

## **Measuring Health Effects of Wildfire-Generated Air Pollution**

The linkage between air pollution and human health is a well-researched area with a long-standing tradition. Similarly, the impact of wildfires on air quality has been thoroughly examined by the physical sciences in recent decades. Somewhat surprisingly, however, few if any studies have explored the direct link between specific wildfire occurrences and health outcomes. This study aims to bridge this gap using information on 35 large-scale wildfires in the California and Nevada Sierras that have sent smoke plumes to the Reno / Sparks area of Northern Nevada over a three-year period. We relate the specific attributes of these fires, such as distance and fuel load, to daily data on local hospital admissions for acute respiratory syndrome. In our econometric framework we take care to identify fire-induced pollution and health effects separately from respiratory ailments related to other factors, such as seasonally varying baseline pollution and epidemiological conditions. Using available information on treatment expenses, we compute the per-acre cost of wildfires of different attributes with respect to respiratory admissions.