

What happened in Italy? A brief summary of studies conducted in Italy to evaluate the impact of the smoking ban

G. Gorini^{1*}, E. Chellini¹ & D. Galeone²

¹Environmental and Occupational Epidemiology Unit, Center for Study and Prevention of Cancer, Florence;

²Prevention Department, Italian Ministry of Health, Rome, Italy

Received 13 March 2007; accepted 9 May 2007

The aim of this short report is to give a brief summary of the studies conducted in Italy in order to evaluate the impact of the ban on smoking in enclosed public places that came into force on 10 January 2005. Support of Italians for the smoking ban increased once the policy was introduced, and is still increasing. Surveys conducted among the Italian population and owners of hospitality premises report that the ban is generally respected. After the ban, environmental nicotine concentrations in four pubs and three discos in Florence and concentrations of particulate matter with diameter $<2.5 \mu\text{m}$ in 50 hospitality premises in Milan, Trieste and Rome dropped to 70–97% of the concentrations recorded before the ban. In 2005 total sales of cigarettes in Italy decreased by 6.1% in comparison to 2004, from 98.8 to 92.8 million kg. In 2006 sales increased by 1.1% in comparison to 2005, partly attributed to the covered outdoor smoking places available in many restaurants and bars from the winter of 2005–2006. Smoking prevalence decreased from 2004 to 2006 by 7.3%, from 26.2% to 24.3%.

Key words: Italy, second-hand smoke, smoking bar

introduction

A law banning smoking in enclosed public places entered into force in Italy on 10 January 2005 [1]. Some studies from various Italian areas that evaluate specific aspects of the impact of the smoking ban have been published, some of them in peer-reviewed journals in English or Italian, others in proceedings of national conferences organized by governmental institutions. The aim of this short report is to give a brief summary of the results of these studies, in order to give a synthetic scenario of what happened in Italy after the smoking ban.

is it a smoking ban or a smoking restriction law?

The law bans smoking in indoor spaces, including hospitality venues and workplaces, unless they have a separate room less than half of the size of the whole premises, enclosed by automatic sliding doors and with a negative pressure of at least 5 pascal provided by forced ventilation with a flow rate of at least 30 L per second per person, considering a crowding rate of 0.7 persons per m^2 [2].

In the survey conducted in January–April 2005 by some local health authorities in collaboration with the National Institute

of Health among the owners of 1641 bars, restaurants, pizzerias and pubs, located mainly in northern Italy, fewer than 1% reported that they had built smoking areas in their premises because of the high cost due to the tight standards on air quality defined by the smoking ban [3].

attitudes of Italians towards the smoking ban

A survey conducted in April 2001 by DOXA, the Italian branch of the Gallup International Association, on a representative sample (1009 subjects) of the Italian population aged 15 years or over, showed that 83% were in favour of a smoking ban in public places [4]. Two similar post-ban DOXA surveys of two representative samples of the Italian population conducted in March–April 2005 (3114 subjects) and in March–April 2006 (3039 subjects) showed that 90% and 94% respectively were in favour of the smoking ban on hospitality premises [5, 6].

Almost 90% of people interviewed in the 2005 DOXA survey reported that the smoking ban was observed in bars and restaurants and 70% in workplaces, including small workplaces [5]. In the above-mentioned survey conducted in January–April 2005 among the owners of 1641 hospitality premises [3], 92% reported that all customers respected the ban; only 11% had had to ask customers to stop smoking.

