, affectées à la consommation de tabac et dans lesquelles aucune prestation de service n'est délivrée. Aucune tâche d'entretien et de maintenance ne peut y être exécutée sans que l'air ait été renouvelé, en l'absence de tout occupant, pendant au moins une heure.

« Ils respectent les normes suivantes :

« 1° Etre équipés d'un dispositif d'extraction d'air par ventilation mécanique permettant un renouvellement d'air minimal de dix fois le volume de l'emplacement par heure. Ce dispositif est entièrement indépendant du système de ventilation ou de climatisation d'air du bâtiment. Le local est maintenu en dépression continue d'au moins cinq pascals par rapport aux pièces communicantes ;

« 2° Etre dotés de fermetures automatiques sans possibilité d'ouverture non intentionnelle ;

« 3° Ne pas constituer un lieu de passage ;

« 4° Présenter une superficie au plus égale à 20 % de la superficie totale de l'établissement au sein duquel les emplacements sont aménagés sans que la superficie d'un emplacement puisse dépasser 35 mètre carrés.

« Art. R. 3511-4. - L'installateur ou la personne assurant la maintenance du dispositif de ventilation mécanique atteste que celui-ci permet de respecter les exigences mentionnées au 1° de l'article R. 3511-3. Le responsable de l'établissement est tenu de produire cette attestation à l'occasion de tout contrôle et de faire procéder à l'entretien régulier du dispositif.

« Art. R. 3511-5. - Dans les établissements dont les salariés relèvent du code du travail, le projet de mettre un emplacement à la disposition des fumeurs et ses modalités de mise en oeuvre sont soumises à la consultation du comité d'hygiène et de sécurité et des conditions de travail ou, à défaut, des délégués du personnel et du médecin du travail.

« Dans les administrations et établissements publics dont les personnels relèvent des titres Ier à IV du statut général de la fonction publique, le projet de mettre un emplacement à la disposition des fumeurs et ses modalités de mise en oeuvre sont soumises à la consultation du comité d'hygiène et de sécurité ou, à défaut, du comité technique paritaire.

« Dans le cas où un tel emplacement a été créé, ces consultations sont renouvelées tous les deux ans.

« Art. R. 3511-6. - Dans les lieux mentionnés à l'article R. 3511-1, une signalisation apparente rappelle le principe de l'interdiction de fumer. Un modèle de signalisation accompagné d'un message sanitaire de prévention est déterminé par arrêté du ministre chargé de la santé.

« Le même arrêté fixe le modèle de l'avertissement sanitaire à apposer à l'entrée des espaces mentionnés à l'article R. 3511-2.

« Art. R. 3511-7. - Les dispositions de la présente section s'appliquent sans préjudice des dispositions législatives et réglementaires relatives à l'hygiène et à la sécurité, notamment celles du titre III du livre II du code du travail.

« Art. R. 3511-8. - Les mineurs de moins de seize ans ne peuvent accéder aux emplacements mentionnés au premier alinéa de l'article R. 3511-2.
»

Article 2

A la section unique du chapitre II du titre unique du livre V de la troisième partie du code de la santé publique, les articles R. 3512-1 et R. 3512-2 sont remplacés par les dispositions suivantes :

« Art. R. 3512-1. - Le fait de fumer dans un lieu à usage collectif mentionné à l'article R. 3511-1 hors de l'emplacement mentionné à l'article R. 3511-2 est puni de l'amende prévue pour les contraventions de la troisième classe.

« Art. R. 3512-2. - Est puni de l'amende prévue pour les contraventions de la quatrième classe le fait, pour le responsable des lieux où s'applique l'interdiction prévue à l'article R. 3511-1, de :

« 1° Ne pas mettre en place la signalisation prévue à l'article R. 3511-6 ;

« 2° Mettre à la disposition de fumeurs un emplacement non conforme aux dispositions des articles R. 3511-2 et R. 3511-3 ;

« 3° Favoriser, sciemment, par quelque moyen que ce soit, la violation de cette interdiction. »

Article 5

Les dispositions du présent décret entrent en vigueur le 1er février 2007. Toutefois les dispositions des articles R. 3511-1 à R. 3511-8 et de l'article R. 3511-13 du code de la santé publique en vigueur à la date de publication du présent décret restent applicables jusqu'au 1er janvier 2008 aux débits permanents de boissons à consommer sur place, casinos, cercles de jeu, débits de tabac, discothèques, hôtels et restaurants.

Full text at: <http://www.legifrance.gouv.fr/affichTexte.do?cidTexte=JORFTEXT000000818309&dateTexte>

Greece

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking allowed in designated smoking areas	Smoking allowed in designated smoking areas	Smoking banned altogether. On ships allowed in designated smoking rooms.	Smoking allowed in designated smoking areas	Smoking allowed in designated smoking areas - for employees in institutions of primary and secondary education and both for employees and students in institutions of tertiary education	No restrictions	<p>The Health Regulations Y1/GP oik.76017 (FEK* 1001/v.b /01-08-02) and Y1/GPoik. 82942 (FEK* 1292/v. b/12-09-03) entered into force in September 2003.</p> <p>Smoking in workplaces, public places, and healthcare facilities is allowed in designated smoking areas equipped with ventilation and is banned completely in means of public transport There are no restrictions on smoking in the hospitality sector.</p> <p>A draft Law for the total smoking ban in all public places as of Jan. 2010 has been prepared by the Ministry of Health and Social solidarity and presented to the Parliament in May 2008.</p>

Legal provisions

Decision No Y1/G.P./OIK. 76017
of 29 July 2002

Imposing a ban on smoking in public places, means of transport and health service units.

THE MINISTER FOR HEALTH AND WELFARE
(HEALTH REGULATION)

We issue this Health Regulation, which shall apply throughout the country.

I. We ban smoking in the following areas:

a. In all buildings housing public service offices, offices belonging to bodies established under public law and those belonging to bodies established under private law which are supervised and subsidised by the State; in organisations and other institutions (Hellenic Telecommunications Organization, Public Power Corporation, Hellenic Post, etc.); and in workplaces which belong to private bodies, as well as in public waiting areas (airport waiting areas, railway station waiting areas, bus station waiting areas, etc.);

b) In all health service units, such as:

- 1) Hospitals
- 2) Private Clinics
- 3) Health Centres
- 4) District Surgeries
- 5) Public Surgeries
- 6) Surgeries belonging to bodies established under public law and those belonging to bodies established under private law (Social Insurance Institute, etc.)
- 7) Private Surgeries – Dental Surgeries
- 8) Pharmacies
- 9) Other Primary Health Care (PHC) services
- 10) In all areas not mentioned above, where health services are provided.

c) In all education premises, such as:

- 1) Primary Schools (Public or Private)
- 2) Secondary and Post-secondary Schools (Public or Private)
- 3) Universities, Technical Institutions and general tertiary education institutions
- 4) Private Tuition Centres

d) In all nurseries, kindergartens, crèches and playgrounds.

Special areas shall be designated for smokers in the workplace, where powerful ventilation systems shall be in place, in all buildings housing public service offices, offices belonging to bodies established under public law and those belonging to bodies established under private law, which are

subject to supervision and subsidies by the State, in organisations and other institutions (Hellenic Telecommunications Organization, Public Power Corporation, Hellenic Post, etc.), and in hospitals, private clinics, health centres and surgeries belonging to bodies established under public law and those belonging to bodies established under private law (Social Insurance Institute, etc).

In the case of primary and secondary schools and private tuition centres, the above mentioned regulations shall apply only to employees who wish to smoke, while in the case of tertiary education institutions they shall apply both to employees (scientific, administrative and auxiliary personnel) and students.

The areas shall be designated by directors/supervisors of the competent bodies in accordance with their needs, so that the fundamental function of their services is not impeded.

II. Smoking is also banned in means of transport:

- 1) Buses (KTEL, city buses, coaches, school buses, etc.)
- 2) Trains (Hellenic Railways Organisation, METRO, Athens-Piraeus Electric Railways, etc.)
- 3) Ships operating on domestic routes: a well ventilated smoking room shall be designated if possible on every deck
- 4) Airplanes operating on domestic routes
- 5) Taxi

III. Moreover, smoking is also banned in all public health facilities pursuant to the provisions of Article 5 of Health Regulation No A1b/8577/83 (Government Gazette 526/83 II), with the exception of non-food serving bars and traditional cafés in accordance with Article 37, and entertainment places in accordance with Article 41.

In particular, in the facilities referred to in Articles 37, 38 and 39 and in the food-serving facilities referred to in Article 40 of the aforementioned Health Regulation, smoking shall be permitted within a section of the clients area, which shall be divided physically or visibly and shall be marked with a special sign that shall read 'smoking area'. The non-smoking area, which shall comprise a surface area of at least 50% of the entire clients area, shall be depicted in the plans for obtaining a permit to set up and operate a business and it shall be inscribed on the operating permit.

The smoking area shall have a special mechanical system of continuous and complete air renewal.

In cases where the above mentioned facilities use open-air spaces exclusively or in conjunction with an enclosed clients area in order to provide additional seating, smoking shall be permitted in the open-air spaces in accordance with the provisions in force.

IV. Those responsible for implementing the provisions of this Health Regulation are as follows:

Regarding hospitals and private clinics: Managers and Administrative Directors;

Regarding all other areas mentioned above: the direct supervisors of the services where smoking areas are located;

Regarding all other areas belonging to private companies: the operators.

Transitional provisions

Existing public health facilities and health service units shall implement this Regulation within a reasonable period of time stipulated by the competent health service, and no later than six months.

In particular, those responsible for public health facilities shall affix a ground plan of the clients area next to the operating permit on a scale of 1 to 50, in which both smoking and non-smoking areas shall be depicted in accordance with the provisions of this Regulation.

Moreover, the administration of public services, bodies established under public law and bodies established under private law which are supervised and subsidised by the State, of organisations and other institutions (Hellenic Telecommunications Organization, Public Power Corporation, Hellenic Post, etc.), as well as those responsible for public waiting areas, shall ensure that the aforementioned provisions are implemented within a reasonable period of time and no later than six months.

Penalties

Any person infringing this Regulation shall be prosecuted and punished in accordance with Article 3 of Emergency Act No 2520/40 (Government Gazette 273/40 I) on Health Regulations, as replaced by Article 1 of Act No 290/1943 (Government Gazette 185 I), which was ratified by Act No 303/1946 and replaced by Article 4(4) of Act No 2207/94 (Government Gazette 65 I), and replaced once again by Article 11(10) of Act No 2307/95 (Government Gazette 113/95 I).

Moreover, any person infringing the provisions of this Regulation within health units shall be subject to the following administrative penalties:

- a) regarding patients who infringe this Regulation: disciplinary discharge note;
- b) regarding visitors or companions who infringe this Regulation: expulsion from the unit;
- c) regarding those responsible for implementing the provisions of this Regulation and those working in health units: disciplinary penalties shall be imposed in accordance with the provisions of the Civil Service Code.

The competent health and other state bodies shall be responsible for implementing this Regulation. This Regulation shall enter into force a fortnight after its publication in the Government Gazette.

Decision No Y1/GP/OIK 82942

of 1 September 2003

Supplementing Health Regulation No Y1/GP/76017/29.7.02 (Government Gazette 1001 II/1.8.2002) imposing a ban on smoking in public places, means of transport and health service units.

THE MINISTER

FOR HEALTH AND SOCIAL WELFARE

We supplement Health Regulation No Y1/GP/76017/29.7.02 (Government Gazette 1001/1.8.2002 II) as follows:

Subparagraph 5 shall be added to paragraph 1(4), as follows:

Smoking shall be forbidden in public and private waiting areas, reception areas, places of public gathering and business, meeting rooms, conference auditoriums, amphitheatres, etc. Regarding other workplaces, areas where smoking shall be banned or permitted shall be systematically and spatially designated , following dialogue and bilateral agreements between employees and employers.

The competent health and other state bodies shall be responsible for implementing this Regulation. This Regulation shall enter into force a fortnight after its publication in the Government Gazette.

Germany

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Employers obliged to protect non-smokers against passive smoking at federal and Länder (state) level except for workplaces accessible to the public	Smoking banned at Länder level. In some states smoking rooms are allowed	Smoking banned altogether at federal level	Smoking banned at Länder level. In some Länder smoking rooms are allowed	Smoking banned at Länder level. In a few Länder smoking rooms are allowed; smoking banned in outdoor areas of schools	Differs by Land Bans on smoking in hospitality establishments in all Länder. Most of the Länder allow for separate smoking rooms. Some allow also for other exemptions such as the creation of private clubs or smoking in tents at wine and beer festivals.	<p>Regulations at federal level:</p> <p>The amendment of the workplace ordinance, which entered into force in Oct. 2002, requires that the employer has to take “all necessary measures to effectively protect non-smoking employees against the health hazards of tobacco smoke in the workplace”. The amendment in 2008 specified that a ban on smoking in the workplace is one of the ways to provide protection. In workplaces open to the public (i.e. primarily hospitality sector but also other areas where smoking by customers and visitors is allowed) the employers’ obligations are more limited and “go only as far as the nature of the enterprise and the type of employment allow”.</p> <p>The federal government prohibited smoking in government buildings, on public transport (including taxis) and at public transport stations in February 2007 and this measure came into effect on 1st September 2007.</p> <p>Regulations at Länder (state) level</p> <p>In March 2007, the Germany's 16 Länder concluded a framework agreement with the federal government on introducing a smoking ban in the areas where the states have responsibility (Land and local institutions, educational facilities, health care facilities,</p>

					<p>cultural institutions, sport facilities, hospitality venues and other public places). Each Land had to enact the law through its own legislature.</p> <p>Between August 2007 and July 2008, all 16 Länder adopted bans on smoking in enclosed public places including bars, pubs and restaurants. The laws differ from Land to Land, in particular in the hospitality sector. Most of the Länder (except for Bavaria) allow for smoking in separate smoking rooms. Some allow also for other exemptions such as the creation of private smoking clubs.</p> <p>On 30 July 2008, the Federal Constitutional Court declared the smoke-free regulations of two Länder (Baden-Württemberg and Berlin) partly unconstitutional because of discriminatory exemptions. The Court noted that single-room pubs, which cannot create physically separate areas for smokers as could larger bars and restaurants, are placed at a considerable disadvantage by the existing laws. Likewise, the smoking ban in the discotheques is not justified as long as other types of venues are allowed to create separate smoking rooms.</p> <p>The Court decided that current rules are to remain in effect until the end of 2009, by which time the Länder will have to make constitutionally correct laws. The court offered two options: a total smoking ban in the hospitality sector without any exemptions or exemptions for small single-room venues in addition to the possibility of separating rooms.</p> <p>Until the smoking rules are revised, the Court has granted provisional exemptions to pubs of less than 75 m² that do not serve meals and do</p>
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						<p>not allow people under 18 and to separate rooms in discotheques, provided that smoking is not permitted on the dance floor and that people under 18 are not allowed into any part of the disco.</p> <p>The Court decision indirectly applies to all German Länder – except for Bavaria that enacted strict smoking ban whose constitutionality has been confirmed in a separate Court ruling.</p>
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Legal provisions

Verordnung über Arbeitsstätten

(Arbeitsstättenverordnung - ArbStättV)

§ 5 Nichtraucherschutz

(1) Der Arbeitgeber hat die erforderlichen Maßnahmen zu treffen, damit die nicht rauchenden Beschäftigten in Arbeitsstätten wirksam vor den Gesundheitsgefahren durch Tabakrauch geschützt sind. Soweit erforderlich, hat der Arbeitgeber ein allgemeines oder auf einzelne Bereiche der Arbeitsstätte beschränktes Rauchverbot zu erlassen.

(2) In Arbeitsstätten mit Publikumsverkehr hat der Arbeitgeber Schutzmaßnahmen nach Absatz 1 nur insoweit zu treffen, als die Natur des Betriebes und die Art der Beschäftigung es zulassen.

Full text at: http://www.bundesrecht.juris.de/bundesrecht/arbst_tv_2004/gesamt.pdf

Summary of Länder legislation by DEHOGA

BUNDESVERBAND

Situation as of 9 April 2008

Land (bill)	Scope	Exemptions	Rules on separate smoking rooms	Signposting obligations	Fines	Entry into force/ adoption
<p>Baden-Württemberg (LNRSG)</p> <p>http://www.pro-rauchfrei.de/Gesetzentwurf-Baden-Wuerttemberg.pdf</p>	<ul style="list-style-type: none"> Smoking is banned in catering establishments: pubs, bars, night clubs, winegrowers' taverns and all other catering establishments (including temporary ones) (§7, para. 1, subpara. 1) Clubhouses Discotheques (§7, para. 1, subpara. 1) 	<ul style="list-style-type: none"> Beer, wine and festival tents, outside catering facilities and travel industry (§7, para. 1, subpara. 2) Toilet access routes Forming a club in order to circumvent the rules is not allowed 	<ul style="list-style-type: none"> As an exemption from para. 1 – in completely separated side-rooms, provided these are clearly indicated as smoking rooms. Smoking is permitted in these rooms if and as long as non-smoker protection is not compromised (§7, para. 2). Model: §§7 and 14(1) LBOAVO For clarification: not in discotheques 	<ul style="list-style-type: none"> Reference to general smoking ban In both smoking and no-smoking areas (§§7, para. 2, subpara. 1 and 8, para. 1, subpara. 2) 	<ul style="list-style-type: none"> Only for customers: up to €40, or up to €150 for repeat offences 	<ul style="list-style-type: none"> 01.08.2008 25.07.2007
<p>Bavaria (GSG)</p> <p>http://www.pro-rauchfrei.de/Gesetzentwurf-Bayern.pdf</p>	<ul style="list-style-type: none"> Total smoking ban §1 GastG, 1998 version, <i>in as far as rooms are publicly accessible</i> Discotheques (Article 2, No 8 in conjunction with Article 3, para. 1, subpara. 1) 	<ul style="list-style-type: none"> Private parties, as long as the catering establishment operator agrees 'Club solutions' possible So far only for 2008: smoking is permitted in beer festival tents 	None	None	<ul style="list-style-type: none"> For smokers and establishment operators between €5 and €1 000 	<ul style="list-style-type: none"> 01.01.2008 12.12.2007
<p>Berlin (NRSG)</p> <p>http://www.pro-rauchfrei.de/Gesetzentwurf-Berlin.pdf</p>	<ul style="list-style-type: none"> §1 GastG, 1998 version Travel industry establishments involved in events No exemptions for festival tents or clubhouse catering facilities 	<ul style="list-style-type: none"> (Hotel and guesthouse rooms, §4, para. 1, No 1) 	<ul style="list-style-type: none"> Separated side-rooms for smoking may be provided. The number of places in the no-smoking area must be substantially higher than the number of places in the smoking room. Not in discotheques to which young people under the age of 18 are admitted (§4, para. 3). 	<ul style="list-style-type: none"> Both smoking and no-smoking areas (§5, subpara. 1) 	<ul style="list-style-type: none"> For smokers up to €100 For catering establishment operators up to €1 000 Operators also for failure to display signs 	<ul style="list-style-type: none"> 01.01.2008 Fines as from 1.7.2008 08.11.2007

Land (bill)	Scope	Exemptions	Rules on separate smoking rooms	Signposting obligations	Fines	Entry into force/ adoption
			<ul style="list-style-type: none"> The question of whether serving in smoking rooms is permitted is controversial. It is not possible to imply a ban from the legislation. However, smoking rooms should be designed and used in such a way as to prevent a health hazard as a result of passive smoking. 			
Brandenburg (NiRSchG) http://www.pro-rauchfrei.de/Gesetzentwurf-Brandenburg.pdf	<ul style="list-style-type: none"> §1 GastG, 1998 version, closed rooms General smoking ban in discotheques Shopping centres Beer, wine and festival tents (§§2, para. 1, No 8 and paras 2 and 3, Nos 8 and 9) 	<ul style="list-style-type: none"> Exemptions may be granted by the <i>Land</i> health department, as long as structural or other measures ensure that third parties are not put at risk (§4, para. 3) 	<ul style="list-style-type: none"> The smoking ban does not apply in catering establishment side-rooms, as long as structural or other measures ensure that the health of third parties is not at risk. For clarification: not in discotheques (§4, para. 2, subpara. 2) 	<ul style="list-style-type: none"> Only smoking areas (§5) 	<ul style="list-style-type: none"> For smokers between €5 and 100 For catering establishment operators between €10 and 1 000 	<ul style="list-style-type: none"> 01.01.2008 Fines as from 1.7.2008 14.12.2007
Bremen (BremNiSchG) http://www.pro-rauchfrei.de/Gesetzentwurf-Bremen.pdf	<ul style="list-style-type: none"> Catering establishments where drinks or prepared foods are served on a commercial basis on the spot (§1 GastG) Discotheques (§2, para. 1, No 8) 	<ul style="list-style-type: none"> None apart from separate side-rooms 	<ul style="list-style-type: none"> Separated side-rooms may be established. They must be separated structurally in an effective manner which prevents others being put at risk by passive smoking. Any side-room must be smaller than the main room used by customers. The room in which the bar is located is usually the main room (§3, para. 5) Also in discotheques (but only in side-rooms without a dance 	<ul style="list-style-type: none"> Only to indicate the smoking ban (§4) 	<ul style="list-style-type: none"> Smokers up to €500 Catering establishment operators up to €2 500 Operators also for failure to display signs 	<ul style="list-style-type: none"> 1 January 2008 Fines from 1.7.2008

Land (bill)	Scope	Exemptions	Rules on separate smoking rooms	Signposting obligations	Fines	Entry into force/ adoption
			floor)			
Hamburg (HmbPSchG) http://www.pro-rauchfrei.de/Gesetzentwurf-Hamburg.pdf	<ul style="list-style-type: none"> Establishments where drinks or prepared foods are served for consumption on the spot (catering establishments), including those operated as discotheques. The smoking ban also applies to catering establishments in shopping centres Applies to all fully enclosed rooms (§2, para. 1, Nos 9 and 11 in conjunction with para. 2, subpara. 1) 	<ul style="list-style-type: none"> Festival tents at local temporary events and clubhouses of registered societies are exempted from the smoking ban (§2, para. 4) 	<ul style="list-style-type: none"> Separated smoking rooms may be established. They must be separated structurally in an effective manner which prevents others being put at risk by passive smoking, and must be ventilated and indicated by specific signs (§2, para. 3, subpara. 1) Also in discotheques 	<ul style="list-style-type: none"> Only smoking areas (§2, para. 3, subpara. 2 and §3) 	<ul style="list-style-type: none"> For smokers between €20 and 200 For catering establishment operators between €50 and 500 Operators must ask smokers to stop smoking or leave the premises, or must call the police. They can also be fined for failure to display signs. 	<ul style="list-style-type: none"> 1 January 2008 Adopted on 04.07.2007 Proclaimed on 11.07.2007
Hessen (HessNRSG) http://www.pro-rauchfrei.de/Gesetzentwurf-Hessen.pdf	<ul style="list-style-type: none"> §1 GastG, 1998 version, closed rooms in all catering establishments Discotheques Winegrowers' taverns Temporary catering establishments in sports and multipurpose halls, Shisha bars, private parties, hybrid establishments, e.g. gambling halls 	<ul style="list-style-type: none"> Club rooms used only by club members and not open to the public are not covered. Innovation clause: technical measures which offer equivalent protection to a smoking ban Beer, festival and wine tents in use for a maximum of 21 days (§2, para. 5) 	<ul style="list-style-type: none"> Completely separated side-rooms which must not be the main room for customers may be established in catering establishments. The smoking room must not be bigger than the main room. Also in discotheques (§2, para.4) 	<ul style="list-style-type: none"> Both smoking and no-smoking areas (§2, para. 4, §3) 	<ul style="list-style-type: none"> For smokers up to €200 For catering establishment operators up to €2 500 (appropriate measures to prevent infringements) 	<ul style="list-style-type: none"> 1.10.2007 Adopted on 06.09.2007
Mecklenburg-	<ul style="list-style-type: none"> §1 GastG, 1998 version (Accommodation 	<ul style="list-style-type: none"> (Accommodation establishments may 	<ul style="list-style-type: none"> Smoking areas may be established as separate 	<ul style="list-style-type: none"> Both smoking and no-smoking areas (§2, 	<ul style="list-style-type: none"> For smokers up to €500 	<ul style="list-style-type: none"> 1 August 2007

Land (bill)	Scope	Exemptions	Rules on separate smoking rooms	Signposting obligations	Fines	Entry into force/ adoption
Western Pomerania (NichtRSchG) http://www.pro-rauchfrei.de/Gesetzentwurf-Mecklenburg-Vorpommern.pdf	<i>establishments, hotels, guest houses</i> <ul style="list-style-type: none"> Discotheques Winegrowers' taverns (§10, para. 1, No 10) 	<i>designate individual guest rooms as smoking areas, §2, para. 1</i>	rooms (§2, para. 1) <ul style="list-style-type: none"> Also in discotheques 	para. 1, subpara. 2, §3)	<ul style="list-style-type: none"> For catering establishment operators up to €10 000 Operators also for failure to display signs 	<ul style="list-style-type: none"> For catering establishments from 1.1.2008; fines from 1.8.2008
Lower Saxony (Nds.NiRSG) http://www.pro-rauchfrei.de/Gesetzentwurf-Niedersachsen.pdf	<ul style="list-style-type: none"> Closed rooms in catering establishments which are accessible to customers Discotheques Wine, beer and festival tents, winegrowers' taverns (§1, para. 1, subpara. 1, No 10) <i>also in clubhouses with commercially run catering facilities</i> Shopping centres ('market hall regulation'), so-called 'large solution' (§1, para. 1/1, subpara. 2) 	<ul style="list-style-type: none"> In accommodation establishments, smoking may be permitted in the restaurant/bar etc. if food and drink are served exclusively to persons staying there (§2, para. 2, No 1) Clubs may not be founded in order to circumvent the rules 	<ul style="list-style-type: none"> The smoking ban does not apply in a completely separated side-room in an establishment, provided it does not exceed half the size of the total area accessible to customers (§2, para. 2) Also in discotheques 	<ul style="list-style-type: none"> Smoking area (§3, para. 1, No 7) Permanent and clearly visible signs at the entrance; size and colour at the operator's discretion No-smoking area (§1, para. 4) 	<ul style="list-style-type: none"> Smokers Catering establishment operator Operators also for failure to display signs Offences may give rise to a fine of between €5 and €1 000 	<ul style="list-style-type: none"> 1 August 2007 Fines from 1.11.2007 11.07.2007
North Rhine-Westphalia	<ul style="list-style-type: none"> Cafés, bars and restaurants, regardless of the type, size and number of rooms Including discotheques Reference to usual 	<ul style="list-style-type: none"> The smoking ban does not apply to temporary festival tents or <i>private parties in restaurants</i> (§4, 	<ul style="list-style-type: none"> Separated smoking rooms may be established. They must take up a lesser proportion of the establishment's area (§4, subparas 2 and 3) 	<ul style="list-style-type: none"> Both smoking and no-smoking areas (§3, para. 2, subpara. 1, No 2 and §4, subpara. 2) 	<ul style="list-style-type: none"> Smokers Catering establishment operators failing to display signs Operators must 	<ul style="list-style-type: none"> 1 January 2008 For restaurant

Land (bill)	Scope	Exemptions	Rules on separate smoking rooms	Signposting obligations	Fines	Entry into force/ adoption
http://www.pro-rauchfrei.de/gesetzgebung-nordrhein-westfalen.htm	terminology in §1 GastG	<i>para. 4),</i> 'Use of clubs and societies whose exclusive purpose is the common consumption of tobacco' (§3, para. 7) <ul style="list-style-type: none"> Innovation clause: technical measures which offer equivalent protection to a smoking ban (§3, para. 8) 	<ul style="list-style-type: none"> Also in discotheques 		<p>take the necessary measures to enforce the smoking ban</p> <ul style="list-style-type: none"> Offences may give rise to a fine of between €5 and €1 000 	s from 01.07.2008
<p>Rheinland-Pfalz (NRSG)</p> <p>http://www.pro-rauchfrei.de/Gesetzentwurf-Rheinland-Pfalz.pdf</p>	<ul style="list-style-type: none"> Catering establishments within the meaning of the Catering Establishment Act are smoke-free. This applies to all bars, cafés and restaurants and all other rooms where customers are present, including dance floors in discotheques and other dance establishments in buildings or parts of buildings (§7, para. 1) Does not apply for a period of three months from 11.2.2008 for owner-managed one-room catering establishments without other staff, if signs to this effect are clearly 	<ul style="list-style-type: none"> Smoking may be permitted (appropriately indicated) in wine, beer and other festival tents if used at the same location for no more than 21 consecutive days (§7, para. 3) 	<ul style="list-style-type: none"> Separated side-rooms for smokers may be established. The area and number of seats in rooms where smoking is allowed must not be bigger than in the other (no-smoking) rooms used by customers (§7, para. 2) Also in discotheques (but only in side-rooms without dance floors) 	<ul style="list-style-type: none"> Both smoking and no-smoking areas (§7, para. 2 and 3, §9) 	<ul style="list-style-type: none"> Up to €500 for catering establishment operators failing to display signs Up to €1 000 for catering establishment operators failing to enforce the smoking ban 	<ul style="list-style-type: none"> 15 February 2008 5 October 2007

Land (bill)	Scope	Exemptions	Rules on separate smoking rooms	Signposting obligations	Fines	Entry into force/ adoption
VGH RHP: interim arrangement 11.2.2008	placed in the entrance area					
Saarland http://www.pro-rauchfrei.de/Gesetzentwurf-Saarland.pdf VGH Saarland interim	<ul style="list-style-type: none"> • §1 GastG independent of the type of licence • Accommodation establishments • Discotheques • Festival tents (§2, para. 1, No 7) • Clubhouses • Does not apply at the moment to Shisha bars 	<ul style="list-style-type: none"> • Owner-managed catering establishments. This means that no staff other than the operator are employed, apart from occasional assistance from adult family members. • Applies also to clubhouses • Beer, wine and other festival tents, if used temporarily for no more than 14 consecutive days (§3, para. 7) 	<ul style="list-style-type: none"> • Separated smoking rooms, The area and number of seats must not be bigger than the rest of the rooms used by customers (§3, para. 3, No 1) • For clarification: also in discotheques (§3, para. 5), but only in side-rooms without dance floor 	<ul style="list-style-type: none"> • Owner-managed establishments must have signs identifying them as such (§3, para. 8) • Both smoking and no-smoking areas (§3, para. 8 and §4) 	<ul style="list-style-type: none"> • Up to €1 000 for catering establishment operators who fail to display signs • Up to €1 000 for catering establishment operators who fail to enforce the smoking ban • Up to €200 for customers who infringe the smoking ban 	<ul style="list-style-type: none"> • 15 February 2008 • Fines from 1 June 2008

Land (bill)	Scope	Exemptions	Rules on separate smoking rooms	Signposting obligations	Fines	Entry into force/ adoption
<i>arrangement</i> <i>27.3.2008</i>						
Saxony (SächsNSG) http://www.pro-rauchfrei.de/Gesetzentwurf-Sachsen.pdf <i>VGH Saxony interim arrangement 27.3.2008</i>	<ul style="list-style-type: none"> • §1 GastG, 1998 version • Establishments subject to the provisions of the GastG • Discotheques • Does not apply for a period of three months from 27.3.2008 for owner-managed one-room catering establishments without staff, provided this is clearly indicated in the entrance area. 	<ul style="list-style-type: none"> • None, other than separate side-rooms 	<ul style="list-style-type: none"> • Separated side-rooms for smoking are permitted. The biggest room must be no-smoking. • For clarification: not in discotheques (§4, No 3) 	<ul style="list-style-type: none"> • Both smoking and no-smoking areas (§4, No 3, §5, para. 2) 	<ul style="list-style-type: none"> • Up to €5 000 for smokers or catering establishment operators • Operators also for failure to display signs 	<ul style="list-style-type: none"> • 1 February 2008 • 26.09.2007
Saxony Anhalt http://www.pro-rauchfrei.de/Gesetzentwurf-	<ul style="list-style-type: none"> • §1 GastG independently of the type of licence • Shopping centres • Other buildings in which services are provided (§2, No 10) • Discotheques (§2, No 11) 	<ul style="list-style-type: none"> • None, other than separate side-rooms 	<ul style="list-style-type: none"> • Closed rooms may be established in which smoking is allowed, provided they are separated in such an effective way as to prevent any hazards as a result of passive smoking and are specifically indicated as smoking rooms. 	<ul style="list-style-type: none"> • Smoking room (§4, No 6) • Otherwise an obligation to provide information, but no rules on how (§6, subpara. 1) 	<ul style="list-style-type: none"> • Up to €1 000 for smokers • Up to €1 000 for catering establishment operators • Operators also for failure to display 	<ul style="list-style-type: none"> • 1 January 2008 • Fines from 1 July 2008

Land (bill)	Scope	Exemptions	Rules on separate smoking rooms	Signposting obligations	Fines	Entry into force/ adoption
Sachsen-Anhalt.pdf			(§4, subparas 2 and 3) <ul style="list-style-type: none"> The room size is of no consequence; unlike in other <i>Länder</i>, catering establishment operators are free to decide which room should be the smoking room. Not in discotheques 		signs	
Schleswig-Holstein (NiSchG) http://www.pro-rauchfrei.de/Gesetzentwurf-Schleswig-Holstein.pdf	<ul style="list-style-type: none"> §1 GastG, 1998 version All fully enclosed rooms Discotheques Catering establishments in shopping centres (§2, para. 2 in conjunction with para. 1, No 7) 	<ul style="list-style-type: none"> For private parties, separate event rooms may be designated as smoking rooms. Beer, wine and other festival tents operating temporarily for a maximum of 21 consecutive days 	<ul style="list-style-type: none"> Separated smoking rooms may be established. These must be separated structurally in such an effective manner that any health risk to others as a result of passive smoking is prevented. The smoking room should be the smaller room. Also in discotheques. Rooms may also change, e.g. larger hall and smaller room 	<ul style="list-style-type: none"> Only smoking area (§3) 	<ul style="list-style-type: none"> Up to €1 000 for smokers Up to €1 000 for catering establishment operators Operators also for failure to display signs 	<ul style="list-style-type: none"> 1 January 2008 Adopted on 21 November 2007
Thuringia (ThürNRSchG) http://www.pro-rauchfrei.de/Gesetzentwurf-Thuringen.pdf	<ul style="list-style-type: none"> §1 GastG, 1998 version Act applies also to hotels, but not to accommodation rooms Publicly accessible club rooms are included Discotheques (§2, No 7, 9, 10 in conjunction with §3, paras 1 and 2) 	<ul style="list-style-type: none"> (<i>Hotel and guesthouse rooms, §4, para. 1, subpara. 1</i>) 	<ul style="list-style-type: none"> Separated smoking rooms may be established. These must be separated structurally from the other rooms in such a way that there is no permanent exchange of air (§5) For clarification: also in discotheques 	<ul style="list-style-type: none"> Only smoking area (§5, subpara. 2) 	<ul style="list-style-type: none"> For smokers between €20 and 200 For catering establishment operators between €50 and 500 Operators also for failure to display signs 	<ul style="list-style-type: none"> 1 July 2008 20.12.2007

Available in German at:

http://www.dehoga-bundesverband.de/uploads/branchenthemen/nichtraucherschutz/synopse_nrsgesetze_in_den_bundeslaendern.pdf

Further info: <http://www.pro-rauchfrei.de/gesetzgebung.htm>

Hungary

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking allowed in designated areas	Smoking allowed in designated areas	Smoking allowed in designated areas Banned altogether on means of local public transport, local and suburban railways and on scheduled intercity buses	Smoking allowed in designated areas Banned altogether in institutions providing basic health services or outpatient care, in the customer areas of pharmacies and in institutions providing inpatient care principally to children.	Smoking banned altogether in areas within public education institutions that are also used by students	In restaurants , smoking allowed in designated areas In primarily non-food establishments, smoking may be conducted without the designation of a smoking area.	Smoking in workplaces and public places is regulated by Act XLII of 1999 on the Protection of Non-Smokers and Certain Regulations on the Consumption and Distribution of Tobacco Products According to the Act, in workplaces and most public places smoking is allowed in designated areas. In education facilities, most forms of public transport and most healthcare facilities, smoking is banned altogether. In January 08, Health Minister stated that the Health Ministry is drafting a comprehensive smoking ban covering all indoor workplaces and public places, including bars and restaurants. In May, there has been a change at the post of the health minister. The draft law would need to be approved by the cabinet before it is submitted to the parliament.

Legal provisions

Act XLII of 1999 on the Protection of Non-Smokers and Certain Regulations on the Consumption and Distribution of Tobacco Products

Fundamental Provisions on the Consumption of Tobacco Products

Section 2.

(1) With the exception of areas designated for smoking - and with the deviation contained in Subsection (3)- smoking is prohibited

a) in confined areas, which are open to persons using the services of public institutions;

- b) on means of public transport;
- c) at events held in confined spaces;
- d) at places of work, in the cases defined in a separate legal regulation and according to the instructions of the employer.

(2) Smoking areas may not be designated

- a) at the premises of medical institutions providing basic health services or outpatient care, or departments of medical institutions offering such services, and in the customer areas of pharmacies, furthermore, in buildings of providers of health services providing inpatient care principally to children;
- b) in nursery schools;
- c) in areas within public education institutions, other than those referred to in Paragraph b), that are also used by students;
- d) in institutions of child care and child protection;
- e) in communal areas of social institutions offering personal solicitude services;
- f) on means of local public transport, local and suburban railways and on scheduled intercity buses;
- g) in the confined areas of sports facilities serving the performance of sport activities.

(3) In derogation of the provisions set forth in Subsection (1)- if not prohibited by any fire regulations - smoking may be conducted without the designation of a smoking area

- a) in the public and guest areas of restaurants and other establishments of the entertainment and hospitality industry which are designated exclusively for serving foodstuffs and beverages for guests, if hot and cold food as well as pastries are not served there to be consumed on the premises, or are served only as a supplementary service in accordance with the sphere of business activities

(4) A smoking area may only be designated in the same premises if the air space thereof can be separated from the other part of the premises or if the separation can be resolved satisfactorily with the use of an air control device. The area designated for smoking may only be in a confined space if the required ventilation conditions are met by means of doors and windows or with the installation of other technical equipment, and the presence in such space of other non-smoking persons arising from the function of the premises - in addition to the execution of tasks in the course of employment activities, with due consideration of the provisions of Act XCIII of 1993 on Labor Safety - is not required.

Section 4.

(6) An operator of a public institution providing entertainment or hospitality services may declare the institution a non-smoking establishment. In this case there is no need to designate a smoking area in the institution. The non-smoking status of the institution must be displayed in an easily visible manner using unambiguous wording or signs at the entrance to the institution open to the general public, as well as in all places used by guests.

Italy

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking allowed only in separately ventilated smoking rooms	Smoking allowed only in separately ventilated smoking rooms	Smoking banned altogether	Smoking allowed only in separately ventilated smoking rooms	Smoking allowed only in separately ventilated smoking rooms	Smoking allowed only in separately ventilated smoking rooms that occupy less than half of the overall serving area	Art. 51 of Law 3 of 16 January 2003 set out a comprehensive smoking ban applicable to all enclosed premises, except private ones and to separately ventilated smoking rooms. The technical requirements for smoking rooms have been set out by the decree of 23 December 2003 The law entered into force in January 2005.

Legal provisions

Law No 3 of 16 January 2003

Article 51

(Safeguarding the health of non-smokers)

1. Smoking shall be prohibited in enclosed premises, apart from:

- a) private premises not open to users or the public;
- b) premises reserved for smokers and indicated as such.

2. The establishments and workplaces referred to in paragraph 1 (b) must be equipped with installations in regular operation for the ventilation and circulation of air. In order to ensure the essential levels of the right to health, the technical properties of the installations for the ventilation and circulation of air shall be defined, within 180 days after the date of publication of this law in the *Gazzetta Ufficiale*, in a regulation to be proposed by the Minister for Health and issued in accordance with Article 17 (1) of Law No 400 of 23 August 1988 and subsequent amendments. The same regulation shall define the premises reserved for smokers and the specimen signs relating to the implementation of the provisions of this article.

3. In catering establishments, in accordance with paragraph 1 (b), one or more rooms must be reserved for non-smokers and their surface area must be more than half of the overall serving area of the establishment.

4. In a regulation to be proposed by the Minister for Health and issued in accordance with Article 17 (1) of Law No 400 of 23 August 1988 and subsequent amendments, other enclosed premises where smoking is permitted may be specified in compliance with the provisions of paragraphs

1-3. There must be provision in this regulation for all facilities accommodating people on a non-voluntary basis to have rooms reserved for smokers.

Prime Ministerial Decree of 23 December 2003

Implementation of Article 51 (2) of Law No 3 of 16 January 2003 as amended by Article 7 of Law No 306 of 21 October 2003 on 'safeguarding the health of non-smokers'.

Article 1:

1. This Decree transposes the Agreement between the State, the Regions and the Autonomous Provinces of Trento and Bolzano on safeguarding the health of non-smokers, that was ratified at the Standing Conference for Relations between the State, the Regions and Autonomous Provinces of Trento and Bolzano of 24 July 2003.

Article 2:

1. Annex 1, which is an integral part of this Decree, sets out the technical requirements for smoking rooms, their respective ventilation systems and for the specimen signs regarding the smoking ban.

Annex 1

Technical requirements for smoking rooms, their respective ventilation systems and for the specimen signs regarding the smoking ban.

1. Smoking rooms, in accordance with Article 51(1b) of Law No 3 of 16 January 2003, shall be marked accordingly and set up in such a way as to be appropriately separated from adjacent rooms, where smoking is prohibited. To this end, smoking rooms shall comply with the following structural requirements:

- a) they shall be enclosed on all four sides by floor-to-ceiling walls;
- b) they shall have an entrance with an automatically closing door which is normally in the closed position;
- c) they shall have appropriate signs that are in accordance with the provisions set out in points 9 and 10;
- d) they may not consist of rooms through which non-smokers have to pass.

2. Smoking rooms shall be equipped with appropriate mechanical means of forced ventilation in order to guarantee an additional supply of external fresh air or that is transmitted from other adjacent rooms where smoking is prohibited. The additional supply of fresh air shall be appropriately filtered. The minimum additional supply of air that shall be ensured is equivalent to 30 litres/second for each person who may be present in the room, in accordance with the law in force, on the basis of a density rating of 0.7 persons/ m². The maximum number of persons permitted on the basis of the capacity of the establishment shall be indicated at the entrance.

3. Smoking rooms shall be kept at a vacuum of at least 5 Pa (Pascal) in relation to the surrounding areas.

4. Smoking areas in catering establishments, in accordance with Article 51 of Law 3 of 16 January 2003, shall, in all cases, be less than half of the overall serving area of the establishment.

