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Background—Several countries in the world have not yet prohibited smoking in public places. Few studies have been conducted on the effects of smoking bans on cardiac health. We evaluated changes in the frequency of acute coronary events in Rome, Italy, after the introduction of legislation that banned smoking in all indoor public places in January 2005.

Methods and Results—We analyzed acute coronary events (out-of-hospital deaths and hospital admissions) between 2000 and 2005 in city residents 35 to 84 years of age. We computed annual standardized rates and estimated rate ratios by comparing the data from prelegislation (2000–2004) and postlegislation (2005) periods. We took into account several time-related potential confounders, including particulate matter (PM_{10}) air pollution, temperature, influenza epidemics, time trends, and total hospitalization rates. The reduction in acute coronary events was statistically significant in 35- to 64-year-olds (11.2%, 95% CI 6.9% to 15.3%) and in 65- to 74-year-olds (7.9%, 95% CI 3.4% to 12.2%) after the smoking ban. No evidence was found of an effect among the very elderly. The reduction tended to be greater in men and among lower socioeconomic groups.

Conclusions—We found a statistically significant reduction in acute coronary events in the adult population after the smoking ban. The size of the effect was consistent with the pollution reduction observed in indoor public places and with the known health effects of passive smoking. The results affirm that public interventions that prohibit smoking can have enormous public health implications. **(*Circulation*. 2008;117:1183-1188.)**

Key Words: tobacco smoke pollution ■ prevention ■ myocardial infarction ■ heart diseases ■ social class

The adverse effects of exposure to environmental tobacco smoking (ETS) are well established.[1] Several well-conducted studies have shown a higher risk of coronary artery diseases, lung cancer, respiratory diseases, and stroke associated with exposure to passive smoke.[2] On the basis of this research, many countries have enacted legislation that prohibits smoking in public places, which include bars and restaurants. Smoking restrictions in the workplace have already been implemented in several European nations. A recent report illustrates the policies worldwide for ETS prevention.[3] Evidence is mounting that smoking bans reduce ETS exposure and respiratory symptoms among service industry workers and that they reduce hospitalizations for acute myocardial infarction (AMI) in the general population.[4–7] Because coronary heart disease is the leading cause of death in developed countries, even a small reduction in risk could lead to large public health gains.

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Several problems exist in evaluating the effect of antismoking laws on the occurrence of AMI in the general population, and the interpretation of individual "before-and-after" studies is hampered by several limitations.[8] National smoking bans, as enacted in most European countries, leave no control population unaffected by the ban. Time trends of coronary events may be related to factors other than ETS exposure, such as long-term trends, air pollution, temperature, influenza epidemics, changes in diagnostic behavior, and changes in preventive treatment.

On January 10, 2005, a comprehensive smoking ban was introduced throughout Italy, with strong sanctions for smokers as well as for business and workplace owners and managers.[9] The prohibition included all indoor public places, such as offices, retail shops, restaurants, pubs, and discos. The law was followed by a widespread reduction in ETS exposure and considerable improvement in indoor air quality. A recently published study monitored concentrations of fine (particulate matter <2.5 μm in diameter [$PM_{2.5}$]) and ultrafine (<0.1 μm in diameter) particles in 40 public places in Rome before and after the introduction of the smoking ban (after 3 and 12 months). In the postlegislation period, indoor $PM_{2.5}$ decreased significantly from a mean concentration of 119.3 $\mu g/m^3$ to 38.2 $\mu g/m^3$ after 3 months, and then to 43.3 $\mu g/m^3$ 1 year later. Ultrafine particle concentrations also decreased significantly from 76 956 particles/mL to 38 079 particles/mL and then to 51 692 particles/mL. Similarly, the concentrations of urinary cotinine among nonsmoking workers decreased from 17.8 to 5.5 ng/mL and then to

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3.7 ng/mL.[10] At the same time, the per capita sale of cigarettes declined in 2005 compared with 2004 and the sale of nicotine-replacement products increased,[11] which suggests that the smoking ban in Italy reduced both active smoking and passive smoking exposures.

We evaluated changes in acute coronary event rates in residents of Rome from 2000–2004 to 2005, after the smoking ban, while taking into account the effect of several potential factors that could confound the association. We postulated that the effect of the smoking ban would be small (<15%, as previously suggested) and would be more evident in young people.[7,12]

Methods

Area of the Study and Population Data

The study was conducted on residents of Rome between 35 and 84 years of age (total population of ≈2.7 million) between 2000 and 2005. Annual population data by gender and age (in 5-year age groups) were obtained from the municipal population register.