*Correspondence to: Dr G. Gorini, Environmental and Occupational Epidemiology Unit, Center for Study and Prevention of Cancer, Via di S. Salvi, 12-50135 Florence, Italy. Tel: +39-055-6268-347/345; Fax: +39-055-679954; E-mail: g.gorini@cspo.it

drop in second-hand smoke exposure in hospitality venues

Studies measured environmental nicotine concentrations in four pubs and three discos in Florence [7] and concentrations of particulate matter with diameter $<2.5 \mu\text{m}$ in two restaurants and two pubs in Milan [8], in six bars in Trieste [9] and in 40 hospitality premises in Rome [10] before and after the smoking ban, showing reductions ranging from 70% to 97%.

health gains for hospitality workers

It has been estimated that before the smoking ban about 800000 workers were exposed to second-hand smoke (SHS) in Italy, in particular 190000 workers in the hospitality industry, 380000 white-collar workers and 45000 blue-collar workers [11, 12].

In the survey of the owners of 1641 hospitality premises [3], 15% of owners who were smokers reported that they had quit after the smoking ban and 61% reported that they smoked fewer cigarettes per day.

cigarette sales, nicotine replacement therapy sales and smoking prevalence

In 2005 total sales of cigarettes in Italy decreased by 6.1% in comparison to 2004 (from 98.8 to 92.8 million kg of cigarettes) [13], with a reduction in adult per capita sales of cigarette packs of about 6.6% [14].

In a newsletter published by the research centre Ref (Milan), funded by British America Tobacco (the buyer in 2003 of the former Italian government tobacco manufacturing operation and owner of 30% of the cigarette market share in Italy, second only to Philip Morris), it was reported that the lowest level of cigarette sales since 1998 had been recorded in 2005 in Italy. Considering that in the 1990s a significant quantity of cigarettes arrived in Italy through smuggling, the authors concluded that actually cigarette sales in 2005 were the lowest recorded in 30 years [15].

The same newsletter also reported an increase in cigarette sales of about 1 million kg in 2006 in comparison with 2005 (from 92.8 to 93.8 million kg). The authors partly attributed this increase to the covered outdoor smoking places built by many restaurants and bars from the winter of 2005–2006. These covered outdoor areas have a roof, at least three transparent plastic or glass walls and a heating system. The Italian smoking ban applies to indoor public places only. These areas cannot be considered separate indoor rooms, so customers smoke there in winter while drinking or eating. In spring, summer and autumn the walls, roof and heating systems are usually removed. In January–March 2005, immediately after the smoking ban came into force and when the lowest levels of cigarette sales were recorded, no such covered outdoor areas were available in Italian hospitality premises.

In January–September 2005 total sales of nicotine replacement therapy (NRT) products increased by 10.8%, above all in the first 5 months after the smoking ban [14]. Smoking prevalence was 26.2% in 2004 (30.0% in men, 22.5% in women), 25.6% in 2005 (29.3% in men, 22.1% in women) and 24.3% in 2006 (28.6% in men, 24.3% in women),

according to three different DOXA surveys conducted in these years [5, 6], with a reduction from 2004 to 2006 of about 7.3%.

short-term effects on rates of hospital admission for acute myocardial infarction

Epidemiological studies have found that there is a decrease in risk of acute myocardial infarction (AMI) within some months after cessation of SHS exposure [16].

In the Piedmont region (4 million inhabitants) among persons aged <60 , the number of admissions for AMI decreased significantly by 11% (95% CI, 2%–19%) after the smoking ban, from 922 admissions in February–June 2004 to 832 in February–June 2005 [17].

economic impact of the smoking ban on the hospitality industry

No high-quality studies of the economic impact on the hospitality sector have been conducted in Italy after the coming into force of the smoking ban. In the survey conducted among owners of hospitality venues [3], only 12% recorded a significant economic loss, whereas 55% recorded no losses or a small increase. The Italian Federation of Hospitality Industries reported a significant economic loss for gambling and bingo houses only [18], but the precise amount of the loss was not reported.

