
Wildfire Smoke, Excessive Heat and Health

*House Interim Committee on Environment
and Natural Resources
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The logo for the Oregon Health Authority. The word "Oregon" is in orange, "Health" is in blue, and "Authority" is in orange. The word "Health" is significantly larger than the other two words and is positioned in the center. The word "Oregon" is positioned above the "H" and "e" of "Health". The word "Authority" is positioned below the "t" and "h" of "Health".

Oregon
Health
Authority

Health Implications: Smoke Affects...

- Heart function (heart attack, irregular heart rhythm)
- Lung function (worsened lung function, asthma attack)
- Pregnancy outcomes (pre-term birth, low birth weight)
- Nuisance symptoms (eye irritation, scratchy throat, mild cough)

Populations at Smoke Risk

Sensitive

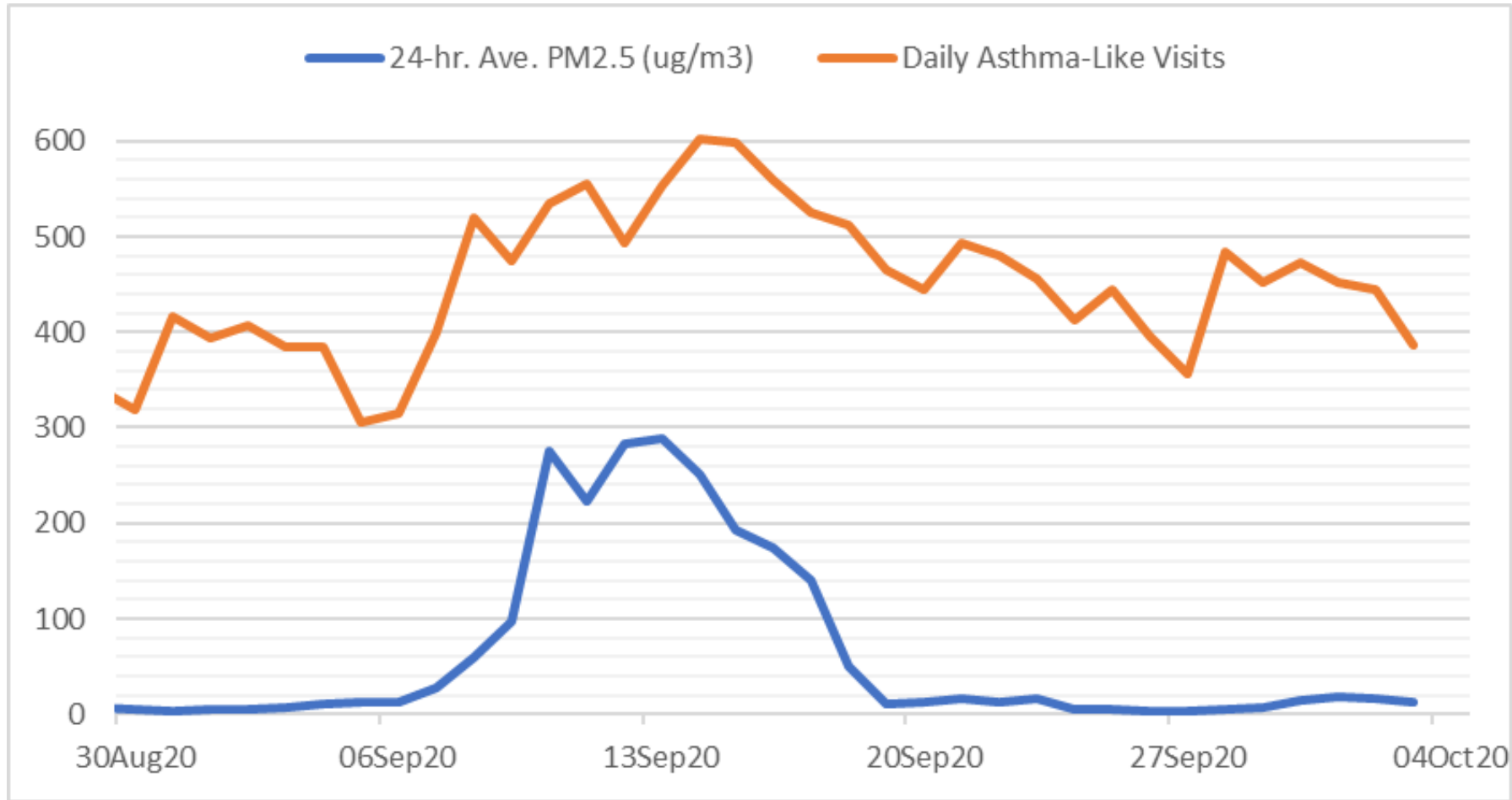
- Pre-existing heart and respiratory disease, allergies
- Elderly, infants and children, pregnant women (fetus)
- Healthy subjects can also be affected; some may not