Data on Acute Coronary Events

Episodes of acute coronary events in the population were obtained from 2 reliable population registers: the hospital discharge database, which records all hospitalizations of city residents at public and private hospitals in Rome, and the regional register of causes of deaths, which includes all deaths of city residents regardless of where in the country they occurred. To evaluate occurrence rates in the total population, we evaluated both out-of-hospital deaths and hospitalized cases.

We defined hospitalizations for acute coronary events from all discharge reports of residents of Rome (35 to 84 years of age) between 2000 and 2005 that listed a principal diagnosis of "acute myocardial infarction" (as subsequently defined) and "other acute and subacute forms of ischemic heart disease" (International Classification of Diseases, 9th Revision, Clinical Modification [ICD-9-CM] code 411). We defined hospitalizations for AMI as all discharges with a principal diagnosis of AMI (ICD-9-CM code 410) or a secondary diagnosis of AMI when the principal diagnosis indicated AMI complications (427.1, paroxysmal ventricular tachycardia; 427.41, ventricular fibrillation; 427.42, ventricular flutter; 427.5, cardiac arrest; 428.1, left heart failure; 429.5, rupture of chordae tendineae; 429.6, rupture of papillary muscle; 429.71, acquired cardiac septal defect; 429.79, mural thrombus atrial/ventricular acquired, after myocardial infarction; 429.81, other disorders of papillary muscle; 518.4, acute edema of lung, unspecified; 780.2, syncope and collapse; 785.51, cardiogenic shock; 414.10, aneurysm of heart [wall]; and 423.0, hemopericardium). We considered 2 events that occurred within 28 days of each other as a single episode.

Individual records from the mortality register (using a personal identification number) were compared with hospital discharge records to identify out-of-hospital coronary deaths. These were deaths due to ischemic heart diseases listed on the death certificate (ICD-9 410 to 414), with no evidence of hospital admission for coronary causes in the previous 28 days and no evidence of hospitalization for any cause in the previous 2 days.

Environmental and Population Characteristics

Several factors that vary over time may confound the association between a smoking ban and acute coronary events. We collected daily mean data on particulate matter with an aerodynamic diameter <10 μm (PM_{10}) from 4 fixed monitors located in residential areas and run by the regional Environmental Protection Agency. We also considered influenza epidemics (based on estimates of weekly influenza incidence, as reported by the Italian National Health Service) and holidays. The Italian Air Force Meteorological Service provided daily apparent temperature (a climatological index that indicates the combined effect of air temperature and humidity).[13] Data on cigarette sales in Rome during 2003 to 2005 were provided by the Italian National Health Institute (Istituto Superiore di Sanità). Data on population smoking habits (≥15 years) for the region of Rome during the years 2000 to 2003 and 2005, based on health surveys, were provided by the National Institute of Statistics (ISTAT).

We used a small-area index based on 2001 census data as a measure of socioeconomic position.[14] We considered census information that represents various aspects of deprivation (education, occupation, home ownership, family composition, and nationality) from the 4888 census blocks in Rome with at least 50 inhabitants (average population 500 people). We performed a factor analysis and created a composite index of socioeconomic position, distributed in quintiles. Income data were not available.

Statistical Analyses

We computed directly age-standardized rates of annual acute coronary events considering the population of Rome on January 1 of each year as the denominator (European population as standard). A priori, we stratified the analyses into 3 age groups (35 to 64 years, 65 to 74 years, and 75 to 84 years of age) with the hypothesis that ETS exposure is higher in people of working age than among the very elderly. To evaluate changes over time, we used Poisson regression analyses on the calendar-time axis from January 1, 2000, to December 31, 2005. The number of daily episodes was the dependent variable, whereas daily predictors included air pollution, flu epidemics, a binary variable for holidays, and apparent temperature. For the latter, we used a linear spline with knots at 20°C and 26°C to accommodate nonlinear relationships.[15] The gender and age distribution of the at-risk population was always considered as the offset variable. From the Poisson regression, we estimated relative rates (RRs; with 95% confidence intervals [CIs]) of acute coronary events occurring after January 10, 2005, with those that occurred before implementation of the ordinance.