5. The air from smoking rooms may not be recycled and shall be extracted to the outside through appropriate systems and functional openings, in accordance with the provisions of the law in force on external atmospheric emissions and in compliance with municipal hygiene and building regulations.

6. The design, installation, maintenance and inspection of ventilation systems shall comply with safety and energy saving rules and regulations in

force, and with the technical standards of the Italian Unification Body (*UNI*) and of the Italian Electrotechnical Committee (*CEI*). Authorised entities shall provide an appropriate declaration that the systems have been installed in accordance with the rules of the trade and that they comply with the law in force. The Installation certificates attesting the appropriateness of the extraction systems and the annual certificates on the inspection and maintenance of the ventilation systems, shall, for the purpose of the required check, be kept at the disposal of the competent authorities.

7. Appropriate clearly visible signs pointing out this prohibition shall be posted in rooms where smoking is prohibited. For the purpose of uniformity within the national territory that is technically possible, these signs shall bear the words 'No Smoking' supplemented by the statutory requirements regarding the penalties applicable to offenders and the parties responsible for ensuring compliance with this prohibition and for detecting infringements.

8. In establishments with several rooms, in addition to the specimen sign set out in point 7, signs bearing only 'No Smoking' shall be posted in entrances or in prominent places.

9. Smoking rooms shall be marked, for reasons of uniformity referred to in point 7, with appropriate illuminated signs clearly indicating 'Smoking Area'.

10. Signs referred to in point 9 shall, in all cases, be supplemented by other illuminated signs bearing, for reasons of uniformity set out in point 7, the words 'Ventilation System Out of Order: Please Do Not Smoke' that are automatically triggered in the event of failure or malfunctioning of the additional ventilation systems and at the same time switch off the sign indicating the reserved area.

11. Any room which does not comply, even temporarily, with the technical requirements set out above may not implement the rules referred to in Article 51 of Law No 3 of 16 January 2003.

Ireland

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking banned altogether	Smoking banned altogether	Smoking banned altogether	Smoking banned altogether with the exception of nursing homes, hospices and psychiatric hospitals	Smoking banned altogether	Smoking banned altogether	<p>The relevant sections of the Public Health (Tobacco) Acts 2002 and 2004 came into force in March 2004, banning smoking in all workplaces, including bars and restaurants.</p> <p>There are exemptions for dwellings and places that act as de-facto residences such as hotel bedrooms, prisons, nursing homes and psychiatric hospitals. However, all employers (even those who are exempt) have a duty of care to employees and may introduce smoke-free policies.</p>

Legal provisions

Public Health (Tobacco) (Amendment) Act 2004

16.—The Principal Act is amended by the substitution of the following section for section 47:

“47.—(1) Subject to subsection (7), the smoking of a tobacco product in a specified place is prohibited.

(2) A person who contravenes subsection (1) shall be guilty of an offence.

(3) Where in relation to a specified place there is a contravention of subsection (1), the occupier, manager and any other person for the time being in charge of the specified place concerned shall each be guilty of an offence.

(4) In proceedings for an offence under this section, it shall be a defence for a person against whom such proceedings are brought to show that he or she made all reasonable efforts to ensure compliance with this section.

(7) This section shall not apply to—

(a) a dwelling,

(b) a prison,

(c) subject to paragraph (d), a place or premises, or a part of a place or premises, that is wholly uncovered by any roof, whether fixed or movable,

(d) an outdoor part of a place or premises covered by a fixed or movable roof, provided that not more than 50 per cent of the perimeter of that part is surrounded by one or more walls or similar structures (inclusive of windows, doors, gates or other means of access to or egress from that part),

(e) a bedroom in—

(i) a premises registered under Part III of the Tourist Traffic Act 1939 in a register established and maintained under that Part,

(ii) a premises for the time being specified in a list published, or caused to be published, under section 9 of the Tourist Traffic Act 1957, or

(iii) any other premises in which a person carries on business, being a business that consists of or includes the provision, in those premises, of sleeping accommodation to members of the public,

(f) a room that, in furtherance of charitable objects, is used solely for the provision of living accommodation,

(g) in premises owned or occupied by a person whose main objects are the provision of education, a room that, in furtherance of those objects (other than objects relating to the provision of primary or secondary education), is used solely for the provision of living accommodation,

(h) a nursing home,

(i) a hospice,

(j) a psychiatric hospital, or

(k) the Central Mental Hospital.

(8) In this section—

‘specified place’ means—

(a) a place of work,

(b) an aircraft, train, ship or other vessel, public service vehicle, or a vehicle used for the carriage of members of the public for reward other than a public service vehicle, insofar as it is a place of work,

(c) a health premises, insofar as it is a place of work,

(d) a hospital that is not a health premises, insofar as it is a place of work,

(e) a school or college, insofar as it is a place of work,

(f) a building to which the public has access, either as of right or with the permission of the owner or occupier of the building, and which belongs to, or is in the occupation of—

(i) the State,

(ii) a Minister of the Government,

(iii) the Commissioners of Public Works in Ireland,

or

(iv) a body established by or under an Act of the Oireachtas, insofar as it is a place of work,

(g) a cinema, theatre, concert hall or other place normally used for indoor public entertainment, insofar as it is a place of work,

(h) a licensed premises, insofar as it is a place of work, or

(i) a registered club, insofar as it is a place of work.”.

Full text at: <http://acts.oireachtas.ie/en.act.2002.0006.1.html> and <http://www.oireachtas.ie/documents/bills28/acts/2004/A0604.pdf>

Lithuania

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
<p>Special premises (places) may be set aside which are separated from non-smoking premises and meet certain ventilation requirements.</p>	<p>Smoking banned altogether</p>	<p>Smoking banned altogether except for long-distance trains where individual cars must be designated for smokers and aircrafts where separate places shall be designated for smokers and non-smokers</p>	<p>Smoking banned altogether</p>	<p>Smoking banned altogether</p>	<p>Banned altogether except cigar and pipe clubs specially fitted for the purpose of smoking.</p>	<p>The Law on Tobacco Control of 1995 banned smoking in educational establishments, healthcare facilities and some public places (Internet cafes, sports premises). In workplaces, special premises (places) may be set aside.</p> <p>The Hygiene Norm 122:2006 adopted by the Order of Ministry of Health Care of Nov. 2006 determines requirements for „special premises (places) in workplaces“. The order specifies that smoking premises must be separated from workplace, sanitary and domestic lodging which are also used by nonsmoking workers, clients or visitors, situated in such a way that it is not necessary to walk via them for nonsmoking workers, clients or visitors and meet certain ventilation requirements.</p> <p>As of Jan. 2007, the amendment to the Tobacco Control Law introduced a ban on smoking in bars, restaurants and other hospitality venues. One exception, however, is special cigar and pipe clubs. The specification of order on establishment and conditions of cigars clubs, approved by the government decision of Dec. 2006, determines, that equipment of cigar clubs are the same as for special smoking places in workplaces (the requirements of Hygiene Norm 122:2006 are applied). According to information from the ministry of health, there is only one cigar and bar pipe in Lithuania.</p> <p>As of July 2008, the new amendment of the Law extended the ban on smoking from Internet clubs and sport premises to all enclosed public places.</p>

Legal provisions

LAW ON TOBACCO CONTROL

20 December 1995 No I-1143
Vilnius

(As amended on 15 June 2006 – No X-699 and 26 June 2008 – No X-1637)

Article 19. Restrictions on the Consumption of Tobacco Products

1. It shall be prohibited to smoke (consume tobacco products) in the Republic of Lithuania:

- 1) in all educational establishments, health care facilities and their territories;
 - 2) at indoor workplaces. Special premises (places) may be set aside in undertakings, institutions and organisations where smoking shall be permitted. The requirements for fitting out and operating smoking premises (places) shall be set forth by the Government of the Republic of Lithuania or an institution authorised by it.
 - 3) in common-use residential and other public premises where non-smokers may be forced to breathe tobacco smoke-polluted air;
 - 4) in all types of public transport, except for long-distance trains where individual cars must be designated for smokers and non-smokers and also on aircraft where separate places shall be designated for non-smokers and smokers;
 - 5) in restaurants, café, bars and other catering establishments, clubs, discotheques, internet cafes (internet clubs, etc.), gaming-houses (casino), salons of slot-machines or bingo and other leisure establishments, in premises where sport competitions and other events take place and other public service premises, except for cigar or pipe clubs specially fitted out for this purpose. The procedure and conditions of establishing cigar and pipe clubs shall be set forth by the Government of the Republic of Lithuania or an institution authorised by it.
3. Municipal councils shall have the right to prohibit smoking in public places (parks, squares, etc.) and other public places falling within the scope of their competence.

4. The administrative bodies of a legal person must ensure that its personnel, clients and visitors are not forced to breathe tobacco smoke-polluted air; they must also ensure that non-smoking warnings or signs are displayed in visible locations and special premises (places) be set aside and fitted out for smoking with notices or signs indicating their location.

PROCEDURE AND CONDITIONS FOR THE ESTABLISHMENT OF CIGAR AND PIPE CLUBS

ADOPTED

by the Government of the Republic of Lithuania
by Resolution No 1320 of 22 December 2006

I. GENERAL PROVISIONS

1. The procedure and conditions for the establishment of cigar and pipe clubs (hereinafter referred to as "this Procedure") apply to cigar and pipe clubs in which it is not prohibited to smoke (consume tobacco products) pursuant to Article 19(1), point 5, of the Tobacco Control Law of the Republic of Lithuania (Official Gazette 1996, No. 11-281; 2003, Nr. 117-5317).
 2. The term "cigar and pipe club" as used in this Procedure shall mean premises meeting the requirements of this Procedure specifically established for the smoking of tobacco products.
- Other terms used in this Procedure shall be understood as defined in the Tobacco Control Law of the Republic of Lithuania.

II. CONDITIONS FOR THE ESTABLISHMENT OF CIGAR AND PIPE CLUBS

3. Cigar and pipe clubs may be established only in such places where, pursuant to Article 19(1) of the Tobacco Control Law of the Republic of Lithuania, it is not prohibited to smoke (consume tobacco products).
4. Cigar and pipe clubs shall meet the requirements laid down by legal acts for the establishment and operation of smoking rooms in firms, institutions and organisations.
5. Cigar and pipe clubs may be established solely in closed premises having a separate entrance (which is not also an entrance to the staircase of a residential building or an entrance to the premises of restaurants, cafes, bars, other public catering establishments, clubs, discotheques and other firms, institutions and organisations).
6. Cigar and pipe clubs shall be established in such a way that persons do not need to walk through them in order to reach other public spaces, workplaces, sanitary facilities or other premises, and persons working in such premises serving customers and visitors are not required to breathe in tobacco smoke via contaminated air.
7. At the entrance to cigar and pipe clubs there shall be a clearly visible indication that the premises in question are a cigar and pipe club and a warning that smoking and air contaminated with tobacco smoke is harmful to health and may cause cancer and lung, cardiovascular or other diseases.
8. The warning referred to in paragraph 7 of this Procedure shall be clear and legible. The board on which the warning is to be displayed shall not contain any text or signs in addition to the warning.

HYGIENE STANDARD HN 122:2006 "REQUIREMENTS FOR THE ESTABLISHMENT AND OPERATION OF ISOLATED SMOKING ROOMS (AREAS) IN FIRMS, INSTITUTIONS AND ORGANISATIONS"

I. GENERAL PROVISIONS

1. This Hygiene Standard lays down the requirements for the establishment and operation of isolated smoking rooms (areas) in firms, institutions and organisations.

2. This Hygiene Standard shall be complied with by all natural and legal persons of the Republic of Lithuania and by branches of legal persons of foreign states established in the Republic of Lithuania (hereinafter – "persons") which are planning, setting up, reconstructing or operating firms in which isolated smoking rooms (areas) are established and by those persons carrying out state monitoring and control.

3. Persons shall be liable for infringements of the requirements of this Hygiene Standard in accordance with the law.

4. The term used in this Hygiene Standard and its definition:

Isolated smoking room (area) – a special room (area) established in firms, institutions and organisations in which it is permitted to smoke.

III. REQUIREMENTS RELATING TO THE ESTABLISHMENT AND OPERATION OF ISOLATED SMOKING ROOMS (AREAS)

6. Isolated smoking rooms (areas) shall be separate from working areas and from sanitary and domestic facilities which are also used by non-smoking employees, customers and visitors.

7. Isolated smoking rooms (areas) shall be established in such a way as to ensure that non-smoking employees, customers and visitors do not have to walk through them.

8. Materials which do not absorb smells and are easy to clean shall be used for the surfaces of walls, floors and furniture of isolated smoking rooms (areas).

9. Isolated smoking rooms (areas) shall be clean and be periodically cleaned using water.

10. Isolated smoking rooms (areas) shall be equipped with non-inflammable ashtrays or urns for cigarette butts.

11. The air pressure of buildings in which isolated smoking rooms (areas) are established and of their ventilation systems shall be distributed in such a way as to ensure that, under normal conditions of building use, air passes from cleaner to more contaminated areas. The pressure in isolated smoking rooms shall be maintained at a lower level than that of adjacent rooms. Clean air shall generally be channelled to that part of rooms where the air is least contaminated and be removed from the part where contaminants are more intensively present or their concentration is greatest [5.1].

12. The quantity of outside air channelled to isolated smoking rooms (areas) per 1 m² of floor area shall not be less than 36 m³/h, and the quantity of air removed shall be not less than 72 m³/h.

13. The limit values for concentrations of air contaminants (benzene, formaldehyde) in isolated smoking rooms (areas) shall not exceed the statutory requirements [5.2].

14. The concentration of nicotine in the ambient air of isolated smoking rooms (areas) shall not exceed 10 µg/m³ (limit concentration established on the basis of an air sample taken over a period of 24 hours).

15. The microclimate of isolated smoking rooms (areas) shall comply with statutory requirements [5.3].

16. Checks on the air quality of isolated smoking rooms (areas) and measurements relating to the effectiveness of ventilation systems, as laid down by this Hygiene Standard, shall, for self-monitoring purposes, be carried out not less than once every three years by accredited or approved laboratories.

17. In isolated smoking rooms (areas) there shall be at least one warning concerning the health risks of smoking taken from the list of warnings concerning the health risks of smoking contained in the annex. The warning concerning the health risks of smoking shall be displayed in a prominent place, be written legibly in block capitals on a contrasting background and be replaced at least once a year.

Latvia

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
<p>Smoking allowed only in ventilated rooms intended exclusively for smoking</p>	<p>Smoking allowed only in ventilated rooms intended exclusively for smoking</p>	<p>Smoking banned altogether</p> <p>Exceptions are long-distance trains, ships and aircraft, where there shall be separate railway carriages, cabins or lounges which are designated for smokers</p>	<p>Smoking allowed only in ventilated rooms intended exclusively for smoking</p> <p>Internal regulations of the relevant institutions may provide for the possibility of patients or inmates to smoke also outside of smoking rooms taking into account their physical and mental condition.</p>	<p>Only in higher education institutions possibility of creating ventilated rooms intended exclusively for smoking</p>	<p>Smoking allowed in ventilated smoking rooms (not larger than 50% of the total area) where services can be provided or ventilated rooms intended exclusively for smoking</p>	<p>The 1996 Law On Restrictions regarding Sale, Advertising and Use of Tobacco Products was amended in 2005. As of July 2006, smoking in enclosed workplaces and public places is allowed only in specially designated smoking rooms intended exclusively for smoking. In bars and restaurants, it is allowed to smoke in separate rooms where services can be provided.</p> <p>In April 2008, the parliament approved an amendment to the Law setting out stricter limitations on smoking in Latvia. As of July 2009, smoking will be banned altogether in public places. As of April 2010, it will be also banned to smoke in bars and restaurants.</p> <p>In addition, smoking will be banned in outside areas of schools, parks etc.</p>

Law on Restrictions regarding Sale, Advertising and Use of Tobacco Products

Section 1 sets out the following definitions

9) **pecially dedicated smoking premises** – an area set aside for smoking, contained by means of fixed structural elements and fitted with an extractor fan to prevent tobacco smoke from permeating other areas. This area is to be designated by means of a sign bearing an appropriate inscription or a symbol. This area shall not be used for the provision of basic services by an institution, trader, any other legal person or self-employed person;

12) **pecially dedicated smoking area** – a separate area designated by means of a sign bearing an appropriate inscription or a symbol and complying with fire safety regulations situated outside a building in the open air, or premises or part of premises fitted with an air ventilation system, or part of the premises of a summer (open-air) cafe;

15) **premises which are separated for smoking** – a separate room contained by means of fixed structural elements and designed for the receipt of basic services and for smoking, and fitted with an extractor fan. This area may occupy up to 50% of the total area open to the public and must be situated as far as possible from the entrance to the latter. The area is to be designated by means of a sign bearing an appropriate inscription or a symbol;

Section 11 prohibits to smoke:

1) in educational and correction institutions, except in institutions of higher education in which it is permitted to smoke in premises, which are specially designated for smoking;

2) in medical treatment institutions, social care and rehabilitation establishments, except in premises, which are specially designated for smoking. The internal procedure regulations of the relevant institutions and establishments may provide for the possibility of the patients of the institutions or the inmate of the establishments to smoke also outside of the premises, which are specially designated for smoking, taking into account the physical and mental condition of such patients or inmates;

3) closer than 10 meters from the entrance of buildings or structures (also on the outside steps and landings), where State or local government institutions and capital companies in which more than 50 per cent of the capital shares (stock) is owned by the State or local governments are located.

4) in the shelters at public transport stops;

5) in the stairwells of multi-apartment residential buildings;

6) in places of work in work-spaces and areas of common use, with the exception of specially designated smoking areas;

7) in public buildings, structures and premises (cinemas, concert and sports halls, other sports buildings and structures, post offices and other institution halls, discotheques and dance halls, etc.), with the exception of separate premises, which are specially designated for smoking. This prohibition does not apply to existing apartments in public buildings;

8) in all kinds of public means of transport and taxis, with the exception of long-distance trains, ships and aircraft, where there shall be separate railway carriages, cabins or lounges which are designated for smokers;

9) during sport and other public events in stadiums and other enclosed territories, with the exception of areas, which are specially designated for smoking.

(2) Smoking in cafes, restaurants and other public catering locations, casinos and gaming halls shall only be allowed in premises, which are specially designated for smoking, or premises, which are separated apart for smoking. It is permitted to smoke in summer (outside) cafes only in areas, which are specially designated for smoking.

Luxembourg

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
The employer is obliged to ensure that workers are effectively protected from passive smoking.	Smoking banned altogether	Smoking banned altogether except for taxis	Smoking allowed only in smoking rooms (one per establishment)	Smoking banned altogether	Smoking ban in restaurants except for separate ventilated smoking rooms which do not occupy more than 25% of the total area of the venue. In drinking establishments that also serve food, smoking banned during dining hours.	The law of 11 August 2006 entered into force in September 2006. The law bans smoking in enclosed public places, public transport, healthcare and education facilities. The law obliges the employer to take all necessary measures to protect employers against passive smoking but does not set out an outright ban on smoking. A total ban on smoking (except for separate smoking rooms) applies in restaurants and a partial ban (during dining hours) to drinking establishments that also serve food. No restrictions for venues that do not serve food.

Legal provisions

Loi du 11 août 2006 relative à la lutte antitabac

Art. 6. (1) Il est interdit de fumer:

1. à l'intérieur et dans l'enceinte des établissements hospitaliers;
2. dans les locaux à usage collectif des institutions accueillant des personnes âgées à des fins d'hébergement, y compris les ascenseurs et corridors;
3. dans les salles d'attente des médecins, des médecins-dentistes et des autres professionnels de la santé ainsi que des laboratoires d'analyses médicales;
4. dans les pharmacies;
5. à l'intérieur des établissements scolaires de tous les types d'enseignement ainsi que dans leur enceinte;
6. dans les locaux destinés à accueillir ou à héberger des mineurs âgés de moins de seize ans accomplis;
7. dans tous les établissements couverts où des sports sont pratiqués;
8. dans les salles de cinéma, de spectacles et de théâtre ainsi que dans les halls et couloirs des bâtiments qui les abritent;
9. dans les musées, galeries d'art, bibliothèques et salles de lecture, ouverts au public;
10. dans les halls et salles des bâtiments de l'Etat, des communes et des établissements publics;
11. dans les autobus des services de transports publics de personnes, même à l'arrêt ou en stationnement;

12. dans les voitures de chemin de fer et dans les aéronefs;
13. dans les établissements de restauration et les salons de consommation des pâtisseries et des boulangeries;
14. dans les discothèques au sens de la réglementation portant nomenclature et classification des établissements classés, dont l'accès n'est pas expressément réservé aux personnes ayant atteint ou dépassé l'âge de seize ans;
15. dans les galeries marchandes et les salles d'exposition ouvertes au public;
16. dans les locaux de vente de tous commerces de denrées alimentaires.

(2) L'interdiction dont question au point 1 du paragraphe 1er ne vaut pas dans des fumeurs spécialement aménagés à cette fin par l'exploitant d'un établissement hospitalier.

Exception faite de fumeurs aménageables à l'intérieur de services psychiatriques fermés, un seul fumeur peut être admis par établissement hospitalier. Ce fumeur devra être localisé à distance des services et aménagé de façon à ce que la fumée de tabac n'atteigne ni le personnel ni le public. L'accès aux fumeurs est strictement réservé aux patients hospitalisés qui en font la demande.

(3) Pour les lieux dont question au point 13, une pièce séparée peut être installée dans laquelle l'interdiction dont question au présent article ne vaut pas.

La pièce séparée doit être munie d'un système d'extraction ou d'épuration d'air. Les caractéristiques techniques du système d'extraction ou d'épuration d'air seront fixées par règlement grand-ducal.

La pièce séparée doit être installée de manière à réduire au maximum les inconvénients de la fumée vis-à-vis des non-fumeurs et ne peut être une zone de transit.

La superficie de la pièce séparée ne peut excéder un quart de la superficie totale du local dans lequel des plats préparés sont servis à la consommation.

La pièce séparée doit être clairement identifiée comme local réservé aux fumeurs. Un ou plusieurs signaux rappelant l'interdiction de fumer dans les espaces réservés aux non-fumeurs doivent être posés de telle sorte que toute personne présente puisse en prendre connaissance.

L'exploitant des lieux est tenu de prendre des mesures empêchant les mineurs âgés de moins de seize ans accomplis d'avoir accès à la pièce séparée.

L'exploitation de la pièce séparée est soumise à l'autorisation préalable du ministre ayant la Santé dans ses attributions, qui ne l'accorde sur rapport de l'Inspection sanitaire que si les exigences prévues au présent article sont remplies.

L'Inspection sanitaire veille au respect des exigences précitées.

(4) L'interdiction de fumer s'applique également aux débits de boissons où des plats sont servis, aux plages horaires situées entre douze et quatorze heures ainsi qu'entre dix-neuf et vingt et une heures.

Art. 16. L'article 5 de la loi modifiée du 17 juin 1994 concernant la sécurité et la santé des travailleurs au travail est complété par un paragraphe (3) nouveau libellé comme suit:

«3. L'employeur doit prendre toutes les mesures pour assurer et améliorer la protection de la santé physique et psychique des travailleurs, notamment en assurant des conditions de travail ergonomiques suffisantes, en évitant dans la mesure du possible le travail répétitif, en organisant

le travail de manière appropriée et en prenant les mesures nécessaires afin que les travailleurs soient protégés de manière efficace contre les émanations résultant de la consommation de tabac d'autrui.

Un règlement grand-ducal, pris sur avis du Conseil d'Etat et de l'assentiment de la Conférence des Présidents de la Chambre des Députés pourra préciser les obligations de l'employeur ci-avant définies.»

Art. 18. L'article 36, paragraphe 2, alinéa 1 de la loi modifiée du 24 décembre 1985 fixant le statut général des fonctionnaires communaux est complété par une lettre c) libellée comme suit:

«c) en prenant les mesures nécessaires afin que les fonctionnaires soient protégés de manière efficace contre les émanations résultant de la consommation de tabac d'autrui.»

Malta

Enclosed workplaces (incl. private workplaces)	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking allowed only in enclosed smoking rooms (the Smoking in Premises Open to the Public Regulations, 2004, L.N. 414 of 2004)	Smoking allowed only in enclosed, smoking rooms	Smoking banned altogether	Smoking banned altogether	Smoking banned altogether	Smoking allowed only in enclosed, smoking rooms	<p>Smoking in public transport, healthcare institutions and education institutions has been banned by the Tobacco Control Act (Act XLII of 1986 as amended by Act IX of 2003)</p> <p>The Smoking in Premises Open to the Public Regulations (L.N. 414 of 2004) banned smoking in enclosed workplaces and public places as of 5 April 2004 with the exception of enclosed smoking rooms which meet certain technical specifications and approved by the Competent Authority.</p> <p>For bars and restaurants below 60 m², the ban entered into force on 5 April 2005.</p>

Legal provisions

L.N. 414 of 2004

TOBACCO (SMOKING CONTROL) ACT (CAP. 315)
Smoking in Premises Open to the Public Regulations, 2004

Interpretation

2. In these regulations, unless the context otherwise requires “employee” means a person who is employed by an employer;

“designated smoking room” means an enclosed room that is designated for smoking;

“responsible person” means any person who is ultimately responsible for any establishment to which these regulations apply and shall include any person acting on his behalf or any employer;

“premises” means catering premises and other similar premises from which food and drink are served to the public either with or without payment;

“employer” means a person who employs one or more persons and includes such person as may ultimately be in charge of any premises;

“smoking” includes the carrying of any lighted tobacco product;

“workspace” means any indoor or other enclosed space where employees perform their duties as employees, and includes any adjacent corridor, lobby, stairwell, elevator, lift, cafeteria, washroom or other common area frequented by such employees during the course of their employment.

Ban on smoking in enclosed establishments.

3. Smoking is hereby banned in any enclosed private or public premises which is open to the public except in designated smoking rooms.

Designated smoking rooms

4. Designated smoking rooms shall

(i) be totally separate from areas or rooms normally occupied by non smokers; and

(ii) have walls from floor to ceiling; and

(iii) have all apertures leading onto other closed areas, or rooms, tight fitting and that they shall be kept so closed while the premises are open for business; and

(iv) be clearly marked as being reserved for persons who smoke; and

(v) be situated in such a manner that they do not require non-smokers to pass through them.

Duty of responsible person

5. It shall be the duty of the responsible person to:

(a) designate rooms for smoking;

(b) adopt measures to ensure that smoking only takes place in designated smoking rooms;

(c) adopt measures to ensure that by the 5th October, 2004 the exposure of non-smokers to tobacco smoke in designated smoking rooms, is reduced in accordance with criteria as approved from time to time by the Superintendent of Public Health and published in the Gazette;

Provided that in the case of licensed premises whose area is less than sixty square meters, the responsible person shall adopt the measures referred to in paragraph (c) hereof by the 5th April 2005.

Smoking prohibited in any workspace.

6. No person shall smoke in any workspace or public place except in a designated smoking room.

Exemption.

7. These regulations shall not apply to individual rooms in any accommodation premises used for sleeping purposes and which are occupied solely by smoking patrons:
Provided that this exemption does not affect other rooms occupied or which may be occupied by non-smokers.

Full text at: http://www.sahha.gov.mt/showdoc.aspx?id=310&filesource=4&file=LN414_English.pdf

**TOBACCO (SMOKING CONTROL) ACT
ACT XLII of 1986, as amended by Act IX of 2003; and Legal Notice 424 of 2007.**

Prohibition of smoking in certain premises and public transport.

14. (1) No person shall smoke any cigarette, cigar, tobacco or tobacco product on any public transport, in any cinema, theatre, hospital, clinic or other health institution, or in any television studio in any debate, discussion or other programme broadcast locally for public viewing whether live or pre-recorded; or in any other place or establishment or part thereof as the Minister may from time to time prescribe; nor shall any person smoke any such item in any classroom, corridor, yard or appurtenance of a school, day home or similar premises used by children under eighteen years of age.

For the purposes of this subarticle "school" includes a kindergarten, nursery school or similar premises.

(2) It shall be the duty of the person in charge of any premises mentioned in subarticle (1), and of the driver and conductor of any public transport, to ensure that an appropriate sign or notice is put up in a prominent place or places as the case may require, so as to attract attention that smoking is prohibited, and it shall also be the duty of any such person to ensure that no smoking takes place on the premises or public transport, as the case may be.

Full text at: http://docs.justice.gov.mt/lom/legislation/english/leg/vol_7/chapt315.pdf

**L.N. 44 of 2002
OCCUPATIONAL HEALTH AND SAFETY AUTHORITY ACT, 2000
(ACT NO. XXVII OF 2000)**

Work Place (Minimum Health and Safety Requirements) Regulations, 2002

1. (2) These regulations shall come into force:

- (a) on the date of publication for workplaces used for the first time after the date of publication of these regulations; and
- (b) on the 1st January, 2003 for all other workplaces already in use before the date of publication of these regulations.

2. (1) These regulations shall be considered as the minimum occupational health and safety requirements applicable mutatis mutandis to every workplace and to every work activity, and shall apply whenever required by the features of the workplace, the work activity being carried out, the circumstances prevailing, and the degree or nature of a hazard.

(2) Nothing in these regulations shall debar the Authority from issuing any order to any employer or to any employee in any workplace if in the opinion of an Officer of the Authority there is a risk to the health or safety of a person or persons.

28. (1) The employer shall identify those areas in which smoking could cause a risk of fire or explosion, and he shall ensure that smoking is not allowed in such areas.

(2) The employer shall identify areas, which are physically separate from other areas where smoking is allowed, in which smoking is prohibited, so as to protect non-smokers against discomfort caused by tobacco smoke.

(3) The employer shall put up appropriate signs indicating that smoking is prohibited in those areas in which smoking is not allowed.

Full text at: http://www.msp.gov.mt/documents/laws/ohs/ohs_In_44.pdf

Netherlands

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking allowed only in enclosed smoking rooms	Smoking allowed only in enclosed smoking rooms	Smoking allowed only in enclosed smoking rooms	Smoking allowed only in enclosed smoking rooms	Smoking allowed only in enclosed smoking rooms	Smoking allowed only in enclosed smoking rooms where no service is provided	<p>The Tobacco Act of 1988 banned smoking in government, education and healthcare building as of 1990.</p> <p>The 2002 amendment of the Tobacco Act introduced smoking bans in (private) workplaces except for bars and restaurants and in public transport as of Jan. 2004. Since Jan. 2005, self-regulation in the hospitality industry.</p> <p>The further amendment in 2007 extended the ban on smoking to bars and restaurants as of 1 July 2008.</p> <p>In all venues, it is possible to set up special enclosed smoking rooms. There are no requirements for size or ventilation.</p>

The text of the Tobacco Act on 1 January 2005

An Act of 10 March 1988, laying down measures to control the use of tobacco, in particular for the protection of the non-smoker

§ 5. Smoking bans

Article 10

1. For the institutions, departments and businesses that are managed by the State and by the public bodies, the competent authority shall take such measures that the facilities provided by them can be used and work carried out in them without experiencing hindrance or nuisance from smoking.
2. The measures referred to in the first paragraph shall in any case include the imposing, designation and maintenance of a smoking ban in areas belonging to categories designated by an Order in Council. Restrictions can be applied to the ban in accordance with regulations imposed by the Order in Council.

Article 11

1. An Order in Council can be used to oblige those persons who – in a capacity other than that within the meaning of in Article 10 – are responsible for the management of buildings or institutions for healthcare, welfare, social services, art and culture, sport, social-cultural work or education, in as much as those buildings or institutions belong to categories designated by Order in Council, to take measures as referred to in Article 10 (1).
2. Article 10(2) is applicable correspondingly.

Article 11a

1. Employers are obliged to take such measures that employees are enabled to carry out their work without experiencing hindrance or nuisance from smoking by others.
2. Operators of means for the conveyance of passengers are obliged to take such measures that passengers are enabled to complete their journey without thereby experiencing hindrance or nuisance from smoking.
3. Dutch airline companies are obliged to take such measures that passengers on board of their aircraft during their use for civil aviation on flights to and from airports in Dutch territory are enabled to complete their journey without thereby experiencing hindrance or nuisance from smoking.
4. Those persons who – in capacities other than those referred to in Articles 10 or 11 – are responsible for the management of buildings accessible to private individuals, in as much as those buildings belong to categories designated by Orders in Council, are obliged to take measures as referred to in Article 10 (1).
5. Restrictions can be applied to the obligations referred to in this Article by Order in Council. For example, it may be determined that the restrictions referred to in the first paragraph do not apply to the following, designated by that measure:
 - a. categories of employers;
 - b. areas in buildings;
 - c. other places where work is being carried out.

Further rules may be laid down in such cases.

§ 6. Administrative penalties

Article 11b

1. In the matter of the violations referred to in the appendix, Our Minister can impose a penalty on the natural or legal person to whom the violation can be attributed.
2. The magnitude of the penalty shall be determined in the manner provided for in the appendix, subject to the condition that the sum to be paid because of an individual violation will be no more than:
 - a. € 450,000 in the case of a violation of Articles 5 or 5a, if the violation has been committed by a manufacturer, a wholesaler or an importer of tobacco products;
 - b. € 4,500 in cases other than those referred to under a.
3. Our Minister can set the penalty at a figure lower than provided for in the appendix if the magnitude of the penalty in a given case has to be regarded as disproportionately high on the grounds of special circumstances.
4. The activities in connection with the implementation of the first paragraph are performed by persons who have not been involved in drawing up

the report referred to in Article 11f and the investigation which preceded it.

5. The power to impose a penalty lapses if criminal proceedings have been instituted against the perpetrator in the matter of the violation on the grounds of which the penalty can be imposed, and the examination in court has already begun, or if the right to criminal proceedings has lapsed in accordance with Article 74 of the Penal Code.

6. Contrary to the provisions of the first paragraph, the violation cannot be settled with a penalty if the penalty provided for in the appendix in the matter of the violation is significantly exceeded by the commercial advantage achieved with the violation.

7. The right to pursue criminal proceedings lapses if Our Minister has already imposed a penalty.

Article 11c

1. The appendix determines the amount of the penalty to be imposed for each violation described therein.

2. The appendix can be amended by Order in Council.

3. An Order in Council laid down in pursuance of the second paragraph shall enter into force no earlier than eight weeks following the date of publication of the Bulletin of Acts, Orders and Decrees in which it has been placed. An announcement of its placing shall be made to both Houses of the States General forthwith.

4. An Order in Council, as referred to in the second paragraph shall be laid down on the recommendation of Our Minister, in consultation with Our Minister of Justice.

Article 11d

The person against whom such an action is instituted is not obliged to make any statement in the matter if he can reasonably conclude that a penalty will be imposed on him because of a violation. He shall be informed of this before information is orally requested from him.

Article 11e

1. If Our Minister intends to impose a penalty, he shall inform the person referred to Article 11b (1) from that, giving the reasons on which the intention is based.

2. Contrary to section 4.1.2 of the General Administrative Law Act, Our Minister shall give the person an opportunity to put forward his view, in writing or orally as he chooses, within a reasonable period before the penalty is imposed.

3. Our Minister can decide not to apply the second paragraph in as much as the person has already been given an earlier opportunity to put forward his view and since then no new facts or circumstances have become apparent.

4. If the person wishes to put forward his view orally but has insufficient mastery of the Dutch language, at his request Our Minister shall arrange for the appointment of an interpreter to support him unless it is reasonable to assume that there is no need for this.

Article 11f

1. If a civil servant appointed pursuant to Article 13 determines that a violation described in the appendix has been committed, he shall draw up a report on the matter.

2. The report shall in any case include mention of:

- a. the violation, with reference to the relevant statutory regulation and the description in the appendix;
 - b. an indication of the place where, and the time when, the violation was committed;
 - c. the facts and circumstances forming the grounds for determining that a violation has been committed;
 - d. the statement from the person referred to in Article 11d, if made.
3. The report shall be sent to Our Minister.
 4. A copy of the report shall be sent or given to the perpetrator.
 5. At the request of the person referred to in Article 11b (1), who insufficiently understands the report because of his poor knowledge of the Dutch language, Our Minister shall as far as possible ensure that the contents of the report are presented to that person in a language that he understands.

Article 11g

1. Our Minister shall impose the penalty by decree.
2. The decree shall in any case include mention of:
 - a. the violation, with reference to the relevant statutory regulation and the description in the appendix;
 - b. the information referred to in Article 11f (2) under b and c;
 - c. the magnitude of the penalty and the period within which it must be paid.
3. At the request of the person referred to in Article 11b (1), who insufficiently understands the decree because of his poor knowledge of the Dutch language, Our Minister shall as far as possible ensure that the contents of the decree are presented to that person in a language that he understands.

Article 11h

The operation of the decree referred to in Article 11g shall be suspended until the period for lodging an appeal has elapsed or, if an appeal has been submitted, until a decision has been made on the appeal.

Article 11i

1. The power to impose a penalty shall lapse after the passage of three years from the day on which the violation was committed.
2. A decree imposing a penalty interrupts the period referred to in the first paragraph.

Article 11j

1. A penalty shall be paid within six weeks of the entering into force of the decree by which the penalty is imposed.
2. The penalty shall be increased by the statutory interest, calculated from the day falling six weeks after the publication of the decree.
3. If payment is not made within the period referred to in the first paragraph, the person on whom the penalty has been imposed will be ordered, in writing, to pay the sum of the penalty, increased by the costs of the warning, within two weeks.
4. In the event of failure to pay within the period referred to in the third paragraph, Our Minister can collect the penalty owed, increased by the costs of the warning and the collection, by writ of execution.

5. The writ of execution shall be served by bailiff's notification, at the expense of the person on whom the penalty has been imposed and shall result in entitlement to enforcement in the sense of the Second Book of the Dutch Code of Civil Procedure.
6. During a period of six weeks from the day on which the writ is served, objection may be made against the writ of execution by issuing a summons against the State.
7. The objection shall not suspend the enforcement, unless the appeal court decides otherwise, when requested, in interlocutory proceedings.
8. The objection cannot be based on the claim that the penalty has been unlawfully set or has been set at too high a sum.
9. The power to collect shall lapse two years after the decree relating to the imposition of the penalty has become irrevocable.

§ 7. Further provisions

Article 12

The recommendation for an Order in Council pursuant to Article 7, Article 9 (4) and Article 11a, shall not be made earlier than four weeks after the draft has been presented to both Houses of the States General.

Article 13

1. The civil servants appointed by decree from Our Minster shall be charged with monitoring the observance of the provisions of, or pursuant to, the provisions of this Act.
2. An announcement of a decree as referred to in the first paragraph shall be made by publication in the Netherlands Government Gazette.

Poland

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking banned in rooms in work establishments except for separate smoking rooms	Smoking allowed in separate smoking rooms	Smoking banned altogether. In trains smoking is allowed in appointed wagons	Smoking allowed in separate smoking rooms. In special cases, a doctor may grant a patient a derogation from the smoking ban.	Smoking allowed in separate rooms	Smoking allowed in separate rooms (if there is more than one room). In one-room establishments, smoking allowed in designated areas	The 1999 tobacco act provides for a smoking ban in rooms in work establishments and public places, except for separate smoking rooms. Smoking is also prohibited in public transport on the base of internal regulations and organisational arrangements. In hospitality venues that have more than one room, smoking is allowed in separate rooms. In one-room establishments, smoking is allowed in designated areas. The parliamentary initiative for a comprehensive ban on smoking in all enclosed workplaces and public places, including hospitality sector has been tabled in the parliamentary health committee in March 2008. It would need three readings in the lower chamber and one reading in the upper chamber to become law.

Legal provisions

Law on the Protection of Public Health Against the Effects of Tobacco Use of 9 November 1995

As amended on 5 November 1999

Article 5. 1. The smoking of tobacco products outside insulated and suitably adapted rooms shall be prohibited:

- 1) in health care institutions, without prejudice to paragraph 2,
- 2) in schools and educational establishments,

3) in rooms in work establishments and other public utility buildings and in small, single-room gastronomic establishments, apart from in distinctly separate areas.

1a. The introduction of the ban on smoking tobacco in the places referred to in paragraph 1 shall be the responsibility of the proprietor or tenant of those premises.

2. In special cases, a doctor providing treatment to a patient who has been admitted to a health care establishment may grant that patient a derogation from the prohibition on the smoking of tobacco products.

3. The Minister of Defence, the Minister of Internal Affairs and the Minister of Justice shall adopt Decrees laying down rules on the consumption of tobacco products on premises which come under their respective authority.

4. Municipal councils may adopt bye-laws designating places in municipal premises, other than those referred to in paragraph 1, as smoke-free zones.

(implementing legislation)

Article 13. 1. Any person who:

1) smokes tobacco products in places which are subject to the prohibition laid down in Article 5,

2) permits the smoking of tobacco on premises which are under his authority in contravention of the prohibitions laid down in Article 5, shall be liable to a financial penalty.

Portugal

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
<p>Smoking allowed in enclosed rooms or designated areas that prevent tobacco smoke from spreading into adjacent areas</p>	<p>In most places smoking allowed in enclosed rooms or designated areas that prevent tobacco smoke from spreading into adjacent areas</p>	<p>Smoking banned altogether with the exception of uncovered areas on vessels.</p>	<p>Smoking banned altogether</p> <p>In hospitals and psychiatric services, smoking allowed in enclosed rooms or designated areas that prevent tobacco smoke from spreading into adjacent areas rooms</p>	<p>Smoking banned altogether</p> <p>In higher education system, smoking allowed in enclosed rooms or designated areas that prevent tobacco smoke from spreading into adjacent areas rooms</p>	<p>Venues smaller than 100 m² can allow smoking in separate ventilated smoking areas or rooms.</p> <p>Venues bigger than 100 m² can allow smoking in enclosed rooms or designated areas that prevent tobacco smoke from spreading into adjacent areas which should not occupy more than 30% and 40% of the overall surface, respectively.</p>	<p>The law banning smoking in most public places was passed in June 2007 and came into force on 1 Jan. 2008.</p> <p>In workplaces and most public places, it is allowed to smoke in areas which are either physically separated or equipped with ventilation or other mechanisms preventing smoke from spreading into adjacent areas. Smoking is banned altogether in means of public transport and education facilities.</p> <p>Bars and restaurants smaller than 100 m² can choose to allow smoking in areas which are either physically separated or equipped with ventilation or mechanisms preventing smoke from spreading into adjacent areas.</p> <p>In bars and restaurants larger than 100 m², smoking is allowed in separate smoking rooms which do not occupy more than 40% of the overall surface or in areas equipped with ventilation or other mechanisms preventing smoke from spreading into adjacent areas which do not occupy more than 30% of the overall surface.</p>

Legal provisions

Law No 37/2007 of 14 August 2007

Approving rules to protect citizens from involuntary exposure to tobacco smoke and measures to reduce demand related to dependency and giving up smoking

CHAPTER I

General provisions

Article 2

Definitions

- d) 'Permanent work areas' – places where workers must spend more than 30% of their respective daily working time;
- g) 'Workplace' – the entire area in which a worker works where he/she is under the direct or indirect supervision of the employer;

CHAPTER II

Restrictions on tobacco consumption

Article 3

General principle

The provisions of this chapter are aimed at setting restrictions on tobacco consumption in closed areas intended for collective use, so as to guarantee protection against involuntary exposure to tobacco smoke.