references

1. Government of Italy. *Article 51, no. 3, 16 October 2003*. <http://www.ministerosalute.it/resources/static/primopiano/247/art51.pdf> (1 March, 2007, date last accessed).
2. President of Ministers' Council. *Ordinance of the President of Ministers' Council, 23 December 2003*. <http://www.ccm.ministerosalute.it/resources/static/primopiano/247/DPCM23dicembre2003.pdf> (1 March, 2007, date last accessed).
3. Ministry of Health, Center for Disease Control. *Il rapporto sull'impatto della legge 16 gennaio 2003, n.3 art.51 'Tutela della salute dei non fumatori'*. <http://www.ministerosalute.it/resources/static/primopiano/255/conferenzaFumo.pdf> (1 March, 2007, date last accessed).
4. La Vecchia C, Garattini S, Colombo P et al. Attitudes towards smoking regulation in Italy. *Lancet* 2001; 358: 245.
5. Gallus S, Zuccaro P, Colombo P et al. Effects of new smoking regulations in Italy. *Ann Oncol* 2006; 17(2): 346–347.
6. Rossi S, Mortali C, Mazzola M et al. Il fumo in Italia. *Proceedings of the 8th National Congress on Tobacco and National Health System*. Rome: National Institute of Health 2006. <http://www.iss.it/binary/ofad/cont/II%20fumo%20in%20Italia.1153394871.pdf> (1 March, 2007, date last accessed).
7. Gorini G, Gasparini A, Centrich F et al. Environmental tobacco smoke (ETS) exposure in Florence hospitality venues before and after the smoking ban in Italy. *J Occup Environ Med* 2005; 47(12): 1208–1209.
8. Ruprecht A, Boffi R, Mazza R et al. An air quality comparison in hospitality venues before and after the Italian smoking ban. *Epidemiol Prev* 2006; 30: 334–337.
9. Tominz R, Poropat C, Bovenzi M. Changes in PM10 and PM2.5 air levels in bars after the enforcement of the smoking ban in the Italian legislation. *Epidemiol Prev* 2006; 30: 325–333.

10. Valente P, Bacosi A, Cattani G et al. Monitoraggio dell'esposizione a fumo di tabacco ambientale nei pubblici esercizi prima e dopo l'entrata in vigore della legge sul fumo n.3/2003. *Proceedings of the 8th National Congress on Tobacco and National Health System*. Rome: National Institute of Health 2006. <http://www.iss.it/binary/ofad/cont/Monitoraggio%20ambientale%20e%20biologico.1153395055.pdf> (1 March, 2007, date last accessed).
11. Mirabelli D, Kauppinen T. Occupational exposures to carcinogens in Italy: an update of CAREX database. *Int J Occup Environ Health* 2005; 11(1): 53–63.
12. Kauppinen T, Toikkanen J, Pedersen D et al. Occupational exposure to carcinogens in the European Union. *Occup Environ Med* 2000; 57(1): 10–18.
13. Rossi S, Pizzi E, Mastrobattista L et al. Consumo di tabacco: mondiale e nazionale. *Proceedings of the 8th National Congress on Tobacco and National Health System*. Rome: National Institute of Health 2006. <http://www.iss.it/binary/ofad/cont/Consumo%20di%20tabacco.1164799746.pdf> (1 March, 2007, date last accessed).
14. Galeone D, Laurendi G, Vasselli S et al. Preliminary effects of Italy's ban on smoking in enclosed public places. *Tob Control* 2006; 15(2): 143.
15. Tobacco Observatory Newsletter 2007; 9: <http://www.ref-online.it/tobacco.asp> (1 March, 2007, date last accessed).
16. Barnoya J, Glantz SA. Cardiovascular effects of secondhand smoke: nearly as large as smoking. *Circulation* 2005; 111: 2684–2698.
17. Barone-Adesi F, Vizzini L, Merletti F et al. Short-term effects of Italian smoking regulation on rates of hospital admission for acute myocardial infarction. *Eur Heart J* 2006; 27: 2468–2472.
18. Italian Federation of Hospitality Industries. Anno 2006: si assestano le vendite di sigarette <http://www.fipe.it/fipe/index.htm> (1 March, 2007, date last accessed).