Additional adjusted analyses using annual variables and subgroup analyses were conducted. To consider the effect of time trends in the occurrence of acute coronary events, we adjusted for a linear time term from 2000 to 2005. We also considered annual all-cause hospitalization rates for residents of Rome (from the age groups considered) as an adjustment factor to take into account that changes in the occurrence of acute coronary events may reflect the overall trends of hospital use. Finally, we also compared data from 2005 with data from 2004. Stratified analyses were conducted to evaluate possible gender and socioeconomic differences in the effect of the smoking ban. We performed separate analyses for out-of-hospital coronary deaths and hospitalizations. Finally, we analyzed incident cases only, namely, only people with a first event who had no admissions for an acute coronary event in the previous 4 years (ICD-9-CM 410, 411, or 412, any position) and no secondary diagnosis of previous AMI (ICD-9-CM 412) in the index hospitalization. Effect modification was evaluated with a log-likelihood ratio test.

The authors had full access to and take full responsibility for the integrity of the data. All authors have read and agree to the manuscript as written.

Results

Over the period studied, a small increase occurred in the total population of the 3 age groups, which was largest in the oldest group (Table 1). A decrease in all-cause hospital admission rates in the 3 age groups was evident. Slight changes occurred in population (≥15 years) smoking habits: The prevalence of smoking decreased from 34.9% to 30.5% in men and from 20.6% to 20.4% in women. Cigarette sales also decreased in Rome in 2005 compared with 2004 (−5.5%). Table 1 summarizes the statistics of the daily variables. The average concentrations of PM_{10} decreased (from 46 $\mu g/m^3$ in 2000 to 39 $\mu g/m^3$ in 2005), as did the number of days per year that PM_{10} rose above 50 $\mu g/m^3$ (144 days in 2000 versus 73 in 2005). Annual mean apparent temperature did not vary, but the number of days per year with temperatures above 25°C varied considerably, from 47

Table 1. Characteristics of the Study Population and Predictors of Coronary Events by Year, Rome, 2000 to 2005

	2000	2001	2002	2003	2004	2005
Residents of Rome by age group						
35–64 y						
n	1 166 559	1 177 232	1 188 821	1 193 984	1 201 227	1 208 986
Women, %	52.0	52.0	51.9	51.9	51.9	51.9
65–74 y						
n	284 981	287 982	290 260	293 154	298 232	303 985
Women, %	56.0	55.8	55.8	55.7	55.6	55.6
75–84 y						
n	156 039	161 103	168 554	177 071	184 695	191 600
Women, %	62.4	62.3	62.2	61.9	61.9	61.6
All-cause age-standardized hospitalization rates (×1000 inhabitants)						
35–64 y	112	103	102	100	100	98
65–74 y	254	232	229	225	225	220
75–84 y	356	318	319	316	312	310
Population smoking habit (≥15 y)						
Men, %						
Ex-smokers	28.6	28.0	29.9	27.3	...	33.0
Moderate smokers (<20 cigarettes/d)	29.8	29.2	29.1	31.2	...	26.2
Heavy smokers (≥20 cigarettes/d)	5.1	6.3	4.5	5.0	...	4.3
Women, %						
Ex-smokers	12.5	11.3	11.4	13.4	...	12.8
Moderate smokers (<20 cigarettes/d)	20.0	20.4	20.6	18.9	...	19.9
Heavy smokers (≥20 cigarettes/d)	0.6	1.4	1.1	0.8	...	0.5
Cigarette sales, kg · 10^3	...	...	...	8313	8135	7690
Airborne particulate matter, PM_{10}, $\mu g/m^3$						
Mean (SD)	46.2 (16.1)	44.5 (14.8)	43.0 (19.8)	42.0 (14.8)	42.1 (16.8)	39.4 (14.6)
No. of days with PM_{10} >50 $\mu g/m^3$	144	115	94	85	92	73
Apparent temperature, °C, mean (SD)	15.5 (8.2)	15.8 (7.9)	16.3 (8.3)	16.3 (9.5)	15.3 (8.7)	14.8 (9.3)
No. of days with temperature >25°C	47	54	72	89	65	69
No. of days with temperature <5°C	44	33	25	54	50	82
No. of days of flu epidemics	13	7	19	9	11	20
Holiday days	13	13	9	10	9	10

in 2000 to 89 in 2003. Similarly, the number of days under 5°C varied, ranging from 25 in 2002 to 82 in 2005. The number of days of flu epidemics ranged from 7 in 2001 to 20 in 2005. The number of holidays varied from 9 in 2002 and 2004 to 13 in 2000 and 2001.