Article 4

Prohibition of smoking in certain places

1. It is prohibited to smoke:

- a) In places housing sovereign bodies, services and bodies of the Public Administration and public legal persons;
- b) In workplaces;
- c) In places where the public is dealt with directly;
- d) In establishments providing health care, namely hospitals, clinics, health centres and nursing homes, doctors' surgeries, first aid posts and other such facilities, laboratories, pharmacies and places where medicinal products not requiring a prescription are dispensed;
- e) In homes and other institutions looking after the elderly or persons with a disability or handicap;
- f) In places intended for persons under 18 years of age, namely nurseries, crèches and other establishments looking after infants, children's homes and youth homes, after-school and holiday clubs, children's camps and holiday camps and other similar establishments;

- g) In educational establishments, irrespective of the age of the students and level of schooling, including, specifically, classrooms, study rooms, staff rooms and meeting rooms, libraries, gymnasiums, halls and corridors, bars, restaurants, canteens, refectories and recreational areas;
- h) In vocational training centres;
- i) In museums, establishments housing collections that can be visited and places keeping categorised cultural objects, cultural centres, archives and libraries, conference rooms, reading rooms and exhibition halls;
- j) In enclosed performance halls and spaces and other enclosed areas intended for art and performance, including lobbies, access areas and adjoining areas;
- l) In enclosed entertainment areas and places intended for performances of a non-artistic nature;
- m) In the enclosed areas of sports facilities;
- n) In enclosed exhibition and show areas;
- o) In retail complexes and shopping centres and commercial establishments selling goods to the public;
- p) In hotels and other tourist establishments providing accommodation services;
- q) In restaurants and bars, including those with rooms or areas for dancing;
- r) In canteens, refectories and bars belonging to public or private entities for use only by staff of these entities.
- s) In service areas and petrol stations;
- t) In airports, train stations, bus stations and sea and river ferry terminals;
- u) In the underground in areas open to the public, namely in end and intermediate stations, in all access areas and adjoining establishments and premises;
- v) In covered car parks;
- x) In lifts, goods lifts and similar facilities;
- z) In enclosed telephone boxes;
- aa) In enclosed areas housing automated teller machines;
- ab) In any other area where, as determined by the management or by other applicable legislation, particularly regarding the prevention of occupational hazards, smoking is banned.

2. It is also prohibited to smoke in vehicles used for urban, suburban and interurban public passenger transport, in road, rail, plane, sea and river transport, express, tourist and private hire services, in taxis, ambulances, vehicles for the transport of sick people and cable cars.

Article 5

Exceptions

1. Notwithstanding the provisions of Article 4(1)(d), areas may be set up exclusively for patients who smoke in hospitals and psychiatric institutions, treatment and rehabilitation centres and residential centres for drug addicts and alcoholics, provided that these areas meet the requirements laid down in Article 5(5)(a), (b) and (c).

2. Notwithstanding the provisions of Article 4, accommodation units may be set up in prisons, in cells or dormitories, for prisoners who smoke, provided that they meet the requirements laid down in Article 5(5)(a), (b) and (c). Smoking shall also be permitted in outdoor areas.

3. Smoking shall be permitted in outdoor areas in the places referred to in Article 4(1)(a), (b), (c), (d), (e), (h), (i), (j), (l), (m), (n), (o), (p), (q), (r) and (t), and in outdoor areas in the places referred to in Article 4(1)(g) within the higher education system.
4. Smoking shall be permitted in outdoor areas in the places referred to in Article 4(1)(s), except in areas where vehicles are filled with fuel.
5. Smoking may be permitted in areas expressly provided for this purpose in the places referred to in Article 4(1)(a), (b), (e), (j), (l), (n), (o), (p) and (t), in the places referred to in Article 4(1)(g) within the higher education system, and in the places referred to in Article (4)(1)(h) not frequented by persons under 18 years of age, provided that these areas meet the following requirements:
 - a) They are duly indicated, with signs put up in visible places as laid down in Article 6;
 - b) They are physically separated from the other premises, or have a ventilation device or other mechanism, provided that it is autonomous, which prevents smoke from spreading into adjacent areas.
 - c) The air is ventilated directly to the outside by means of an extraction system to protect staff and non-smoking customers from the effects of smoke.
6. In the premises referred to in Article 4(1)(q) with a public area of less than 100 m², the owner may choose to allow smoking, provided that the requirements laid down in Article 5(5)(a)(b) and (c) are met.
7. In the premises referred to in Article 4(1)(q) with a public area equal to or larger than 100 m², smoking areas may be set up accounting for a maximum of 30% of the total area, or a physically separate space may be set up accounting for a maximum of 40% of the total area, provided that these areas comply with the requirements laid down in Article 5(5)(a)(b) and (c). These areas shall not include staff-only areas or areas in which workers must work for extended periods.
8. In the places referred to in Article 4(1)(p), separate floors, accommodation units or rooms may be set up for smokers, accounting for a maximum of 40% of the total area, occupying adjacent areas or all of one or more floors, provided that these areas comply with the requirements laid down in Article 5(5)(a)(b) and (c).
9. Notwithstanding Article 4(2) and the restrictions set out in the regulations issued by transport companies and harbourmasters, smoking shall be permitted in uncovered areas on vessels operating on sea and river routes.
10. Notwithstanding Article 5(6), the decision to allow smoking must, wherever possible, result in the provision of separate areas for smokers and non-smokers.
11. The entities running the establishments concerned shall be responsible for determining the smoking areas. To this end, the relevant occupational safety, hygiene and health services and the committees for occupational safety, hygiene and health or, in their absence, the employees' representatives for occupational safety, hygiene and health, must be consulted.

Romania

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking allowed in ventilated smoking areas	Smoking allowed in ventilated smoking areas	Smoking banned altogether except for taxis	Smoking banned altogether	Smoking allowed in ventilated smoking areas	Smoking allowed in ventilated smoking areas	<p>Law no. 349/2002 entered into force in Dec. 2002. According to Art. 3 (1-4) of the Law smoking in enclosed public places and workplaces, including bars and restaurants, is allowed in special ventilated smoking areas.</p> <p>Smoking is completely banned in medical care facilities (Emergency Ordinance 13/2003).</p> <p>In September 2008, the Romanian parliament approved an Ordinance banning smoking in all enclosed workplaces and public places except for separately ventilated smoking rooms as of Jan.2009. In bars and restaurants, smoking rooms cannot exceed 50% of the total space designated for clients. Venues with a surface less than 100 m² could choose to allow smoking.</p>

Legal provisions

LAW NO 349 of 6th June 2002

Regarding the prevention and fighting of the effects of the tobacco products consumption

As modified by Emergency Ordinance No. 13 from 30th January 2003

ART.2

According to the present law:

- m) By closed public areas we understand all the spaces from the central and local public institutions, economic, public nourishment, tourism, commercial, sports, health and sanitation, cultural units and institutions, all means of public transportation, bus stations, stations, airports, state or private, closed areas from the work place, or other spaces that the law mentions, except the specified and especially set smoking areas of their premises;

n) closed areas in the working place mean all the areas of the estates of the buildings, industrial halls, meeting rooms, council rooms, halls, corridors, toilets, elevators, offices and/or rooms used by one or more persons.”

ART. 3

- (1) No smoking in closed public areas; it is completely forbidden smoking in the sanitary units, state or private.
- (2) The smoking is allowed in special smoking areas, if the following compulsory conditions are observed:
 - a) must be constructed in a way to allow smoking, but not to permit the entering of the polluted air in the closed public area;
 - b) must be ventilated, endowed with ashtrays and extinguishers, and arranged according to the legal prescriptions regarding the prevention and extinction of the fires;
 - c) must be marked, in visible areas, by one of the following indicators: << Smoking area>>, <<Smoking place>>, <<Smoking room>>, << Room where smoking is allowed>>, so that any person will know that only in that specific room , smoking is allowed. The persons in charge of the above mentioned institutions, according to the article 2 letter m) and n) will issue and apply internal regulations in order to separate the areas where smoking is allowed from those where smoking is forbidden, by marking of the last ones with indicators:<< No smoking>> or by using the international mark, the cigarette barred by a transversal line.”
- (3) Bars, restaurants, discos and other public area with similar destination will delimitate and insure the ventilation of the smoking areas, so that the polluted air does not enter in the non smoking area.”
- (4) The provisions of the second paragraph do not apply to the bars, restaurants, discos and other similar destination public areas whose manager or owner establishes and posts the warning: ”No smoking in this unit”.

ART. 10

- a) The infringement of the provisions of article 3, paragraph 1, is punished with a contraventional fine from 1,000,000 lei to 5,000,000 lei or with 20 hours of community service, in the case of the transgressive pupils or students, under the law’s conditions;
- b) The infringement of the provisions of the article 3, paragraphs (3), (4) and (6) is punished with a contraventional fine from 10,000,000 lei to 50,000,000 lei;

Ordinance No 5 of 30 January 2008

amending and supplementing Law No 349/2002 preventing and combating the effects of the consumption of tobacco products

Text enters into force on 14 February 2008

On the basis of Article 108 of the Romanian Constitution and Article 1(III)(3) of Law No 373/2007 empowering the Government to issue ordinances,

The Romanian government hereby adopts the following Ordinance.

Article I

Law No 349/2002 preventing and combating the effects of the consumption of tobacco products, published in Official Gazette of Romania Part I No 435 of 21 June 2002, as amended, is hereby amended and supplemented as follows:

1. Article 2(n) is amended and reads as follows:

"n) 'enclosed spaces in the workplace' means all spaces within buildings, such as industrial machine rooms, warehouses, meeting rooms, board rooms, halls, corridors, toilets, lifts, offices and rooms;"

2. Subparagraphs (2) to (4) of Article 3 are amended and read as follows:

"(2) In enclosed public places, smoking shall be permitted only in specially designated smoking rooms, which shall comply with the following compulsory conditions:

- a) they are used solely for smoking;
- b) they are not used for transit or access to the enclosed public place in question;
- c) they are fitted with working ventilation systems that extract tobacco smoke;
- d) they are equipped with ashtrays and fire extinguishers and fitted out in accordance with the fire-prevention and firefighting legislation in force;
- e) they are visibly marked with one of the following signs: "Cameră pentru fumat" ("Smoking room"), "Încăpere în care este permis fumatul" ("Room in which smoking is permitted") or "Loc pentru fumat" ("Smoking area"), so that it is clear to all that smoking is permitted in that place only.

(3) Smoking is permitted in bars, discotheques, restaurants and other public places intended for similar purposes, only in specially designated areas complying with the following compulsory conditions:

- a) they account for a maximum of 50% of the enclosed public place open to customers;
- b) they are separated to ensure that they are completely sealed off from the rest of the enclosed public place;
- c) they are not used for transit or access to the enclosed public place in question;
- d) they are fitted with working ventilation systems that extract tobacco smoke;
- e) they are equipped with ashtrays and fire extinguishers and fitted out in accordance with the fire-prevention and firefighting legislation in force;
- f) they are visibly marked with one of the following signs: "Loc pentru fumat" ("Smoking area"), "Spațiu pentru fumat" ("Smoking area"), "Încăpere în care este permis fumatul" ("Room in which smoking is permitted").

(4) Subparagraphs (2) and (3) shall not apply to enclosed public places whose owner, manager or director decides to display the following notice: "În această clădire fumatul este complet interzis" ("Smoking is totally prohibited in this building"), "În această instituție fumatul este complet interzis" ("Smoking is totally prohibited in this institution"), "În această unitate fumatul este complet interzis" ("Smoking is totally prohibited in this establishment")."

3. Two new subparagraphs, (4¹) and (4²), are inserted after Article 3(4) and read as follows:

"(4¹) Subparagraph (3) shall not apply to bars, discotheques, restaurants and other public spaces intended for similar purposes, where the total area of the enclosed public place open to customers is smaller than 100 m², if the owner or manager of the establishment decides to display the following notice: "În această unitate fumatul este permis" ("Smoking is permitted in this establishment")."

(4²) The Romanian Government shall take a decision as to whether to impose a complete ban on smoking in all enclosed public places, in full accordance with the relevant European Union policies and strategies."

Slovakia

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking banned altogether in workplaces where also non-smokers are present	Smoking banned altogether in some public places such as cultural and sports institutions, shops, fastfoods.	Smoking banned altogether with the exception of reserved cars in trains	Smoking banned altogether	Smoking banned altogether	Smoking is allowed in separate areas	<p>The act no. 377/2004 on the protection of non-smokers was approved in 2004 and the amendment to the act no. 465/2005 in 2005. Smoking is banned in workplaces in the presence of non-smokers, in certain public places and in public transport. In hospitality venues, smoking should be restricted to separate areas.</p> <p>Recently, the Slovak Health Ministry and the Public Health Authority prepared a proposal for strengthening current provisions. The draft amendment envisages a full smoking ban in all enclosed public places and a partial ban in bars and restaurants (establishments of over 200 m². metres would have to install separate smoking rooms).</p> <p>The draft bill has to be approved by the Cabinet, before it is submitted to the parliament. A number of initiatives to strengthen existing provisions failed in the past.</p>

Legal provisions

377/2004 Coll.

**ACT
of 26 May 2004**

on the protection of non-smokers, amending and supplementing several acts

Amendment: 465/2005 Coll.

§ 7

Ban on smoking

(1) Smoking shall be prohibited:

- a) in means of regular rail passenger transport except reserved cars, in other means of regular domestic passenger transport, in waiting rooms and shelters at regular domestic passenger transport stops and stations, on covered platforms, in open public spaces intended for passengers of such transport services, and on open platforms within 4 metres of a designated area of the platform;
- b) in healthcare facilities;
- c) in primary and secondary schools, educational establishments, pre school establishments and children's play areas;
- d) in higher-education establishments and student residences;
- e) on social services premises, except in smoking rooms reserved for employees;
- f) on cultural premises and in enclosed sports facilities;
- g) in parts of official buildings and facilities accessible to the public, shops, theatres, cinemas, exhibition centres, museums and galleries;
- h) in mass catering establishments, except those with separate areas for smokers;
- i) in confectionery establishments and fast-food outlets;
- j) on premises where young people are detained or serving custodial sentences.

(2) A ban on smoking at the workplace shall be laid down in separate legislation.

(3) Municipalities may impose generally binding regulations restricting or prohibiting smoking in other places accessible to the public.

**124/2006 Coll.
ACT**

of 2 February 2006

on occupational safety and health protection and on the amendment of certain acts

Section 6

General Obligations of the Employer

(5) The employer shall be obliged to forbid smoking at workplaces where work is also performed by non-smokers, and ensure the enforcement of this prohibition, as well as the prohibition against smoking at workplaces¹².

Section 9

Controlling Activities

(1) The employer shall be obliged to systematically control and request compliance with legal regulations and other regulations applying to the ensuring of occupational safety and health protection, with principles of safe work, health protection at work and safe conduct at workplaces and safe working procedures, and in particular to control

b) whether the employees are under the influence of alcohol, narcotics or psychotropic substances, during working time, and whether they adhere to the issued prohibition of smoking on the employer's premises.

Section 12

Rights and Obligations of Employees

(2) The employee shall be obliged to

m) comply with the prohibition against smoking at workplaces.

¹² For example, Act No 377/2004 Coll. on the protection of non-smokers and on the amendment of certain acts; Regulation of the Government of the Slovak Republic No 393/2006 Coll. on the minimum requirements for ensuring occupational safety and health protection in explosive atmosphere.

Slovenia

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking allowed only in enclosed smoking rooms intended exclusively for smoking	Smoking allowed only in separate smoking rooms intended exclusively for smoking	Smoking banned altogether	Smoking banned altogether with the exception of mental health institutions	Smoking banned altogether, including in outdoor spaces of childcare and educational establishments	Smoking allowed only in enclosed smoking rooms intended exclusively for smoking	<p>The amendment to the 2005 Tobacco Act was adopted on 22 June 2007 and went into effect on 5 Aug 2007</p> <p>The law introduced complete ban on smoking in all enclosed workplaces and public places, incl. hospitality venues, with the exception of separate ventilated smoking rooms. Smoking rooms should be reserved only for smoking (with no eating or drinking allowed inside) and should occupy not more than 20% of the overall surface.</p> <p>After its entry into force, the law was challenged by small bar owners and some MPs. However, in January 2008, the draft parliamentary amendment to weaken the law was rejected by the Health Committee of the National Assembly.</p>

Legal provisions

The Act Amending the Restriction of the Use of Tobacco Products Act (Official Gazette of the Republic of Slovenia no. 60/2007)

Article 2

10. A smoking room is an enclosed area that is physically separate from other enclosed areas, and is specially regulated exclusively for smoking.

Article 3

Public spaces pursuant to this act are those designed for activities in the fields of healthcare, childcare, education, social work, traffic, public transport, trade, catering and tourism, sport and recreation, and culture.

Public spaces specified in the previous paragraph are specifically waiting rooms, conference rooms, cinema halls, theatres, health, childcare, education and social institutes, catering premises, shops, sports halls, means of public transport, lifts, cable cars, public toilets and other spaces where non-smokers are exposed to cigarette smoke against their will.

Article 4

Work premises pursuant to this act means any closed area under the control of an employer where work and services are performed for the employer.

Article 16

It shall be prohibited to smoke in an enclosed public space and work premises. Any space with a roof where more than half of the area of the appurtenant walls is completely closed shall be deemed an enclosed public space or work premises.

Smoking shall also be prohibited in areas that pursuant to this act are not deemed enclosed spaces, if they are part of the appurtenant functional land of areas where childcare and education are provided.

The previous paragraph notwithstanding, smoking shall be allowed:

- in areas specially designated for smokers at residential facilities and other accommodation providers,
- in senior citizens' homes and jails in areas not intended for common use, should smokers alone reside there,
- in areas specially designated for smokers in psychiatric hospitals and in areas specially designated for smokers at other treatment providers for mental patients,
- in smoking rooms.

Smoking rooms shall not be allowed in areas where healthcare, childcare or education are provided.

The owner, tenant or manager of the spaces where smoking is prohibited shall be responsible for upholding the prohibition on smoking.

Article 17

Smoking rooms must meet the following conditions:

- the space must be regulated so that air contaminated with tobacco smoke cannot flow freely from it into other spaces,
- the space may not be designed for passage into other areas, and may not exceed more than 20% of the total surface area of the public space and/or work premises,
- the space must be designed exclusively for smoking, with service not allowed in the space,
- food and beverages may not be consumed in the space.

The minister responsible for health shall set out the detailed conditions to be met by smoking rooms.

Full text at:

http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/mz_dokumenti/vprasanja_in_odgovori/ZOUTI_velja_050807/ZOUTI_english_version.pdf

Spain

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking banned altogether	Smoking banned altogether in places mentioned in Art. 7 Separately ventilated smoking rooms allowed in public entertainment premises.	Smoking banned altogether with the exception of separately ventilated smoking rooms in airports, bus stations, railway stations and ship and ferry terminals.	Smoking banned altogether	Smoking banned altogether	In bars and restaurants larger than 100m ² as well as in clubs and gaming establishments when they do not admit minors, smoking is allowed only in separately ventilated smoking rooms. Bars and restaurants smaller than 100m ² can opt to be either smoking or non-smoking	The new Tobacco Act entered into force in December 2005. The Act sets a total ban on smoking in enclosed workplaces and most of the public places. In some public places (e.g. entertainment premises), it is possible to create separately ventilated smoking rooms. In bars and restaurants larger than 100 m ² as well as in clubs and gaming establishments, smoking is allowed only in separate smoking rooms (not bigger than 30% of the total surface). Smaller venues can opt to be either smoking or non-smoking.

Legal provisions

Law No. 28/2005 of 26 December 2005 on health measures in relation to smoking and regulating the sale, supply, consumption, and advertising of tobacco products.

Article 6. Restrictions on the consumption of tobacco products.

The consumption of tobacco products shall take place exclusively in those premises or spaces where this is not totally prohibited or that are specially designated for this purpose. Accordingly, a distinction is made between those areas where smoking is completely banned and those others where, despite the ban, the designation of areas for the consumption of tobacco is permitted.

Article 7. Total ban on smoking.

In addition to those premises or spaces defined in the legislation of the Autonomous Communities, smoking shall be completely banned in the following:

- a. Public and private workplaces, with the exception of those areas in the open air.
- b. Centres and offices of the public administrations and public-law bodies.

- c. Health centres, services or establishments.
- d. Educational and training establishments, irrespective of the age of the student body and the type of teaching.
- e. Sporting facilities and premises where public entertainment events are held, provided these are not in the open air.
- f. Premises where the public is dealt with directly.
- g. Shopping centres, including superstores and shopping malls, with the exception of areas in the open air. Smoking will not be permitted in bars, restaurants and other food and drink establishments situated within such centres and separated from the other premises thereof, irrespective of the surface area occupied, unless smoking areas are designated in accordance with this Law.
- h. Social care centres for persons under the age of 18.
- i. Leisure or amusement centres accessible to persons under the age of 18, with the exception of spaces in the open air.
- j. Cultural centres, reading rooms, exhibitions, libraries, conferences and museums.
- k. Night clubs or clubs open to the general public during the times or periods that persons under the age of eighteen are admitted.
- l. Areas or establishments where foods are manufactured, processed, prepared, consumed or sold.
- m. Lifts and goods lifts.
- n. Telephone boxes, ATM kiosks and other small spaces for public use. A “small space for public use” is one that occupies an area no greater than five square metres.
- o. Urban or inter-urban public transport vehicles, company vehicles, taxis, ambulances, funicular railways and cable cars.
- p. All premises in the suburban transport system (carriages, platforms, walkways, stairways, stations, etc.), with the exception of those spaces that are completely in the open air.
- q. Means of rail and sea transport, with the exception of those spaces in the open air.
- r. Aircraft whose journeys start and end within the national territory and on board all flights operated by Spanish airlines, including those codeshared with foreign companies.
- s. Service stations and similar establishments.
- t. Any other premises where smoking is banned under this Law or another regulation, or by decision of the owner.

Article 8. Designation of smoking areas.

1. Smoking areas may be designated in the following premises or spaces where smoking is banned:

Social care centres.

Hotels, hostels and similar establishments.

Bars, restaurants and other enclosed catering establishments with a surface area for customer or visitor use that is equal to or greater than 100 m², unless they are located within centres or buildings where smoking is prohibited in accordance with Article 7.

Night clubs, gaming establishments or other establishments and clubs open to the general public during the times or periods that persons under the age of eighteen are not admitted, with the exception of those spaces in the open air.

Theatres, cinemas and other enclosed public entertainment premises. In these cases, the smoking area must be situated outside the rooms where the performance takes place or the film is shown.

Airports.

Bus stations.

Railway stations and ship and ferry terminals.

Any other premises where smoking is not banned and the owner decides to do so.

In any premises or spaces where this is permitted by the legislation of the Autonomous Communities, other than in the instances listed in Article 7.

2. Smoking areas may only be designated in the premises referred to in the above paragraph provided that the following minimum conditions are met:

They must be correctly and visibly signposted, in Castilian and in the co-official language, with the information required by the corresponding Autonomous Community regulations.

They must be physically separated from the other facilities of the centre or organisation and completely enclosed, and must not be an area through which non-smokers are required to pass unless the latter work or are employed in these areas and are over the age of 16.

They must have independent ventilation systems or other devices or mechanisms that guarantee the extraction of smoke.

In all cases, the surface area of the specially equipped area must be less than 10% of the total surface area intended for customers or visitors to the centre or establishment, except in those instances referred to in points b, c and d of the previous paragraph, where a maximum of 30% of the common areas may be set aside for smokers. Under no circumstances can the smoking areas designated in all of the premises or spaces referred to in paragraph 1 of this article have a total surface area greater than 300 m².

In the areas referred to in paragraph (1)b of this article, up to 30% of the rooms may be set aside for smoking guests.

In establishments where two of the activities of those listed in this article take place (separated spatially), the usable surface area shall be calculated for each one of these independently, excluding common areas and passageways in which smoking will not be permitted under any circumstances.

In all cases where it is not possible for these areas to meet the requirements laid down, the smoking ban will be maintained throughout the premises.

3. Persons under the age of 16 will not be admitted to the smoking areas created in the establishments referred to in this Article.

Sweden

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Employers obliged to ensure that employees are not involuntarily exposed to tobacco smoke	Smoking allowed in separately ventilated smoking rooms	Smoking banned altogether	Smoking banned altogether	Smoking banned altogether	Smoking allowed only in separate smoking rooms where no food or drink is served or consumed	<p>The 1993 Tobacco Act introduced smoking ban in educational and healthcare facilities, public transport and indoor public places. In workplaces, there is no explicit ban on smoking but the employer is obliged to ensure that employees are not exposed to tobacco smoke against their will.</p> <p>The Act extending the ban on smoking also to restaurants and bars entered into force on 1 June 2005. Owners have the possibility to install a separately ventilated smoking room where no food or drink is to be served or consumed.</p>

Legal provisions

Tobacco Act (1993:581) with amendments up to and including SFS 2005:369

Restrictions on smoking in some premises and spaces and in some areas outdoors

Section 2 Smoking is prohibited

1. in premises intended for child care, school activities or other activities for children young people and in school playgrounds as well as in the equivalent outdoor areas at preschools and after-school recreation centres,
2. in premises intended for health and medical care,
3. in premises intended for joint use in residential accommodation and at establishments offering special service or care,
4. on means of transport in domestic public transport or in premises and other spaces intended for use by those travelling by such means of transport,

5. in restaurants and other establishments serving food or beverages, except when the service is provided outdoors,
6. in premises other than those referred to in Sections 1 to 5 when a public meeting or public event as referred to in Chapter 2, Sections 1 to 3 of the Public Order Act (1993:1617) is arranged and in premises intended to be used by those taking part in such a meeting or event, and
7. in premises other than those referred to in Sections 1 to 6 if the general public has access to the premises. (SFS 2004:485).

Section 3 Repealed by (SFS 1994:98).

Section 4 In hotels and other establishments where temporary accommodation is offered on a commercial basis, smoking is to be prohibited in a certain number of the rooms or the equivalent. Section 2, item 4 shall apply instead as regards sleeping-compartments and other spaces made available for temporary accommodation on means of transport in domestic public transport. (SFS 2004:485).

Section 5 The provisions of Section 2 do not apply regarding housing and other premises for accommodation which are not temporary. (SFS 1994:98).

Section 6 Smoking is, notwithstanding the provisions of Section 2, items 2 to 4, 6 and 1, permitted in parts of the premises or other spaces referred to there, if these parts have been specially set aside for smoking. The same applies to premises referred to in Section 2, item 1 and which are available only to members of staff.

Notwithstanding the provision of Section 2, item 5, smoking is permitted in restaurants and in other establishments serving food or beverages in separate rooms that are specially set aside for smoking. Rooms where smoking is permitted may only comprise a small part of the area of such establishment. The rooms shall be located so that visitors do not have to pass through them. Employees shall only need to stay in the rooms temporarily, when people are smoking. Service or other similar activities may not be conducted in the rooms when people are smoking. However, this does not apply to such activities that are directly linked to the function of the rooms. Food or beverages may not be brought into these rooms.

Deviations from Section 2, items 1 to 4, 6 and 7 and Section 4 are permitted if there are special reasons for so doing due to the nature of the space or the area available, its mode of usage or other circumstances. (SFS 2004:485).

Section 6 a The Government, or the authority appointed by the Government, may issue regulations on design and ventilation of such rooms referred to in Section 6, second paragraph. (SFS 2004:485).

Section 7 A person who in his or her capacity of owner or who otherwise disposes over premises, another space or an outdoor area subject to any of the provisions of Section 2 and 4 is responsible to ensure compliance with the provisions.

If any person smokes despite being requested not to smoke where smoking is not permitted, this person may be required to leave. (SFS 1994:98).

Smoke-free working environment

Section 8 In cases other than those intended in Sections 2 and 4, the employer is responsible for ensuring that an employee is not against his or her will exposed to tobacco smoke at the workplace or in similar premises where the employee is active. Here the persons referred to in Chapter 1, Section 2, first paragraph and Section 3 of the Work Environment Act (1977:1160) are to be considered as employees. (SFS 1994:98).

United Kingdom

Enclosed workplaces	Enclosed public places	Public transport	Health care facilities	Education facilities	Bars and restaurants	Comments
Smoking banned altogether	Smoking banned altogether	Smoking banned altogether	Smoking banned altogether except for semi-residential premises (exemptions differ slightly in the four parts of the UK)	Smoking banned altogether	Smoking banned altogether	<p>Comprehensive smoke-free laws went into effect in March 2006 in Scotland, in April 2007 in Northern Ireland and Wales and in July 2007 in England.</p> <p>All four regulations were subject to public consultations.</p> <p>The regulations differ slightly but as a rule smoking is prohibited in all enclosed and substantially enclosed workplaces and public places with minimum exemptions, mainly for residential premises such as long-stay care homes or mental health hospitals. Smoking is defined widely as being in possession of any lit product.</p> <p>English and Northern Irish laws give the power to the department of health to designate additional smoke-free places that need not be enclosed or substantially enclosed.</p>

England

The Health Act 2006 came into force on 1st July 2007, prohibiting smoking in most wholly and substantially enclosed public places and workplaces with the exception of semi-residential premises.

The following places are exempt from the legislation:

- private accommodation and private vehicles

- designated hotel bedrooms
- designated rooms in adult residential care homes, hospices and prisons
- during performances where artistic integrity makes it appropriate for a person to smoke
- specialist tobacconist shops are exempt for the purposes of sampling cigars or small amounts pipe tobacco within the shop's premises. However, cigarette smoking is not permitted.
- designated rooms in offshore installations
- designated room in a research or testing facility

Smoking is also permitted in vehicles used for work purposes if they are for the sole use of one driver. Convertible cars used for work purposes are also exempt when the roof is completely removed or stowed.

Legal provisions

Health Act:

http://www.opsi.gov.uk/ACTS/acts2006/ukpga_20060028_en_1

Five sets of regulations set out the details of England's smoke-free legislation:

1. The Smokefree (Premises and Enforcement) Regulations set out definitions of "enclosed" and "substantially enclosed" and the bodies responsible for enforcing smokefree legislation.

<http://www.opsi.gov.uk/si/si2006/20063368.htm>

2. The Smokefree (Exemptions and Vehicles) Regulations set out the exemptions to smokefree legislation and vehicles required to be smokefree.

<http://www.opsi.gov.uk/si/si2007/20070765.htm>

3. The Smokefree (Penalties and Discounted Amounts) Regulations set out the levels of penalties for offences under smokefree legislation.

<http://www.opsi.gov.uk/si/si2007/20070764.htm>

4. The Smokefree (Vehicle Operators and Penalty Notices) Regulations set out the responsibility on vehicle operators to prevent smoking in smokefree vehicles and the form for fixed penalty notices.

<http://www.opsi.gov.uk/si/si2007/20070760.htm>

5. The Smokefree (Signs) Regulations set out the requirements for no-smoking signs required under smokefree legislation.

<http://www.opsi.gov.uk/si/si2007/20070923.htm>

Scotland

The Smoking, Health and Social Care (Scotland) Act came into force on 26th March 2006, banning smoking in most wholly and substantially enclosed public places. The regulations that accompany the Bill include an outline of the premises to be classed as non-smoking, and an outline of the premises to be exempt from the Act.

Premises classed as 'non-smoking' under the regulations are as follows:

- Restaurants
- Bars and public houses
- Shops and shopping centres
- Hotels
- Libraries, archives, museums and galleries
- Cinemas, concert halls, theatres, bingo halls, gaming and amusement arcades, casinos, dance halls, discotheques and other premises used for the entertainment of members of the public
- Premises used as a broadcasting studio or film studio or for the recording of a performance with a view to its use in a programme service or in a film intended for public exhibition
- Halls and any other premises used for the assembly of members of the public for social or recreational purposes
- Conference centres, public halls and exhibition halls
- Public toilets
- Club premises
- Offices, factories and other non-domestic premises in which more than one persons works
- Offshore installations
- Educational institution premises
- Premises providing care home services, sheltered housing, secure accommodation services that are non-domestic
- Hospitals, hospices, psychiatric hospitals, psychiatric units and health care premises
- Creches, day nurseries, day centres and other premises used for the day care of children or adults
- Premises used for, or in connection with, public worship or religious instruction, or the social or recreational activities of a religious body
- Sports centres
- Airport passenger terminals and any other public transportation facilities
- Public transportation vehicles
- Vehicles which one or more persons use for work
- Public telephone kiosks

Exemptions under the regulations are:

Residential accommodation
Designated rooms in adult care homes
Adult hospices
Designated rooms in psychiatric hospitals and psychiatric units
Designated hotel bedrooms
Detention or interview rooms which are designated rooms
Designated rooms in offshore installations
Private vehicles
Designated laboratory rooms
HM submarines and ships of the Royal Fleet Auxiliary

Legal provisions

The Smoking, Health and Social Care (Scotland) Act:

http://www.opsi.gov.uk/legislation/Scotland/acts2005/asp_20050013_en_1

The Prohibition of Smoking on Certain Premises (Scotland) Regulations 2006: Scottish Statutory Instrument 90 2006

<http://www.opsi.gov.uk/legislation/scotland/ssi2006/20060090.htm>

Northern Ireland

Smoke-free public places legislation came into force in Northern Ireland on 30 April 2007 under [The Smoking \(Northern Ireland\) Order 2006](#).

There are only a few exemptions to the Order. The exemptions are: private accommodation, designated bedrooms in hotels, designated rooms in residential care homes, nursing homes and research and testing facilities, specialist tobacconists (for sampling purposes), prisons, young offenders centres and remand centres (certain areas are not exempt), designated rooms in residential accommodation in mental health units (until 30 April 2008), a designated room used as a detention cell within a police station, an exercise area within a police station and an interview room within a Child Abuse and Rape Enquiry (CARE) suite (until 30 April 2008).

Legal provisions

The Smoking (Northern Ireland) Order 2006

http://www.opsi.gov.uk/si/si2006/uksi_20062957_en.pdf

Wales

The Smoke-Free Premises etc.(Wales) Regulations came into force on 2nd April 2007. There are few exemptions to the legislation. Exemptions include designated hotel bedrooms, designated rooms in research and testing facilities, designated rooms for use by adults in care homes, adult hospices and residential mental health units.

Legal provisions

Smoke-Free Premises etc.(Wales) Regulations

http://www.opsi.gov.uk/legislation/wales/wsi2007/wsi_20070787_en_1

D) LAWS BANNING SMOKING IN VEHICLES CARRYING CHILDREN – INTERNATIONAL OVERVIEW

Jurisdiction	Applicable Age	Date Law in Force	Date Law Adopted
Canadian provinces/territories			
1. Nova Scotia	19	April 1, 2008	Dec. 13, 2007
2. Yukon Territory	18	May 15, 2008	Apr. 22, 2008
3. British Columbia	16	date to be set	May 29, 2008
4. Ontario	16	Jan. 21, 2009	June 18, 2008
Canadian municipalities			
5. Wolfville, Nova Scotia	19	June 1, 2008	Nov. 19, 2007
6. Surrey, British Columbia	19	July 31, 2008	July 14, 2008
7. Okotoks, Alberta	16	Sept. 1, 2008	July 15, 2008
U.S. states			
8. Arkansas	if car seat required ¹	July 21, 2006	Apr. 10, 2006
9. Louisiana	13 ²	Aug. 15, 2006	July 5, 2006
10. California	18	Jan. 1, 2008	Oct. 10, 2007
11. Maine	16	Sept. 1, 2008	Apr. 10, 2008
U.S. municipalities			
12. Bangor, Maine	18	Jan. 18, 2007	Jan. 8, 2007
13. Keyport, New Jersey	18	Apr. 26, 2007	Apr. 24, 2007
14. Rockland County, N.Y.	18	June 21, 2007	June 15, 2007
15. West Long Branch Borough, NJ	18	June 9, 2007	June 6, 2007
Australian states and territories			
16. South Australia	16	May 31, 2007	Apr. 5, 2007
17. Tasmania	18	Jan. 1, 2008	Dec. 19, 2007
Countries			

18. Cyprus	16		June 14, 2002
19. South Africa	12	date to be set	Feb. 23, 2008
Other			
20. Puerto Rico (US Commonwealth in Caribbean)	13	Mar. 2, 2007	Mar. 2, 2006

ANNEX V–HEALTH EFFECTS OF ETS EXPOSURE

A) RELATIVE RISK ESTIMATES FOR ETS-ASSOCIATED DISEASES AND CONDITIONS

This Annex summarises the relative risk estimates reported in the literature for mortality and morbidity associated with those diseases where evidence is sufficient (or suggestive) to infer a causal relationship: lung cancer, coronary heart disease, stroke, respiratory conditions in adults (e.g. asthma, COPD) as well as respiratory conditions in children (e.g. asthma or wheezing)

Table 4: Summary of Relative Risk estimates due to ETS for selected diseases

<u>Condition</u>	<u>Work</u>		<u>Home</u>	
	<u>Lowest estimate</u>	<u>Highest estimate</u>	<u>Lowest estimate</u>	<u>Highest estimate</u>
<u>Lung cancer</u>	<u>1.03</u>	<u>2.01</u>	<u>1.16</u>	<u>1.29</u>
<u>CHD</u>	<u>1.11</u>	<u>1.21</u>	<u>1.25</u>	<u>1.42</u>
<u>Stroke</u>	<u>n/a</u>	<u>n/a</u>	<u>0.50</u>	<u>1.82</u>
<u>COPD/Asthma</u>	<u>n/a</u>	<u>n/a</u>	<u>1.2</u>	<u>2.6</u>
<u>Childhood asthma</u>	<u>n/a</u>	<u>n/a</u>	<u>0.93</u>	<u>1.54</u>

As shown in the table, relative risk estimates reported in the literature exhibit wide ranges. Even though the large majority of studies report relative risks greater than one with 95% significance, a few studies report ratios smaller than one. The highest estimates are reported for lung cancer due to ETS exposure at work (2.01), stroke due to ETS exposure at home (1.82) and COPD/Asthma due to ETS exposure at home (2.6). Separate relative risks for ETS exposure at work were not reported for three diseases (stroke, COPD/Asthma and childhood asthma).

The full range of relative risk estimates is summarised below.

