SPEC L R CLE

to smoking. There were two reasons for using these indirect indicators of smoking. First, for most study areas, data on the prevalence of smoking are not available for the late 1970s and early 1980s, and second, the measures for lung cancer and COPD indicate the population's cumulative exposure to smoking. The *International Classification of Diseases, 10th Revision* (ICD-10) was used to calculate death rates for lung cancer (ICD-10 codes C33-C34 and D02.1-D02.2) and COPD (ICD-10 code J40-J44). The death rates were based on the underlying cause of death in individual death records from national mortality statistics and population data from the U.S. Census, pooled for the same 5-year periods as life expectancy. Death-

inonahd7-31(i)20(a)-29((p)-h)2(e)-2s7-34(-)257-34-11(v)-24(T54(p)-16(a)-24)8-214(d)2(7-31(r)-20(i))8-214(r(i))8-21

The

tration of 10 μg per cubic meter was associated with mean (±SE) reductions in life expectancy of 1.19±0.27 years from 1978 to 1982 and 2.02±0.50

regression line, indicating that factors other than changes in air pollution were influencing the changes in life expectancy.

Table 2 shows regression coefficients for the association between increases in life expectancy and reductions in $PM_{2.5}$ for models with various combinations of socioeconomic and demographic

proxy variables for the prevalence of smoking or

tributed to measurable improvements in human health and life expectancy in the United States.

Supported by a cooperative agreement with the Centers for Disease Control and Prevention; by grants from the Association of Schools of Public Health (U36/CCU300430-23), the Harvard Environmental Protection Agency (EPA) Particulate Matter Center (EPA RD832416), and the National Institute of Environmental Health Sciences (ES0002); and funds from the Mary Lou Fulton Professorship, Brigham Young University.

Dr. Dockery reports receiving grant support from the Health Effects Institute. No other potential conflict of interest relevant to this article was reported.

The contents of this article are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Association of Schools of Public Health. Although funded in part by the EPA, this study has not been subjected to the agency's peer- and policy-review process and therefore does not necessarily reflect the views of the agency, and no official endorsement should be inferred.

REFERENCES