Table 2 illustrates the annual number of events and the annual age-standardized rates of acute coronary events for the 3 age groups. The test for trend indicated decreased annual rates in people 35 to 64 years of age, no trend in those 65 to 74 years old, and an upward trend in 75- to 84-year-olds. Compared with data from the years 2000 to 2004, a statistically significant reduction occurred in acute coronary events after the smoking ban in 35- to 64-year-olds (RR 0.89, 95% CI 0.85 to 0.93) and in 65- to 74-year-olds (RR 0.92, 95% CI 0.88 to 0.97). No evidence was found of an effect in the oldest group studied (75- to 84-year-olds).

Table 3 shows results from additional adjusted analyses and subgroup analyses of the 35- to 64-year and 65- to

Table 2. Age-Standardized Rates and Rate Ratios* of Acute Coronary Events by Age Group and Year

	35–64 y*				65–74 y†				75–84 y*			
Year	n	Rate (×1000)	RR	95% CI	n	Rate (×1000)	RR	95% CI	n	Rate (×1000)	RR	95% CI
2000	2433	2.05	1.00	...	2093	7.30	1.00	...	1783	11.44	1.00	...
2001	2363	1.98	0.97	0.92–1.03	2131	7.33	1.02	0.96–1.09	1922	11.91	1.06	1.00–1.13
2002	2538	2.13	1.04	0.98–1.10	2239	7.66	1.08	1.01–1.14	2158	12.69	1.15	1.08–1.22
2003	2324	1.95	0.96	0.91–1.02	2336	7.86	1.12	1.06–1.19	2365	13.15	1.20	1.13–1.28
2004	2281	1.92	0.92	0.87–0.98	2227	7.39	1.03	0.97–1.10	2382	12.65	1.15	1.08–1.22
2005	2136	1.80	0.87	0.82–0.92	2126	6.95	0.97	0.91–1.03	2477	12.59	1.15	1.08–1.23
Post–smoking ban (2005) vs pre–smoking ban (2000–2004)	...	...	0.89	0.85–0.93	...	...	0.92	0.88–0.97	...	...	1.02	0.98–1.07

*Rate ratios are from a Poisson regression model of daily acute coronary events considering PM_{10}, flu epidemics, holidays, and apparent temperature.
*P_{trend} (year)<0.001; †P_{trend} (year)=.578.

74-year age groups. The effect of the smoking ban on both age groups remained after adjustment for the temporal trend of acute coronary events. Adjustment for annual all-cause (directly standardized) hospitalization rates did not change the results substantially from the main analysis. When we simultaneously adjusted the same model for both time trends and hospitalization rates, as a way to test the robustness of the findings to an extreme correction, the results were borderline statistically significant in the youngest group (RR 0.94, 95% CI 0.89 to 1.01) and basically unchanged in the 65- to 74-year-olds (RR 0.90, 95% CI 0.84 to 0.96). When we compared post–smoking ban data with those from the previous year only, the effect was slightly attenuated in both age groups (RR 0.94, $P=0.040$ for 35- to 64-year-olds; RR 0.94, $P=0.044$ for 64- to 74-year-olds). Although the interaction between gender and the smoking ban was not statistically significant, the effect of the ordinance was statistically significant on men but not on women. The protective effect of the law seemed to be stronger for residents living in low socioeconomic census tracts than for those living in high socioeconomic areas, even though no evidence was found of a statistically significant interaction. In both age groups, out-of-hospital deaths and hospitalizations decreased. The effect of the smoking ban was slightly attenuated when we

Table 3. Results of Additional Adjusted Analyses and Subgroup Analyses of the Association Between the Italian Smoking Ban and Acute Coronary Events in 35- to 64-Year-Olds and 65- to 74-Year-Olds