Lung Cancer

Table 2 Relative risk of lung cancer for non smokers exposed to workplace ETS

Reference	Location	No studies in meta-analysis	RR (95% CI)
(Stayner, Bena <i>et al.</i> 2007)	Multiple	22	1.24 (1.18-1.29)

(Stayner, Bena <i>et al.</i> 2007) High exposure	Multiple	22	2.01 (1.33-2.60)
(Royal College of Physicians 2005) Male and female	Multiple	7 (1,582 lung cancer cases)	1.03 (0.86-1.23)
(Surgeon General 2006) Non smokers vs. none	Multiple	25	1.22 (1.13-1.33)
(Surgeon General 2006) Non smoker vs none	Europe	7	1.13 (0.96-1.34)

Table 3 Relative risk of lung cancer for non smoking men exposed to workplace ETS

Reference	Location	No studies in meta-analysis	RR (95% CI)
(Royal College of Physicians 2005) Men	Multiple	6 (246 lung cancer cases)	1.12 (0.80-1.56)
(Surgeon General 2006) Men vs none	Multiple	25	1.12 (0.86-1.50)

Table 4 Relative risk of lung cancer for non smoking women exposed to workplace ETS

Reference	Location	No studies in meta-analysis	RR (95% CI)
(Royal College of Physicians 2005) Women	Multiple	19 (3,588 lung cancer cases)	1.19 (1.09-1.30)
(Surgeon General 2006) Women versus none	Multiple	25	1.22 (1.10-1.35)

Table 5 Relative risk of lung cancer for non-smokers exposed to home ETS from spousal smoking

Reference	Location	No studies in meta-analysis	RR (95% CI)
(Surgeon General 2006) Spousal smoking: Smoking versus non-smoking spouse	Multiple	44 case control	1.21 (1.13-1.30)
(Surgeon General 2006) Spousal smoking: Smoking versus non-smoking spouse	Multiple	8 Cohort	1.29 (1.125-1.49)
(Surgeon General 2006) Spousal smoking: Smoking versus non-smoking spouse.	Europe	52	1.16 (1.03-1.30)

Table 6 **Relative risk for lung cancer for never smoking women exposed to home ETS from spousal smoking**

Reference	Location	No studies in meta-analysis	RR (95% CI)
(Taylor, Najafi <i>et al.</i> 2007)	Multiple	55	1.27 (1.17-1.37)
(Taylor, Najafi <i>et al.</i> 2007)	Europe	11	1.31 (1.24-1.52)
(Surgeon General 2006)	Multiple	52	1.37 (1.05-1.79)
Taylor <i>et al.</i> (2001) Cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005)*	Multiple	43	1.29 (1.17-1.43)
(Royal College of Physicians 2005)	Multiple	46 (6,257 lung cancer cases)	1.24 (1.14-1.34)

Table 7 **Relative risk of lung cancer for never smoking men exposed to home ETS from spousal smoking**

Reference	Location	No studies in meta-analysis	RR (95% CI)
(Royal College of Physicians 2005)	Multiple	11 (442 lung cancer cases)	1.37 (1.02-1.83)
(Surgeon General 2006)	Multiple	8 Cohort	1.29 (1.125-1.49)
(Surgeon General 2006)	Multiple	52 spousal studies included in meta-analysis for SG report	1.22 (1.13-1.31)

Coronary Heart Disease

Table 8 **Relative risk of CHD for non smokers exposed to home/work ETS**

Reference	Location	No. studies in meta-analysis	RR (95% CI)
(Surgeon General 2006)	Multiple	16 (9 cohort and 7 case-control)	1.27 (1.19-1.36)
(Surgeon General 2006) Nonsmokers exposed to low to moderate (1-14 or 1-19 cigarettes/day) SHS	Multiple	8	1.16 (1.03-1.32)
(Surgeon General 2006) Nonsmokers exposed to moderate to high (≥ 15 or ≥ 20 cigarettes/day) SHS	Multiple	8	1.44 (1.13-1.82)

Table 9 **Relative risk of CHD for non smokers ever-exposed to workplace ETS**

Reference	Location	No, studies in meta-analysis	RR (95% CI)
Wells (1998a) Cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005)* Ever-exposure to ETS in the workplace	Multiple	8	1.18 (1.04-1.34) for mortality only (n=8) 1.32 (1.01-1.72) for morbidity only (n=6)
He <i>et al</i> (1999) Cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005)*	Multiple	8	1.11 (1.00-1.23)
Steenland (1999) Cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005)*	Multiple		1.21 (1.04-1.41)

Table 10 **Relative risk of CHD for non smokers ever-exposed to home ETS from spousal smoking**

Reference	Location	Number of studies in meta-analysis	RR (95% CI)
Glantz and Parmley (1991) Cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005)	Multiple	10	1.3 (1.2-1.4)
Wells (1994) Cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005)*	Multiple	10	1.42 (1.15-1.75)
Law <i>et al</i> (1997) Cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005)*	Multiple	19	1.30 (1.22-1.38)
Thun <i>et al</i> (1999) Cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005)	U.S.	17	1.25 (1.17-1.33) 1.25 (1.17-1.33) for fatal CHD 1.25 (1.17-1.33) for no fatal MI
Thun <i>et al</i> (1999) Cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005)*	Multiple	8	1.22 (1.13-1.32)
Wells (1998a) Cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005)*	Multiple	18	1.49 (1.29-1.78) for all home (n=18) 1.28 (1.02-1.61) for morbidity only (n=6) 1.21 (1.09-1.35) for mortality (n=6)
He <i>et al</i> (1999) Cited in (NHS Health	Multiple	18	1.25 (1.17-1.32)

Scotland, Ludbrook <i>et al.</i> 2005)*			1.24 (1.17-1.32) for mortality only (n=14)
He <i>et al</i> (1999) Cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005)* Never-smokers exposed to ETS by spouses who smoke more than 20 cigarettes/day	Multiple	7	1.31 (1.21-1.42)

Stroke

Table 11 **Relative risk of stroke for non smokers exposed to home ETS from spousal smoking - Meta analysis**

Reference	Location	No. studies in meta analysis	RR (95% CI)
(Royal College of Physicians 2005)	Multiple	3 cohort	1.27 (1.10-1.46)

Table 12 **Relative risk of stroke for never smokers exposed to home ETS from spousal smoking - Individual studies**

Reference	Location	Type of study and number of individuals (no. of stroke cases)	RR (95% CI)
Bonita <i>et al</i> (1999) Cited (Royal College of Physicians 2005) Never smokers and former smokers who quit > 10 years ago exposed to ETS from spouse. Men and women	New Zealand	Case-control. 215 cases and 1,366 controls	1.82 (1.34-2.49)
You <i>et al</i> (1999) Cited in (Royal College of Physicians 2005). Men and women	Australia	Case-control. 149 cases and 210 controls. Lifetime non smoking men and women	1.70 (0.98-2.92)
Anderson <i>et al</i> (2004) Cited in (Royal College of Physicians 2005)		Case-control	0.5 (0.2-1.3)
Anderson <i>et al</i> (2004) Cited in (Royal College of Physicians 2005)		Case-control	1.3 (0.7-2.3)

Table 13 **Relative risk of stroke for never smokers exposed to home ETS from spousal smoking - Individual studies (men only)**

Reference	Location	Type of study and number of individuals (no. of stroke cases)	RR (95% CI)
Iribarren <i>et al</i> (2001) Cited in (Royal College of Physicians 2005)		Cross-sectional 16,524 (42)	0.25 (0.04-0.82)
Lee <i>et al</i> (1986) Cited in (Royal College of Physicians 2005)		Case-control	0.78 (0.23-2.24)
Bonita <i>et al</i> (1999) Cited in (Royal College of Physicians 2005) Never smokers and former smokers who quit > 10 years ago exposed to ETS from spouse.	New Zealand	Case-control. 215 cases and 1,366 controls	2.10 (1.33-3.32)
Sandler <i>et a</i> (1989) cited in (Surgeon General 2006) ETS exposure in the home (self reported)	Washington country, Maryland U.S.	Cohort	0.97 (0.65-1.46)

Table 14 **Relative risk of stroke for never smokers exposed to home ETS from spousal smoking - Individual studies (women only)**

Reference	Location	Type of study and number of individuals (no. of stroke cases)	RR (95% CI)
Iribarren <i>et al</i> (2001) Cited in (Royal College of Physicians 2005)		Cross-sectional 26,197 (95)	1.23 (0.75-1.96)
Lee <i>et al</i> (1986) Cited in (Royal College of Physicians 2005)		Case-control	1.00 (0.54-1.91)
Bonita <i>et al</i> (1999) Cited in (Royal College of Physicians 2005) Never smokers and former smokers who quit > 10 years ago exposed to ETS from spouse.	New Zealand	Case-control. 215 cases and 1,366 controls	1.66 (1.07-2.57)
Sandler <i>et a</i> (1989) cited in (Surgeon General 2006) ETS exposure in the home (self reported)	Washington country, Maryland U.S.	Cohort	1.24 (1.03-1.49)

Respiratory effects in Adults from exposure to SHS (e.g. Asthma and COPD)

Table 15 Relative risk of adult onset asthma for non smokers exposed to home and/or work ETS

Reference	Location	Type of study (Number of participants)	RR (95% CI)
Robbins <i>et al</i> (1993) as cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005) Self-reported asthma Home and work	California, U.S.	Cohort (3,917)	1.57 (0.81-2.97)
Leuenberger <i>et al</i> (1994) as cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005) Self-reported asthma Home and/or work SHS in the past 12 months among lifetime non-smoking Swiss adults	Switzerland	Cross sectional (4,197)	1.39 (1.04-1.86)
Jaakola <i>et al</i> (2003) as cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005) Home and work ETS exposure in the previous 12 months	Finland	Case control (521)	1.66 (0.99-2.78)
(Surgeon General 2006) ETS exposure (versus none) at home or work		Review	40-60%

Table 16 Relative risk of adult onset asthma for non smokers exposed to home ETS (women only)

Reference	Location	Type of study (Number of participants)	RR (95% CI)
Ng <i>et al</i> (1993) as cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005) Self-reported adult onset asthma. Home (live with heavy smoker - more than 20 cigarettes/day)	Singapore	Cross sectional (1,438)	1.6 (0.69-3.70)

Table 17 Relative risk of adult onset asthma for non smokers exposed to work ETS

Reference	Location	Type of study (Number of participants)	RR (95% CI)
Greer <i>et al</i> (1993) as cited in (Surgeon General 2006)	California, U.S.	Cohort (3,577)	1.5 (1.2-1.8)

Self-reported asthma Amongst population of 3,577 Seventh Day Adventists between 1977 and 1987			
McDonnell <i>et al</i> (1999) as cited in (NHS Health Scotland, Ludbrook <i>et al.</i> 2005)	California, U.S.	Case control (521)	1.21 (1.04-1.39) for seven year increments-women
Flodin <i>et al</i> (1995) as cited in (Surgeon General 2006)	Sweden	Case control (79 cases)	1.5 (0.8-2.5)

Table 18 **Relative risk of COPD for non smokers exposed to home and work ETS**

Reference	Type of study (Number of participants)	RR (95% CI)
Robbins <i>et al</i> (1993) as cited in (Surgeon General 2006) Airways Obstructive Disease (self reported symptoms and physician diagnoses – asthma, chronic bronchitis, and emphysema). ETS exposure at home and work during childhood and adulthood	Cohort study 1977-1987 of 3,914 adults aged 25 years and older	1.7 (1.3-2.2)
Leunberger <i>et al</i> 1994) as cited in (Surgeon General 2006) Self-reported chronic bronchitis. ETS exposure at home and work during previous 12 months	Cross-sectional survey of 4,197 Swiss adults 18-60 years old	1.7 (1.3-2.2) (odds ratio)
Dayal <i>et al</i> (1994) as cited in (Surgeon General 2006) Exposed to less than one pack of cigarettes per day (low) Obstructive respiratory disease (self reported physician-diagnosed asthma, chronic bronchitis, or emphysema)	Case control (219 lifetime non smokers versus 657 controls)	1.2 (0.8-1.7)
Dayal <i>et al</i> (1994) as cited in (Surgeon General 2006) Exposed to one or more pack of cigarettes per day (high) Obstructive respiratory disease (self reported physician-diagnosed asthma, chronic bronchitis, or emphysema)	Case control (219 lifetime non smokers versus 657 controls)	1.9 (1.2-2.9)
Forastiere <i>et al</i> (2000) as cited in	Cross sectional survey of 1,983	1.75 (0.88-3.47)

(Surgeon General 2006)	nonsmoking women	
Self-reported COPD in 4 areas of Italy		
Surgeon General's (Surgeon General 2006)	Qualitative Evidence synthesis	1.2-2.0
COPD		

Table 19 **Relative risk of COPD for non smokers exposed to home ETS from spouse**

Reference	Condition	Exposure	Location	Type of study (Number of participants)	RR (95% CI)
(Royal College of Physicians 2005)	COPD	Never smokers exposed to ETS from spouse		8	25% (10%-43%)
Forastiere <i>et al</i> (2000) as cited in (Surgeon General 2006)	Self reported COPD		4 areas of Italy	Cross sectional survey of 1,983 nonsmoking women	1.75 (0.88-3.47)
Kalandidi <i>et al</i> (1987)	Hospital admissions for COPD (Chronic Obstructive lung disease)	Women's whose husbands smoked one pack per day or less (low) Women's whose husbands smoked more than one pack per day (low)		Hospital based Case-control study(cases: 103 ever-married women aged 40-73 non-smokers; controls: 179 ever-married non smoking women)	2.6 (90%CI 1.3-5.0) low 1.5 (0.8-2.7) high
Hirayama (1981)	COPD mortality from emphysema and asthma)	Spousal smoking (husband former smokers or smokes 19 cigarettes or less per day) (low) Spousal smoking (husbands smoked 20 or more cigarettes per day) (high)		Population based Cohort study of 91,540 nonsmoking Japanese housewives aged 40 years and older	29% (low) 49% (high) Results not statistically significant.
Sandler <i>et al</i> (1989)	COPD mortality (from emphysema and bronchitis)	Household smoking exposure	Washington country, Maryland, U.S.	Cohort study among 10,799 residents (life time nonsmokers)	5.7 (1.2-26.8) women (n=13) 0.9 (0.2-5.3) men (n=6)

Respiratory effects in Children from exposure to SHS

Table 20 Respiratory effects in Children from exposure to SHS

Reference	Condition	Exposure	Number of studies in meta-analysis	RR (95% CI)
(Royal College of Physicians 2005)	Early lower respiratory illnesses (similar for wheezing and non-wheezing illnesses)	Children exposed when one or both parents smoke	Summary estimates	60% (47%-74%)
(Royal College of Physicians 2005)	Asthma at school age	Children exposed when one or both parents smoke	Summary estimates	23% (14%-33%)
(Royal College of Physicians 2005)	“Clinically defined Asthma” in case control studies	Children exposed when one or both parents smoke	Summary estimates	39% (19%-64%)
(Surgeon General 2006)	Asthma prevalence	Children exposed to smoking by either parent, 1976-1999	12 Studies that did not adjust for potential confounders (Unadjusted pooled odds ratio)	1.26 (1.15-1.38) odds ratio
(Surgeon General 2006)	Asthma prevalence	Children exposed to smoking by either parent, 1986-2000	18 Studies that adjusted for a variety of potential confounders (Adjusted pooled OR)	1.22 (1.12-1.32) odds ratio
(Surgeon General 2006)	Asthma prevalence	Children exposed to smoking by either parent	29 studies. Overall pooled Odds ratio from all the studies, using adjusted values if available	1.23 (1.14-1.33) odds ratio
(Surgeon General 2006)	Childhood asthma and wheeze illness onset	Maternal smoking	Meta-analyses 4 cohort studies for the first five to seven years of life	1.31 (1.22-1.41)
(Surgeon General 2006)	Childhood asthma and wheeze illness onset	Maternal smoking	Meta-analyses 4 cohort studies for	1.13 (1.04-1.22)

			school years or throughout childhood, excluding infancy	
(Surgeon General 2006)	Childhood asthma or wheeze prevalence	Smoking by either parent, 1974-2000	15 case control studies (pooled OR)	1.39 (1.19-1.64)
(Surgeon General 2006)	Childhood asthma or wheeze prevalence	Maternal smoking, 1974-2000	15 case control studies (pooled OR)	1.54 (1.31-1.81)
(Surgeon General 2006)	Childhood asthma or wheeze prevalence	Paternal smoking, 1974-2000	15 case control studies (pooled OR)	0.93 (0.81-1.07)

B) HEALTH EFFECTS OF ETS EXPOSURE IN CHILDHOOD AND SMOKING IN PREGNANCY

Health effects of exposure to ETS in childhood

There is conclusive evidence that exposure to SHS in children causes:	There is substantial evidence that exposure to SHS in children causes:
• Cot death	• Development of asthma in those previously unaffected
• Middle-ear disease (ear infections)	
• Respiratory infections	
• Asthma attacks in those already affected	
• Reduced lung function	

Health effects of smoking in pregnancy

There is conclusive evidence that smoking in pregnancy causes:	There is substantial evidence that smoking in pregnancy causes:	There is suggestive evidence that smoking in pregnancy causes:
• Placental complications	• Ectopic pregnancy	• Specific fetal malformations
• Premature rupture of the membranes	• Miscarriage	• Predisposition to smoke in later life
• Premature birth	• Reduced rates of breastfeeding	• ADHD
• Perinatal death	• Shorter duration of breastfeeding	
• Reduced fetal growth (low birth-weight baby)	• Asthma	
• Cot death	• Respiratory symptoms	
• Reduced lung function in infancy		

Source: BMA (2007) *Breaking the cycle of children's exposure to tobacco smoke*.

ANNEX VI– EFFECTS OF SMOKE-FREE POLICIES

A) SUMMARY OF EVIDENCE FROM SMOKE-FREE JURISDICTIONS

This Annex provides summary tables for the non-economic and economic effects of smoke-free policies. The non-economic effects comprise ETS exposure among non-smokers, air quality, population health, smoking behaviour, and attitudes and compliance. The economic effects of smoking bans relate to the tobacco industry, hospitality sector, and other industries.

ETS exposure among non-smokers

The following tables summarise the effects of ETS exposure among non-smokers using various measures including a) by self-report, b) by cotinine, c) by nicotine, and d) general (non-specific).

Table 21 **By self-report**

Study	Country	Setting	Before	After	% reduction
(Edwards, Bullen <i>et al.</i> 2008) Previous week in 2003 compared to previous week in 2006	New Zealand	Work	20%	8%	12%
(WHO 2007)	Ireland	Work	30 hrs	0 hrs	100%
(Goodman, Agnew <i>et al.</i> 2007) Before and one year post ban. 42 Dublin pubs in 73 bar workers	Ireland	Pubs	40 hrs	25 minutes	99%
Abrams <i>et al.</i> (2006)	U.S. (New York)	Hospitality	20 hrs	6 hrs	70%
(Eisner, Smith <i>et al.</i> 1998) Reduction over the previous 7 days	U.S. (San Francisco)		28 hrs	2 hrs	93%
Weekly, July 20, 2007	U.S. (New York)	Restaurant patrons	19.8%	3.1%	16.7%

New York Adult Tobacco Survey (n~2000 residents aged ≥ 18 years). Pre: June 26 – July 23 2003 vs Post: April 1 – June 30 2004		Bar patrons	52.4%	13.4%	39%
(Farrelly, Nonnemaker <i>et al.</i> 2005) From baseline to 12 months follow-up	U.S. (New York)	Hospitality workers (n=30, p<0.01)	12.1 hrs (95%CI 8.1 to 16.3 hrs)	0.2 hrs (95%CI -0.1 to 0.5 hrs)	98%
(Eisner, Smith <i>et al.</i> 1998) Median self-reported ETS per week (p <.001)	U.S. (California)	Bartenders	29 hrs	2 hrs	93%

Table 22 **By cotinine (a principal nicotine metabolite and highly specific biomarker in saliva, urine, or blood)**

Study	Country	Setting	Before	After	% reduction
WHO (2007) Post implementation	Ireland	Hospitality			69%
(Akhtar, Currie <i>et al.</i> 2007)	Scotland	(in children)			39%
(Goodman, Agnew <i>et al.</i> 2007) 42 pubs. Before and one year post ban.	Ireland	Dublin bar men (n=81)			81%
(Semple, Maccalman <i>et al.</i> 2007) Pre and one year post ban	Scotland		2.94 ng/ml ⁻¹	0.41 ng/ml ⁻¹	12%
Fernandez <i>et al.</i> , ECTH (2007)	Spain	Work: Total ban			53.1%
		Work: Designated areas			21.4%
		Work: No restrictions			14.8%

Haw S, TSFS Adult, non smokers, aged 18-74 years old	Scotland	Public and private places	0.57 ng/ml	0.38 ng/ml	33%
Haw S, TSFS Adult, non smokers, aged 18-74 years old in non- smoking households	Scotland	Public and private places			49%
Haw S, TSFS Adult, non smokers, aged 18-74 years old in smoking households	Scotland	Public and private places	0.92 ng/ml	0.81 ng/ml	12%
(Mulcahy, Evans <i>et al.</i> 2005) Median cotinine concentration	Ireland	Hotel employees	1.6 ng/mL	0.5 ng/mL	69%
(Mulcahy, Evans <i>et al.</i> 2005)	Ireland	Bars	35.5 $\mu\text{g}/\text{m}^3$	6.0 $\mu\text{g}/\text{m}^3$	83%
(Mulcahy, Evans <i>et al.</i> 2005) Sample from 20 Galway city centre bars among 35 hospitality workers at 15 hotels	Ireland	Bars			69%
(Allwright 2004) Control: 22.5% reduction in Northern Irish staff	Northern Ireland	Bars			80%
(Semple, Maccalman <i>et al.</i> 2007) Feb 2006 to Feb 2007	Scotland	Bar	3.25 ng/ml	0.55 ng/ml	83%
Weekly, July 20, 2007 New York Adult Tobacco Survey (n=1,594 saliva samples amongst non-smoking residents aged \geq 18 years). Pre: June 26 – July 23 2003 vs Post: April 1 – June 30 2004. Geometric mean levels.	New York		0.078 ng/mL	0.041 ng/mL	47.4%

(Menzies, Nair <i>et al.</i> 2006) Serum cotinine levels (one month after ban) P<.001	Scotland	Bar workers	5.15 ng/mL	3.22 ng/mL	(-1.93 ng/mL 95% CI - 2.83 to - 1.03 ng/mL)
(Menzies, Nair <i>et al.</i> 2006) Serum cotinine levels (two months after ban) P<.001	Scotland	Bar workers	5.15 ng/mL	2.93 ng/mL	(-2.22 ng/mL 95% CI - 3.10 to - 1.34 ng/mL)
Fernando <i>et al.</i> (2007) Average increase in cotinine before and after a 3hr visit to 30 bars in 3 cities. Pre: Winter and Spring 2004 Post: Winter and Spring 2005	New Zealand	Non-smoking volunteers in bars	0.66 ng/ml	0.08 ng/ml	88%
(NHS Health Scotland, Ludbrook <i>et al.</i> 2005) SHS exposure in non-smoking adults and children (Cotinine)	Scotland				39%
(Farrelly, Nonnemaker <i>et al.</i> 2005) From baseline to 12 months follow-up	U.S. (New York)	Hospitality workers (n=24, p<0.01)	3.6 ng/ml (95%CI 2.6 to 4.7 ng/ml)	0.8 ng/ml (95%CI 0.4 to 1.2 ng/ml)	78%
(Haw 2007) Mean salivary cotinine one year post implementation	Scotland				89%

Table 23 **By nicotine**

Study	Country	Setting	Before	After	% reduction
WHO (2007)	Ireland	Bars			83%

(Lopez, Nebot <i>et al.</i> 2007) Pre and post after one year.	Spain	Hospitality	88%	60%	28%
		Public administration			50%
		Universities			65%
		Private sector			100%
Gorini <i>et al.</i> , ECTH (2007) In Austria: Before 24.53 $\mu\text{g}/\text{m}^3$ and after 24.14 $\mu\text{g}/\text{m}^3$ ^g	Italy (vs Austria)	Hospitality	44.07 $\mu\text{g}/\text{m}^3$	1.34 $\mu\text{g}/\text{m}^3$	97%
		Discos	86.63 $\mu\text{g}/\text{m}^3$	1.94 $\mu\text{g}/\text{m}^3$	98%
(Gorinin, Costantini <i>et al.</i> 2007) Study locations: Florence and Belluno. Pre and two years post ban in sample of 28 bars.	Italy	Bars	19.02 $\mu\text{g}/\text{m}^3$	0.25 $\mu\text{g}/\text{m}^3$	99%
		Restaurants	2.03 $\mu\text{g}/\text{m}^3$	0.10 $\mu\text{g}/\text{m}^3$	95%
		Discos/pubs	35.16 $\mu\text{g}/\text{m}^3$	0.01 $\mu\text{g}/\text{m}^3$	99%
Ellingsen <i>et al.</i> (2006) 13 study sites		Bars/restaurants	28 $\mu\text{g}/\text{m}^3$	0.6 $\mu\text{g}/\text{m}^3$	99%
(Johnsson, Tuomi <i>et al.</i> 2006) Enforcement Finnish Tobacco Act (1 July 2003). Smoking allowed in 50% of service area (if service area >50m ² provided smoke does not spread in area where smoke prohibited. N=16 establishments across 3 Finnish cities. Nicotine: Geometric mean in establishments.	Finland	In food and dining restaurants	0.7 $\mu\text{g}/\text{m}^3$	0.6 $\mu\text{g}/\text{m}^3$	14%
		Bars and taverns	10.6 $\mu\text{g}/\text{m}^3$	12.7 $\mu\text{g}/\text{m}^3$	+20%
		Discos and nightclubs	15.2 $\mu\text{g}/\text{m}^3$	8.1 $\mu\text{g}/\text{m}^3$	47%
		All establishments	7.1 $\mu\text{g}/\text{m}^3$	7.3 $\mu\text{g}/\text{m}^3$	+0.1%

Table 24 **General (non-specific ETS exposure)**

Study	Country	Setting	Before	After	% reduction
(Brownson, Hopkins <i>et al.</i> 2002)	Multiple	Work			-60% (+4% to -97%)
Hopkins <i>et al.</i> (2001)	Multiple				60.5%

(Andreeva 2007)	Ukraine	Work: Complete ban			OR 0.504 (95%CI 0.335-0.758)
	Ukraine	Work: restricted to isolated premises			OR 0.622 (95% CI 0.442-0.873)
	Ukraine	Work: Non-isolated premises			OR 0.806 (95% CI 0.544-1,195)
(Skeer, Cheng <i>et al.</i> 2005) n=3650 adults vs employees complete smokefree ban	Massachusetts U.S.	Designated smoking areas at work			2.9 times the odds of being exposed 1.74 times the duration of exposure
(Skeer, Cheng <i>et al.</i> 2005) n=3650 adults (survey) vs employees complete smokefree ban	Massachusetts U.S.	No restrictions at work			10.27 times the odds of being exposed 6.34 times the duration of exposure

Table 25 **Impact on air quality (PM_{2.5})**

Study	Country	Setting	Before	After	% reduction
(Goodman, Agnew <i>et al.</i> 2007) 42 Dublin pubs. Pre and post ban.	Ireland	Bars			83%
(Semple, Maccalman <i>et al.</i> 2007) Baseline and 2 months after ban in 41 pubs in 5 locations.	Scotland	Bars			86%
(Office of Tobacco Control 2005) Dublin pubs - Pre and one year after ban	Ireland	Pubs	40.2 µg/m ³	5.0 µg/m ³	88%
(Semple, Maccalman <i>et al.</i> 2007)	Scotland		167 g/m ³	16 g/m ³	91%

Travers <i>et al</i> (2004) 14 bars where smoking been allowed pre-ban	U.S.A (New York)		412 µg/m ³	27 µg/m ³	93%
Reaney (Reuters) Pre and after one year of ban.	Ireland	Bar workers in pubs			53% 87.6% (PM ₁₀)
(Office of Tobacco Control 2005) U.S. & international Smoking pubs (n=87) (in pre column) versus smoke- free Irish pubs (n=41)	Ireland	Irish pubs	340 µg/m ³	23 µg/m ³	93%
(Alpert, Carpenter <i>et al.</i> 2007) N=27 hospitality venues	Massachusetts (U.S.)	Hospitality venues			93%
Lee <i>et al</i> (2007) N=9 hospitality venues and one bingo hall. Average indoor concentrations. Pre and one week after 100% smoke-free workplace law. Lower level was sustained.	Georgetown, Kentucky, U.S.	Hospitality venues and one bingo hall	84 µg/m ³	18 µg/m ³	79%
Cummings, M (2007) International Tobacco Control Results of global air monitoring studies: 2,531 locations in 32 countries. Smoking versus smoke- free	Global		182 µg/m ³	23 µg/m ³	87%

Study Hyland <i>et al</i> (2008)	Setting	No. times PM_{2.5} higher in places with smoking vs no smoking
PM _{2.5} in 1,822 bars, restaurants, retail outlets, airports, and other workplaces in 32 geographically dispersed countries. <i>NB: A summary of smoke-free versus smoking places by country is available.</i>	Overall places	8.9 (95% CI 8 to 10)
	Bars	15.4 (95% CI 12.5 to 34.5)
	Restaurants	6.2 (95% CI 5.3 to 7.2)
	Transportation places	8.8 (95% CI 5.4 to 14.2)
	Other places	7.0 (95%CI 5.4 to 9.0)

	Smoking and smokefree venues in 29 countries <i>without</i> comprehensive clean indoor air policies compared to Ireland, New Zealand and Uruguay.	7.5 (85%CI 5.9 to 9.7)
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Health effects

Table 26 **Coronary events (Hospital admissions)**

Study	Country	Before	After	% reduction
(Cesaroni, Forastiere <i>et al.</i> 2008) Acute coronary event (out of hospital deaths and hospital admissions) for residents <i>aged 35-64 years old</i> . Time period: 2000 and 2004 -05 and after smoking ban in Jan 2005.	Italy			11.2% (95%CI 6.9% - 15.3%)
(Cesaroni, Forastiere <i>et al.</i> 2008) Acute coronary events (out of hospital deaths and hospital admissions) for residents <i>aged 65-74 years old</i> . Time period: 2000 and 2004 -05 and after smoking ban in Jan 2005.	Italy			7.9% (95%CI 3.4% - 12.2%)
(Barone-Adesi, Vizzini <i>et al.</i> 2006) AMI in six months after ban	Italy			0.7%
NHS Health Scotland (NHS Health Scotland, Ludbrook <i>et al.</i> 2005) Heart attacks admitted to 9 major Scottish hospitals one year post ban. (Average reduction of 3% per annum in the 10 years leading up to ban)	Scotland			17%
Howell <i>et al</i> , ECTH (2007) AI coronary events (hospital admissions per week)	Ireland	0.10	1.03	
(Redpath 2007) Average annual change in incidence MI	Scotland	-4.7% (95%CI - 4.9 to -4.5)	-25.1% (95%CI -38.7 to -8.4)	20.4%

(Redpath 2007) Average annual change in MI (admissions)	Scotland	-3.4% (95%CI - 3.6 to -3.2)	-24.9% (95%CI -41.3 to -3.8)	21.5%
(Redpath 2007) Average annual change in MI (deaths)	Scotland	-6.67% (95%CI - 6.94% to -6.39%)	-17.7% (95%CI -39.4 to -11.8)	11%
(Spizzichino 2007) AMI in 2005. AMI absolute numbers increased overtime 2001-04.	Italy			7%
Cited in (WHO 2007) Heart attack - Piedmont region	Italy			20%
Le Figaro, 22 February 2008 National Sanitary Institute. Admissions to emergency wards for myocardial infarction since 1 st Jan 2008 (compared to Jan and Feb 2006 and 2007). This is equivalent to reduction of 10,000 heart attacks in 2008.	France			15%
Lemstra <i>et al</i> (2008) Age standardised incidence (hospital discharges) rate for acute MI from July 1 2000 to June 30 2004) to July 1 2004 to June 30 2005).	Canada	176.1 cases per 100,000 pop (95% CI 165.3 – 186.8)	152.4 cases per 100,000 pop (95% CI 135.3 – 169.3)	13%
Bartecchi <i>et al</i> (2006) AMI hospitalisations among residents in Pueblo, 18 months pre and post ban in licensed venues.	U.S. (Colorado)			27%
(Samet 2006) Admissions for AMI during 6 months of ban. Admission rose after public smoking ban lifted.	Helena, Montana U.S.			40%
Dong-Chul and Torabil (2007)	Monroe Country	17	5	-12 (-21.19 to - 2.81) or 71%

Hospital admissions for AMI among non-smoking patients in Monroe County [pre public smoking ban: August 2001 to May 2003 versus post: August 2003 to May 2005). No significance difference (17 vs 18) pre implementation of smoking ban between Monroe County and Delaware County. Delaware County (control): pre: 18 versus post: 16.	(U.S.)			
(Sargent, Shepard <i>et al.</i> 2004) Hospital discharge rates for AMI (304 cases in study)	Helena, Montana			RR 0.60 (95%CI 0.21 - 0.99)
Bartecchi <i>et al</i> (2006) Hospital discharge rates for AMI (2794 cases in study)	Pueblo, Colorado			RR 0.73 (95%CI 0.63 - 0.85)
(Barone-Adesi, Vizzini <i>et al.</i> 2006) Hospital discharge rates for AMI in person under 60 (4213 cases in study)	Piedmont, Italy			RR 0.89 (95%CI 0.81 - 0.98)
Khunder <i>et al</i> (2007) Hospital discharge rates for ischemic heart disease and heart failure (1109 cases in study)	Bowling Green, Ohio			RR 0.61 (95%CI 0.55 - 0.67)
Dinno & Glantz (in press) Pooled estimate (random effects model) for above 4 studies.	Meta			RR 0.73 (95%CI 0.56 - 0.89)
Irish Independent, 5 Sept 2007 Heart attack hospital admissions in the South-West Public hospitals, after year of ban	Ireland			11%
NYS Dept of Health, 28 Sept 2007. Hospital admissions for AMI in NY State in 2004 (smoking ban took effect July 2003)	New York, U.S.			8%

Table 27 **Respiratory symptoms**

Study	Country	Setting	Before	After	% reduction
(Allwright 2004)	Ireland	Bar workers			16.7%
Fernandez E, TSFS (2007)	Spain	Work			39.2%
Ayres, TSFS (2007) N=371 bar workers: baseline and one year after ban.	Scotland	Bar workers	67%	54%	13%
(Semple, Maccalman <i>et al.</i> 2007) pre (Feb 2006) and one year after ban (Feb 2007)	Scotland		73%	57%	16%
(Menzies, Nair <i>et al.</i> 2006) Respiratory and sensory symptoms (one month after ban) P<.001	Scotland	Bar workers	79.2%	53.2%	26% (95%CI 13.8% to 38.1%)
(Menzies, Nair <i>et al.</i> 2006) Respiratory and sensory symptoms (two months after ban) P<.001	Scotland	Bar workers	79.2%	46.8	32.5 (95% 19.8% to 45.2%)
Reaney (Reuters) Decrease in symptoms both respiratory and irritant. Pre and after one year of ban.	Ireland	Bar workers in pubs			30% - 40%
(Farrelly, Nonnemaker <i>et al.</i> 2005) From baseline to 12 months follow-up. Sensory symptoms (n=24, p<0.01). No change in overall prevalence of upper respiratory symptoms, p<0.16)	U.S. (New York)	Hospitality workers	88% (95% CI 66% to 95%)	38% (95%CI 20% to 59%)	50%
(Eisner, Smith <i>et al.</i> 1998) Respiratory symptoms	U.S. (California)	Bartenders (n=39)			41%

p<0.001					
(Eisner, Smith <i>et al.</i> 1998) Sensory irritation symptoms p<0.001	U.S. (California)	Bartenders (n=41)			22%

Table 28 **Other disease**

Study	Country	Disease	Before	After	% reduction
Cited in European Respiratory Society (2008)	14 countries in Europe	Incidence lung cancer			30%
Cited in European Respiratory Society (2008)		Incidence asthma			8%
(Menzies, Nair <i>et al.</i> 2006) Airway inflammation in Asthmatic bar workers exhaled nitric oxide (one month after ban) P<.04	Scotland	Bar workers	34.3 ppb	27.4 ppb	0.8 fold change (95%CI 0.67 to 0.96 ppb)

Effects on smoking behaviour

Table 29 **Smoking prevalence in Europe**

Study	Country	Setting	Before	After	% reduction
(Fong, Hyland <i>et al.</i> 2006)	Ireland	Work	62%	14%	16%
		Restaurants	85%	3%	82%
		Bars/pubs	98%	5%	93%
		Shopping malls	40%	3%	37%
(Heloma, Kahkonen <i>et al.</i> 2000) Among workers	Finland				5%
Gorini <i>et al</i> (2007) Daily smokers aged 16-74 years in 2003	Norway		27.3%	24.5%	2.8%

vs 2006					
Braverman <i>et al</i> (2007) Daily smoking. Baseline and 4 months post implementation. No significant change in these variagbbles between 4 an 11 months post implementation.	Norway	Any			3.6%
		Work			6.2%
Greiner BA, Mullally BJ <i>et al</i> ECTH, Switzerland, 11-13 Oct 2007 Pre ban and post ban after 3 months	Ireland		24.7%	22.9%	1.8%
(Gallus, Zuccaro <i>et al.</i> 2006) March-April 2004 versus same period in 2005 and 2006. In 2005 prevalence 25.6%.	Italy		26.2% (2004)	24.3% (2006)	1.9%
Deputy Chief Medical Officer, Department of Health, England (Presentation) Adult smokers (no dates specified)	England		24%	22%	2%
Office of Tobacco Control Annual report (2006). In March 2004 versus March 2006	Ireland		26.4	25.7	1.4%

Table 30 Smoking prevalence outside Europe

Study	Country	Setting	Before	After	% reduction
Gorini <i>et al</i> (2007) 1992-3 vs 2001-02. % reduction in the rests of U.S. was	California		18.8%	14.7%	4.1%

14%.					
Lemstra <i>et al</i> (2008) Saskatoon. Time period: 2003 (pre-ban) to 2005 (post ban). Smoking prevalence in Saskatchewan remained unchanged at 23.8%.	Canada		24.1%	18.2%	5.9%
(Fichtenberg and Glantz 2002) Meta analysis of 26 studies		Workplaces (amongst employees)			3.8%
(Brownson, Hopkins <i>et al.</i> 2002) workers employed in smoke-free workplaces vs no smoking restrictions.			16%	26.4%	
(NHS Health Scotland, Ludbrook <i>et al.</i> 2005) Review.	Multiple				3.8% to 20%
(Fichtenberg and Glantz 2002) Review. Amongst employees. Effect sizes were about half this size in workplaces where partial restrictions were already present.	Multiple				3.8% (2.8% to 4.7%)
Levy <i>et al</i> (2007) Review of literature to determine inputs and effect sizes for the SimSmoke model.	Thailand	Workplace total ban			3% (with variation by age and gender)
		Workplace partial ban, requiring ventilation (smoking			2% (with variation by age and

		restricted to ventilated areas in all indoor workplace)			gender)
		Workplace partial ban limited to common areas (smoking limited to non-ventilated common area)			1% (with variation by age and gender)
		Restaurant total ban			1%
		Restaurant partial ban (ban in all restaurants except in designated areas)			0.5%
		Other place bans (ban in 3 of 4 locations – malls, retail stores, public transportation, and elevators)			1%
U.S. study cited in (The Smoke free Partnership 2006) Versus 2.6% reduction in smoking prevalence if partial ban.	U.S.				5.7%

Consumption

Table 31 Individual Consumption

Study	Country	Setting	Before	After	reduction in number of cigarettes smoked
(Brownson, Hopkins <i>et al.</i> 2002) Follow up periods of up to two years.	Multiple	Work place bans			1.2 (0 to -4.3) per day

Review					
(Fichtenberg and Glantz 2002) Meta analysis of 26 studies. For Active smokers.	Multiple	Workplace bans			3.1 per day
(NHS Health Scotland, Ludbrook <i>et al.</i> 2005) Review		Workplace			1.2 – 3.1 per day
(Heloma, Kahkonen <i>et al.</i> 2000)	Finland		19	16	3
(Gallus, Zuccaro <i>et al.</i> 2006). In 2005 smokers consumed 14.6 cigarettes per day.	Italy		15.4 (2004)	13.9 (2006)	9.7% per day
Braverman <i>et al.</i> (2007) Continuing smokers. Baseline and 4 months after ban.	Norway	Any			1.55
		At work			1.63
(Andreeva 2007)	Ukraine	Work (complete ban)			3.08
		Work (isolated premises)			2.39
Office of Tobacco Control Annual report (2006) 2005 and 2006	Ireland	Occasional (1-5 per day)			+2.2%
		Light (6-10 per day)			-1.2%
		Regular (11-20 per day)			-0.3%
		Heavy (21+ per day)			-0.7%

Table 32 **Total consumption**

Study	Country	Before	After	Reduction in tobacco consumption
(Cesaroni, Forastiere <i>et al.</i> 2008) Rome. Frequency of cigarette smoking. Time period: 2000-04 and after smoking ban Jan 2005.	Italy	34.9%	30.5%	4.4%
		20.6%	20.4%	0.2%
(Fichtenberg and Glantz 2002) Meta analysis of 26 studies. For Active smokers.				29%
World Bank cited in (WHO 2007)				4 to 10%
(WHO 2007) Review.	Multiple			29%
Champan <i>et al</i> Review. Time period: 1988-1994	U.S.			12.7%
Pisano M (2008)	Italy			8%
Salton <i>et al</i> ECTH (2007) Daily consumption.	Spain			28.4%
Greiner <i>et al</i> , ECTH (2007) Pre and 3 months after ban.	Ireland	65%	46%	
(Evans, Byrne <i>et al.</i> 2007)	U.S.			10%
(Gallus, Zuccaro <i>et al.</i> 2006) March-April 2004 versus same period in 2005. Survey in March April 2004 vs comparison survey in	Italy			7.6%
				23% (15-24 year olds)
				10.5% (women)

2005				
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Cessation

Table 33 **Cessation attempts**

Study	Country	Increase in cessation attempts
(Brownson, Hopkins <i>et al.</i> 2002) Review. Median change or difference in cessation attempts (measured and self-reported) in smokers exposed to workplace ban vs lesser or no ban.	Multiple	73% (-3.2% to 272%)
NCI (Brownson, Hopkins <i>et al.</i> 2002) Review	Multiple	OR: 1.09 (95%CI 1.00 – 1.18)
(Fong, Hyland <i>et al.</i> 2006) Survey of 640 smokers. Other findings: Amongst smokers who quit since ban, 80% reported ban helped them quit, 88% said helped stay quit, and 34% more likely to use NRT.	Ireland	46%
Greiner BA, Mullally BJ <i>et al</i> ECTH, Switzerland, 11-13 Oct 2007 Proportion of heavy smokers: Pre ban and post ban after 3 months.		11.6% (pre) to 9.9% (post)
Greiner BA, Mullally BJ <i>et al</i> ECTH, Switzerland, 11-13 Oct 2007 Proportion of light smokers: Pre ban and post ban after 1 year.	Ireland	25% (pre) to 28.3% (post)
Media release, August 1 2005, Quit Organisation. Increase in calls to quit line in first month following smoking ban July 1, 2007.	Australia (VIC)	27%
BBC News, 22 March 2007. Increase in number of people contacting smoking cessation services in the three months prior to the ban	Scotland	40%

Table 34 **Actually quit smoking**

Study	Country	Quitting
(Gorini, Moshammer <i>et al.</i> 2007) Survey Jan-April 2005 among owners of 1641 bars, restaurants, pizzerias, and pubs in N. Italy. Smoking owners who quit after the ban.	Italy	15%

NCI (Brownson, Hopkins <i>et al.</i> 2002) OR of being former smoker of 3 months or more. Review		OR: 1.34 (95%CI 1.10 to 1.63)
(Directorate for Health and Social Affairs 2005) Employees (1 out of 10 employees quit smoking)		10%
Salto E, Valverde A <i>et al</i> ECTH, Switzerland, 11-13 Oct 2007	Spain	9.1%
Information Centre for Health and Social Care, Department of Health (2008) 165,000 smokers quit April – Sept 2007	England and Wales	28%
Media release, Quit 1 October 2004 The percent of smokers who are “somewhat or very likely to quit smoking” with smokefree ban in pubs, clubs, and gambling venues.	Australia (VIC)	28%
(Helakorpi, Patja <i>et al.</i> 2007) OR for daily smoking after 1995 for Employed men.	Finland	OR: 0.83 (95% CI 0.73 – 0.94)
(Helakorpi, Patja <i>et al.</i> 2007) OR for daily smoking after 1995 for employed women	Finland	OR: 0.78 (95% CI 0.68 – 0.91)
(Surgeon General 2006) If U.S. workplaces implemented 100% smokefree policy	U.S.	1.3 million smokers quitting

Table 35 **Uptake/Initiation of Smoking**

Study	Country	Setting	Before	After	Uptake
(Spizzichino 2007) 2003 to 2005. Males aged (18-19 years old)	Italy		26.5%	27.7%	1.2%
Spizzichino, L cited in TSFS, Edin, Scotland 2003 to 2005. Females aged (20-24 years old)	Italy		21.3%	21.6%	0.3%
(Andreeva 2007)	Ukraine				OR: 0.517 (95%CI 0.262 – 1.017)

Table 36 Youth smoking behaviour

Study	Country	Impact	% Reduction
(WHO 2007)		Reduction in prevalence amongst teenagers living in communities with smokefree law versus none	17.2%
(Farkas, Gilpin et al. 2000) Based on two national surveys conducted in 1993-93 and 1996-7.	U.S.	Ever-smoking prevalence amongst employed 15-17 year olds living in smoke free home vs homes with no smoking restrictions	26% (95%CI 12 – 38%)
(Farkas, Gilpin et al. 2000) Based on two national surveys conducted in 1993-93 and 1996-7.	U.S.	Ever-smoking prevalence amongst employed 15-17 year olds working in smoke free workplace versus workplace with no smoking restrictions	32%

Table 37 Domestic trickle down

Study	Country	Impact	Before	After	% reduction
(Evans, Byrne et al. 2007) Smoking at home	Ireland	Smoking at home	58%	50%	5%
(Andreeva 2007) Edin, Scotland Chances of household restrictions with smoking restrictions to isolated premises at their work	Ukraine				1.44 (95% 1.03 – 2.01)
(Edwards, Bullen <i>et al.</i> 2008) Self-reported ETS in all households. (42% of household had one or more smoker)	New Zealand				20%
(Fong, Hyland <i>et al.</i> 2006)	Ireland		85%	80%	5%

Smoking allowed in the home. This was similar to decrease from 82% to 76% over same period for UK.					
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Attitudes and social norms

Table 38 European countries

Author	Country	Key finding
(European Commission 2007) <i>Attitudes of European's towards tobacco</i>	EU	Most people totally or somewhat in favour of smoking bans in offices, and other indoor workplaces (86%), and indoor public space (84%), restaurants (77%) and bars or pubs (61%). Only 9% and 16% of people were totally opposed to smoking bans in restaurants and bars or pubs, respectively.
(Gallus, Zuccaro <i>et al.</i> 2006)	Italy	<p>In 2001, 83.3% were favourable to a smoking ban in public places, such as pubs or restaurants. This figure increased to over 90%</p> <p>Based on a survey of 3114 Italian adults interviewed in March-April 2005, <i>the degree in favour of separate smoking areas in cafes, restaurants, and other areas open to the public, and smoking ban in their absence:</i></p> <p>All the population: Strongly in favour: 68.1% Strongly against: 2.7%</p> <p>Current smokers only: Strongly in favour: 44.4% Strongly against: 6.6%</p> <p><i>Extension to forbid smoking in every workplace, including private ones</i></p> <p>All the population: Strongly in favour: 55.5% Strongly against: 2.9%</p> <p>Current smokers only: Strongly in favour: 33.5% Strongly against: 8.5%</p>
(Directorate for Health and Social Affairs 2005)	Norway	Support for the Smokefree law increased from 47% in survey six month before to 58% six months after implementation. In different national surveys support for smokefree bars and restaurants increased from 54% before the legislation to 68% one year after. A survey in May 2005, a year after the legislation, found that 77% though the law had been a success. Among a cohort of hospitality industry employees (from 48% pre to 51% three months post implementation, with 18-22% neutral and the

		proportion opposed remaining at 30-31%.
(Hilton, Semple <i>et al.</i> 2007)	Scotland	Bar workers agreed with the proposed legislation on smoking went from 69% (before) to 79% (post implementation, and the need to protect the health of workers, 80% (before) to 81% (post). 49% thought the legislation would harm business (before) to fewer than 20% (post). Legislation would encourage smokers to quit showed reduced support, 70% pre-implementation to 60% post implementation.
Mullally BJ <i>et al</i> ECTH, Switzerland, 11-13 Oct 2007	Ireland	General public agreed SHS exposure raises NS' risk of asthma (84% to 92%), of lung cancer (86% to 94%), of HD (76% to 88%). Bar workers identified SHS as risk factor for all 3 diseases, percentage was substantially lower than GPs or general public. 42% of NS bar workers felt they had moderate risk of lung cancer.
Richmond, L cited in TSFS, Edin, Scotland	Scotland	49% staff supported the ban before implementation and 50% after, with no differences according to the type of facility. Bar staff (and customers) in affluent areas were more likely to support the ban both pre and post implementation ($p<0.001$). Customer complaints were more common in deprived areas ($p<0.001$) and deprived areas were more likely to report a decline in business, and less likely to report improvements ($p<0.001$). In the most affluent areas, 97% reported that customers supported the ban pre and post implementation. In the most deprived group, only 11% initially supported the ban but this increased to 14% after implementation.
Hara, M cited in TSFS, Edin, Scotland	Finland	In 1974 85% Finnish adult population in favour prohibiting smoking in public places. In 2005 62% (and 77% in 2007) thought smoking should be prohibited in restaurants and bars. In 2007 13% were strictly against restrictions.
(Office of Tobacco Control 2005)	Ireland	Support for the Irish smoke free law among the public increased from 67% before, to 82% four months after implementation, and 93% after one year.
(Fong, Hyland <i>et al.</i> 2006)	Ireland	Support for total bans among Irish smokers increased in all venues, including workplaces (43% to 67%), restaurants (45% to 77%), and bars/pubs (13% to 46%). Overall 83% of Irish smokers reported that the smoke-free law was a "good" or "very good" thing. Based on prospective cohort study of adult smokers in Ireland surveyed before the law (Dec 2003-Jan 2004) and 8-9 months after the law (Dec 2004-Jan 2005).
(Royal College of Physicians 2005)	Ireland	Percentage support among smokers for smoke-free policy: Pre-policy (Dec 2003-Jan 2004) to post-policy (Dec 2004-Jan 2005): Workplaces: 38% to 47% (UK) Workplaces: 44% to 67% (Ireland) Restaurants: 33% to 47% (UK)

		Restaurants: 46% to 77% (Ireland) Bars/pubs: 6% to 12% (UK) 6% to 48% (Ireland)
Pursell <i>et al</i> (2007)	Republic of Ireland (ROI)	Survey of approx 288 (pre) and 220 (post – one year after ban) bar workers in public houses (pubs) in three areas or ROI . Support for legislation increased from 59.5% (pre) to 76.8% (post). Support increased amongst smokers from 39.4% (pre) to 66.7% (post) (p<0.001) Support increased amongst non-smokers from 66.8% (pre) to 81.2% (post) (p=0.003) Percentage agreeing that legislation would make bars more comfortable and was needed to protect workers' health rose from 75% (pre) to over 90% (post) (p<0.001). Perceptions that legislation has a negative impact on businesses rose from 50.9% (pre) to 62.7% (post) (p=0.008) and that fewer people would visit pub (41.8% to 62.7%, p <0.001). Overall support for ban increased two to three-fold post implementation.
Smokefree England (2008) www.smokefreeengland.co.uk/thefacts/latest-research.html	England	Department of Health survey findings July 2007: 98% of the general public aware of the law. 75% of adults expressed their support for the law and 79% believe new law will have a positive effect on people's health. August 2007: 87% of businesses thought implementation gone well and 78% think the legislation is a "good idea".
Smokefree England (2008) www.smokefreeengland.co.uk/thefacts/latest-research.html	England	ONS survey (fieldwork Oct and Nov 2006) Support for smoke-free law 77%: 53% of people strongly support the law; 24% support the law; 15% disagree with the new law.
Deputy Chief Medical Officer, Department of Health, England (Presentation)	England	¾ adults support the smokefree legislation More smokers agree (47%) than disagree (37%) with the legislation
(Haw 2007)	Scotland	97.2% compliance with smoking regulation in the year following implementation. Based on 80,832 inspections of pubs and other workplaces.

