

eAppendix

Confidence Intervals

Confidence intervals for the numbers of average annual smoking-attributable deaths in the U.S. from 2002-2006 were constructed using a bootstrap technique. One thousand sets of estimates of age-specific death rates for never-smokers; hazard ratios by smoking status, adjusted for confounding factors; and smoking prevalence were selected by sex and used to produce estimates of smoking-attributable deaths with the method described in the main article. Values for death rates were randomly selected from a negative binomial distribution with mean μ equal

to the observed sample rate and distribution parameter θ equal to $\frac{\mu^2}{\sigma^2 - \mu}$, where σ^2 equals the

observed sample variance. Values for hazard ratios were randomly selected from a log-normal distribution with mean and variance equal to the observed sample log hazard ratios and their variance. Values for smoking prevalence were randomly selected from a normal distribution with mean and variance equal to the observed sample proportion and variance. Supplementary Table 1 presents the results.

Hazard Ratios during Follow-Up

Hazard ratios by smoking status were also estimated with the same procedure and control variables as in the main analysis, but with a shorter follow-up period to evaluate the consistency of the ratios over time. Follow-up time was limited to the end of the following two calendar years for each of the National Health Interview Survey cohorts, as opposed to the follow-up time averaging six years that was used in the main analysis. Results shown in Supplementary Table 2

indicate that the overall hazard ratios for ages 35 and over from the shorter follow-up period were similar to those from the longer follow-up period. These results indicate that the hazard ratios by smoking status were generally consistent during the follow-up period. There are differences for some of the hazard ratios, particularly for current smokers at younger and oldest ages. Much of the differences for these hazard ratios results from imprecision in the estimates due to small numbers of observed deaths, particularly for the shorter follow-up period.

eTable 1. Estimates of smoking-attributable deaths and confidence intervals, by age and sex: U.S., 2002-2006

Age Group	Males		Females	
	Smoking – Attributable Deaths	95% Confidence Interval	Smoking – Attributable Deaths	95% Confidence Interval
35-44	10,518	5,225; 19,580	11,059	6,064; 19,662
45-54	23,266	13,061; 36,380	14,699	8,381; 23,510
55-64	49,042	30,133; 68,525	26,042	16,436; 39,651
65-74	89,353	64,410; 121,220	60,214	45,475; 78,456
75-84	104,756	74,497; 146,546	74,978	58,027; 93,738
85+	14,046	1,539; 31,193	41,914	27,668; 71,846
Total	290,981	247,344; 356,564	228,906	200,691; 266,892

eTable 2. Hazard ratios for smokers with 2.5 and 6 year follow-up periods, by sex and age: National Health Interview Survey participants, 1997-2006.

a) Males

	Age						
	35+	35-44	45-54	55-64	65-74	75-84	85+
2.5 Years of Follow-Up							
Former Smoker	HR	HR	HR	HR	HR	HR	HR
Current Smoker < 1 pack a day	1.42	0.94	1.41	1.65	1.65	1.39	1.20
Current Smoker >= 1 and < 2 packs a day	2.11	1.38	1.80	2.68	2.71	1.93	1.24
Current Smoker >= 2 packs a day	2.48	1.87	2.38	2.57	3.12	2.31	1.92
Current Smoker >= 2 packs a day	3.55	3.01	2.58	4.19	4.83	3.15	2.92
6 Years of Follow-Up							
Former Smoker	HR	HR	HR	HR	HR	HR	HR
Current Smoker < 1 pack a day	1.41	1.34	1.33	1.53	1.61	1.56	1.10
Current Smoker >= 1 and < 2 packs a day	2.12	1.53	1.65	2.53	2.88	2.06	1.22
Current Smoker >= 2 packs a day	2.32	1.86	1.98	2.29	3.01	2.36	2.17
Current Smoker >= 2 packs a day	3.21	3.21	1.97	3.65	4.57	3.31	1.72

b) Females

	Age						
	35+	35-44	45-54	55-64	65-74	75-84	85+
2.5 Years of Follow-Up							
Former Smoker	HR	HR	HR	HR	HR	HR	HR
Current Smoker < 1 pack a day	1.54	1.68	1.25	1.68	1.80	1.56	1.26
Current Smoker >= 1 and < 2 packs a day	2.23	2.46	1.73	1.86	2.50	2.85	1.26
Current Smoker >= 2 packs a day	2.66	3.53	2.34	2.77	2.80	2.38	2.32
Current Smoker >= 2 packs a day	3.88	7.17	4.29	3.66	3.33	2.07	3.65
6 Years of Follow-Up							
Former Smoker	HR	HR	HR	HR	HR	HR	HR
Current Smoker < 1 pack a day	1.58	1.69	1.35	1.53	1.99	1.60	1.38
Current Smoker >= 1 and < 2 packs a day	2.23	2.39	1.80	1.73	2.57	2.66	1.64
Current Smoker >= 2 packs a day	2.56	3.26	2.28	2.36	3.03	2.32	1.89
Current Smoker >= 2 packs a day	3.80	6.35	3.13	4.57	3.28	1.90	4.14

HR = hazard ratio.

Note: Hazard ratios for 2.5 years of follow-up were based on follow-up for each NHIS cohort through the end of the following two calendar years. Hazard ratios for 6 years of follow-up were based on follow-up for the 1997-2004 NHIS cohorts through the end of 2006, for an average of six years of follow-up.