

## ABSTRACT

### FINE PARTICULATE MATTER AND ACUTE MYOCARDIAL INFARCTIONS: A RETROSPECTIVE STUDY

Heart disease is the leading cause of death in the United States and air pollution is thought to increase the occurrence of heart disease problems. The purpose of this study was to determine if there is a relationship between the incidence rates of hospital admissions for acute myocardial infarction (AMI) and ambient fine particulate matter (PM<sub>2.5</sub>) in Fresno, California. The City of Fresno resides in the San Joaquin Valley Air Pollution Control District, an area that is in non-attainment with the federal ambient air standard for PM<sub>2.5</sub>.

The daily, weekly, monthly, and seasonal average PM<sub>2.5</sub> concentrations and AMI totals data sets were visually analyzed as time-series line graphs and statistically analyzed by correlation-regression (95% Confidence Coefficient). The results of the analyses were mixed. A significant correlation was seen in the year 2000, however, other years covered by the study (2001-2003) did not show a significant correlation between the two variables.

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