Table 39 Non-European countries

Author	Country	Main Results
(Edwards, Bullen <i>et al.</i> 2008)	New Zealand	By 2006 population surveys showed over 90% agreement, for the right to live and work in a smokefree environment;

2003 Smoke-free Environments Amendment Act (smoking ban Dec 2004)		and for indoor workers, including bar and restaurant workers, to work in a smokefree environment. Support was similar among men and women, Maori and Non-Maori and all income groups. Support was less strong among smokers.
(Edwards, Bullen <i>et al.</i> 2008)	New Zealand	60-70% before and at the time of implementation, rising to 75%-90% afterwards.
Cherner, Smokefree California	U.S. California	According to the 2004 Field Research poll: -- 90% Californians said they approve of the smoke-free workplace law. -- 52% of former smokers who quit in the past 10 years said that having smoke-free public places made it easier for them to quit smoking. -- 69% of current smokers who attempted to quit in the past 10 years said that smoke-free public places helped them reduce the number of cigarettes they smoke. -- Amongst people who moved to the state after the law went into effect, 93% approve of the law and 91% said they would recommend that other communities adopt a similar smoke-free policy. -- 74% Californians, including nearly half of those who were smokers, agreed that smoking should be prohibited in the outdoor dining areas of restaurants.
Thomson and Wilson (2006)	New Zealand	Between 2004 (before) and 2005 (after) public support for smokefree bars rose from 56% to 69%. Between 2004 and 2005 support for the rights of bar workers to have smokefree workplaces rose from 81% to 91%. Proportion of bar mangers who approved smokefree bars increased from 44% to 60% between November 2004 and May 2005.

Table 40 **Compliance**

Author	Country	Main Results
(Directorate for Health and Social Affairs 2005)	Norway	Before the smokefree legislation , 43% of bar and restaurant employees thought that many guests would refuse to obey the law. However , four months after implementation, only 7% reported many guest refusing to comply.
Smokefree (2007)	England	Overall compliance of premises and vehicles in December 2007 (n=23.009) and first six months of legislation (July – Dec) (n=379,990): - 98.7% compliant of no-smoking (no evidence of management knowingly permitting smoking) and 98.2%, respectively. - 94.4% compliant in terms of signage (required no smoking signage being displayed prominently) and 86.6%, respectively. - Compliance rates varied little by regions

(Office of Tobacco Control 2005)	Ireland	<p>Compliance (no smoking observed on the premises) with the smoke free legislation is very high:</p> <p>Nine months after its introduction, compiled inspection data show overall compliance in workplaces was 94% (ranging from 89% in pubs to 98% in restaurants).</p> <p>Compliance of office and factory workplaces in the Health and Safety Inspection Programme was 92%, in almost 7,500 inspections.</p> <p>Complaints to the smokefree compliance line were concentrated in the first month (677 complaints, 30% of all calls in the first year), and then declined to around 150 per month over the first year and to less than 120 calls per month in 2005.</p> <ul style="list-style-type: none"> - 98% people believe workplaces are healthier because of the smoke free law, including 94% of smokers. - 96% people feel smoke free law is success, including 89% of smokers - 93% people think smoke free law is a good idea, including 80% of smokers <p>(within a month of ban 97% compliance rate had been achieved in all workplaces, including bars).</p>
(Lund and Helgason 2005)	Norway	Better compliance with total ban vs. smoke-free areas. 75% of general public support ban
(Clancy, Goodman <i>et al.</i> 2007)	Ireland	Compliance remains at nearly 100%.
Eadie, D cited in TSFS, Edin, Scotland	Scotland	Interviews with 70 bar workers, customers, and bar proprietors in eight bars in 3 contrasting communities in same local authority. Compliance varied with violations more prevalent in deprived communities. Factors influencing compliance include smoking norms, management competency, and management attitudes towards the ban.
(Edwards, Bullen <i>et al.</i> 2008) 2003 Smoke-free Environments Amendment Act (smoking ban Dec 2004)	New Zealand	Observed compliance in pubs and bars in 2005-06 close to 100%. Number of complaints fell rapidly after the first month, with less than 20% per month since October 2005. Only five complaints resulted in prosecutions. Anecdotal reports suggest that there may be greater non-compliance in licensed premises in more remote rural areas, and in smaller businesses with a high proportion of smokers.
Thomson and Wilson (2006)	New Zealand	During the first ten months of the smokefree bars policy, there were only 196 complaints to officials about smoking in the over 9900 licensed premises.
Weber <i>et al</i> 2003 cited in (Edwards, Bullen <i>et al.</i> 2008)	U.S. California	Patron compliance (defined as no smoking patrons observed in the venue when inspected) increased from 92.2% to 98.5% between 1998 and 2002 for bars with restaurants, and from 45.7 to 75.8% in free-standing bars.
Skeer <i>et al</i> 2004 cited in (Edwards, Bullen <i>et al.</i> 2008)	U.S., Boston	Three months after comprehensive smokefree regulations, a random sample of 102 bars found only three patrons smoking inside, and that complete removal of ash-trays had

		occurred. After eight months, only six violation notices had been issued to free standing bars.
McCaffrey <i>et al.</i> , (2007) cited in (Edwards, Bullen <i>et al.</i> 2008)	Ireland	Study in 39 Dublin pubs visited 7-12 months after the smokefree legislation found that of over 2,500 customers, none were smoking inside the pubs.
(Gallus, Zuccaro <i>et al.</i> 2006)	Italy	Out of about 6000 checks by the Police and other civil forces, less than 100 (1.5%) violations observed.
(Fong, Hyland <i>et al.</i> 2006)	Ireland	At the post legislation wave (8-9 months after law implementation (Dec 2004 to Jan 2005), 94% of Irish smokers (N=640) reported that pubs were enforcing the law “totally”, 5% said “somewhat”, and 2% said “not at all”.
Deputy Chief Medical Officer, Department of Health, England (Presentation)		Over 98% compliance with the legislation
(Haw 2007)	Scotland	97.2% compliance with smoking regulation in the year following implementation (n=80,832 inspections of pubs and other workplaces)
(Global Smokefree Partnership 2007)	Multiple	Compliance in Ireland (94%), New York City (97%), New Zealand (97%), Italy (98.2%), Massachusetts (96.3%), and Scotland (95.9%).

Economic effects

Table 41 Tobacco Industry

Study	Country	Setting	% Change in Sales of cigarettes
(Cesaroni, Forastiere <i>et al.</i> 2008)	Italy	Work and public places (ban 2005)	-5.5% (in 2005 compared to 2004)
(Spizzichino 2007)	Italy		-6.1% (in 2005 compared to 2004)
Rogerson, The Herald, March 3 2007.	Scotland	Benson & Hedges and Dunhill maker Gallaher (however firm posted a 4.9% rise in underlying profit)	-3% to -4%
Convenience Store (Feb 11 th 2008)	England and Wales	Lambert & Butler	-4% (in 2007)
Champman <i>et al</i> (cited in (Royal College of Physicians 2005))	Australia		-3.4%
Nogues (2008) 21 months after	Spain		-10%

smoking ban in province of Malaga			
Smokefree public places in Ireland	Ireland		-8.7% (in 2004 after ban) -3.4% (in 2003) -1.2% (in 2002)
Smokefree public places in Ireland	Ireland	Gallaher Tobacco	-10.7% (from Jan 2004)
(Global Smokefree Partnership 2007) In first six months after ban	Ireland		-16%
(Global Smokefree Partnership 2007) In first 11 months after ban	Italy		-5.7%
(Global Smokefree Partnership 2007) In first year after ban	New Zealand		-1.5%
(Global Smokefree Partnership 2007) In first year after ban	Norway		-14.1%
Study	Country	% Reduction in Demand cigarettes	% Change in Sales of cigarettes
Health Regulatory Impact Assessment - (Gallaher Ltd.)	Northern Ireland	4%	-0.1%
	England	4%	-3% per annum
		20%	-15%
(Gallus, Zuccaro <i>et al.</i> 2006) January-April 2004 versus same period in 2005. Official legal sales (million kg of cigarettes)	Italy		-8.9%
(Surgeon General 2006) If U.S. workplaces implemented 100%	U.S.	950 million fewer cigarette packs being smoked	

smokefree policy			
Study	Country	Setting	% Change in Sales of tobacco products
	Italy		-6.6% per capita
(Spizzichino 2007)	Italy		-5.9% (in 2005) +1.1% (in 2006, after 6% increase in price)

Table 42 Hospitality Sector

	% change from pre-ban to post-ban	Study	Country
Bar and pub sales	+0.5% (95% CI: -0.28% to +1.284%; mean 7.1)	(NHS Health Scotland, Ludbrook <i>et al.</i> 2005)	Review (n=1, California, not s.s.)
	-4.4% (in 2004) -4.2% (in 2003)	(Office of Tobacco Control 2005)	Ireland
	-1%	Lund K (cited in TSFS, Edin, Scotland)	Norway
	Approx. -4% (in 1 st quarter of 2005)	(Edwards, Bullen <i>et al.</i> 2008) <i>This effect was not sustained.</i>	New Zealand
	+0.6%	Thomson and Wilson (2006) Seasonally adjusted bar sales between the first three quarters of 2004 (before ban) versus same period in 2005 (after ban)	New Zealand
	+5.8%	Melia, The Irish Independent, Sept 14 th 2005 Annual increase July 2004-05 in sales of beer, wine and spirits and food	Ireland

		in pubs	
	-11% (drink sales) -3% (food sales)	BBC News, 22 March 2007. Scottish Licensed Trade Association survey for Scottish pubs (only 1/3 members responded out of total 1,500).	Scotland
	-10% (p=0.02, 95% CI: -19% to -2%)	(Adda, Berlinski <i>et al.</i> 2006). Based on 1590 pubs before ban (Feb 24-Mar 10 2006) and after (May 3 – May 31 2006)	Scotland
Hotel room revenues	-0.054% (95% CI: -0.128% to +0.02%; mean 2.43)	(NHS Health Scotland, Ludbrook <i>et al.</i> 2005)	Review
Restaurant/licensed café sales	+0.25% (95% CI: -1.32 to 1.81)	Bartosch and Pope (cited in RCP, (Royal College of Physicians 2005))	Massachusetts, USA
	+0.25% (95% CI: -1.32% to +1.81%)	(NHS Health Scotland, Ludbrook <i>et al.</i> 2005)	Review (n=11, Australia and USA)
	+6%	(Lund and Helgason 2005)	Norway
	+9.3%	Thomson and Wilson (2006) Seasonally adjusted restaurant and café sales between the first three quarters of 2004 (before ban) versus same period in 2005 (after ban)	New Zealand
	+7%	Americas for Nonsmokers' Rights (2005). Effect one year after State smoking ban in 2003.	Florida (U.S.)

Patronage (# customers or tourists)	-14% (p=0.02; 95% CI: -26% to -2%)	(Adda, Berlinski <i>et al.</i> 2006). Based on 1590 pubs before ban (Feb 24-Mar 10 2006) and after (May 3 – May 31 2006)	Scotland
	9.5% higher in non-smoking café	Kunzli <i>et al.</i> (2005)	Switzerland
	+3.2% (in 2004 vs. 2003)	Office of Tobacco Control (2005)	Ireland
	+11% (p=0.060)	(McCaffrey, Goodman <i>et al.</i> 2006) (n=39 public houses prior to ban and one year later)	Ireland
	No change (between 2003/4 and 2005/6)	(Edwards, Bullen <i>et al.</i> 2008)	New Zealand
	+9.6%	(Gallus, Zuccaro <i>et al.</i> 2007) Survey in March-April 2005 and same period 2005 (self-report visits to cafes and restaurants)	Italy
	-7.4%	(Gallus, Zuccaro <i>et al.</i> 2007) Survey in March-April 2005 and same period 2005 (self-report visits to cafes and restaurants)	Italy
	-16%	(Fong, Hyland <i>et al.</i> 2006) Have you avoided going to pub because of law (amongst Irish smokers post-legislation (n=632))	Ireland
	-18%	(Fong, Hyland <i>et al.</i> 2006) Have you avoided	Ireland

		going to restaurants because of law (amongst Irish smokers post-legislation (n=640))	
	-41%	(Fong, Hyland <i>et al.</i> 2006) Survey: Irish smokers report visiting pubs less often than a year ago post legislation (N=640)	Ireland
	+3%	(Fong, Hyland <i>et al.</i> 2006) Survey: Irish smokers report visiting pubs more often than a year ago post legislation (N=640). NB: 57% said they visit the pub the same amount of time.	Ireland
	Patronage decrease: 29.1% (control 33.1%) No change: 36.6% (control 45.5%) Patronage increase: 34.3% (control 21.3%)	(Biener, Garrett <i>et al.</i> 2007) Reports (n=81) of changes in Boston bars patronage anywhere before and after smoking ban (vs other MA towns with no smoking ban). p=0.018	U.S. Boston
	+8.6% (p=0.609)	(Alpert, Carpenter <i>et al.</i> 2007)	Massachusetts, U.S.
Overall hospitality sales	-7.3%	Federation of Licensed Victuallers' Associations and BII (2007)	England
	No change (p=0.240)	(Alpert, Carpenter <i>et al.</i> 2007) Monthly meal tax	Massachusetts, U.S.

		collections	
	U.S.\$ 6.6 B (1995) to U.S.\$ 7.6 B (1998) to U.S.\$ 9.6 B (2002)	Americas for Nonsmokers' Rights (2005). Eating establishments's taxable annual sales for beer and wine 1995 (smoke free restaurants) to 1998 (smoke free bars) to 2002.	California, U.S.
Drink Sales	-7.4%	Federation of Licensed Victuallers' Associations and BII (2007)	England
Food Sales	-0.6%	Federation of Licensed Victuallers' Associations and BII (2007) n=2708, response rate 15.9%	England
Employment in hospitality sector	-2.4% (2003 to 2004) +0.6% (in 2004 compared to 2002)	(Office of Tobacco Control 2005)	Ireland
	-8.82% (p=1.176)	(McCaffrey, Goodman et al. 2006) (n=39 public houses prior to ban and one year later)	Ireland
	-15% (establishments)	YLE News, Dec 17, 2007 Percent establishments who have cut back on staff because of sales drop	Finland
	+24% (pubs, bars and taverns)* +9% (cafes and restaurants)	Thomson and Wilson (2006) Average	New Zealand

employment in first
three quarters of
2004 (before ban)

	-8% (clubs)	versus same period in 2005 (after ban) *Might have high patronage around major sport series.	
	No change (p=0.683)	(Alpert, Carpenter <i>et al.</i> 2007) Number of workers employed in food services and drinking places. (Number of workers increased in accommodation industry but not significant, p=0.926)	Massachusetts, U.S.
	+19.5%	Americas for Nonsmokers' Rights (2005). Increase 19.5% from 1992-2000 in no. individuals employed in eating and drinking places (versus 13.5% for all employment statewide over same period)	California, U.S.
VAT from hospitality industry	+5%	Lund K (cited in TSFS, Edin, Scotland) In the first 16 months after the ban versus the same interval the year before.	Norway
Number of bars	+3.5%	Americas for Nonsmokers' Rights (2005) From April 2002 to May 2004 (smoke-free law implemented on June 23, 2003)	New York
	-7.3% (2005)	Revenue Commissioners	Ireland

	-4.7% (2006)	Change in number of pub licenses in 2005 and 2006. (2004 = +2.4%; 2003 = -1.7%)	
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Table 43 Other Sectors

	% change from pre-ban to post-ban	Study	Country
Gambling revenues	-14%	Lal <i>et al</i> (2008) Mean level of monthly electronic gaming machine expenditure, July 1998 to Dec 2005.	Australia (VIC)
	-15%	Rogerson, The Herald, March 3 2007. Impact on RANK (Mecca Bingo and Grosvenor Casinos). <i>One in 10 Scotland's bingo halls has shut down since ban.</i>	Scotland
Smoking breaks at work	See note	Jones, Daily Express, February 29, 2008 Three 15 minute smoking breaks a day cost employers 195 working hours per annum for each worker.	England

B) FINDINGS FROM THE EVALUATION OF SCOTTISH SMOKEFREE LEGISLATION

In March 2006 a comprehensive ban on smoking in public places was introduced. Summarised below are the preliminary findings from a comprehensive evaluation of the impact of the legislation.

Improvement in Air Quality

- Two months post legislation, there was an 86% reduction in secondhand smoke in 41 pubs in 5 locations across Scotland.
- Immediately before the legislation was implemented measures of air quality (PM_{2.5}) exceeded the US EPA threshold for a hazardous classification in 40% of visits.
- Two months post legislation the majority of pubs had air quality equivalent to that of outdoor air.

Compliance

- In the year following implementation of the legislation environmental health officers made 80,832 inspections of pubs and other workplaces. They recorded 97.2% compliance with smoking regulations.
- These very high levels of compliance were consistent across Scotland and were maintained throughout the year.
- This indicates that the legislation has become self-policing.

Reduction in SHS Exposure

- There was evidence of a reduction in SHS exposure in both bar workers and the general population.
- In bar workers there was an 89% reduction mean salivary cotinine – an indicator of SHS exposure - one year post legislation.
- In adults aged 16 to 74 years and 11 year old children there was a 39% reduction in SHS exposure (based on salivary cotinine)
- Post legislation reductions in SHS exposure were greatest in adults living in non-smoking households and in children living in households where parent figures were non-smokers or only the father figure smoked.
- The main beneficiaries of the legislation are likely to be those who have very little or no SHS exposure in the home.
- There was strong evidence from across the studies in large reductions in reported SHS exposure in other workplaces and on public transport, as well as in bars.
- While, there appears was no evidence of a reduction in exposure in the home, there was **no evidence of displacement of smoking from public places into the home or cars.**

Improvements in Health

- Post legislation, bar workers reported fewer respiratory (coughs and phlegm) and sensory (sore eyes and throat) symptoms one year after their work environments became smokefree.
- These improvements were seen in both non-smokers and smokers indicating smokefree environments have potential health benefits for smokers too.
- Health benefits were also observed at a population level.
- A prospective study of admissions to 9 Scottish hospitals found a 17% reduction in acute coronary syndrome (including heart attack) one year after implementation of the legislation.
- This compares with an average 3% reduction in ACS admissions in the 10 years before the legislation was introduced.
- The reduction occurred in all age groups but was greatest in the under 60s who as a group, spend more time in public places, such as bars, and will therefore experience greater reductions in SHS as a result of the legislation
- This suggests that smoke-free legislation is effective at reducing the risk of AMI.

Changes in Attitude

- Support for smokefree legislation increased post legislation in both Scotland and the rest of the UK (control) but the increase in support was much greater in Scotland.
- In Scotland support for the legislation increased most in respondents from middle SEGs rather than the most or least affluent groups.
- The change in smoker attitudes was greatest post-legislation.

Smoking Restrictions in Private Places

- Post legislation there was a reduction in the proportion of households with no smoking restrictions or only partial smoking restriction in the home.
- There was also a small reduction in the proportion of children who reported exposure to SHS in other people's homes.
- This may reflect increased awareness of the health risks associated with SHS; a change in the acceptability of exposing others to SHS; or both.

Socio-cultural Changes

- Qualitative studies found a reduction in reported tobacco consumption post-legislation, particularly in disadvantaged communities.
- Smokers in both affluent and disadvantaged communities reported experiencing public disapproval associated with their smoking post legislation and this was an important factor that shaped their smoking behaviour.
- Implementation of smokefree legislation has the potential to change attitudes, shape beliefs and change smoking behaviour, thereby bringing about socio-cultural change, particularly in disadvantaged communities.

- A study of the impact of smokefree legislation on smoking behaviour and compliance in Scottish bars showed fear of prosecution was the main motive in enforcing the ban.
- Study shows that the nature and levels of compliance vary widely and suggests the need for more robust, targeted surveillance methods, particularly supporting smokers in deprived areas.

Publications

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Petticrew M, Semple S, Hilton S et al. Covert observation in practice: Lessons from the evaluation of the prohibition of smoking in public places in Scotland. *BMC Public Health* 2007

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Richmond L, Haw S, Pell J. Impact of socioeconomic deprivation and type of facility on perceptions of the Scottish smoke-free legislation (letter). *Journal of Public Health* 2007. doi:10.1093/pubmed/fdm056

Semple S, Creely KS, Naji A et al. Second hand smoke levels in Scottish Pubs: the effect of smoke-free legislation. *Tobacco Control* 2007;16:127-32

Semple S, MacCalman L, Atherton A et al. Bar workers' exposure to second-hand smoke: The effect of Scottish smoke-free legislation on occupational exposure. *Annals of Occupational Hygiene* 2007.

NHS Health Scotland, March 2008

C) UK REGULATORY IMPACT ASSESSMENTS

England:

Annual benefits with full ban (£ million)

Source: Department of Health (2007)

Benefits (£ million)		
Health benefits		
Averted deaths	<u>Reduced ETS exposure</u>	
	Employees	21
	Cutsomers	350
	<u>Smokers giving up</u>	
	Employees	1,600
	Cutsomers	180
		<u>Reduced uptake of smoking</u>
		550
Economic and environmental benefits		
NHS expenditure saved through reduced smoking prevalence		100
Reduced Sickness Absence		70-140
Production gains (from reduced exposure to SHS)		340-680
Safety benefits (damage, fire, injuries etc.)		63
Reduced cleaning and maintenance costs		100
Total (£ million)		3,374 - 3,784
Costs (£ million)		
Implementation of regulatory requirements		0-5
Enforcement		30
Education and communication		1
Revenue losses to the Exchequer from decline in cigarette sales	Employees	859
	Customers	113
Losses to the tobacco industry and retailers		97
Production losses (smoking breaks)		430
Consumers' surplus losses to continuing smokers		155
Total (£ million)		1,685-1,690
Net benefit (£ million)		
Total (£ million)		1,689-2,094

Northern Ireland

Net present value of comprehensive smoke-free legislation (in 2006 prices (£ million) based on 30 year appraisal

Source: Adjusted from Department of Health for Northern Ireland (2006)

Benefits (£ million)			
		Three main smoking related diseases (lung cancer, stroke and ischaemic heart disease)	All identified smoking related diseases
Health benefits			
Economic value of lives saved	Reduced exposure to ETS	59.2	59.2
	Reduced active smoking	123.06	209.66
Morbidity savings (Human Cost of ill health)	Reduced exposure to ETS	156.26	156.26
	Reduced active smoking	37.26	120.69
Resource savings			
NHS Treatment costs		34.67	44.42
Reduced Sickness Absence Savings		6.50	6.50
Productivity gains as a result of reduced smoking breaks		518.66	518.66
Cost savings from reduced fire hazards and reduced cleaning and decoration costs		84.60	84.60
Hospitality sector impacts		-45.98	-45.98
Implementation and enforcement costs			
Costs to Northern Ireland Administration		-47.36	-47.36
Costs to Local Authorities		-5.91	-5.91
Total NPV		788.52	1,100.81

Annual benefits of comprehensive smoke-free legislation (in 2006 prices (£ million) based on 30 year appraisal

Source: Adjusted from Department of Health for Northern Ireland (2006)

Benefits (£ million)			
		Three main smoking related diseases (lung cancer, stroke and ischaemic heart disease)	All identified smoking related diseases
Health benefits			
Economic value of lives saved	Reduced exposure to ETS	5.47	5.47
	Reduced active smoking	11.36	19.35
Morbidity savings (Human Cost of ill health)	Reduced exposure to ETS	14.42	14.42
	Reduced active smoking	3.44	11.14
Resource savings			
NHS Treatment costs		3.2	4.10
Reduced Sickness Absence Savings		0.6	0.6
Productivity gains as a result of reduced smoking breaks		28.2	28.2
Cost savings from reduced fire hazards and reduced cleaning and decoration costs		4.6	4.6
Total (£ million)		71.29	87.88
Costs (£ million)			
Hospitality sector impacts		-2.5	-2.5
Costs to Northern Ireland Administration		-2.4	-2.4
Costs to Local Authorities		-0.3	-0.3
Total (£ million)		-5.2	-5.2
Net benefits (£ million)			
Total (£ million)		66.09	82.68

Scotland:

Annual benefits of comprehensive smoke-free legislation (£ 2003 prices million)

Source: Adjusted from NHS Health Scotland, Ludbrook et al (2005)

Benefits (£ million)		
Health benefits		
Value of deaths avoided	Reduced exposure to ETS	91.4 (range: 16.8 – 176.7)
	Reduced active smoking	108.5 (range: 11.7 – 169.7)
Morbidity savings (Human Cost of ill health)	Reduced exposure to ETS	12.8 (range: 10.8 – 36)
	Reduced active smoking	-
Resource savings		
NHS Treatment cost savings	Reduced exposure to ETS	5.3 (range: 4.5 – 11.5)
	Reduced active smoking	2.8 (range 1.2 – 4.2)
Reduced Sickness absence savings	Reduced exposure to ETS	4.1 – 5.2
	Reduced active smoking	0.8 (0.34 – 1.2)
Cost savings from reduced fire hazards		5.0 (range: 4.0 – 5.0)
Cost savings from reduced cleaning and redecoration costs		11.7 (11.7 – 11.7)
Productivity gains as a result of reduced smoking breaks		73.7 (0 – 73.7)
Total (£ million)		311.9 (range 61.1 – 489.7)

Net present value of comprehensive smoke-free legislation (in 2005 prices (£ million) based on 30 year appraisal

Source: NHS Health Scotland (2005)

Health benefits		
Economic value of lives saved	Reduced exposure to ETS	1,076
	Reduced active smoking	1,278
Morbidity savings (Human Cost of ill health)	Reduced exposure to ETS	151
	Reduced active smoking	-
Resource savings		
NHS Treatment cost savings	Reduced exposure to ETS	63
	Reduced active smoking	33
Reduced Sickness absence savings	Reduced exposure to ETS	49
	Reduced active smoking	9
Productivity gains as a result of reduced smoking breaks		1,474
Cost savings from reduced fire hazards		99
Cost savings from reduced cleaning and redecoration costs		234
Hospitality sector impacts		-28
Implementation and enforcement costs		
Costs to the Scottish Administration		-25
Education and communication		-25
Total NPV		4,387

Wales:

Annual net present value of comprehensive smoke-free legislation (in 2006 prices (£ million) based on 30 year appraisal)

Source: Welsh Assembly Government (2007)

Benefits (£ million)		
Health benefits		
Economic value of lives saved	Reduced exposure to ETS	86.9
	Reduced active smoking	46.8
Morbidity savings (Human Cost of ill health)	Reduced exposure to ETS	12.6
	Reduced active smoking	-
Resource savings		
NHS Treatment cost savings	Reduced exposure to ETS	2.9
	Reduced active smoking	2.2
Reduced Sickness Absence Savings	Reduced exposure to ETS	4
	Reduced active smoking	0.47
Cost savings from reduced fire hazards		6
Cost savings from reduced cleaning and decoration costs		7.6
Hospitality sector impacts		42
Total (£ million)		211.47
Costs (£ million)		
Increased smoking breaks		- 0.4
Implementation and enforcement costs		
Costs to Welsh Assembly Government	Smoking cessation	- 34.91
	Public awareness	- 1.1
	Signage	- 0.05
	Monitoring and evaluation	- 0.5
Costs to local authorities		- 37.58
Total (£ million)		- 74.54
Net benefits (£ million)		
Total NPV (£ million)		136.93

ANNEX VII – QUANTITATIVE ANALYSIS

This Annex estimates the annual numbers of deaths and the medical and non-medical costs due to ETS exposure for smoking and non-smoking staff in indoor workplaces/offices and bars/restaurants across the EU-27 in 2008; and the reduction in annual mortality for each policy option due to ETS is estimated. In addition, the impacts on the hospitality and tobacco industry are estimated. In the first section, the approach used is described followed by the results.

Data and methods

The approach used is based on similar approaches applied in the Impact Assessments regarding passive smoking in the UK ((NHS Health Scotland et al., 2005; Department of Health 2006; Department of Health 2007; Welsh Assembly Government, 2007) and Lifting the Smokescreen (Smokefree Partnership, 2006). It comprised five steps. First, the estimates for the prevalence of ETS (i.e. the number of people exposed to ETS in different venues) across all 27 Member States were obtained. Second, the estimates on the expected effect of each of the five policies on ETS prevalence were obtained. Third, the relative risk estimates were obtained from the literature for four diseases for which ETS is a known risk factor, and transferred into *ETS attributable fractions*. Fourth, the burden of the four diseases was estimated in terms of mortality and costs, across all 27 MS. The fifth and final step consisted in calculating for each MS the burden of ETS per disease-venue combination under each of the five policies. Each of the steps is discussed in detail below and France is used as an example to further clarify the approach used.

ETS prevalence—2006 estimate

The most recent data (field work Oct-Nov 2006) from the Eurobarometer survey was used to estimate the fraction of the population exposed to ETS. This survey covers the population aged 15+ years across all 27 Member States and is based on multi-stage random sampling, with about 1,000 responses in the majority of countries. The data allowed to distinguish between location of exposure (indoor workplaces/offices; and bars/restaurants), and smoking behaviour (smoker and non-smoker). In addition, to be conservative, when the location of exposure was categorised as ‘indoor workplace /office’ or ‘bars/restaurants’, only staff members were included in the analysis while non-staff members were excluded from the calculations. Table 44 shows how different groups exposed to ETS were identified, using specific questions and response options from the Eurobarometer questionnaire.

Table 44 Classification of different groups exposed to ETS

Category	Question	Qualifying answers
Exposed to ETS at indoor workplaces / offices	QB31b How long are you exposed to tobacco smoke on a daily basis—Indoor	- ‘1-5 hours a day’

	workplaces and offices	- 'more than 5 hours a day'
Exposed to ETS in bars and restaurants	QB31b How long are you exposed to tobacco smoke on a daily basis— Restaurants, pubs or bars	- '1-5 hours a day' - 'more than 5 hours a day'
Smoker/tobacco user	QB19	- 'Smoke packed cigarettes - Smoke roll-up cigarettes - Smoke cigars or a pipe - Chew tobacco or take snuff
Non smoker	QB19	- Used to smoke but have stopped - Never smoked
Staff (indoor workplaces / offices)	QB31a Where do you work?	'Indoor workplaces or offices'
Staff (restaurants, pubs, or bars)	QB31a Where do you work?	'Restaurants, pubs or bars'

For example, respondents who chose any of the response categories '1-5 hours a day', or 'more than 5 hours a day' to question QB31b 'How long are you exposed to tobacco smoke in indoor workplaces and offices, on a daily basis?', were categorised in our analysis as being 'exposed to ETS in indoor workplaces and offices'. It should be noted that respondents who chose 'Never or almost never' were not classified as being exposed to ETS. In addition, those responding 'Less than 1 hour a day' were also not classified as being exposed to ETS, in order to adopt a conservative approach and to avoid overstating the prevalence of ETS.

For example, according to the Eurobarometer data, in France at the end of 2006, 26 out of 1,022 respondents were non-smoking staff working in indoor workplaces/offices and exposed to ETS for at least one hour on a daily basis, leading to a fraction of $26/1,022 = 0.0205$. Note that this fraction does not represent the prevalence of ETS exposure within non-smoking staff working in indoor workplaces/offices. Rather, it is the fraction of the population representing non-smoking staff working in indoor workplaces/offices and exposed to ETS for at least one hour on a daily basis. Because subsequent quantities of interest (i.e. costs and mortality due to diseases related to ETS) are typically known at the population level, it is convenient to express the fraction exposed to ETS at this stage also as a population-level fraction.

ETS prevalence—2008 extrapolation

The data discussed above relate to ETS prevalence at the end of 2006. Since then, various Member States have implemented either full or partial smoke-free legislation. As a result of this legislation, the 2008 ETS prevalence for indoor workplaces/offices and restaurants/bars/pubs in those MS is expected to be lower than the ETS prevalence reported in 2006. In order to avoid overstating

the ETS prevalence in 2008, it was assumed that for countries introducing full smoke-free legislation after 2006, prevalence rates in 2008 would fall to the average 2006 ETS prevalence of Ireland, Italy and Sweden, countries that had already implemented smoke-free legislation prior to 2006. The effect of partial bans was assumed to have half the effect of a full ban.¹³

Based on the literature, it was assumed that the countries shown in Table 45 implemented full and partial smoking bans related to ETS exposure at indoor workplaces/offices and bars/restaurants between October-November 2006 and today. For all other countries the 2008 ETS prevalence in indoor workplaces/offices and restaurants/bars/pubs was assumed to be equal to 2006 ETS prevalence.

Table 45 Smoke-free legislation (full and partial bans) implemented after 2006

	Indoor workplaces / offices	Bars / restaurants
Full ban	France United Kingdom	Lithuania Estonia Finland Slovenia France United Kingdom The Netherlands
Partial ban	Denmark Portugal	Germany Belgium Portugal Denmark

Continuing the previous example, France was one of the countries that implemented a smoking ban after 2006. It was therefore assumed that the 2008 prevalence of ETS among non-smoking staff working in indoor workplaces/offices (i.e. being exposed to ETS for at least 1 hour daily) would be equal to the 2006 average of Ireland, Italy and Sweden, calculated as 3.72%. This fraction was then multiplied by the fraction of non-smoking staff working in indoor workplaces/offices in the total sample¹⁴: $3.72\% * 158 / 1,022 = 0.57\%$. The latter estimate represents the fraction of the French (sample) population in

¹³ Smoke-free legislation was implemented in Ireland in March 2004, in Italy in January 2005 and in Sweden in June 2005. The levels of ETS exposure reported in these countries for 2006 therefore can be assumed to represent the effect of these policies within 1-2 years after implementation of the policy.

¹⁴ It was assumed that the fraction of non-smoking staff working in indoor workplaces/offices was stayed constant between 2006 and 2008.

2008 who are non-smoking, working in indoor workplaces/offices and exposed to ETS for at least 1 hour daily.

The effects of the five policy options on ETS exposure

Based on the literature review, the results of the Green Paper consultation and the experience with existing EU instruments, we established a series of arguments supporting certain assumptions regarding the effect of the five policy options on ETS exposure. We then independently asked representatives from various stakeholder groups to give their (expert) opinion on the expected effect of each of the policy options on ETS exposure after explaining the problem of ETS and each of the proposed policy options in detail. The results from the latter exercise were used to validate our assumptions.

Relative risk for selected diseases due to ETS

The venue-specific estimates on the relative risk for lung cancer, cerebrovascular diseases (stroke), ischaemic heart disease, and chronic lower respiratory diseases (including COPD and asthma) that were applied in the calculations were identical to those reported by Jamrozik (The Smoke free Partnership 2006) and the Royal College of Physicians (2005) in the UK. They are based on median figures obtained through meta-review of existing literature and are consistent with the ranges reported in Annex V.

Table 46 Relative risk estimates associated with ETS and specific diseases

Disease	ICD-10 Classification	Relative risk	
		Average workplace	Pub/bar/nightclub
Lung cancer	C33-C34	1.24	1.73
Stroke	I60-I69	1.45	2.52
Ischaemic heart disease	I20-I25	1.2	1.61
Chronic lower respiratory disease	J40-J47	1.25	1.76

In order to estimate the burden of ETS, the eight relative risk ratios (for workplace and pub/bar/nightclub) were converted to eight ETS attributed fractions. The ETS attributed fraction is defined as the part of a disease's burden that can be attributed to ETS:

$$ETS \text{ attributed fraction} = \frac{ETS \text{ Prevalence} * (Relative \text{ Risk} - 1)}{(ETS \text{ Prevalence} * (Relative \text{ Risk} - 1) + 1)}$$

The estimates for the burden of ETS in terms of mortality as well as medical and non-medical costs were obtained by multiplying the number of deaths and costs due to each disease by the ETS attributed fractions. The sections that follow discuss how the estimates for the number of deaths and costs due to each disease were obtained.

Because the ETS attributable fraction depends on the (Member State-specific) ETS prevalence, it varies by MS, venue (indoor workplaces/offices and bars/pubs/restaurants), and smoking status (smoker/non-smoker). Continuing the example for France, the ETS attributable fraction for non-smoking staff in indoor workplaces/offices can be calculated as:

$$ETS \text{ attributed fraction} = \frac{0.0083 * (1.24 - 1)}{(0.0083 * (1.24 - 1) + 1)} = 0.00199$$

Thus, 0.199% of the population-level burden of lung cancer in France can be attributed to ETS exposure among non-smoking staff in indoor workplaces and offices. By plugging in the relative risks for the other three diseases, it is possible to calculate the ETS attributed fractions in a similar way.

Mortality

For each MS, data was obtained from Eurostat on the annual number of deaths in the population of working age (20-64 years) caused by each of the four diseases discussed above. For 16 countries, the most recent estimates were available for 2006 or later; for eight countries, the most recent estimates were available for 2005. For Italy and Denmark, the most recent estimates were available for 2003 and 2001 respectively. For Belgium, no estimates were available. To estimate mortality due to ETS, the ETS attributable fraction was applied to the number of deaths in the population of working age (20-64 years) for each of the four diseases.

