AAP Journals BLOG

Wildfires and Respiratory Health in Young Children

March 25, 2021

Every fall, the western US experiences wildfires. Why in the fall? There is more moisture in the winter and early spring – but during the later spring and summer, the warmer temperatures cause drying of the trees and leaves.

Rachel Y. Moon, MD, Associate Editor, Digital Media, Pediatrics

Article type: Blog

Every fall, the western US experiences wildfires. Why in the fall? There is more moisture in the winter and early spring – but during the later spring and summer, the warmer temperatures cause drying of the trees and leaves.

These wildfires are becoming increasingly common and increasingly severe, and it is anticipated that this will continue to be true. At least part of this is the impact of climate change – temperatures are warmer in the late spring and summer, and thus there is more drying of the vegetation. Winds are often stronger as well, which exacerbates the wildfires.

Why do we as pediatricians need to worry about wildfires? Dr. Rosana Aguilera and colleagues at UC-San Diego have published an important paper (10.1542/peds.2020-027128), which is being early released by *Pediatrics* this week, about the impact of the wildfire smoke on children's respiratory health.

The authors measured daily exposure to wildfire smoke and the wildfire-specific particulate matter ($PM_{2.5}$) levels in each zip code in the San Diego area over the course of 6 years (2011-2017). They also reviewed emergency department and urgent care visits in the Rady's Children's Hospital network, which is the largest pediatric provider in San Diego County, for acute respiratory visits.

What did they find? The particulate matter in the pollution from wildfires is 10 times more harmful to children's respiratory health than other types of pollution, and this is especially true for children 0-5 years of age!

It is yet unclear whether this will have long-term effects on children's health, but the authors cite data that early exposure to wildfire smoke is associated with decreased lung function in adolescent monkeys. There are important public health and policy implications of this paper, and I encourage you to read the entire paper to learn more about this recent threat to children's health.

- Global Climate Change and Children’s Health
- Disaster Preparedness in Neonatal Intensive Care Units
- Effectiveness of Evidence-Based Asthma Interventions
- Facebook
- Instagram