	35–64 y			65–74 y		
	n	RR*	95% CI	n	RR*	95% CI
All events						
Main analysis	2136	0.89	0.85–0.93	2126	0.92	0.88–0.97
Adjusted for time trend	2136	0.93	0.88–0.99	2126	0.88	0.83–0.94
Adjusted for all-cause hospitalization rates	2136	0.90	0.86–0.95	2126	0.89	0.85–0.94
Adjusted for time trends and all-cause hospitalization rates	2136	0.94	0.88–1.01	2126	0.90	0.84–0.96
By gender						
Only men	1712	0.88	0.84–0.93	1408	0.90	0.85–0.96
Only women	424	0.90	0.81–1.00	718	0.95	0.88–1.04
By socioeconomic position (quintiles)						
1 (High)	340	0.92	0.82–1.03	342	0.97	0.86–1.09
2	383	0.90	0.81–1.01	388	0.90	0.81–1.01
3	408	0.88	0.79–0.98	465	0.97	0.87–1.07
4	470	0.90	0.81–0.99	417	0.83	0.75–0.92
5 (Low)	535	0.85	0.77–0.93	514	0.94	0.86–1.04
By type of event						
Out-of-hospital deaths	224	0.85	0.74–0.99	312	0.84	0.74–0.95
Hospital events	1912	0.89	0.85–0.94	1814	0.94	0.89–0.99
Only incident cases	1680	0.93	0.88–0.98	1528	0.95	0.90–1.01

*All rate ratios comparing 2005 vs 2000–2004 are adjusted for PM_{10}, flu epidemics, holidays, and apparent temperature.

considered only incident cases (RR 0.93, 95% CI 0.88 to 0.98 for 35- to 64-year-olds; RR 0.95, 95% CI 0.90 to 1.01 for 65- to 74-year-olds).

Discussion

After smoking was banned in all public places in Italy, we observed in the population of Rome fewer acute coronary events (11.2% fewer in the 35- to 64-year-old population and 7.9% fewer in 65- to 74-year-olds) than in previous years. No evidence was found of a reduction in coronary episodes in people >74 years of age. Men in the youngest population and young people living in low socioeconomic census blocks appeared to have the greatest reduction after the smoking ban. The effects seen were robust in several additional adjusted analyses.

The smoking ban in Rome led to a reduction in exposure to passive smoking, as confirmed by improved indoor air quality measured in public places, and a reduction of active smoking, as shown by the decrease in cigarettes sales and the increase in the sale of nicotine-replacement products reported in 2005.[10,11] The main scientific question was to evaluate the extent to which the effect on acute coronary events was due to a reduction in passive smoking exposure and how much instead was due to a reduction in active smoking. We tried to address this issue using the data from the National Institute of Statistics on smoking prevalence in the periods 2000 to 2004 and 2005 in the region of Rome (presented in Table 1). We derived from the literature different relative risks of acute coronary events for the 3 categories of active smoking: relative risk 2 to 4 for heavy smokers, 1.8 to 3 for moderate smokers, and 1.5 to 2.5 for ex-smokers.[12,16] Using these parameters in a simple formula proposed by Barone-Adesi and colleagues,[7] the estimated reduction in coronary events attributable to changes in active smoking habits was <2%. On the other hand, assuming that exposure to passive smoking in public places is associated with a relative risk of 1.3 for coronary events, a significant reduction of exposure among never-smokers and ex-smokers as suggested in a recent United Kingdom study[17] (eg, from 50% to 60% to as low as 10% to 15%) could lead to a large decrease (10% to 15%) in coronary events. As a result, it is likely that the health benefits seen in the present study are the result of a significant reduction in exposure to passive smoking.

Two studies on the effect of smoking bans in the United States found strong reductions in AMI (36% to 40%), and an Italian study based on data from the first 6 months of 2005 found similar results (a 12% decrease in people <60 years of age).[5–7] However, the first study counted only 24 hospital admissions for AMI from a small community in Montana in the 6 months after the ban. The Italian study evaluated data from a short period and did not control for time trends and other potential confounders. The present study, therefore, is the first in Europe to evaluate the effect of a smoking ban on acute coronary events over 1 year, to consider several other determining factors, and to compare the postlegislation data with a long reference period.

The present study has many strengths, including the large number of cases, the selection of both hospitalized cases and out-of-hospital deaths, and the fact that we controlled for temperature, air pollution, flu epidemics, and holidays, all factors known to be associated with acute coronary events. Specific effects were investigated according to socioeconomic position and gender.