For example, according to the Eurostat data, in France 12,034 people of working age died from lung cancer. Multiplying this by the ETS attributed fraction of 138% calculated above, leads to an estimated annual number of 17 deaths in France among non-smoking staff in indoor workplaces/offices from lung cancer caused by ETS.

Costs

For cerebrovascular disease and ischaemic heart disease, MS-specific estimates for medical and non-medical cost for the year 2006 were obtained from the British Heart Foundation¹⁵. The method adopted by the British Heart Foundation relies on a ‘top-down approach’ to calculate total annual

¹⁵ For a detailed description of this approach, see www.heartstats.org (accessed 1/5/2008)

expenditure for specific diseases, using aggregate data on morbidity, mortality, hospital admissions, disease related costs, and other health related indicators. The following services were included in the estimation of medical costs: primary care, accident and emergency care, hospital inpatient care (including day cases and cardiac rehabilitation services), outpatient care, and medications. Categories included in the estimation of non-medical costs included informal care, productivity costs due to mortality, and productivity costs due to morbidity¹⁶.

Using OECD Health Data the average annual percentage increase in health care expenditure was estimated for each of the 19 OECD EU countries over the period 1996-2005, and the average across these 19 countries (8.2%) was imputed for the remaining eight countries. To obtain estimates for the 2008 medical cost for cerebrovascular disease and ischaemic heart disease, the 2006 costs were extrapolated using this average annual percentage increase in health care expenditure for each of the Member States. The same method was applied for the extrapolation of the 2006 non-medical cost; however the average annual percentage increase in GDP was used rather than health care expenditure.¹⁷

In the case of France, the medical costs of treating stroke were €1,427,985,446 according to figures from the British Heart Foundation. Between 1996 and 2005, according to OECD Health Data, overall health care expenditure in France rose by 5.3% per year on average, leading to an estimated €1,582,299,557 in medical costs for treating stroke. Applying the ETS attributable fraction for stroke then leads to an annual medical cost among non-smoking staff in indoor workplaces/offices exposed to ETS of €4,080,415 in France. Similarly, the British Heart Foundation estimated the non-medical costs of stroke in France in 2006 as €1,742,987,431. Applying an average annual increase in GDP of 3.9%, leads to an extrapolated 2008 estimate of €1,880,133,401. Finally, applying the ETS attributable fraction leads to an annual non-medical cost among non-smoking staff in indoor workplaces/offices exposed to ETS of €2,507,411 in France.

Unfortunately, detailed Member States-specific cost estimates were not readily available for lung cancer and chronic lower respiratory disease. The following indirect method of estimation was therefore used. For lung cancer, an estimate from the National Cancer Institute (part of the U.S. National Institutes of Health) was obtained for total medical spending on lung cancer in the U.S. in 2004. Medical spending on lung cancer was then expressed as a percentage of health care expenditures in the U.S. in 2004, and this percentage was applied to

¹⁶ For a detailed description of this approach, see www.heartstats.org/eucosts (accessed 1/5/2008)

¹⁷ Here GDP is used, because these costs are not directly related to medical treatments. Therefore inflating these by an index specific to the costs of healthcare does not seem appropriate. Because non-medical costs include a broad range of costs, changes over time can be expected to track changes in GDP.

the (estimated) 2008 health care expenditure in each of the 27 Member States. In other words, it was assumed that the share of health care spending allocated to the treatment of lung cancer is relatively homogeneous across industrialised countries.¹⁸

In order to carry out this estimation, the 2008 health care expenditure for each of the 27 Member States had to be calculated first. For the 19 OECD EU countries, the most recent available data (2005 for the majority of countries) was used and extrapolated to 2008 using the average annual percentage increase in health care expenditure over the most recent 10-year period. For all other countries (except for Latvia and Malta, for which no data were available) 2004 estimates on health care expenditure obtained from Eurostat were extrapolated, using the average (8.2%) annual increase in health care spending across the other countries. In case expenditure figures were not available in Euros, the average exchange rate for the first half of 2008 was used to convert national currencies to Euros.

A similar procedure was applied to estimate the cost of lower respiratory disease, and estimates on the medical cost of asthma for 1998 were obtained from Weiss et al, and on the medical cost of COPD for 2002 from the National Heart, Lung, and Blood Institute of the U.S. National Institutes of Health. Estimates for non-medical cost for these diseases were also obtained from the same sources, expressed as a percentage of the U.S. GDP (rather than health care expenditures) and this percentage was applied to the 2008 GDP (obtained from Eurostat) for each of the 27 Member States in order to estimate the non-medical cost. Unfortunately it was not possible to obtain estimates on the non-medical cost for lung cancer.

Methods to estimate effects of smoke-free legislation on revenues and employment to the tobacco and hospitality industry

To estimate the effect of an EU-wide smoking ban on revenues and employment in the tobacco industry, the estimates found in the literature (shown along with the non-peer reviewed literature in Table 41 and Table 42 in Annex VIA) were applied to the EU-wide estimated 2007 revenue and employment estimates for the tobacco and hospitality industry. However, applying the estimates from the literature directly, would assume that the entire EU would move from a scenario in which there is no smoking ban to a complete smoking ban. Because many countries already had smoking bans by 2008, a correction was applied to the estimates from the literature. Because many of the larger Member States such as France, the UK and Italy had already smoking bans, it was estimated that only

¹⁸ Unfortunately, it was not possible to evaluate this assumption due to a lack of data (in fact, if data were available to test this assumption, i.e. spending on lung cancer treatments across a wide range of countries, spending on lung cancer in the EU could have likely been obtained as well, in which case it would not be necessary to infer this spending from the US).

half of the entire EU-27 tobacco market would be affected by a new EU-wide smoking ban.

The most recent data on tobacco industry revenues across the EU-27 are available for the year 2006, which were extrapolated to 2007 by Eurostat using short-term indices.

It was assumed that, holding everything else constant, any reductions in revenue would have a proportional effect on employment in the tobacco industry in the longer run.

The most recent data on MS-specific hospitality industry revenues (NACE categories 55.3 to 55.5, i.e. restaurants, bars, canteens and catering) across the EU-27 were available for the year 2006, which were extrapolated to 2007 by Eurostat using short-term indices.

At the EU-level, restaurants, bars, canteens and catering represent 69.9% (revenue) and 75.4% (employment) of the total, whereas hotels, camping sites and other provision of short-stay accommodation represent the remaining (much smaller) share. Unfortunately, no data were available to further distinguish between bars and restaurants. Because no country-specific estimates were available, we applied these average EU percentages to each country.

Methods to estimate effects of smoke-free legislation on the cost of fires, cleaning and redecoration costs

To estimate the effect of an EU-wide smoking ban on the cost of fires, cleaning and decoration costs, the estimates from the Health and Regulatory Impact Assessment on Smoking for Northern Ireland, reported as £ 4.6 million per annum; the English impact assessment, reported as £163 million per annum; the Scottish impact assessment, reported as £16.6 million per annum; and the Welsh impact assessment, reported as £13.5 million per annum were summed up. To extrapolate this figure to an EU-wide estimate, this was expressed as a fraction of UK GDP and this fraction was then applied to the GDP for Member States that did not have smoking bans as of 2008. Summing across these Member States resulted in the expected EU-wide reduction in the cost of fires, cleaning and redecoration following a smoking ban.

Results

Table 47 provides a summary of the baseline estimates for 2008. This section will discuss these estimates in further detail, in addition to the way they are expected to change under each of the policies considered.

Table 47 Summary of baseline estimates for 2008

	indoor workplaces /offices	bars and restaurants
--	-------------------------------	-------------------------

	Staff	staff
<i>ETS exposure of over 1 hour (per 1,000)</i>		
- non- smokers	18.62	2.58
- smokers	28.66	2.47
<i>Total number of deaths</i>		
- non- smokers	1,714	786
- smokers	2,694	813
<i>Total medical cost (EUR mln)</i>		
- non- smokers	427	139
- smokers	636	134
<i>Total non-medical cost (EUR mln)</i>		
- non smokers	353	124
- smokers	529	119

Throughout this chapter, a distinction is made between exposure among staff in indoor workplaces/offices and bars/restaurants. Exposure among staff in healthcare and educational facilities, as well as government buildings is not taken into account. The reason to exclude these latter categories is that the Eurobarometer survey shows very small numbers of staff exposed (about 55 for each of these three venues across the entire EU-27, in a sample of 28,532 individuals), which prohibits effective use of these data in a country-level analysis. If the data would have allowed to include the effects of ETS exposure among staff in healthcare and educational facilities, and government buildings, the findings and conclusions would not be expected to change drastically, because this population is only about 13% of the size of staff exposed in indoor workplaces/offices.

ETS exposure—2006

Table 48 shows the fraction of smoking and non-smoking staff (per 1,000) exposed to ETS for at least one hour on a daily basis, for each of the combinations of categories.

Table 48 Number of staff per 1,000 EU citizens exposed to ETS in 2006 for at least one hour a day on a daily basis

	Non-smokers		Smokers	
	indoor workplaces /offices staff	bars and restaurants staff	indoor workplaces /offices staff	bars and restaurants staff
average	21.27	4.04	31.95	4.12
minimum	0.99	-	2.98	-
maximum	51.00	12.67	99.00	9.87

The first row of Table 48 shows the population-weighted average for the EU-27. The largest category of staff exposed to ETS is smoking staff in indoor workplaces/offices (32 exposed per 1,000 population). The number of staff exposed at bars and restaurants is relatively small. The minimum and maximum across the EU-27 (second and third row) show that these figures can vary considerably across Member States.

Note, however, that these proportions take the entire population as denominator. An alternative measure is to estimate the proportion of people exposed to ETS within each of the subgroup populations, e.g. the number of non-smoking staff in indoor workplaces/offices exposed to ETS divided by the number of all non-smoking staff in indoor workplaces/offices. These estimates are shown in Table 49 and Table 50.

Table 49 Percentage of staff exposed to ETS in 2006 for at least one hour a day on a daily basis within each subpopulation for at least 1 hour a day

	Non-smokers		Smokers	
	indoor workplaces /offices staff	bars and restaurants staff	indoor workplaces /offices staff	bars and restaurants staff
average	13%	46%	31%	48%

Table 50 Percentage of staff exposed to ETS in 2006 for at least one hour a day on a daily basis within each subpopulation (with smokers and non-smokers combined) for at least 1 hour a day

	indoor workplaces /offices staff	bars and restaurants staff
average	20%	47%

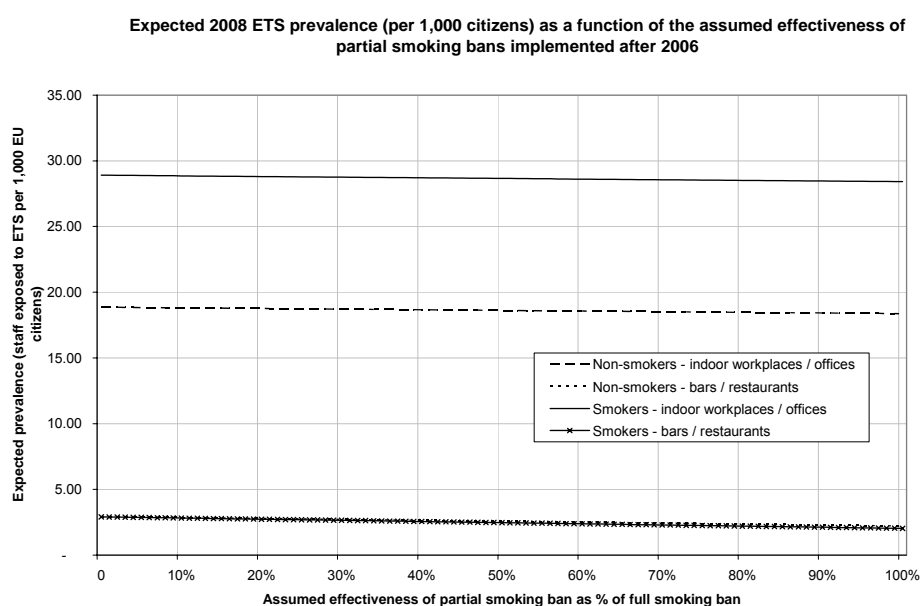
ETS exposure—2008

Using the approach outlined in previous section, the 2006 ETS prevalence estimates were updated for 2008, taking into account that various Member States have implemented smoke-free legislation since 2006. For each quantity of interest, a high and low estimate is shown, depending on the assumed effect of partial bans implemented between 2006 and 2008. The high estimate assumes the effect of a partial ban is equal to the effect of no ban while the low estimate assumes the effect equals the effect of a full ban. Table 51 updates the 2006 estimates shown in Table 48 to 2008, and Figure 1 shows the entire range of ETS prevalence estimates under different assumptions regarding the effectiveness of partial bans. Note that the high and low estimates in Table 51 correspond to the 0% and 100% estimates in Figure 1 (extreme left and right ends of the lines).

Table 51 Estimated number of staff per 1,000 EU citizens exposed to ETS in 2008 for at least one hour a day on a daily basis

Estimate	Non-smokers		Smokers	
	indoor workplaces /offices staff	bars and restaurants staff	indoor workplaces /offices staff	bars and restaurants staff
High	18.86	2.93	28.90	2.91
Low	18.37	2.22	28.41	2.03

Figure 1



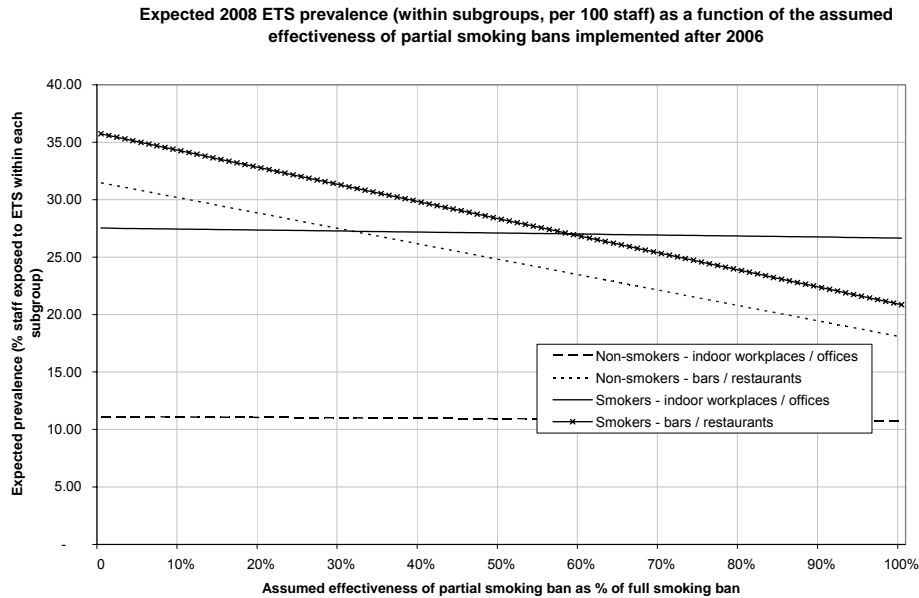
Similarly, Table 52 updates Table 49 to 2008, with the full range of ETS estimates under different assumptions of the effect of partial bans shown in Figure 2. Comparing Figure 1 to Figure 2 provides more insight into the impact of the uncertainty around the effect of partial bans: While the effect of partial bans can have a large impact on the average ETS prevalence *within staff in bars and restaurants*, the eventual impact of ETS exposure *across the entire population* is much smaller. The reason for this is that only a small fraction of the population is employed as staff in bars and restaurants.

Table 52 Estimated percentage of staff exposed to ETS in 2008 within each subpopulation for at least 1 hour a day

Estimate	Non-smokers		Smokers	
	indoor workplaces /offices staff	bars and restaurants staff	indoor workplaces /offices staff	bars and restaurants staff
High	11.13	31.47	27.53	35.73

Low	10.76	18.05	26.66	20.86
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Figure 2



Finally, Table 53 updates Table 50 to 2008, showing expected ETS prevalence within indoor workplaces/offices staff and staff in bars/restaurants (with smokers and non-smokers combined).

Table 53 Percentage of staff exposed to ETS in 2008 for at least one hour a day on a daily basis within each subpopulation (with smokers and non-smokers combined) for at least 1 hour a day

	indoor workplaces /offices staff	bars and restaurants staff
High	17.26	33.96
Low	16.75	19.32

In the remainder of this report, it is assumed partial bans have half the effect of a full ban, and hence our baseline estimates for 2008 fall in the middle of the high and low estimates shown above.

ETS exposure under five alternative policies—2013

After showing 2006 and 2008 baseline estimates in the previous two sections, this section considers ETS prevalence in 2013, under each of the five policies.

The table below summarises the qualitative analysis of the policy options across various parameters carried out in section 6.1 of this IA, assuming that the level of bindingness is the most important factor, followed by scope and timing.

Table 54 Summary of the analysis of the policy options across 5 main parameters

	VA	Timing	Scope	Degree of "bindingness"	Risks	Score of the option
PO1	4	1	1	1	0	1,10
PO2	5	2	3	4	1	3,40
PO3	6	6	6	2	2	3,80
PO4	6	5	6	4	2	4,70
PO3+	7	5	6	4	2	4,75
PO4+	7	4	6	5	2	5,15
PO5	7	2	5	7	1	5,60
relative weight of parameter in final scoring	5%	10%	30%	50%	5%	100%

---	0	+	4
--	1	++	5
-	2	+++	6
+/-	3	++++	7

It should be noted that the final scoring indicates the ranking of options in terms of their potential impact on ETS prevalence rather than the magnitude of impacts. For instance, policy option 5 has been assigned +++ for the degree of bindingness as compared to ++ for options 2 and 4 even though an EU Directive would be several times more binding than the other two policy options.

Based on the above considerations, the experience with existing EU instruments and developments and national level, the following proportional reductions were applied to the ETS prevalence *ratios*:

- Policy 1: 6% reduction
- Policies 2, 3, 3+, 4 and 4+: between 13% and up to 26% reduction, with Policies 2 and 3 being closer to the lower bound and Policy 4 closer to the upper bound.
- Policy 5: under the most optimistic scenario, prevalence rates for all MS become equal to Ireland (a 100% reduction for bars/restaurants and 87-89% reduction in indoor workplaces/offices), corrected for the fact that policy 5 is somewhat narrower in scope than the Irish ban and will not affect businesses that are entirely run by self-employed or family workers. For the hospitality industry, on average 15.4% of the workforce is self-employed or a family worker (based on Eurostat data from the labour force survey), and in the general workforce it is 12.3%. As a result, after

this correction, the reduction in prevalence under policy 5 is equal to an 85% reduction in ETS prevalence among staff in bars/restaurants and 76-78% reduction in indoor workplaces/offices.

The assumed 6% reduction in prevalence ratios for policy 1 takes into account the fact that several Member States are expected to implement smoke-free legislation over the next 5 years, even if the EC would take no further action. It is therefore useful to examine *proposed* legislation across the EU-27, and simulate how implementation of this legislation would affect the 2013 ETS prevalence under policy 1. Member States with smoke-free legislation proposals were therefore categorised into 3 categories, where category 3 represents legislation that is most likely to be implemented and category 1 represents legislation that is least likely to be implemented.

Category 1:

Category 1 assumes that by 2013 Romania will have a full ban in indoor workplaces/offices and a partial ban in bars/restaurants. In January 2008, the government adopted an emergency ordinance setting out a full ban in workplaces and a partial ban in hospitality sector (exemption for venues smaller than 100 m² as of Jan.2009). The ordinance has already been approved by one chamber of the parliament (senate) but still has to be approved by the other chamber (deputies).

In Austria, a partial ban in hospitality venues (below 80m²) can be expected as of January 2009, agreed on by the government in April 2008. However, the draft law now has to be approved by the parliament. Because there have been long negotiations on the proposed changes, chances have increased that the amendment will be accepted in the parliament.

In addition, the Latvian parliament adopted in April 2008 a bill introducing a total ban on smoking in all enclosed public places including hospitality venues as of April 2010. Because ETS prevalence among staff in bars/restaurants is already very low according to the most recent Eurobarometer survey and smoking is currently allowed in ventilated smoking rooms, the adoption of this law is unlikely to significantly change ETS exposure among staff in bars/restaurants in 2013.

Category 2:

Category 2 assumes by 2013, the Czech Republic will have banned smoking in indoor workplaces/offices and bars/restaurants. In the Czech Republic a parliamentary initiative to ban smoking in all public places passed the health committee of the parliament but was watered down in the second reading with a partial ban alternatives. However, it needs one more reading in the lower chamber and one in the senate. A number of similar initiatives failed in the past though.

Category 3:

Category 3 assumes that by 2013, Greece, Poland, Slovakia and Hungary have banned smoking in indoor workplaces/offices and bars/restaurants. Greece and Bulgaria currently have proposals for comprehensive smoking bans in all indoor public places and workplaces submitted to the Parliament. In Poland, a parliamentary initiative to ban smoking in all public places and workplaces passed the health committee of the parliament in March 2008. It needs two more readings in the lower chamber and one in the senate. In Hungary, the health ministry drafted a proposal for a comprehensive smoking ban covering all indoor workplaces, including bars and restaurants. However, there was a change at the post of the health minister and it is not yet certain that the new minister will take up the initiative. In Slovakia, the health ministry drafted a proposal for a partial ban in the hospitality sector (with an exemption for venues below 200m²). Still, it has to be approved by the cabinet, before it is sent to the parliament.

Table 54 shows the resulting reduction in ETS prevalence ratios compared to the 2008 baseline under the assumptions made for each of the three categories. Partial bans are assumed to have half the effect of full bans. The latter table reveals that the 6% reduction assumed for policy 1 would be largely consistent with a situation in which the countries in category 1 and 2 would have implemented their proposed smoke-free policies by 2013. The table also shows that ETS prevalence in the EU would have reduced substantially by 2013 if all category 3 countries would also become successful in implementing the proposed legislation. As has been argued above, there are many uncertainties around these policies though, and one cannot simply assume that they will all be implemented.

Table 54 Percentage reduction compared to baseline

	indoor workplaces / offices staff	bars and restaurants staff
Policy 1, Cat 1, 2013	-5.64%	-5.1%
Policy 1, Cat 1 + 2, 2013	-5.64%	-8.2%
Policy 1, Cat 1 + 2 + 3, 2013	-23.3%	-23%

Policy 1 would therefore be equivalent to Member States in categories 1 and 2 adopting smoke-free legislation by 2013 while all other countries remain on the same ETS prevalence level.

To give an idea about the size of the assumed reductions, it is useful to express them as a (hypothetical) equivalent of member states going entirely smoke-free. For example, a 6% reduction in EU-wide ETS prevalence (policy 1) among non-smoking staff in indoor workplaces/offices, would be equal to Spain reducing ETS exposure in this category to zero. Or, for another example, a 26% reduction EU-wide (policy 4) among non-smoking staff in bars/restaurants would be equal to Belgium, Denmark, Greece, Luxembourg, Austria, Portugal, Bulgaria and Hungary reducing ETS exposure in this category to zero.

As explained in the methods section, these were validated estimates against the expert opinion of members of 15 stakeholder organisations. Their average ratings are shown in Table 55.

Table 55: Stakeholder ratings on percent reduction in ETS prevalence ratio compared to baseline

Venue	Stakeholders ratings on percent reduction in ETS prevalence ratio compared to baseline				
	Policy 1 No change status quo	Policy 2 Open method of coordination	Policy 3 Commission recommenda tion	Policy 4 Council recommenda tion	Policy 5 Binding legislation
overall exposure - indoor workplaces and offices	0%	-1%	-2%	-66%	-81%
overall exposure - bars and restaurants	-1%	-2%	-5%	-70%	-89%
workers' exposure - indoor workplaces and offices	0%	-1%	-1%	-66%	-89%
workers' exposure - bars and restaurants	0%	-1%	-2%	-75%	-94%
exposure at home	0%	-1%	-3%	-12%	-20%

These ratings reveal that the estimates applied in this report are slightly larger for policy 1-3, and substantially more conservative for policy 4.

Table 56 shows the estimated number of staff exposed to ETS for at least one hour a day per 1,000 EU citizens under each of the 5 policies in 2013.

Table 56 Estimated number of people per 1,000 EU citizens exposed to ETS for at least one hour a day on a daily basis

	Non-smokers		Smokers	
	indoor workplaces / offices staff	bars and restaurants staff	indoor workplaces / offices staff	bars and restaurants staff
Baseline 2008	18.62	2.58	28.66	2.47
Policy 1 No change from status quo	17.41	2.41	26.80	2.31
Policy 2-3 Open Method of Coordination	16.20	2.24	24.94	2.15
Policy 4 Council Recommendation	13.78	1.91	21.21	1.83
Policy 5 Binding legislation	2.53	0.40	7.28	0.38

Estimated reductions in ETS-related mortality under each of the policies

This section shows—separately for non-smokers and smokers—the EU-27 wide mortality and cost estimates for the 2008 baseline and each of the five policy

alternatives. These estimates were obtained following the approach described in the previous chapter. A summary of the estimated mortality due to ETS exposure among smoking and non-smoking staff in the EU-27 is shown at the end of this section (table 62).

In all tables that follow we show figures for the different venues (indoor workplaces/offices and bars/restaurants) separately, in addition to the total. In some cases, the total shown differs slightly from the sum of the separate estimates due to rounding of the separate estimates (while the totals have been calculated using the un-rounded estimates).

Non-smokers

Table 57 shows an estimate for the total number of annual deaths to ETS in 2008 among non-smoking staff as 2,500. Note that this is a very conservative estimate, as it does not include non-staff members visiting bars, restaurants and pubs.

Table 57 Estimated EU-wide mortality due to ETS exposure among non-smokers in 2008

Baseline 2008	Non-smokers		
	Indoor workplaces /offices staff	Bars and restaurants staff	Total
Lung cancer	387	156	542
Stroke	378	160	538
Heart disease	384	138	522
Chronic lower respiratory disease	565	332	897
Total	1,714	786	2,500

Table 58 shows the expected *reduction* in annual deaths in 2013 under each of the 5 policies. Whereas reductions for the first four policies are only modest, a large reduction (up to 1,487 deaths among non-smoking staff in indoor workplaces/office, and 664 deaths among non-smoking staff in bars/restaurants).

Table 58 Estimated annual reductions in mortality due to ETS exposure among non-smokers for each of the policies

		Non-smokers		Total
		Indoor workplaces/ offices staff	Bars and restaurants staff	
Policy 1	Lung cancer	25	10	35

	Stroke	24	10	35
	Heart disease	25	9	34
	Chronic lower respiratory disease	36	21	58
	Total	110	51	161
Policy 2/3	Lung cancer	50	20	70
	Stroke	49	21	69
	Heart disease	50	18	67
	Chronic lower respiratory disease	73	43	116
	Total	221	101	323
Policy 3+/ 4	Lung cancer	50-100	20-40	70-140
	Stroke			
	Heart disease			
	Chronic lower respiratory disease			
	Total			
Policy 4+	Lung cancer	100	40	140
	Stroke	97	41	139
	Heart disease	99	36	135
	Chronic lower respiratory disease	146	86	232
	Total	443	203	646
Policy 5	Lung cancer	335	132	466
	Stroke	327	135	463
	Heart disease	333	116	449
	Chronic lower respiratory disease	492	280	773

	Total	1,487	664	2,151
Policy 1 = No change form status quo; Policy 2 = Open method of coordination; Policy 3 = Commission recommendation; Policy 4 = Council recommendation; Policy 5 = Binding legislation				

Smokers

Table 35 shows a separate set of estimates for the annual number of deaths due to ETS among smokers, based on the assumption that regular ETS exposure adds to the risk from smoking itself. A noticeable difference between Table 57 and Table 59 is that mortality from ETS exposure in indoor workplaces/offices is much higher among smokers compared to non smokers. This reflects the baseline prevalence numbers (i.e. the number of smokers exposed to ETS at indoor workplaces/offices is much larger than the number of non smokers exposed to ETS at indoor workplaces/offices).

Table 59 Estimated EU-wide mortality due to ETS exposure among smokers in 2008

	Indoor workplaces / offices	Bars and restaurants	Total
Disease	Staff	Staff	
Lung cancer	600	161	761
Stroke	601	197	798
Heart disease	612	159	771
Chronic lower respiratory disease	881	296	1,176
Total	2,694	813	3,507

Table 60 shows estimated reductions in mortality under each of the policies.

Table 60 Estimated annual reductions in mortality due to ETS exposure among smokers for each of the policies

		Indoor workplaces / offices	Bars and restaurants	Total
	Disease	Staff	Staff	
Policy 1	Lung cancer	39	10	49
	Stroke	38	13	51
	Heart disease	39	10	50

	Chronic lower respiratory disease	57	19	76
	Total	173	53	225
Policy 2/3	Lung cancer	77	21	98
	Stroke	77	25	102
	Heart disease	79	21	100
	Chronic lower respiratory disease	113	38	151
	Total	346	105	451
Policy3+4	Lung cancer	50-100	20-40	70-140
	Stroke			
	Heart disease			
	Chronic lower respiratory disease			
	Total			
Policy 4+	Lung cancer	155	42	196
	Stroke	154	51	205
	Heart disease	158	41	199
	Chronic lower respiratory disease	227	76	303
	Total	693	210	904
Policy 5	Lung cancer	449	136	586
	Stroke	456	166	622
	Heart disease	464	135	598
	Chronic lower respiratory disease	677	250	927
	Total	2,046	687	2,733
Policy 1 = No change form status quo; Policy 2 = Open method of coordination; Policy 3 = Commission recommendation; Policy 4 = Council recommendation; Policy 5 = Binding				

legislation

It should be noted that these impacts might not materialize immediately. For example, for the current cohort of people that would not be exposed to ETS due to any of the proposed policies, a reduction in lung cancer mortality would only become apparent after several years. For other diseases, such as heart disease the effect might be more immediate though. Thus, the effects on mortality should be regarded as annual deaths prevented in the longer run.

Even though these effects will not fully materialise until a certain number of years has passed, the earlier a policy could be implemented, the larger the total benefits (i.e. over a series of years) will be.

Summary

Table 62 shows a summary of the estimated mortality in 2008 and reduction in mortality for each policy option due to ETS exposure among smoking and non-smoking staff in the EU-27.

Table 61: Summary of estimated mortality in 2008 and annual reduction in mortality for each policy option due to ETS exposure among smoking and non-smoking staff in EU-27

	Non-smokers			Smokers			Smokers and Non-Smokers
	Indoor workplaces /offices	Bars and restaurants	Total	Indoor workplaces/ offices	Bars and restaurants	Total	Total
Baseline 2008*	1,714 (25%)	786 (16%)	2,500 (41%)	2,694 (42%)	813 (17%)	3,507 (59%)	6,007
Policy 1	110	51	161	173	53	225	386
Policy 2/3	221	101	323	346	105	451	774
Policy 3+/4	221 -443	101 - 203	323-646	346-693	105-210	451-904	774-1,550
Policy 4+	443	203	646	693	210	904	1,550
Policy 5	1,487	664	2,151	2,046	687	2,733	4,884
<p>* The percentage of total (smokers and non-smokers) is shown in brackets Policy 1 = No change form status quo; Policy 2 = Open method of coordination; Policy 3 = Commission recommendation; Policy 4 = Council recommendation; Policy 5 = Binding legislation</p>							

Medical Cost

This section shows—separately for non-smokers and smokers—the EU-27 wide annual medical cost estimates for the 2008 baseline and each of the five policy alternatives. A summary of the estimated annual medical cost due to ETS exposure among smoking and non-smoking staff in the EU-27 is shown at the end of this section (table 67).

Non- smokers

This section shows the estimated annual medical cost due to ETS exposure across the EU-27, which total to €566 million and are highest for the treatment of stroke (€242 million) and heart disease (€149 million).

Table 62 Estimated EU-wide medical cost (EUR millions) due to ETS exposure among non-smokers in 2008

	indoor workplaces / offices staff	bars and restaurants staff	Total
Lung cancer	29	11	41
Stroke	185	58	242
Heart disease	116	34	149
Chronic lower respiratory disease	97	37	134
Total	427	139	566

Table 63 shows that large reductions in medical cost are possible, up to 85% among staff in bars and restaurants under policy 5. Although policy 3 and 4 are assumed to have lower effectiveness than policy 5, they could still save between 73 million euro (policy 2/3) and 146 million euro (policy 4) annually.

Table 63 Estimated annual reductions in medical cost (EUR millions) due to ETS exposure among non-smokers for each of the policies

		Indoor workplaces / offices	Bars and restaurants	Total
	Disease	Staff	Staff	
Policy 1	Lung cancer	2	1	3
	Stroke	12	4	16
	Heart disease	7	2	10
	Chronic lower respiratory disease	6	2	9
	Total	27	9	36

Policy 2/3	Lung cancer	4	1	5
	Stroke	24	7	31
	Heart disease	15	4	19
	Chronic lower respiratory disease	13	5	17
	Total	55	18	73
Policy 3+/4	Lung cancer	4-8	1 -3	5-11
	Stroke	24 -47	7 -15	31 -62
	Heart disease	15 -30	4 -9	19 -39
	Chronic lower respiratory disease	13 -25	5 -10	17 -35
	Total	55 -110	18 -36	73 -146
Policy 4+	Lung cancer	8	3	11
	Stroke	47	15	62
	Heart disease	30	9	39
	Chronic lower respiratory disease	25	10	35
	Total	110	36	146
Policy 5	Lung cancer	25	9	35
	Stroke	159	49	208
	Heart disease	100	28	129
	Chronic lower respiratory disease	84	31	115
	Total	369	118	486
Policy 1 = No change form status quo; Policy 2 = Open method of coordination; Policy 3 = Commission recommendation; Policy 4 = Council recommendation; Policy 5 = Binding legislation				

Smokers

Table 64 and Table 65 show similar results for the medical cost due to ETS among smokers.

Table 64: Estimated EU-wide medical cost (EUR millions) due to ETS exposure among smokers in 2008

	Indoor workplaces / offices	Bars and restaurants	Total
Disease	staff	staff	
Lung cancer	45	10	55
Stroke	274	56	330
Heart disease	170	33	203
Chronic lower respiratory disease	147	34	181
Total	636	134	770

Table 65 Estimated reductions in annual medical cost (EUR millions) due to ETS exposure among smokers for each of the policies

		Indoor workplaces / offices	Bars and restaurants	Total
	Disease	staff	staff	
Policy 1	Lung cancer	3	1	4
	Stroke	17	4	21
	Heart disease	11	2	13
	Chronic lower respiratory disease	9	2	12
	Total	41	9	49
Policy 2/3	Lung cancer	6	1	7
	Stroke	35	7	42
	Heart disease	22	4	26
	Chronic lower respiratory disease	19	4	23
	Total	81	17	99

Policy 3+/4	Lung cancer	6 -11	1 -3	7-14
	Stroke	35 -70	7 -15	42 -85
	Heart disease	22 -44	4 -9	26-52
	Chronic lower respiratory disease	19 -38	4 -9	23 -47
	Total	81-163	17 -35	99 -198
Policy 4+	Lung cancer	11	3	14
	Stroke	70	15	85
	Heart disease	44	9	52
	Chronic lower respiratory disease	38	9	47
	Total	163	35	198
Policy 5	Lung cancer	33	9	42
	Stroke	203	48	251
	Heart disease	129	28	156
	Chronic lower respiratory disease	108	29	138
	Total	473	113	587
Policy 1 = No change form status quo; Policy 2 = Open method of coordination; Policy 3 = Commission recommendation; Policy 4 = Council recommendation; Policy 5 = Binding legislation				

Summary

Table 67 shows a summary of the estimated medical costs in 2008 and annual reduction in medical costs for each policy option due to ETS exposure among smoking and non-smoking staff in the EU-27 (in € millions).

Table 66: Summary of estimated medical costs in 2008 and annual reduction in medical costs for each policy option due to ETS exposure among smoking and non-smoking staff in EU-27 (in € millions)

	Non-smokers			Smokers			Smokers and Non-Smokers
	Indoor workplaces/offices	Bars and restaurants	Total	Indoor workplaces/offices	Bars and restaurants	Total	Total
Baseline 2008*	427 (27%)	139 (15%)	566 (41%)	636 (44%)	134 (15%)	770 (59%)	1336
Policy 1	27	9	36	41	9	49	85
Policy 2/3	55	18	73	81	17	99	172
Policy 3+/4	55 -110	18-36	73-146	81-163	17 -35	99 -198	172-344
Policy 4	110	36	146	163	35	198	344
Policy 5	369	118	486	113	113	587	1073

* The percentage of total (smokers and non-smokers) is shown in brackets
Policy 1 = No change form status quo; Policy 2 = Open method of coordination; Policy 3 = Commission recommendation; Policy 4 = Council recommendation; Policy 5 = Binding legislation

Non-Medical Cost

This section shows—separately for non-smokers and smokers—the EU-27 wide annual non-medical cost estimates for the 2008 baseline and each of the five policy alternatives. A summary of the estimated annual non-medical cost due to ETS exposure among smoking and non-smoking staff in the EU-27 is shown at the end of this section (table 72).

Non-smokers

This section shows the non-medical cost due to ETS, including productivity losses due to premature death and morbidity. Excluding the cost of lung cancer (for which no recent and reliable estimates were available), the non-medical cost due to ETS for non-smoking staff are slightly less than the medical costs, totalling an estimated €347 million in 2008. Potential savings are estimated at €61 million, €123 million and €407 million for policy 2/3, 4 and 5 respectively..

Table 67 Estimated EU-wide non-medical cost (EUR millions) due to ETS exposure among non-smokers in 2008

	Indoor workplaces / offices	Bars and restaurants	Total
Disease	Staff	Staff	
Lung cancer	n/a	n/a	n/a
Stroke	154	54	208
Heart disease	102	31	134
Chronic lower respiratory disease	96	38	135
Total	353	124	477

Table 68: Estimated annual reductions in non-medical cost (EUR millions) due to ETS exposure among non-smokers for each of the policies

		Indoor workplaces / offices	Bars and restaurants	Total
	Disease	Staff	Staff	
Policy 1	Lung cancer	n/a	n/a	-
	Stroke	10	3	13
	Heart disease	7	2	9
	Chronic lower respiratory disease	6	2	9
	Total	23	8	31
Policy 2/3	Lung cancer	-	-	-
	Stroke	20	7	27
	Heart disease	13	4	17
	Chronic lower respiratory disease	12	5	17
	Total	45	16	61
Policy 3+/4	Lung cancer	-	-	-
	Stroke	20 -40	7 -14	27 -54
	Heart disease	13 -26	4-8	17 -35

	Chronic lower respiratory disease	12 -25	5 -10	17 -35
	Total	45 -91	16 -32	61 -123
Policy 4+	Lung cancer	-	-	-
	Stroke	40	14	54
	Heart disease	26	8	35
	Chronic lower respiratory disease	25	10	35
	Total	91	32	123
Policy 5	Lung cancer	-	-	-
	Stroke	131	46	177
	Heart disease	88	27	115
	Chronic lower respiratory disease	83	33	115
	Total	302	105	407
Policy 1 = No change form status quo; Policy 2 = Open method of coordination; Policy 3 = Commission recommendation; Policy 4 = Council recommendation; Policy 5 = Binding legislation				

Smokers

Finally, estimates for the non-medical cost due to ETS among smokers is shown in Table 69 and Table 70.

Table 69: Estimated EU-wide non-medical cost (EUR millions) due to ETS exposure among smokers in 2008

	Indoor workplaces / offices	Bars and restaurants	Total
Disease	staff	staff	
Lung cancer	n/a	n/a	n/a
Stroke	231	52	284
Heart disease	152	31	183
Chronic lower respiratory disease	145	35	180
Total	529	119	647

Table 70: Estimated annual reductions in non-medical cost (EUR millions) due to ETS exposure among smokers for each of the policies

		Indoor workplaces / offices	Bars and restaurants	Total
	Disease	Staff	Staff	
Policy 1	Lung cancer	n/a	n/a	-
	Stroke	15	3	18
	Heart disease	10	2	12
	Chronic lower respiratory disease	9	2	12
	Total	34	8	42
Policy 2/3	Lung cancer	-	-	-
	Stroke	30	7	36
	Heart disease	20	4	24
	Chronic lower respiratory disease	19	5	23
	Total	68	15	83
Policy 3+/4	Lung cancer	-	-	-
	Stroke	30 -59	7-14	36 -73
	Heart disease	20 -39	4 -8	24 -47
	Chronic lower respiratory disease	19 -37	5-9	23 -47
	Total	68 -136	15-31	83 -167
Policy 4+	Lung cancer	-	-	-
	Stroke	59	14	73
	Heart disease	39	8	47
	Chronic lower respiratory	37	9	

	disease			47
	Total	136	31	167
Policy 5	Lung cancer	-	-	-
	Stroke	166	44	211
	Heart disease	112	26	139
	Chronic lower respiratory disease	107	30	137
	Total	385	100	486
Policy 1 = No change form status quo; Policy 2 = Open method of coordination; Policy 3 = Commission recommendation; Policy 4 = Council recommendation; Policy 5 = Binding legislation				

Summary

Table 72 shows a summary of the estimated non-medical costs in 2008 and annual reduction in non-medical costs for each policy option due to ETS exposure among smoking and non-smoking staff in the EU-27 (in € millions).

Table 71: Summary of estimated non-medical costs in 2008 and annual reduction in non-medical costs for each policy option due to ETS exposure among smoking and non-smoking staff in EU-27 (in € millions)

	Non-smokers			Smokers			Smokers and Non-Smokers
	Indoor workplaces/offices	Bars and restaurants	Total	Indoor workplaces/offices	Bars and restaurants	Total	Total
Baseline 2008*	353 (27%)	124 (15%)	477 (42%)	529 (44%)	119 (15%)	647 (58%)	1124
Policy 1	23	8	31	34	8	42	73
Policy 2/3	45	16	61	68	15	83	144
Policy 3+/4	45 -91	16 -32	61-123	68 -136	15 -32	83-167	144-290
Policy 4+	91	32	123	136	32	167	290

Policy 5	302	105	407	385	100	486	893
<p>* The percentage of total (smokers and non-smokers) is shown in brackets Policy 1 = No change form status quo; Policy 2 = Open method of coordination; Policy 3 = Commission recommendation; Policy 4 = Council recommendation; Policy 5 = Binding legislation</p>							

Results industry revenues and employment

Tobacco industry revenues

The 2007 revenues across the entire EU-27 tobacco industry were estimated from Eurostat data as €67,089 million. According to the literature (shown in Table 41, Annex VI A) the effect of a smoking ban on tobacco revenues ranges from a reduction of 5.5% (Cesaroni et al, 2008) to 14% (Directorate for Health and Social Affairs, 2005). As discussed in the methods section, one could expect to see about half of this effect if an EU-wide smoking ban would be implemented, because various countries already have smoking bans in place. For the entire EU-27, the expected loss in revenue is within a range from €1,844 million to to €4,696 million.