The smoking ban took effect nationally, which means no control population was available, and this aspect represents the present study's major weakness.[4,7] A comparison with a city in another country, such as Paris, France, or Athens, Greece, would have led to comparability issues because of marked differences in smoking habits and time trends in these countries. Because no solution to this problem existed, we decided to perform several additional analyses, including considering the time trend and adjusting for total hospitalization rates. The model with a simple time trend in acute coronary events may take into account all unmeasured confounders that change over time. A decline in all-cause hospital admissions also occurred in all age groups considered, which possibly reflected a change in health service organization independent of the specific cause of the hospitalization. However, acute coronary events necessitate hospital treatment. In any case, results did not vary substantially when we adjusted for overall hospitalization rates in the Poisson regression. We were specifically interested in evaluating a reduction in the number of episodes of acute coronary syndrome, not just incident cases. This implies some intraindividual correlation. However, when we analyzed incident cases only, a statistically significant reduction in acute coronary events among 35- to 64-year-olds remained. Finally, we studied 3 different age groups, with the hypothesis that the elderly would be less likely to be affected by a ban of smoking in public. The weaker effect on 65- to 74-year-olds compared with 35- to 64-year-olds and the lack of effect on the elderly (75 to 84 years old) support our hypothesis.

Alternative explanations for the reduction were investigated. During the study period, new diagnostic criteria for AMI were implemented because of the new European Society of Cardiology/American College of Cardiology definition[18] (ie, measurement of troponin levels became available in hospitals in Rome). It is reasonable to consider that these changes could have caused an increase in acute coronary hospital admissions starting in 2002 to 2003. One factor that could have influenced the observed decrease is the change in cardiac medications. In Italy, the daily defined doses of statins increased from 10 to 55 per 1000 residents per day during the study period, and these medicines are used more often in Rome than in other areas of the country.[19] Because statins are generally prescribed to people <75 years of age, an increase in their use actually could be responsible for at least part of the decrease. Nevertheless, when we considered a time-trend term in the analysis, we took into account the linear changes of various unmeasured factors, such as the use of statins, and we still obtained a statistically significant reduction in acute coronary events after the smoking ban.

Because the prevalence of cigarette smoking is not evenly distributed across socioeconomic groups of the population, Koh and colleagues[3] indicate that tobacco control is a fundamental effort in eliminating health inequalities. A variety of interventions have been undertaken, such as increased taxation, the availability of nicotine-replacement therapies, and limits on advertising and sponsorship, but it is not clear whether they help all socioeconomic groups equally or whether they are more effective with the affluent portion of the society, therefore

increasing socioeconomic inequalities. In general, an impoverished smoker who attempts to quit is more likely to fail than an affluent smoker.[20,21] Siahpush and colleagues[22] showed that affluent people are responsible for more of the calls to telephone quit lines, and hard-hitting advertisements on the health risks of smoking did not alter that distribution. A modeling study on the smoking ban in the United Kingdom urged the government to extend the ban to all public places and not to limit the prohibition to pubs that serve food, to prevent increases in socioeconomic inequalities.[23] In the present study, we found a stronger effect of the ban on low socioeconomic groups than on more affluent members of the population, which indicates that a comprehensive ban could contribute effectively to the reduction of inequalities in health.

In conclusion, this study indicates that the Italian smoking ban of 2005 had a measurable impact on health. Because coronary heart diseases are the leading causes of death in Italy and elsewhere, even the small reduction we observed could have enormous public health implications.

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Disclosures

None.

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CLINICAL PERSPECTIVE

The adverse health effects of environmental tobacco smoke are well established; they include lung cancer and respiratory and cardiovascular diseases. Coronary artery disease has been clearly associated with exposure to passive smoking, and the physiopathological mechanisms of this association are well understood. In several countries around the world, laws banning smoking in public places have been implemented to protect people's health, but the evidence of their beneficial health effects has remained limited. The aim of this study was to evaluate the effect of the national comprehensive smoking ban on population rates of acute coronary events in Rome, the largest Italian city. Both out-of-hospital cardiac deaths and hospitalizations were considered. During the first year of implementation of the law, fewer coronary events than in previous years were observed in subjects 35 to 64 years old (an 11.2% decrease) and in subjects 65 to 74 years old (a 7.9% decrease). No evidence was found of a reduction in acute coronary events in the population over 74 years of age, possibly because their exposure levels were less influenced. Subjects of low socioeconomic position had the greatest reduction in acute coronary events after the smoking ban. These data strengthen preliminary findings from the United States and Europe and show that smoking bans are simple and effective interventions for improving public health. Because coronary heart disease is the leading cause of death, even a small proportional reduction could have tremendous public health implications.