Table 72 Estimated lost revenues (million EUR) in tobacco sales and jobs due to EU-wide smoking ban

	2007 estimate	Lost revenues and jobs due to smoking ban	
		Lower bound	Upper bound
EU-27 revenues	67,089	2.75%	7%
EU-27 revenues	67,089	1,844	4,696
EU-27 jobs	53,521	1,472	3,746

Tobacco industry employment

Table 72 shows the estimated number of people employed in the tobacco industry (NACE code 160) across the entire EU in 2007. Assuming the ratio of employment/revenue to be constant in the longer run, an EU-wide smoking ban would lead to a loss within a range from 1,472 to 3,746 jobs in the tobacco industry in the longer run. Note that this is not an annual loss (as the other figures are), but rather an overall shrinkage of the tobacco industry workforce. Considering that the current EU-27 labour force contains 218 million workers, even the upper bound estimate on jobs lost would represent less than 0.002% of the entire EU-27 labour force.

Hospitality industry revenues

Although the comprehensive Scollo and Lal (2008) review concluded that smoking bans did not have a negative effect on the hospitality industry, it may still be informative to extrapolate the range of effects reported in the literature to an EU-wide estimate. Table 73 shows for countries with no smoking ban for bars/pubs and restaurants, the 2008 estimated revenues and expected change in revenues due to an EU-wide smoking ban. The upper and lower bound in the table reflect the large range of effect estimates reported in the literature, varying from a reduction in revenues of 10% (Adda, Berlinski et al. 2006) to an increase in revenues by 9% (Thomson and Wilson, 2006). As a result, the estimated change in revenues varies between -€11 billion and +€10 billion annually.

Table 73 Estimated annual changes in revenues in restaurants/pubs/bars sales due to EU-wide smoking ban (in EUR millions)

Country	Comprehensive smoke-free legislation present	2007 revenues	Change in revenue due to smoking ban	
			Lower bound	Upper bound
			- 10%	9.3%
Belgium		8,557	-855.7	795.8
Denmark		4,042	-404.2	375.9
Greece				
Spain		42,110	-4,211.0	3,916.3
Finland	Yes			
France	Yes			
Ireland	Yes			
Italy	Yes			
Luxembourg		790	-79.0	73.5
Netherlands	Yes			
Austria		6,944	-694.4	645.8
Portugal		6,936	-693.6	645.1
Sweden	Yes			
Germany West		27,000	-2,700.0	2,511.0
United Kingdom	Yes			
Bulgaria		726	-72.6	67.5
Cyprus		980	-98.0	91.2
Czech Republic		2,783	-278.3	258.8
Estonia	Yes			
Hungary		1,909	-190.9	177.5
Latvia	Yes			

Lithuania	Yes			
Malta	Yes			
Poland		3,461	-346.1	321.9
Romania		1,345	-134.5	125.0
Slovakia		860	-86.0	80.0
Slovenia	Yes			
			-10,758.2	10,005.1

The expected effect on hotel revenues (-0.054%, as reported by NHS Health Scotland, 2005) is much smaller compared with the effect on restaurants/pubs/bars. Given that hotel revenues represent 30% of total revenues in the hospitality sector, the expected loss from an EU-wide smoking ban is estimated at €17.6 million annually.

Hospitality industry employment

Table 74 shows the expected change in employment (in 1,000 workers) due an EU-wide smoking ban. Following the range of effect estimates reported in the literature (McCaffrey, Goodman et al. 2006 reported a 8.82% reduction while Thomson and Wilson reported a 9% increase), the resulting (one-time) change is in the range of 265,000 jobs lost to 271,000 jobs gained.

Table 74 Estimated changes in employment (1,000 workers) in restaurants/pubs/bars sales due to EU-wide smoking ban

Country	Comprehensive smoke-free legislation present	2007 Employment	Change in employment due to smoking ban	
			Lower bound	Upper bound
			- 8.82%	+9%
Belgium		140	-12.4	12.6
Denmark		81	-7.1	7.3
Greece				
Spain		981	-86.6	88.3
Finland	Yes			
France	Yes			
Ireland	Yes			
Italy	Yes			
Luxembourg		12	-1.1	1.1
Netherlands	Yes			
Austria		144	-12.7	12.9
Portugal		235	-20.7	21.1

Sweden	Yes			
Germany West		809	-71.4	72.8
United Kingdom	Yes			
Bulgaria		87	-7.6	7.8
Cyprus		19	-1.7	1.7
Czech Republic		122	-10.7	11.0
Estonia	Yes			
Hungary		105	-9.3	9.5
Latvia	Yes			
Lithuania	Yes			
Malta	Yes			
Poland		177	-15.6	15.9
Romania		99	-8.7	8.9
Slovakia		22	-1.9	2.0
Slovenia	Yes			
			-265.4	270.9

Estimated effects of smoke-free legislation on the cost of fires, cleaning and redecoration costs

The total savings related to the cost of fires, cleaning and redecoration resulting from a smoking ban estimated in the four impact assessments for the UK, added up to GBP 197 million, or 0.015% of the 2006 UK GDP. Applying this fraction to the GDP of member states that did not have a full smoking ban by 2008, led to an extrapolated figure for annual EU-wide savings from a smoking ban (i.e. policy 5) of €965 million.

Summary of potential costs and benefits of EU initiative

To give an indication of the overall economic impact of an EU smoke-free initiative, the table below summarises the monetary benefits and costs of option 5 for which the most elaborate estimates are available. The magnitude of the impacts would be proportionately smaller under options 1-4+.

An economic value was placed on the following impacts of the initiative:

- economic value of lives saved as a result of reduced staff exposure to ETS in indoor workplaces/offices and bar/restaurants;
- reduced medical costs as a result of reduced exposure staff exposure to ETS;
- reduced non-medical (productivity) costs as a result of reduced staff exposure to ETS;

- Cost savings from reduced fire hazards and reduced cleaning and decorating costs;
- Impact on jobs and revenue in the tobacco industry.

It should be noted that the benefits category is very conservative as it does not include the economic value of lives saved and the resource savings resulting from reduced exposure to ETS in non-staff members and reduced levels of active smoking, which are expected to bring substantial additional benefits.

The costs category does not include reduced revenues from tobacco taxes and the implementation costs. However, these costs are expected to be relatively small.

Even with a very incomplete list of benefits an EU smoke-free initiative would clearly result in a positive net economic impact.

Summary of costs and benefits of option 5 (binding EU legislation)

Benefits (€)		Costs (€)	
Social impacts			
Reduction in annual mortality due to ETS exposure among staff ¹⁹	- 4,884 deaths averted = €4.9 billion to €9.7 billion		
Reduction in morbidity due to ETS exposure	non-quantifiable		
Reduction in mortality from reduced active smoking			
Reduction in morbidity from reduced active smoking			
Reduction of ETS at home			
Reduction in socio-economic inequalities			
Economic impacts			
Reduction in annual medical costs due to reduced ETS exposure among staff	-€1073 million		
Reduction in annual non-medical costs due to reduced ETS exposure among staff	-€893 million		
		Reduced tax revenues from tobacco sales ²⁰	
		Annual lost revenues in tobacco industry ²¹	€1.8 to 4.7 billion
		Lost jobs in tobacco industry ²²	1,472 to 3,746 jobs less

¹⁹ The lives saved from reduced passive smoking were converted into an economic impact by assuming the value of a statistical life at € 1 – 2 million.

²⁰ These have not been quantified as this would have exceeded the scope of this IA but reference is made to TAXUD IA. However in the majority of MS, tobacco taxes are less than 5% of total tax revenues.

²¹ It could be expected that money not spent on tobacco products would be spent on other goods and services, hence resulting in a re distribution of revenues from one sector to another.

²² The loss of jobs is not annual but represents the overall shrinkage of the workforce.

Impact on sales and revenues in hospitality sector is reported in the literature to range from minus 10 % to plus 9 %. Hence could range from – 11000 to 10000 million Euro.			
Impact on jobs in hospitality sector is reported by the literature to vary between 8.8 % reduction to 9 % increase. Hence could vary between 265.000 jobs lost to 271.000 jobs gained.			
Reduced costs of fires, cleaning and redecoration for bar owners	€965		
		Enforcement and implementation costs	
Environmental impacts			
Reduction in indoor air pollution: 83%-93% particular matter reduction reported in the literature for smoking bans	Non-monetisable		
Increased street litter and use of air heaters	non quantifiable		

Conclusion: Health benefits to be gained clearly outweigh costs.

Discussion and conclusion

The analysis has shown that the current burden of ETS is substantial. Even under conservative assumptions (i.e. the requirement of being exposed for at least an hour on a daily basis), 2,500 non-smoking EU citizens of working age die each year due to ETS exposure at the place where they work. More than 1,700 of these are due to exposure in indoor workplaces and offices, equal to an average of more than 7 deaths per regular business-day.

The total annual costs among non-smoking and smoking staff combined, estimated at almost €2.5 billion, are substantial. At the same time, the evidence from countries (e.g. Ireland) with smoke-free legislation that exposure levels can drop considerably and approach zero if a ban on smoking at specific venues is implemented and enforced. It is reasonable to expect a similar reduction would be possible in other countries as well, in case EU-wide smoke-free legislation (policy option 5) would be implemented. As our analysis shows, up to 85% of deaths due to ETS among employees in the workplace could be prevented. Given that not only staff but also non-staff members are being exposed to ETS in workplaces, bars and restaurants, the number of (preventable) deaths due to ETS in the entire population is likely even larger.

Under less stringent smoke-free policies compared to option 5, e.g. a Commission or Council Recommendation, the number of prevented deaths and savings from (non-)medical costs is still considerable, but substantially less than under option 5.

It is interesting to compare the results of this IA with the most recent reported estimates in the literature, in particular those by Jamrozik (Smokefree Partnership, 2006). Jamrozik estimated 2,799 non-smokers across the EU-25 died in 2002 due to ETS exposure at workplaces (including the hospitality industry). This estimate is remarkably close to this IA's estimate of 2,500 deaths due to ETS (combined for non-smoking staff in indoor workplaces/offices and restaurants/bars). However, this IA's estimates for the number of deaths among

non-smoking staff in bars/restaurants (786) is much higher than what Jamrozik reports for the hospitality industry (89). No recent comprehensive direct estimates have been reported for the medical and non-medical cost of ETS, which makes it difficult to compare this IA's findings in this area to existing work.

The method underlying this analysis is similar in many respects to various country-specific impact assessments on smoke-free legislation. For example, the impact assessments for Northern Ireland and Scotland applied a population attributable risk factor to the incidence of lung cancer, ischaemic heart disease and stroke to estimate the annual number of deaths caused by ETS, in addition to the costs resulting from morbidity due to these diseases and attributable to ETS.

It should be noted that the estimates only consider (changes in) exposure to ETS among staff members in indoor workplaces and offices, bars, pubs and restaurants. However, visitors of these places will likely be exposed to ETS as well, in case staff members report to be exposed. It is expected that the policies considered examined in this IA would not only affect exposure among staff but also among these visitors. It is difficult to estimate the effect on non-staff members, because reliable data on ETS prevalence in this group are not currently available. All that can be said is that most likely the population of non-staff members in bars, pubs and restaurants is substantially larger than the population of staff-members (e.g. a restaurant with 10 staff will likely serve many more than 10 guests during one evening), and hence the absolute number exposed to ETS is much larger for non-staff members. At the same time, the time of exposure (e.g. in hours per day) is likely lower for non-staff compared to staff, making it difficult to compare the risk of exposure and resulting burden.

Likewise, a (relatively small) number of people are exposed to ETS in other work places and (fairly substantial) number at home. For the latter category, reliable prevalence estimates were not available from the Eurobarometer dataset, and hence albeit was not possible to estimate the burden due to ETS exposure at home. However, it should be also noted that the policies considered in this IA do not directly aim to reduce ETS exposure at home.

As discussed in the methods chapter, it was not possible to obtain reliable and recent estimates on the costs of lung cancer, asthma and COPD, neither for individual member states, nor for the EU as a whole. Although the European Lung White Book contains estimates on the costs of these diseases, they are of limited value as they are not very recent (i.e., estimates for the year 2000) and apply to the EU-15, in addition to Norway and Switzerland, rather than the EU-27. Based on the preference to use estimates published in the peer-reviewed literature, a different method was chosen instead based on US cost figures published in the peer-reviewed literature, and expressed as a ratio of total US health care costs. It is useful to compare this IA's estimates to those reported in the European Lung White Book.

For lung cancer (i.e. the total cost of lung cancer, both resulting from ETS and from other causes), the direct medical costs estimated in this IA were €9.6 billion, whereas the European Lung White Book estimated these as €2 billion in 2000, which would be €3.8 billion in 2008 (assuming an average 8% annual increase in health care expenditures, based on calculations we made using OECD Health data). Given that the latter estimate applies to only 15 member states, the estimate of this IA does not diverge by an order of magnitude from the European Lung Whitebook. Performing the same exercise for COPD, the estimate of this IA was €18 billion, whereas the 2008 extrapolated European Lung Whitebook estimate would be €18,914 million. Finally, for asthma these figures would compare as €6.1 billion (ours) and €14.6 billion (European Respiratory Society 2003).

It might be useful to compare this IA's medical cost estimates to (extrapolated) estimates from the UK impact assessments (NHS Health Scotland et al., 2005; Department of Health 2006; Department of Health 2007; Welsh Assembly Government, 2007). Potential savings in treatment costs under a complete smoking ban were estimated at £110.818 million at 2003 prices (Northern Ireland £2.6 million; England £100 million; Scotland £5.318 million; and Wales £2.9 million), or 0.13% of the UK's 2003 expenditure on health care (£86,529 million in 2003 according to OECD Health data). Applying this percentage to the predicted 2008 expenditure on health care in all EU-27 countries that did not have a smoking ban in 2008, and half the percentage to all EU-27 countries that had a partial smoking ban would result in savings from a total smoking ban (policy 5) at €682 million. This is higher than this IA's estimated savings under policy option 5 for non-smoking staff (€486 million) and lower than the estimated savings under that same policy option for non-smoking and smoking staff combined (€1073 million).

Table 75: Estimated number of deaths attributable to passive smoking among non-smoking staff in the EU-25 in 2002 and EU-27 in 2008

Disease	Non-smokers			
	Indoor workplaces/offices		Bars and restaurants	
	EU-25 2002	EU-27 2008	EU-25 2002	EU-27 2008
Lung cancer	521	387	16	156
Ischaemic heart disease	1481	384	48	160
Stroke	596	378	19	138
Chronic lower respiratory disease	201	565	6	332

Total	2799	1,714	89	786
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The literature suggests that smoke-free policies can have substantial effects on industry revenues, in particular those of the tobacco and hospitality sector. The extrapolations made in this IA show that such losses can amount to €1.9 billion annually for the tobacco industry under EU binding legislation (policy 5). However, this estimate is very sensitive to the exact effect assumed, making it difficult to provide an exact quantification across the policy options. This is even more the case for the effects on the hospitality industry, where the literature reports contradictory evidence: i.e. both positive and negative effects on revenue, leading to extrapolated increases and reduction in revenues due to EU-wide smoke-free legislation (policy 5) in the order of €10 billion annually. Further research would be necessary to obtain a more conclusive estimate than is currently available from the literature.

European Health Interview Survey (EHIS) Questionnaire

SK.1 Do you smoke at all nowadays?

- Yes, daily 1
- Yes, occasionally 2 → GO TO SK.4
- Not at all 3 → GO TO SK.4

SK.2 What tobacco product do you smoke each day?

More answers are possible

- Manufactured cigarettes 1
- Hand-rolled cigarettes 2
- Cigars 3
- Pipefuls of tobacco 4
- Other 5

SK.3 On average, how many cigarettes, cigars or pipefuls do you smoke each day?

Manufactured cigarettes	┌┐		→ GO TO SK.5
Hand-rolled cigarettes	┌┐		
Cigars	┌┐		
Pipefuls of tobacco	┌┐		
Other	┌┐		

SK.4 Have you ever smoked (cigarettes, cigars, pipes) daily, or almost daily, for at least one year?

- Yes 1
- No 2 → GO TO SK.6

SK.5 For how many years have you smoked daily? Count all separate periods of smoking daily. If you don't remember the exact number of years, please give an estimate.

__ years

SK.6 How often are you exposed to tobacco smoke indoors at home?

- Never or almost never 1
- Less than 1 hour per day 2
- 1-5 hours a day 3
- More than 5 hours a day 4

SK.7 How often are you exposed to tobacco smoke indoors in public places and transport (bars, restaurants, shopping malls, arenas, bingo halls, bowling alleys, trains, metro, bus)?

- Never or almost never 1
- Less than 1 hour per day 2
- 1-5 hours a day 3
- More than 5 hours a day 4

SK.8 How often are you exposed to tobacco smoke indoors at your workplace?

- Never or almost never 1
- Less than 1 hour per day 2
- 1-5 hours a day 3
- More than 5 hours a day 4
- Not relevant (don't work or don't work indoors) 5

Full questionnaire available at

European System of Household Survey Modules (EHS)

Updated List of variables/questions to be included in the 2008 pilot data collection

HIS043	<p align="center">1 2 3</p>	<p>Do you smoke at all nowadays? Yes, daily Yes, occasionally Not at all</p>
HIS044	<p align="center">1 2 3 4</p>	<p>How often are you exposed to tobacco smoke indoors in public places and transport (bars, restaurants, shopping malls, arenas, bingo halls, bowling alleys, trains, metro, bus)? Never or almost never Less than 1 hour per day 1-5 hours a day More than 5 hours a day</p>
HIS045	<p align="center">1 2 3 4 5</p>	<p>How often are you exposed to tobacco smoke indoors at your workplace? Never or almost never Less than 1 hour per day 1-5 hours a day More than 5 hours a day Not relevant (don't work or don't work indoors)</p>

ANNEX IX– TECHNOLOGICAL APPROACHES TO CONTROLLING ETS

This Annex provides an overview of technological strategies and their effectiveness for controlling second-hand smoke, specifically the segregation of smokers and non-smokers. This may include designated smoking rooms equipped with ventilation systems; designated smoking areas with ventilation (i.e. not separated by walls); and smoking stations and cabins. We draw upon evidence from the peer reviewed and grey literature. A literature search was performed on PubMed using the terms “tobacco smoke pollution,” “ventilation” and “designated smoking rooms”.²³ The grey literature, including reports of government agencies, international organisations and scientific associations was searched for relevant material accessible on the Internet. Several reports and peer reviewed articles were also obtained through the stakeholder consultation on the Commission's smoke-free initiative on 19th March 2008. For example, material was obtained from the manufacturers of air treatment systems. A summary of the types of articles that were examined are presented below.

Table 76: Summary of articles obtained from the peer reviewed and grey literature

Type of article	Number	Type of article	Number
Peer reviewed journal article	11	Industry sponsored report	2
International agency	1	Charity	1
Professional associations	2	Independent	1
Scientific association	1	Non profit association	1
Government/Government agency	3	Partnership organisation	1
Government sponsored report	1	Conference proceeding	1
Industry	2	Foundation	1
		Professional society	1
Total			29

²³ A search was carried out using PubMed’s MeSH database, which is the U.S. National Library of Medicine's controlled vocabulary used for indexing articles. The search term used was “tobacco smoke pollution” and “ventilation.” A total of 84 articles were identified. Another PubMed search was carried out using the search term “designated smoking rooms.” A total of 10 articles were identified. The title and abstract for each article was reviewed to determine whether or not the article was relevant for the current assignment. Full articles were obtained for all those abstracts we deemed to be relevant (i.e. articles focussed on the effectiveness of designated smoking rooms, designated smoking areas with ventilation and/or smoking stations and cabins).

Table 72 at the end of this section lists and summarises the studies that have been incorporated into this chapter. Each study was summarised across the following dimensions: sample size, year of data collection, location, setting, study design, outcome measures, and technology considered to control secondhand smoke.

Most of the studies examining the effectiveness of technological strategies for controlling second hand smoke have relied on observational designs, comparing concentrations of ETS in non smoking and smoking sections of restaurants, bars or other venues (such as airports). Most of the studies also obtain concentrations at a control site, such as a non-smoking office building. The number of venues included in the studies varied from one to more than fifty over multiple cities. We did not come across any randomised control trial designs.

ETS concentrations (such as nicotine and particulate matter) are typically measured using personal air sampling equipment worn by wait staff or volunteers, and/or through air quality monitoring. Furthermore, concentrations are typically measured over a specified time period (e.g. 4 hours or one day) and are taken from more than one sampling point in a venue. In several cases we could not summarise the study across the dimensions listed above since this information was not cited.

Types of air treatment systems

Ventilation and filtration are the two main methods of air treatment used to reduce indoor air pollution. Box 1 defines common terms cited in the literature (Smokefree Northern Ireland. Health Promotion Agency; Surgeon General 2006). Source control may also be used to eliminate or reduce individual sources of pollutants. The tobacco industry as well as other interest groups, such as manufacturers of air treatment systems, have promoted the installation and use of ventilation systems and equipment in an attempt to accommodate smokers and non-smokers in the same indoor enclosed spaces (Bialous and Glantz 2002; Drope, Bialous et al. 2004; Pilkington and Gilmore 2004). The case is also made that if ventilation is complemented with improved filtration of the returned air, it may be possible to achieve greater reductions of some second-hand smoke constituents beyond what dilution alone can accomplish. This may help avoid the establishment of strict smoking bans (Surgeon General 2006; WHO 2007).

Box 1: Description of different types of air treatment systems

Positive output ventilation systems exhaust air from an enclosed space at a rate that completely replaces the air in the room.

Dilution ventilation is the introduction and mixing of ventilation air with air already present in the space. For example, 80-90% of air may be re-circulated,

10-20% fresh air brought in from outside, and 10-20% of the stale air expelled.

Displacement ventilation involves the introduction of ventilated air generally at or near floor level in a directional pattern with little or no mixing to force air out from or near the ceiling. Displacement ventilation is often considered a design option for the separation strategy of smokers and non-smokers.

Filtration systems (sometimes called air cleaners) pump the air through very fine filters to remove particles of smoke and dust before the air is re-circulated.

Table 77 presents six technologies used in air cleaning systems. Air cleaners are typically classified by the method employed to remove particles of various sizes from the air. Neither air filtration (cleaning) nor air conditioning is ventilation because neither process introduces air into or moves air through an enclosed space. The Environmental Protection Agency (2008) states there are three general types of air cleaners: mechanical filters, electronic air cleaners, and ion generators. Hybrid units, using two or more of these removal methods, are also available. Further, air cleaners may be in-duct units (installed in the central heating and/or air conditions systems) or stand-alone portable units. The effectiveness of these devices will be assessed by the volume of air processed and the removal efficiency of various constituents. The product of these two values is compared to the dilution rate achieved by the overall ventilation of the air delivered to the conditioned space. Field and laboratory investigations have evaluated the second-hand smoke controls strategies discussed above. In the next sections we review the effectiveness of various second-hand smoke control strategies.

Table 77. Comparison of air-cleaning systems

Source: (Surgeon General 2006)

Characteristic	Technology					
	Electrostatic precipitation	Solid media filtration	Gas-phase filtration	Ozone (O ₃) generation	Catalytic oxidation	Bipolar air ionization
Function	Electronic	Physical	Physico-chemical	Electronic	Physico-chemical	Electronic
Principle	High-voltage wire and plate	Flat, pleated, or high efficiency particulate air media	Sorption and reaction	Sparking discharge	Solid catalyst with or without ultraviolet	Dielectric barrier discharge
Process	Charging of particulate matter	Collection of porous media	Sorption and reaction	O ₃ generation	Catalytic oxidation	Positive and negative ion generation
Active species	Charged particles	High surface area	Sorption and reaction sites	O ₃	Reactive oxygen species	Reactive oxygen and charged species
By-products	O ₃ if not cleaned	Spent filters; contaminants	Spent media with contaminants	Significant O _y	Exhausted or fouled	Some O ₃

	regularly			atmospheric reactants	catalyst, some VOCs	
VOCs	Sorption of VOCs on PM _x	NA	Adsorption/absorption	Chemical oxidation	Chemical oxidation	Chemical oxidation
PM _x	Collection on plates	Impact, settling, and diffusion	Collection on media	NA	NA	Agglomeration
VOCs = Volatile Organic Compounds PM = particulate matter NA = Not applicable						

SOURCE: (Surgeon General, 2006)

Separating smokers and non-smokers

This section reviews studies in the peer reviewed and grey literature which have examined whether second-hand smoking can be controlled by separating smokers from non smokers, through means such as designated smoking rooms equipped with ventilation system (as allowed in Italy, France, and Sweden); designated smoking areas with ventilation (i.e. not separated by walls); and smoking stations or cabins.

Ventilation and designated smoking areas with ventilation systems

A number of studies examined whether second-hand smoking can be controlled by the use of ventilation or separating smokers from non smokers with designated smoking areas (i.e. not separated by walls) with ventilation systems.

A panel of ventilation experts assembled by the Federal Occupational Safety and Health Administration (OSHA) and the American Conference of Governmental Industrial Hygienists (ACGIH) in June 2000 found that dilution ventilation used in virtually all mechanically ventilated buildings, will not control second-hand smoke in the hospitality industry. Displacement ventilation was estimated to offer the potential for up to 90% reductions in ETS levels. However, this assertion was based on professional judgement rather than on measured data. Air cleaning was judged to be somewhere between dilution and displacement, depending on the level of maintenance. Panelists also observed that building ventilation codes are not routinely enforced. The panel concluded that dilution ventilation, air cleaning, or displacement ventilation technology (even under moderate smoking conditions) cannot control ETS risk to “acceptable”²⁴ levels for workers or patrons in hospitality venues without substantially impractical increases in ventilation. Moreover, smoking bans remained the only viable control measure to ensure workers and patrons of the

²⁴ The WHO state there is no “safe” level of ETS exposure. Hence the only “acceptable” level means zero.

hospitality industry are protected from exposure to toxic wastes from tobacco combustion (Repace 2000).

Dutch government commissioned a study from the Netherlands Organisation for Applied Scientific Research - TNO (Building and Construction) and the National Institute for Public Health and the Environment (RIVM) to review the literature on ventilation and air cleaning technologies that could be used in the hospitality industry, and ascertaining to what extent these technologies may help to limit exposure to ETS. The review found that the dilution application is the usual application in the hospitality industry. With this technique, several tens of percent of exposure reduction can be achieved. Possibilities to increase the air exchange rate are limited because of the comfort that would otherwise be lost at high air exchange rates. Ventilation systems based on replacement and not dilution may provide better results (about 90% reductions under the most favourable conditions) because much higher air exchange rates can be used without losing comfort. However, these estimates are based on measurements carried out under laboratory conditions. In practice, disturbances (objects and undesired air flows due to movements of persons, doors etc) may make the systems significantly less effective. In addition, installation and maintenance of these systems are much more expensive than for traditional dilution systems. The report estimated the cost of the purchasing and installation of full-displacement ventilation at around one thousand euro per square metre (as compared with the annual turnover of slightly less than €1,000 per square metre in cafés and bars, and approximately €2,700 in restaurants). This did not take into account the operating and maintenance costs (de Gids and Opperhuizen 2004).

Several studies have found traditional systems based on dilution ventilation and air filtration to be ineffective at reducing levels of SHS. A study of second-hand smoke exposure in 60 randomly selected bars in Greater Manchester, UK undertaken in 2003, found that complete separation of smokers from non smokers reduced the concentrations of various SHS markers (e.g. respirable suspended particulate matter, ultraviolet light-absorbing particulate matter, and nicotine) by about 50% compared to smoking and non-smoking sections. However, compared with other settings (homes and other workplaces) with unrestricted smoking, mean ETS levels were high throughout all areas of the pubs regardless of ventilation systems in place, which included mechanical ventilation and extractor fans. The authors note that better ventilation designs might have further reduced second-hand smoke (Carrington, Watson et al. 2003).

In a study of 75 restaurants in 26 cities, Hammond (2002) also found no evidence that an increase in ventilation had any effect. Results indicated that, in spatially separated strategies where half or more of the seating area was non smoking, SHS smoke levels in the non smoking section were reduced, but levels remained high (Surgeon General 2006).

The limited potential of traditional dilution ventilation has been confirmed by the results of two series of experiments that were carried out by the Commission of the European Union, Joint Research Centre, Institute for Health and Consumer Protection, Ispra to test the impact of ventilation rates on ETS components also indicate that chemicals such as volatile hydrocarbons, carbonyls, poly aromatic hydrocarbons, inorganic gases and particles etc cannot be rapidly and substantially eliminated from the indoor air atmosphere, even when high air exchange rates are applied. Further, diffusion of the emitted compounds and burning products is relatively slow, so dilution via mixing with new incoming fresh air is not very effective as a control measure. Only “wind tunnel” rates or other high rates of ventilation would be required to achieve pollutant levels close to ambient air limit values (Kotzias, Geiss et al. 2006). These findings were comparable to results obtained from U.S. studies carried out at different hospitality venues. In addition, the WHO (2007) argues that while increasing the ventilation rate reduces the concentration of indoor pollutants, including tobacco smoke; ventilation rates more than 100 times above common standards would be required just to control odour. Even higher ventilation rates would be required to eliminate toxins, which is the only safe option for health. Indeed, the WHO state that eliminating toxins in the air would require many air exchanges that it would be impractical, uncomfortable and, most critically, unaffordable.

A report prepared by Theodor Sterling Associates (2007) assessed the indoor air quality and the performance of ventilation systems in three hospitality venues throughout the UK in December 2006. The study concluded that dilution ventilation when operated effectively, can achieve levels of particles and gases in an indoor environment where smoking occurs that are comparable to levels of particles and gasses in the outdoor environment. In one hospitality venue PM_{2.5} levels reached 27.6 µg/m³ compared to 41.3 µg/m³ outdoors. In the two other venues indoor measurements of the particles and gases were higher than outdoor measurements. Other studies measuring PM_{2.5} levels after smoking bans have been enforced have shown that PM_{2.5} levels can be reduced to, for example 16 µg/m³ in Scotland (Semple, Macalman et al. 2007), and 5 µg/m³ in Ireland (Office of Tobacco Control 2005). This suggests that smoking bans are more effective at reducing levels of particles and gases than dilution ventilation (Theodor Sterling Associates 2007). The study by Theodor Sterling Associates (2007) has been linked to the tobacco industry.

There have been a few published studies in the peer reviewed and grey literature which have concluded that displacement ventilation technology for restaurants/pubs with separate smoking and non smoking areas are capable of achieving non-smoking area or outside air ETS concentrations (Jenkins, Finn et al. 2001; Theodor Sterling Associates 2007). For example, a Canadian study by Jenkins *et al* (2001) tested the concentration of ETS components in a small restaurant/pub with separate smoking and non-smoking areas (a facility outfitted with a heat-recovery ventilation system and directional airflow). The results indicated that ETS of the non-smoking section of the restaurant/bar were not

statistically different ($P < 0.05$) from those measured in similar facilities where smoking is prohibited. This study only examined the issue of non-smoking patron exposure to ETS, and did not examine the issue of employees exposure to ETS (Jenkins, Finn et al. 2001). This study has also been linked to the tobacco industry (Drope, Bialous et al. 2004). Furthermore, this study has been criticised on methodological grounds (Surgeon General 2006) and its results were undermined more recently by Repace and Johnson (2006) who examined whether displacement ventilation could control second-hand smoke. Results showed that displacement ventilation was not a viable substitute for smoking bans in controlling ETS exposure in contiguous designated non-smoking areas sharing the same space volume. Furthermore, a study in Ontario found leakage of ETS from a restaurant with a designated smoking area to other areas of the establishment. Again, these finding reinforces the EPA concept of atmospheric “spill-over” effect (Stantec Consulting 2004)

Another study commissioned by the tobacco industry into the effectiveness of displacement ventilation in the day-to-day operations of three types of hospitality businesses indicated that exposure to ETS in the hospitality industry can be reduced significantly, up to 92-99% in the non-smoking areas (de Gids and Jacobs 2006). However, the assessment of the study performed for the Dutch government by the National Institute of Public Health and Environment RIVM showed that the reported high levels of reduction were due to an incorrect calculation approach. Based on the same data, RIVM calculated that the reductions are lower (between 50 and 79%) for the three hospitality venues (National Institute for Public Health and the Environment 2006)

Separate smoking and non-smoking areas may not protect employees from SHS. For example, a study by Stantec Consulting (2004) showed that based on data from personal air samplers work by staff, servers based in the non-smoking sections experienced higher levels of some ETS markers than were present in the non-smoking sections, which was probably because staff entered the smoking section to obtain drinks.

A recent review on ventilation performance for spaces where smoking is permitted also identified conflicting views. The authors acknowledge where attention has been paid to ensuring that the ventilation system being tested is adequate and working correctly, significant improvements in indoor air quality can be made, but such solutions need to be scientifically and critically evaluated (Geens, Snelson et al. 2006). Previously, pro-technological studies have been criticised for applying an incorrect method of calculation and as a result reporting excessively high reduction percentages in ETS (see for example National Institute for Public Health and the Environment (2006) and Piha (2006)).

Because some particulate matter in smoke is visible, ventilation and filtration systems can give the non smoker the impression that they are safe from exposure to ETS by diluting the larger particles (ASH Scotland 2004).

However, the WHO (2007) argue that these systems can not eliminate the carcinogens present in SHS, and cannot therefore be considered an adequate solution to eliminating the health risks associated with ETS. Further, many particles are inhaled or deposited on clothing, furniture, walls, and ceilings before they can be ventilated. As ventilation systems may increase comfort levels, many people under-estimate the extent to which they are exposed to ETS (not surprisingly given that carcinogens have no smell). In one U.S. study, for example, 40% of people questioned reported exposure to ETS. However, the U.S. Centre for Disease Control measured cotinine (a nicotine by-product in the body) in the blood of 88% of the non smoking population (Pirkle and *et al* 1996). The twin criteria of health and comfort should not be confused.

Advanced technology solutions often require regular maintenance and ongoing monitoring to ensure effective operation (Broadbent 2005). A commentary on ventilation by the New Zealand Health Select Committee reported many proprietors leave their ventilation systems switched off, as they find the running costs too high.²⁵ The US Environmental Protection Agency (2008) has stated there are major costs for air cleaners including the initial purchase of the unit, maintenance costs (i.e., cleaning and/or replacement of filters and other parts), and operating costs (e.g. costs for electricity) (Environmental Protection Agency 2008). Moreover, the most effective units are also the most costly. Other considerations (apart from cost, installation, use and need for maintenance) include the noise of the unit, soiling of walls and other surfaces, and the air cleaners ability to remove odours (Environmental Protection Agency 2008).

Designated smoking rooms equipped with ventilation systems

Several researchers have investigated the use of designated smoking rooms to control second hand smoke and whether they can protect non-smokers from exposure to second hand smoke.

Studies evaluated for the Surgeon General's (2006) report showed that designated smoking rooms do not prevent persons outside these areas being exposed to second-hand smoke. There is usually a "spillover" effect into adjacent areas to the designated smoking room (Pion and Givel 2004). The strategy may require complicated engineering and a careful assessment of relevant building characteristics. A study by Wagner *et al* (2004) which examined ETS leakage from a simulated smoking room found it essential to maintain the smoking room at a negative pressure with respect to adjacent areas to ensure that the tobacco smoke did not move out of the room into the surrounding air. They also found the amount of ETS pumped out by a smoking room door when it is open and closed can be reduced significantly by

²⁵ Report of the New Zealand Health Select Committee Commentary on ventilation, 2003, cited in Smokefree Northern Ireland. Health Promotion Agency Factsheet: Second-hand smoke and ventilation. Belfast.

substituting a sliding door for the standard swing-type door. Another study in Ontario also found that designated smoking rooms prevented a substantial amount of ETS moving to adjacent smoking sections by physical separation and ventilation and by maintaining the designated smoking rooms under negative pressure compared with the non-smoking section. There was a fifty-fold reduction in nicotine levels observed in non-smoking sections compared with the smoking sections in two restaurants (Stantec Consulting 2004).

Moreover, a U.S. study found levels of airborne ETS-related contaminants were significantly lower in the control environments (non-smoking buildings) than in the non-smoking dining rooms which were located within or adjacent to smoking dining rooms. Levels of ETS pollutants were also lower in the non-smoking dining rooms and smoking dining rooms (Akbar-Khanzadeh 2003). The authors recommend that if non-smoking employees or patrons are to be fully protected, designated smoking dining rooms should be completely separated from smoking dining rooms and both rooms should be equipped with separate ventilation systems.

Furthermore, designated smoking rooms may adversely affect the health of workers by exposing them to highly concentrated levels of second-hand smoke and would also subject any staff who enter these high concentration areas (Surgeon General 2006; German Cancer Research Center (DKFZ) 2007). For example one study showed smokers using the designated room were themselves subject to levels that were 1,800 times higher than typical office nicotine levels before the new smoking policy took effect (Vaughan and Hammond 1990). A more recent U.S. study compared the mean levels of carbon dioxide and ultrafine particles in a smoke free restaurant and a restaurant with a dedicated smoking room. The mean level in the smoking room was up to 43 times higher than at the smoke-free restaurant (Milz, Akbar-Khanzadeh *et al.* 2007).

A Dutch study investigated the effectiveness and costs for a decentralised smoke extraction using recirculation and filtration in a designated smoke room. The concept was based on the extraction of air from a room by being blown in slowly, just above floor level. The cost of using the technology was estimated in area of €5,000 to €10,000. Readings were taken in a smoking room with and without the air purifier, and in a smoke free room. While the study found a potential exposure reduction for catering/hospitality staff of 40% for aldehydes, 69% for VOCs, 81% for fine particulate matter and about 90% for nicotine in the smoking room, the absolute concentrations of the toxic substances were higher than in the smoke-free venue (Jacobs, de Jong *et al.* 2006). Moreover, workplaces need to be completely smoke-free in order to protect employees from second-hand smoke. Employees may not have the same option as patrons to avoid SHS exposure if they have to enter designated smoking areas (German Cancer Research Center (DKFZ) 2007).

Regarding the costs of designated smoking rooms, laws which allow designated smoking rooms have been overturned in Ottawa, Canada because they create

unfair competition. Large businesses can afford to install them, but smaller businesses often cannot.²⁶

Smoking stations and cabins

Manufacturers smoking stations and cabins claim that these systems create an interior environment that is completely free of smoke and odour, in places where smoking is permitted through capturing the smoke before it spreads and purifying the smoke by filtration and releasing purified air. We were not able to identify evaluations in the peer reviewed publications of such technological solutions, but evidence has been reported by manufactures in reply to the Commission's stakeholder consultation on the Impact Assessment.

The manufacturers cite studies by public research institutes in a number of European countries. For instance, the SP Swedish National Testing Research Institute found that smoking cabins can reduce the investigated tobacco smoke compounds close to 100%. The study was conducted in accordance with the EN ISO 16017-1 test method for “indoor, ambient and workplace air” and showed that 99.6% of pyridine and pyrrole gases were filtered away; 3-vinyl pyridine was filtered away in 99.7% of cases; and 99.9% of nicotine was filtered away. Another test showed that 99.99966% of particles, ranging from 0.10 - 0.45 µm, and 100% of larger particles, were filtered away.

There have also been evaluations to investigate whether smoking stations prevent smoking spreading to adjacent rooms (on the basis that they are used according to instructions). A study by the Labour Inspectorate in Finland found that nicotine and 3-ethyle pyridine were below the detection level (<0.05 µ) in the surrounding room. Measurements were taken from three air samples on a normal working day from 8:45am – 4:10pm, and a total of 43 cigarettes were smoked in the smoking station during the measurement period.

In 2007, the German BG-Institute for Occupational Health and Safety (BGIA), launched and published a standard procedure of certification for smoking cabins to be installed at workplaces (Institute for Occupational Health and Safety 2007). This procedure, which in its test methodology makes use of numerous European norms (EN, CEN standards), was developed by an international group of health and safety experts, representatives of independent test laboratories and manufacturers of smoking cabins themselves. To pass a test procedure, it is required that a smoking cabin produces an air quality that contains no detectable levels of nicotine, TVOCs, carbon monoxide, formaldehyde or acetaldehyde. The manufacturers are now working to prepare the ground for a European certification process for smoking cabins at the European Institute for Standardisation (CEN).

²⁶ <http://www.smokefreeottawa.com/english/article-e20.htm> (accessed 29 May 2008)

Manufacturers emphasise a number of economic benefits of smoking stations or cabins in the workplace. First, they claim that smoking stations in the immediate workplace vicinity will keep smoking breaks short and reduce the likelihood of people leaving their work station to smoke outside. This helps avoid losses in productivity and also helps protect non smokers from outdoor tobacco smoke. Another claim is that, a total indoor smoking ban may create ‘security problems.’ For example industrial companies might ban smoking outdoors because of the presence and/or proximity of explosive and inflammable materials. More over it is argued that if working people are not allowed to smoke in close proximity to their workstation they tend to lose concentration and become less motivated.²⁷ Consequently, the social and working climate between smokers and non smokers could suffer. Promoters also claim that smoking cabins ensure that neither ash nor cigarette ends are deposited in the front of office blocks. Evaluations of such claims in peer reviewed publications were not identified. We came across limited information on the cost of purchasing a smoking station or cabins. A German website cites the commercial price of smoking stations as between €2,500 and €9,500, and smoking cabins for rent at a cost of €100-€400 per month.

Conclusions

There are various studies which have examined the effectiveness of technological strategies for controlling second hand smoke, including smoking stations and cabins, enclosed smoking rooms, designated smoking areas or floors, or by implementing both strategies, separating smokers from non smokers and increasing ventilation. The WHO (2007) states that there is no evidence for a safe ETS exposure level and recommends that only 100% smoke-free environments protect the public from exposure to SHS and ventilation and smoking areas. It is argued ventilation systems cannot remove all particulate matter produced by ETS and certainly not toxic gases (i.e. carcinogens) (WHO 2007). Moreover, in 2006, the U.S. Surgeon General’s report concluded that “establishing smoke-free workplaces is the only effective way to ensure that second-hand smoke exposure does not occur in the workplace; and exposures of non smokers to second-hand smoke cannot be controlled by air cleaning or mechanical air exchange” (Surgeon General 2006). In 2005 the American Society of Heating, Refrigeration and Air Conditioning Engineers, the leading standard setting body in ventilation and air conditioning also concluded that ventilation and other air filtration technologies cannot eliminate the health risks caused by SHS exposure, and that the most effective option is to make indoor place smoke-free (American Society of Heating and Air Conditioning Engineers, 2005).

²⁷ This argument could be undermined by confounding factors, such as nicotine withdraw which is known to have similar effects.

There are considerable uncertainties surrounding current knowledge on technological solutions to control ETS. In particular, there are very few published peer-reviewed studies on the effectiveness of the new engineering approaches in real settings.

The studies reviewed in this chapter suggest that technological solutions based on mixed occupancy of smokers and non-smokers as well as designated smoking areas not physically isolated from non-smoking sections cannot adequately control non-smokers' exposure to ETS. The types of ventilation systems currently used in the hospitality sector and in workplaces (based on mixing and dilution) have been proved to have a limited impact on the levels of ETS pollutants. Of new technologies, displacement ventilation has been identified as potentially more effective. However, the figures for ETS reduction are never close to 100%, even with the most modern equipment.

Allowing smoking only in separate and isolated rooms can potentially control ETS exposure in non-smoking spaces in the same building. In order to prevent ETS leakage, it is essential that the smoking rooms be equipped with a separate ventilation system from non-smoking areas and maintained at a negative pressure with respect to adjacent areas. This approach, however, cannot control the adverse health effects for the occupants of the smoking rooms and the staff.

Evidence reported by manufacturers of smoking cabins and stations seems to suggest that such technological solutions can reduce the investigated tobacco smoke compounds close to 100%, levels comparable to those of ambient air pollution. However the scientific quality of such evidence must be demonstrated before the effectiveness of technological strategies for controlling second-hand smoke are proven.

It should also be highlighted that modern ventilation systems are relatively expensive to install and maintain. This could create an uneven playing field. Large scale operators can afford to install sophisticated engineering systems, while smaller operators cannot. In addition, possible reductions in ETS exposure can only be achieved if equipment is properly used and maintained, which might require extensive inspection and monitoring infrastructure.

Table 78: List of selected studies on technological strategies for controlling second hand smoke (in alphabetical order)

Reference	Type of article	Sample size	Year of data collection	Location	Setting	Study design	Outcome measure	Technology considered
Akbar-Khanzadeh, F. (2003)	Peer reviewed journal article	8 restaurants and 97 nonsmoking subjects (40 restaurant employees, 37 patrons, and 20 referents)		Metropolitan Toledo, Ohio.	8 restaurants (6 restaurants with a bar and 2 without). 15 designated non-smoking rooms, 14 designated smoking dining rooms, and 7 bars.	Observational comparison study (with control group): non-smoking and smoking dining rooms	Air contaminants: Personal and area samples for fluorescent particulate matter, nicotine, respirable suspended particles, solanesol, and ultraviolet particulate matter, CO (8 hours) Urinary cotinine and nicotine (pre work, post work and 18hr post exposure).	Designated smoking areas with ventilation
ASH Scotland (2004)	Charity report					Not applicable		
Bialous, S. and S. Glantz (2002)	Peer reviewed journal article		Jan 2001 – March 2002			Literature review: Review of tobacco industry documents available on the Internet		Ventilation approaches
Broadbent, C. (2005)	Independent report					Not applicable		
Carrington, J., A. F. R. Watson, et al. (2003)*	Peer reviewed journal article	Total number of sample locations for 60 pubs include 683 smoking ares		Greater Manchester, UK	Bars	Random selection of bars. Observational	Min, max and median secondhand smoke markers: Respirable suspended particulate matter, Ultraviolet	Electrostatic precipitators and extractor fans

		and 112 non-smoking areas.				comparison study.	light-absorbing particulate matter, fluorescent particulate matter, Solanesol particulate matter	
De Gids and Opperhuizen (2004)	Government sponsored report	111 articles included in review	Articles published from 1975 to 2004)	n/a	Hospitality industry	Literature review	Whether or not ventilation and air cleaning can contribute to the reduction of exposure to ETS	Ventilation and air cleaning technologies
Drope, J., S. A. Bialous, et al. (2004)	Peer reviewed journal article			U.S.		Literature review: tobacco industry documents		Ventilation approaches
Environmental Protection Agency (2008)	Scientific Association report					Not applicable		Air cleaning devices
Geens, A., D. Snelson, et al. (2006)	Peer reviewed journal article					Review		
German Cancer Research Center (DKFZ) (2007)	Foundation report					Not applicable		
Hammond (2002)*	Conference proceeding	75 restaurants	Not cited	26 cities	Restaurants	Not cited	Mean nicotine levels	Designated smoking areas with ventilation
Jacobs, P., P. de Jong, et al. (2006)	Industry sponsored report		30 th January 2006	Haarlem	Jacobus Pieck restaurant	Case study: Smoke room with and without an air purifier, and in a smoke free room	Aldehydes, volatile organic compounds, and nicotine	Designated smoking rooms with a decentralised smoke

								displacement system using recirculation and filtration.
Jenkins, R., D. Finn, et al. (2001)	Peer reviewed journal article	1 restaurant/pub			Restaurant/pub	Case study	ETS components	Designated smoking areas with heat-recovery ventilation system
Kotzias and Geiss <i>et al</i> (2006)	Not-for-profit, international medical organisation	INDOORTRON facility, a 30m ³ walk-in type environmental chamber	Not cited	Not cited	INDOORTRON facility, a 30m ³ walk-in type environmental chamber	Two series of experiments to test the impact of ventilation rates on ETS components	ETS components (VOCs, carbonyl compounds, inorganic gases)	Ventilation rates in indoor environmental chamber
Milz, S., F. Akbar-Khanzadeh, et al. (2007)	Peer reviewed journal article	4 restaurants. 2 restaurants smokefree restaurants and 2 restaurants with dedicated smoking rooms. Smokefree office (reference site).		Two cities in Norwest Ohio, Toledo and Bowling Green	Restaurants	Observational comparison study: with and without smoking rooms (with control site)	Carbon dioxide Ultrafine particle concentrations	Smoking rooms
Piha, T. (2006)	Government report					Not applicable		
Pilkington, P. and A. Gilmore (2004)	Peer reviewed journal article					Literature review: Web-based search of tobacco industry documents made public through		Ventilation approaches

						litigation		
Pion, M. and M. S. Givel (2004)	Peer reviewed journal article	Lambert airport – 2 tests	1997-98, and again in 2002	Lambert Airport – near smoking room 4C (15 Dec 1997 – 26 Feb 1 1998). Sea-Tac airport – indoor bar remote from entrances. Lambert Airport – near smoking room 4C (26 Sept 2002)	Airport smoking room	Repeated observational design	Average nicotine vapour concentrations (air monitoring)	Smoking rooms
Pirkle, J. L. and et al (1996)	Peer reviewed journal article	Persons aged 2 months and older (n=16818) and measurements of serum cotinine from persons aged 4 years and older (n=10642)	October 25 th , 1988 to October 21 1991	U.S.	National	Nationally representative cross-sectional survey	Serum cotinine levels in non-tobacco users	Not applicable
Repace, J. (2000)	Government sponsored report					Workshop on Ventilation Engineering Controls for ETS in the hospitality industry, attended by ventilation		Ventilation approaches

						experts		
Repace, J. and K. C. Johnson (2006)	Professional society article	One Pub	December 13 2002 and December 10 2002	Near Toronto	The Black Dog Pub	Observational design comparing pre and post voluntary smoking ban in smoking and non smoking areas of pub	Respirable Suspended Particles and carcinogenic particulate polycyclic aromatic hydrocarbons, carbon dioxide	Designated smoking areas with displacement ventilation
		Two pubs	March 6 2003	Mesa, Arizona	TGI Fridays pubs and Macaroni Grill pub			
		Six pubs	December 12 2002, 6pm – 12 midnight	Ottawa	Pubs (Smoke-free)	Observational design		
Smoke Free Systems (2001)	Industry report	3 sampling points (including one control) across 8 hour day	Feb 1 2001 at 8:45am – 4:10pm	Library on the 8 th floor of Uusimaa Industrial Safety District Building	Workplace - Library	Case study	Nicotine 3-ethyle pyridine TVOC	Smoking station
Smokefree Northern Ireland	Government agency report					Not applicable		
Stantec Consulting (2004)	Non-profit association sponsored report	3 food and beverage establishments with both smoking and non smoking sections Also one control non-smoking location. In each location 3 area samples in	3 day testing at each location during February 2004	Ontario, Canada	Restaurants and bars	Comparison observational design smoking sections versus non-smoking sections	Nicotine and 3-ethenyl pyridine and ultraviolet-absorbing particulate matter, fluorescing particulate matter, and solanesol. Personal air samples from one non-smoking and one smoking section staff.	Designated smoking rooms ventilated by an energy/heat recovery or designated smoking area

		both non-smoking and smoking sections (2 locations had DSR and 1 location DSA).							
Surgeon General (2006)	Government report						Review		
Theodor Sterling Associates (2007)	Industry sponsored report	12 hospitality venues where smoking is allowed (3 indoor samples in each venue and 1 outdoor location)	November 2006	Cardiff, Wales and London	Hospitality	Comparison of indoor and outdoor air quality measurements	Carbon dioxide, nitrogen dioxide, carbon monoxide, respirable suspended particles, particulate matter (PM _{2.5} and PM ₁₀)	Ventilation systems using dilution ventilation principles	
Vaughan, W. M. and S. K. Hammond (1990)*	Professional Association Journal				Office buildings	Before and after observational design: smoking restriction to a snack bar on one floor	Nicotine measurements	Designated smoking room	
Wagner, J., D. Sullivan, et al. (2004)	Peer reviewed journal article	27 laboratory experiments			Simulated smoking room	Laboratory experiments	Rates of ETS leakage to a nonsmoking area	Designated smoking room	
WHO (2007)	International organisation report						Not applicable		

*Cited in Surgeon General (2006)

ANNEX X– COST-EFFECTIVENESS OF SMOKING CESSATION INTERVENTION

Table 81 at the end of this section shows examples of country-level and meta-analysis level economic evaluations we retrieved on the cost-effectiveness (or cost-consequences, or cost-savings) of different smoking cessation interventions (programmes or policies). Results are limited to evidence published since the turn of the millennium for European countries in the English language as well as for other countries such as Australia and the U.S.

The number of studies published on the economic impact of smoking cessation is substantial (n=39 for Europe and meta-analyses; n=50 for outside Europe), with the majority of studies including pharmacotherapies as one component of smoking cessation interventions such as booklets, courses or counselling (n=18 for European studies, n=34 for non-European studies). Of these evaluations, specific comparison of the effectiveness of pharmacotherapies alone in stopping smoking occurred in eight of the European studies (20% of the total) and eight of the non-European studies (10% of the total).

We also found thirteen European or meta-analysis studies (including European studies) and thirteen non-European studies evaluating the cost-effectiveness of some form of counselling/advice or behavioural support alone in stopping smoking (33% of the total and 26% of the total, respectively). Finally, there were nine European and meta-analysis studies evaluating broader smoking cessation strategies such as nation- or community-wide smoking cessation programmes/policies (e.g. taxes and advertising bans in Estonia) or TV campaigns, and three studies evaluating only financial incentive-based smoking cessation (e.g. Quit and Win contest). A similar number of non-European studies were found: five investigated broader state- or community-wide smoking cessation programmes/policies (e.g. smoke-free workplaces versus free nicotine replacement therapy, or NRT) and four investigated incentive-based smoking cessation interventions such as Quit and Win contests or full insurance coverage of tobacco treatment. In addition, there were two U.S. studies evaluating the cost-effectiveness of legal interventions: minimal legal purchase age (Ahmad 2005) and enforcement to halt the sale of tobacco to youths (DiFranza *et al.* 2001).

Smoking cessation strategies: evidence of cost-effectiveness, especially when targeted to sub-groups

In general, smoking cessation interventions are highly cost-effective and compare favourably with other treatment modalities (Song *et al.*, 2002, Ronckers *et al.* 2005; Cornuz *et al.* 2006; Quist-Paulsen *et al.* 2006). For example, the cost-effectiveness of operating English smoking cessation services was well below the National Institute for Health and Clinical Excellence (NICE) benchmark of 20,000 GBP per quality adjusted life year (QALY) (Godfrey *et al.* 2006).

The European Respiratory Society found smoking cessation treatment is cost effective even when delivered through smoking cessation specialists; and the cost per year saved is four-times greater than that of other well-established preventative interventions for hypertension or breast cancer or hypercholesterolemia (Loddenkemper 2003). Table 79 shows the cost effectiveness of various smoking cessation programmes. A U.S. study also found that an enforcement programme to halt the sale of tobacco to youths could save 10 times as many lives as the same amount spent on mammography or screening for colorectal carcinoma (DiFranza *et al.* 2001).

Table 79: Cost effectiveness of smoking cessation programmes

Intervention	Cost per life-year saved €
Brief advice	354
Brief advice with self-help	426
Advice plus self-help plus advice to purchase NRT	1162
Advice <i>etc</i> with specialist services	1458

Source: Loddenkemper (2003).

Some authors suggest that resources allocated to smoking cessation (e.g. physician advice) should be increased by 124% (Lofroth *et al.* 2006). However, different factors influence the economic impact of smoking cessation services on sub-populations and performance targets for smoking cessation services should reflect population differences (Godfrey *et al.* 2006). For example, Denmark's smoking cessation strategies were more cost-effective when offered to men, older persons and light smokers than when offered to women, younger smokers and heavy smokers (Olsen *et al.* 2006). Another European study showed that women have less success at quitting than men, regardless of whether they are treated with pharmacotherapy (bupropion) (Scharf and Shiffman 2004). Nevertheless, analysis of gender-by-treatment interaction suggested that men and women benefited equally from slow-release bupropion (OR=1.01) (Scharf and Shiffman 2004). Finally, although there is limited cost-effectiveness evidence, a review of the literature shows that pregnancy-related smoking cessation and relapse prevention programmes yield favourable cost-benefit ratios, suggesting that the return on investment will far outweigh the costs for this critical population (Ruger, Weinstein *et al.* 2007).

Pharmacotherapies are the most cost-effective for individual smoking cessation

Pharmacotherapies for smoking cessation are considered favourable compared with other accepted public health interventions (Song *et al.* 2002). Studies in England and internationally have shown that using NRT/bupropion in smoking cessation interventions significantly increases the cost-effectiveness of smoking cessation services (Godfrey, Parrott *et al.* 2006).

A U.S. randomised controlled trial of mixed smoking cessation strategies indicated that the pharmacotherapy alone group consistently showed the lowest costs per participant and lowest costs for achieving each of the major study outcomes (Halpin, McMenemy *et al.* 2006). Moreover, compared to no intervention, programmes that offer free NRT are effective in the U.S., with a 1-week supply of nicotine patches representing the most cost-effective strategy (Cummings *et al.* 2006).

Among the possible pharmacotherapies, earlier studies had given only some indication of the greater incremental cost-effectiveness of bupropion in comparison with NRT (NICE 2002, Song *et al.* 2002). But now, there is strong evidence from more recent European data (Sweden, France, Spain, Switzerland, UK) and non-European data (Canada, Australia, U.S.) that bupropion is the most cost-effective pharmacotherapy (Nielsen and Fiore, 2000; Antonanzas and Portillo, 2003; Scharf and Shiffman, 2004; Bolin *et al.*, 2006; Cornuz *et al.*, 2006; and Shearer and Shanahan, 2006).

For pharmacological treatment, the marginal cost-effectiveness ratios are €1768-5879 for men and €2146-8799 for women, depending on age group. The average cost per life year saved is about £750 (£500-1,500), with €1,000-2,399 for NRT, €639-1,492 for bupropion slow-releasing, and €890-1,969 for NRT/bupropion. Finally, there is a wide range of incremental cost-effectiveness ratios for each type of pharmacotherapy (nicotine gum, patch, spray, inhaler, and bupropion) across a variety of European and non-European countries (Cornuz *et al.* 2006).

However, newer evidence suggests that a novel pharmacotherapy, varenicline, may be of more cost-benefit than the currently available pharmacologic alternatives (i.e. bupropion, nortriptyline or NRT). A 2008 European study found that treatment with varenicline for smoking cessation is cost-effective compared with nortriptyline and unaided cessation, and even cost-saving compared with bupropion and NRT (Hoogendoorn *et al.* 2008). These findings confirm an earlier US study showing the cost benefit of varenicline to employers: savings for the employer, per non-smoking employee, were \$540.60 for varenicline, \$269.80 for bupropion SR generic, \$150.80 for bupropion SR brand, and \$81.80 for placebo (Jackson *et al.* 2007).

Financial incentives and support for smoking cessation: social prizes, full insurance coverage and free vouchers

A number of studies have demonstrated how the use of financial incentives could increase the quit rate among smokers for a relatively modest investment of resources. Most notably, the Swedish Quit and Win contest was associated with cost-savings and health gains among women, amounting to €3,550 per female quitter (Johansson *et al.* 2005). An earlier study showed the contest cost \$188-222 per life-year gained. In New York, a Quit and Win contest, offering the chance to win a cash prize (usually \$1,000) for successfully stopping smoking for at least 1 month, revealed the cost per attributable quit was \$301-954 (Tillgren *et al.* 1993). More recently, O'Connor *et al.* (2006) reveal that evidence from 11 Quit and Win contests shows that for a relatively

modest investment of resources (median expenditures of \$25,928 for promoting contests, ranging from \$4,345 to 91,441), thousands of smokers can be recruited to make a serious quit attempt, with many remaining smoke-free months later.

Other forms of financial incentives to quit smoking include providing partial or full financial benefit for smoking cessation treatment. A recent meta-analysis revealed that when full benefit was compared with a partial or no benefit, the costs per quitter varied between \$260 and \$2330 (Kaper *et al.* 2005). The authors also found that when smokers are offered full benefit, there is an increase in self-reported prolonged abstinence rates at relatively low costs compared with a partial or no benefit. This study reinforced the findings from a previous U.S. study that full coverage of tobacco dependence treatment benefit with no patient cost-sharing is an effective strategy for increasing quit rates and quit attempts at low cost with employer-based insurance (Schauffler *et al.* 2001). When smoking cessation benefit is provided, cost of healthcare in the U.S. decreased by \$7.9 to \$8.8 million (Barone-Adesi *et al.* 2006). In evaluating a number of different benefit strategies in New York, Bauer *et al.* (2006) found that offering a free two-week voucher for NRT was a cost-effective strategy for enhancing calls to quitlines in order to improve smoking quit rates in the U.S.. Finally, Kaper *et al.* (2006) also assessed whether reimbursing the costs of smoking cessation treatment is a cost-effective intervention from the Dutch societal perspective; if Dutch society is willing to pay €10,000 for an additional quitter or €18,000 for a QALY, then reimbursement of smoking cessation treatment would be cost-effective.

However, the use of financial incentives for smoking cessation programmes should be carefully chosen when deciding public health priority in this area. Another U.S. study found that a free NRT programme was 15 times more expensive than the smoke-free workplace programme, suggesting that smoke-free workplace programmes should be a public health priority. The average cost per QALY was \$4,440 with the free NRT programme, whereas the average cost per QALY with the smoke-free workplace programme was \$506 (Ong and Glantz 2005). Other studies have shown smoke-free environments can be more cost effective than programmes targeted at smoking cessation. One study showed that smoke-free environments are nine times more cost effective per new non smoker than providing smokers with nicotine replacement therapy (WHO 2007). Hence, Ong and Glantz (2005) concluded that smoke-free workplace policies should be a public health funding priority, even when the primary goal is to promote individual smoking cessation.

Finally, financial support for pharmacotherapy alone may not always prove the most cost-effective. Indeed, among a mix of U.S. tobacco control policies which included pharmacotherapy, flexible coverage was the most effective and, specifically, coverage of behavioural therapy alone was the most cost-effective (incremental cost per quitter was \$2,500.94), compared with brief intervention alone (\$3,381.03) and to prescription pharmacotherapy alone (\$7,185.15) (Levy and Friend 2002).

“Behavioural support”: health professional advice/counselling, quitlines, and intensive face-to-face interventions

There is a growing body of evidence showing the cost-effectiveness of supportive advice or counselling for smoking cessation. A number of different strategies include brief advice from physicians, nurses or other healthcare professionals, delivery of booklets by specially trained healthcare professionals, quitlines or telecounselling, motivational interviewing, intensive interventions such as behavioural therapy or nurse home visits, etc. Notably, cost-effectiveness ratios range widely depending on the type of supportive intervention and the country of implementation (Silagy and Stead, 2004; Godfrey et al., 2006; Lofrothe et al., 2006; and NICE, 2006).

Some important conclusions from the various studies are as follows:

1. In Norway, a programme of delivering booklets by cardiac nurses with special training in smoking cessation remained highly cost-effective even if the cost of the programme increased (Quist-Paulsen *et al.* 2006).
2. The Dutch SmokeStop Therapy was found to be more cost-effective compared to minimal intervention, with a higher number of quitters (20 compared with 9) at lower total costs (Christenhusz *et al.* 2007). However, an earlier study showed that minimal counselling dominated all other interventions (such as physician or specialised counsellors) for every implementation period and, more importantly, minimal GP counselling was event cost saving (Feenstra *et al.* 2005).
3. A meta-analysis of brief physician advice concluded that costs of providing counselling are usually low if provided as a by-product of medical consultation (Silagy and Stead, 2004). Notably, in Switzerland, the training of primary care physicians in smoking cessation counselling is a very cost-effective intervention and may be more efficient than currently accepted tobacco control interventions (Pinget et al. 2007).
4. Quitlines were a cost-effective strategy for smoking cessation in Sweden and compared favourably with other smoking cessation policies. In Australia, telecounselling was shown to dominate brief GP advice and remained cost effective across most scenarios after sensitivity analysis (Shearer and Shanahan 2006). In the U.S., access to telephone counselling almost doubled the maintained quit rates over one year, with only \$1,300 of direct costs for each case of one year's cessations attributable to counselling availability (McAlister *et al.* 2004).
5. Peer-delivered counselling compared with self-help doubled smoking cessation rates with incremental cost-effectiveness of \$5,371 per additional quit at 12 months (Emmons *et al.* 2005)
6. The addition of supportive mailings of booklets and letters to prevent smoking relapse from typical smoking cessation therapies in the U.S. were highly cost-effective because they reduced the incremental cost-utility ratio more than the prevention intervention cost (Chirikos *et al.* 2004)

7. The cost-effectiveness of community-based smoking cessation interventions compare favourably with other tobacco control interventions in the U.S. This is true for the multi-faceted community intervention (Full Court Press project) designed to reduce youth tobacco use by changing the key environmental, personal and behavioural factors (Ross et al. 2006), as well as for the Breathe Easy intervention to help women quit smoking in four U.S. counties (Secker-Walker et al. 2005).

Some exceptions in the literature

There are four studies among the several dozen evaluating the economic impact of smoking cessation interventions that show either neutral or unclear results. First, Grenard *et al* (2006) found in the U.S. that motivational interviewing might be effective among adolescents and young adults with drug-related problems, including tobacco dependence, but the key components of a successful intervention have yet to be identified. However, according to the DARE Database, the study's methods were not sufficiently robust to confirm the reliability of the conclusion.²⁶ Yet, in a particular socio-economic group, another study found that motivational interviewing was cost-effective for preventing smoking relapse among low-income pregnant women and may be cost-saving when net medical cost savings are considered; whereas for smoking cessation, motivational interviewing cost more and provided no additional benefit compared to usual care, although it might offer benefits at costs comparable to other clinical preventive interventions if 8-10% of smokers are induced to quit (Ruger et al. 2007). Third, Hill (2006) examined four NRT and three antidepressants for smoking cessation in the U.S. and concluded that the value for money of Zyban (antidepressant) was unclear due to the uncertain nature of the clinical data. The cost-effectiveness of the other two antidepressant drugs could not be fully assessed because they have significant side effects. Hill (2006) also found that nicotine gum appears to be the most cost-effective strategy for the general population (Hill 2006), a conclusion that contradicts the findings from Cornuz *et al* (2006), whose meta-analysis showing nicotine patches to be the second most cost-effective pharmacotherapy after bupropion. Fourth and finally, in a meta-analysis of opioid antagonists for pharmacotherapy of smoking cessation, David *et al* (2006) could neither confirm nor refute whether naltrexone helps smokers quit; four trials failed to detect a significant difference in quit rates between naltrexone and placebo.

Table 80 Cost-effectiveness of Public Policies for Smoking Cessation

Intervention	Country	Author, Year	Cost Results	
Inpatient SC therapy (behaviour modification and NRT)	Austria	(Schoberberger and Zeidler 2007)	(health impact)	Therapy up. Health diseases
Standard SC (trained in interviewing and advising with a manual)	Denmark	(Kjaer, Evald <i>et al.</i> 2007)	(health impact)	1 in 6 smokers continue to smoke. Influenza dependence
Nation-wide Treatment Service	UK	(Low, Unsworth <i>et al.</i> 2007)	(social impact - Distributional issues)	Smoking cessation than distributional issues. Service number inequalities in wards in
SmokeStop Therapy	Netherlands	(Christenhusz, Pieterse <i>et al.</i> 2007)	Over 12 months, avg patient receiving SST generated EUR 581 in health care costs, including the costs of the SC programme, vs. EUR 595 in the minimal intervention group. The SST is also associated with a lower average number of exacerbations (0.38 vs. 0.60) and hospital days (0.39 vs. 1) per patient, and a higher number of quitters (20 vs. 9) at lower total costs.	Finding After 1 year cost-savings hospital
Quitline (with work legislation)	Ireland	(Flannery and Cronin 2007)	(health impact)	Smoker At 6 months attempted to remain significant
Brief interventions in Primary care	UK	(NICE 2006)	Costs are estimated to be £5.4 million. Extrapolated data from the cost of treating acute MI and stroke (£1.5 billion per year, 1998) indicates that cost savings of £20.7 million over 11 years for avoided events possible.	

Bupropion vs. NRT	Sweden	(Bolin, Lindgren <i>et al.</i> 2006)	<p>Total health care costs averted with bupropion vs nicotine patches was SEK 50,073,220 (EUR 5,419,424.601) for men and SEK 72,727,847 (EUR 7,871,334.881) for women. Indirect costs accounted for a saving of SEK 122,305,699 (EUR 13,237,145.8) for men, and SEK 11,956,131 (EUR 12,117,012.06) for women.</p> <p>Compared with nicotine gum, bupropion results in health care savings of SEK 59,177,442 (EUR 6,404,774.55) for men and SEK 85,962,911 (EUR 9,303,765.858) for women. The indirect costs averted were SEK 144,543,099 (EUR 15,643,899.6) for men and SEK 132,311,792 (EUR 14,320,105.25) for women. The incremental saving of bupropion compared with nicotine patches including indirect costs was SEK 23,400 (EUR 2,532.582) for men and SEK 16,600 (EUR 1,796.62) for women. Incremental saving of bupropion compared with nicotine gum including indirect costs was SEK 33,300 (EUR 3,604.1) for men and SEK 26,500 (EUR 2,868.1) for women.</p>	Direct c represe product Use of b 1073 ad Compar addition women. Stochas chance nicotine Bupropi or nicot
Booklet delivered by cardiac nurses with special training in SC	Norway	(Quist-Paulsen, Lydersen <i>et al.</i> 2006)	<p>Total additional costs associated with SC programme over usual care were NOK 510 (EUR 63) per patient.</p> <p>In the low-risk group (patients with stable CHS), the ICER associated with the SC programme over usual care was NOK 42,500 (EUR 5,230) at 5 yrs and NOK 2,300 (EUR 280) in the lifetime perspective.</p> <p>In the high-risk group (patients after MI), the ICER associated with SC over usual care was NOK 9,800 (EUR 1,200) at 5 yrs and NOK 900 (EUR 110) in lifetime perspective.</p> <p>The SC programme remained highly CE even if the cost of the programme were increased. It compared favourably with other treatment modalities.</p>	Direct c telephon not sign due to fi characte
Specialist services	UK (England)	(Godfrey, Parrott <i>et al.</i> 2006)	<p>Average cost per LYG was £684 (95%CI: 557-811), falling to £438 when savings in future healthcare costs were counted. With worst case assumptions, the estimate CE rose to £2,693 per LYG saved (£2,293 including future healthcare costs) and fell to £227 (£102) under the most favourable assumptions.</p>	Finding smoking below th NICE. Differen indicati perform

Specialist services + NRT + bupropion	U.K. (England)	(Godfrey, Parrott <i>et al.</i> 2006)	<p>Total mean smoking cessation services costs were GBP 254,400 (95% CI: 557.2 to 811.3). Median cost was GBP 214,900.</p> <p>When only smoking cessation costs were included, the cost per LYG was GBP 684.2 (95%CI: 557.2 to 811.3; median GBP 544.2).</p> <p>When both costs of service and health care cost-savings were included, the cost per LYG was GBP 437.7 (95%CI: 311.2 to 564.2; median 292.6).</p> <p>After combining the worst case assumption, the net cost per LYG was GBP 2,293 (95% CI: 536 to 4,050).</p>	<p>Direct costs, sp facilities.</p> <p>Results behavior services support setting increase</p> <p>In 2000, services QALY</p>
Pharmacotherapies (bupropion, nicotine patch, gum, spray, inhaler) vs. GP counselling alone vs. no treatment	Canada, France, Spain, Switzerland, UK, and U.S.	(Cornuz, Pinget <i>et al.</i> 2006)	<p>The cost per LYG with cessation counselling only compared with no treatment was, for 45 yr old men and women respectively was: \$190 and \$288 in Spain, \$375 and \$567 in Switzerland, \$389 and \$588 in Canada, \$479 and \$724 in France, \$623 and \$941 in the U.S. and \$773 and \$1,168 in UK. The min. and max. ICERS for each pharmacotherapy in persons aged 45 were:</p> <p>\$2,230 for men in Spain and \$7,643 for women in the USA for nicotine gum;</p> <p>\$1,758 for men in Spain and \$5,131 for women in UK for nicotine patch;</p> <p>\$1,935 for men in Spain and \$7,969 for women in the USA for nicotine spray;</p> <p>\$3,480 for men in Switzerland and \$8,700 for women in France for nicotine inhaler, and</p> <p>\$792 for men in Canada and \$2,922 for women in USA for bupropion</p>	<p>Estimate analyses 15 prim Direct c discount</p> <p>In each CE treat would b several</p>
Advice from GP	Sweden	(Lofroth, Lindholm <i>et al.</i> 2006)	<p>The CE ratios ranged from EUR 3,653 per QALY gained (including cost of productivity losses, at a discount rate of 3% and at any duration of treatment) to EUR 4,410 (excluding cost of productivity losses, at a discount rate of 5% and at any duration of treatment).</p>	<p>Study co Health c consulta drugs an Value o annual g general The sma smoking serum c of 139 n Authors should b</p>

Group courses, individual courses, quick interventions, NRT	Denmark	(Olsen, Bilde <i>et al.</i> 2006)	Incremental CE ratios for SC strategies over no intervention was EUR 1,358 (95%CI: 1320 to 1396) in whole sample, EUR 1090 (95%CI: 1065 to 1116) for men, EUR 1361 (95%CI: 1326 to 1395) for women, EUR 1114 (95%CI: 1090 to 1137) for light smokers, EUR 1362 (95%CI: 1325 to 1400) for heavy smokers, EUR 1361 (95%CI: 1326 to 1396) in a pharmacy setting, EUR 1058 (95%CI: 1036 to 1081) in a hospital setting, EUR 9651 in age group 25 to 34 yrs, EUR 1984 (95% CI: 1907 to 2060) in age group 35 to 54 yrs, EUR 673 (95% CI: 664 to 681) in those aged 55+. Probabilistic sensitivity analysis showed that probability of being CE at different thresholds was higher for men, light smokers and participants at hospitals compared with women, heavy smokers and participants in pharmacies.	Direct c instructo Regress moderat than ind cheaper individu The ext interv EUR 45 heavy s hospital in age g SC strat younge differen more CI
Opioid antagonists (naltrexone) vs. placebo or vs. alternative therapeutic control for SC	Meta-analysis	David S, Lancaster T, Stead LF, Evins AE; 2006	4 trials of naltrexone failed to detect a significant difference in quit rates between naltrexone and placebo.	Not pos smokers
5 face-to-face SC interventions by GP or specialised counsellors	Netherlands	(Feenstra, Hamberg-van Reenen <i>et al.</i> 2005)	For 75 yr implementation, net value of the intervention at 2000 level prices was EUR 1.7 x10 ⁹ for telecounselling, EUR 0.52x10 ⁹ for minimal counselling, EUR 3.8x10 ⁹ for minimal counselling+NRT, EUR 7.8x10 ⁹ for intensive counselling_NRT, EUR 7.3x10 ⁹ for intensive counselling+bupropion. For 75 yr implementation, cost per LYG was EUR 1400 for TC, EUR 1,800 for MC+NRT, EUR 6,200 for IC+NRT, and EUR 4,300 for IC+Bupr. Cost per QALY gained was EUR 1,100 for TC, EUR 1,400 for MC+NRT, EUR 4,900 for IC+NRT, and EUR 3,400 for IC+Bupr.	Health s help ma cancer t of assist Minimal every in the MC QALYs cost-sav million) Sensitiv in resou smokers as the d All 5 SC practice
Finance incentives for SC treatment	Meta-analysis	(Kaper, Wagena <i>et al.</i> 2005)	When a full benefit was compared with a partial or no benefit, the costs per quitte varied between \$260 and \$2330.	There is directed increase relative benefit.

"Quit and Win" contest	Sweden	(Johansson, Tillgren <i>et al.</i> 2005)	<p>Total costs for a female smoker was estimated between SEK 100,000 (EUR 11,834.32) and SEK 180,000 (21,301.78), depending on age group. For a quitter, these costs were between SEK 80,000 (EUR 9,467.45) and SEK 150,000 (EUR 17,751.48).</p> <p>Savings associated with SC amounted to about SEK 30,000 (EUR 3,550.3) per female quitter. If disease-related morbidity productivity costs were excluded, the savings per quitter were about SEK 20,000 (EUR 2,366.86).</p> <p>Intervention costs were SEK 267,000 (EUR 31,597.63), the cost per participant was SEK 1,100 (EUR 130.178) and the cost per quitter was SEK 7,850 (EUR 928.99). The cost per undiscounted LYG was SEK 4,100 (EUR 485.21).</p> <p>The "Quit Smoking Gals" intervention led to societal cost-savings of SEK 830,000 (EUR 98,224.85). These savings ranged from SEK 2,620,000 (EUR 310,059.17) to SEK 420,000 (EUR 49,704.14) according to discount rate.</p>	Direct costs, and death and morbidities considered and mortality attributed out at 3%. The Quit Smoking Gals health group of tobacco of a wide
Quitline	Sweden	Toomson T, Helgason AR, Gilijam H; 2004	<p>Total costs of quitline were \$699,243 (\$475,095 for personnel, \$23,766 for materials, and \$200,382 for services)</p> <p>Incremental cost per quitter was \$1,052 using the conservative approach of 7% spontaneous smokers, and \$1,360 when assuming a 31% quit rate. The incremental cost per LYG ranged from \$311 (7%) to \$401 (31%).</p> <p>When no discount rate for the benefits were considered, the cost per LYG was \$29 when using a 31% quit rate.</p>	Discounted Quitline Sweden policies
Mass TV campaign	UK	(Parrott and Godfrey 2004)	<p>Campaigning cost U.S. 18 million per year and resulted in 2.5% quit rate, costing U.S.\$10-20 per life-year saved.</p>	
Brief Advice	Meta-analysis	Silagy C, Stead LF; 2004	<p>Brief advice from a physician in UK costs about £469 (US\$750) per life-year saved. A U.S. study found that costs of physician counselling were between \$705 and \$988 per life-year for men, and \$1,204 to \$2,058 per life-year for women.</p>	Costs of of medicine
Bupropion vs. placebo	Meta-analysis	(Scharf and Shiffman 2004)		Twelve Bupropion. However, regardless of placebo that men (OR=1.1)

3 different pharmacotherapy mixes	Spain	(Antonanzas and Portillo 2003)	<p>Total costs at 20 yrs were EUR 44,033,192 for S-I, EUR 57,623,558 for S-II, and EUR 58,877,069 for S-III. Costs avoided during this period for each strategy when compared to current situation were: EUR 128,211,567 for S-I, EUR 84,558,581 for S-II, and EUR 32,270,939 for S-III.</p> <p>There was a net cost saving of EUR 28,166 per avoided death, and EUR 3,265 per year of life saved with S-I, and EUR 13,665 per avoided death and EUR 1,584 per year of life saved with S-II, when compared to current situation.</p> <p>S-III resulted in positive ICERs, equal to EUR 35,369 per each additional avoided death, and EUR 4,099 per each additional year of life gained, when compared to current situation.</p>	Strategy patches, Strategy 1% gum Strategy and 1% Compar willpow 1% use Six prev Direct c therapie diseases CONCL bupropr therapie
Community pharmacy-based	Meta-analysis	(Blenkinsopp, Anderson <i>et al.</i> 2003)	<p>For SC RCTs: cost of using intensive rather than standard pharmaceutical support was GBP 83 per life-year saved in the Scottish trial, while the cost per life-year saved in the intervention arm ranged from GBP 197 to GBP 351 for men and GBP 181 to GBP 722 for women in the Northern Ireland trial.</p> <p>Evidence supports the wider provision of smoking cessation and lipid management through community pharmacies.</p>	Interven factors counsel the SC s
4 NRT therapies (gum patch, spray, inhaler) and bupropion as adjunct to GP advice	Switzerland	Cornuz J, Pinget <i>et al.</i> ; 2003	<p>Counselling: cost per LYS ranges from EUR 385 (45-49 yrs) to EUR 622 (age 65-69) for men, and EUR 468 (age 50-54) to EUR 796 (age 25-29) for women.</p> <p>Pharmacological treatment: the marginal CER ranges from EUR 1768 to 5879 for men and from EUR 2146 to EUR 8799 for women.</p>	Change: CE. Upper a patch (4 2298) a
OTC NRT, placebo, prescription NRT	Meta-analysis	Hughes JR, Shiffman S, Callas P, Zhang J; 2003		Seven R informa produce prescrip
Stage-based interventions to change smoking behaviour	Meta-analysis	(Riemsma, Pattenden <i>et al.</i> 2003)	<p>One RCT estimated the marginal cost per person who quit as GBP 450.65, which could fall to an extreme of GBP 265 with increased use.</p> <p>A second study reported an incremental CE ratio for the intervention as GBP 300 per person who quit.</p>	Interven program program interven program contact, systems 35 unna included

NRT vs. Bupropion	U.K. (England & Wales)	NICE, 2002	Incremental cost per LYS is about GBP 1,000-2,399 for NRT, GBP 639-1,492 for bupropion SR, and GBP 890-1,969 for NRT + BSR. Estimated cost of SC programme to the NHS in E&W would be about GBP 67-202 million per year. Consequently, about 45,000-135,000 smokers will quit, and about 90,000-270,000 life-years saved. The average cost per LYS is about GBP 750 (range: GBP 500-1,500).	According to BSR is, interpre relative
Comprehensive Community Programs	U.K.	Stevens W, Thorogood M, Kayaikki S; 2002	Estimated program costs were 56,987 GBP. (alternative of no programme was zero). Incremental cost per life-year gained was 105 GBP (95%CI: 33-391 GBP), with a modal value of 90 GBP. The incremental cost per one-year quitter was 825 GBP (95%CI: 300-3,500).	Targeted Costs in overhea
Advice or counselling: only, or + NRT, or + bupr, or + NRT & bupr	U.K.	Song F, Raffery J, Aveyard P, Hyde C, Barton P, Woolacott N; 20027	Cost per attempt was: \$5.08 with advice only; \$108.72 with advice + NRT; \$109.56 with advice + bupr sustained release; \$207.23 with all three; Cost per attempt was: \$50.76 with counselling only; \$148.44 with counselling + NRT; \$149.27 with counselling + BSR; and \$246.95 with all three. In comparison with advice or counselling alone, the average incremental cost per LYG was: \$3,455 (range: 2,107 to 16,726) with advice + NRT; \$2,150 (range: 1,182 to 14,535) with advice + BSR; \$2,836 (range: 1,268 to 26,245) with advice + NRT + BSR; \$1,441 (range: 439 to 8,044) with counselling + NRT; \$920 (range: 306 to 7,052) with counselling + BSR; and \$1,282 (range: 507 to 11,817) with counselling + NRT + BSR. Incremental cost per QALY was: \$2,559 or \$1,067 for NRT relative to advice or counselling, respectively; 1,593 or \$681 for BSR over advice or counselling, respectively; and \$2,101 or \$950 for NRT + BSR relative to advice or counselling, respectively. In comparison with advice or counselling + NRT, the average incremental cost per LYS was \$2,391 (range: 952 to 80,558) with advice, NRT & BSR, and \$1,156 (range: 538 to 33,170) with counselling, NRT and BSR In comparison with advice or counselling + BSR, the average incremental cost per LYS was \$4,322 (range: 1,385 to 288,612) with advice, NRT & BSR, and \$2,123 (range: 825 to 115,445) with counselling, NRT & BSR.	Direct c NRT All SC health c pessimis slightly with cau those fo
Non-tailored letters	Scotland	Lennox A <i>et al</i> , 2001	CER = 89£ per additional quitter, under optimistic assumptions the CER is £37/quitter. Using a 5% discount rate gives a cost per LY of 50 to 122£.	Patients included
Behavioural support (trained occupational health advisor) + access to NRT	UK	(Cruse, Forster <i>et al</i> . 2001)	(Social impact) GlaxoSmithKline implemented a voluntary programme for its employees.	At 12 m had not relapsed themsel 52% of monitor smoking promoti

Unspecified	U.K. (England)	(Naidoo, Stevens <i>et al.</i> 2000)	Target Group 1 (reduce smoking rate from 28% in 1996 to 26% by 2005 and 24% by 2010): undiscounted cost saving was £524 M, 6% discounted cost saving was £320M Target Group 2 (reduce smoking rate from 28% in 1996 to 22% in 2005 and 17% in 2010): undiscounted cost saving was £1.14 B, 6% discounted cost saving was £680 M.	The sav program immedi the utili Costs w events c
Community wide SC	UK	Parrott S, Godfrey 1998	Costs of £107-3622 per life-year saved (\$171-5800).	
Pharmacy-based cessation program	N. Ireland	(Crealey, McElnay <i>et al.</i> 1998)	Cost per life-year saved was between \$326.62 and \$583.41 for men and \$301.04 to \$1,281.72 for women.	
Individual Treatment + brief advice + nicotine gum	UK	(Buck, Godfrey <i>et al.</i> 1997)	Program cost £2370 (U.S.\$3800) per life-year saved.	
Quit & Win	Sweden	(Tillgren, Rosen <i>et al.</i> 1993)	Contest cost from \$188 to \$1,222 per life-year gained.	