Vulnerable

- Working or living downwind of smoke (e.g. migrant and seasonal farmworkers)
- Labored breathing (heavy work, exercise)
- Unsheltered people
- Low income

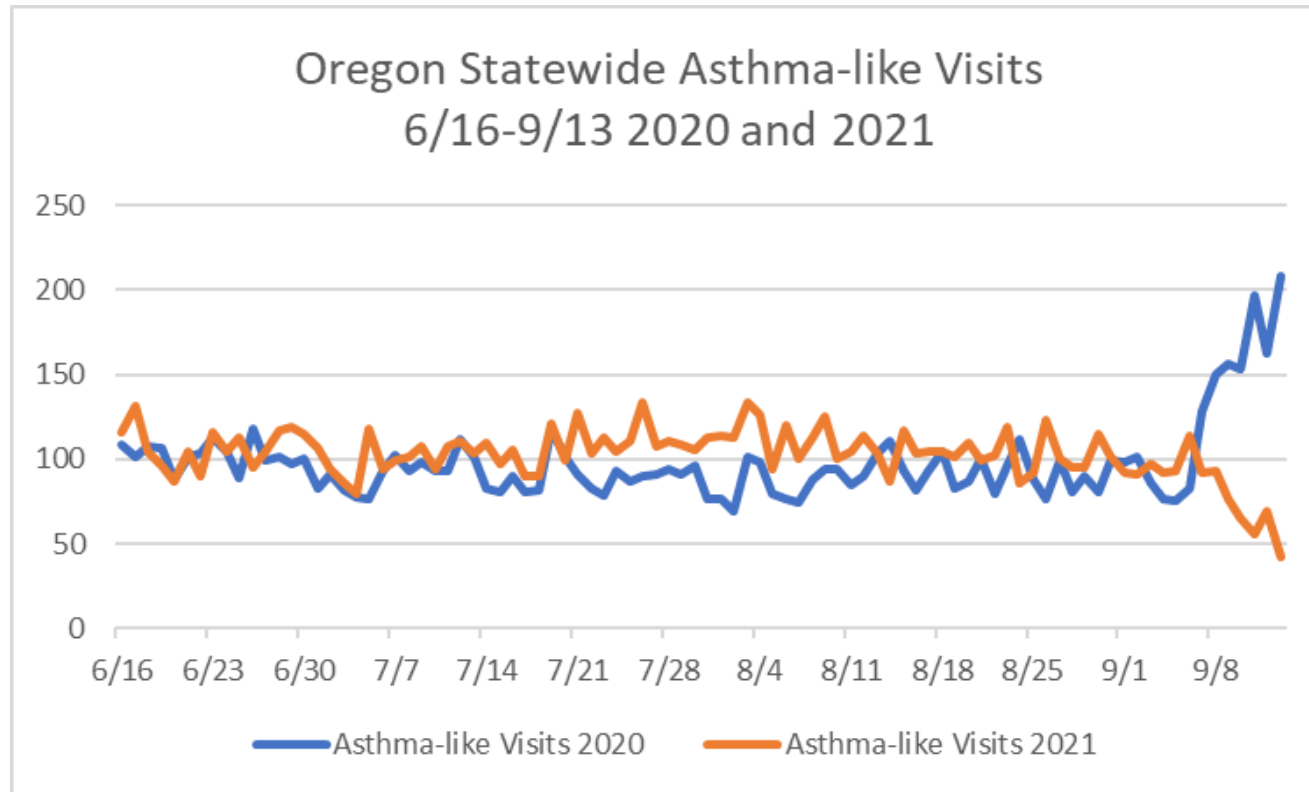


September 2020 Wildfire Health Impacts



- PM2.5 daily 24-hr average concentrations (provisional data from state, regional and tribal air quality monitoring)
- Emergency department and urgent care asthma-like visits from near-real-time syndromic surveillance (ESSENCE)

Interim Oregon Statewide Wildfire Smoke Health Impacts: 2021 vs 2020



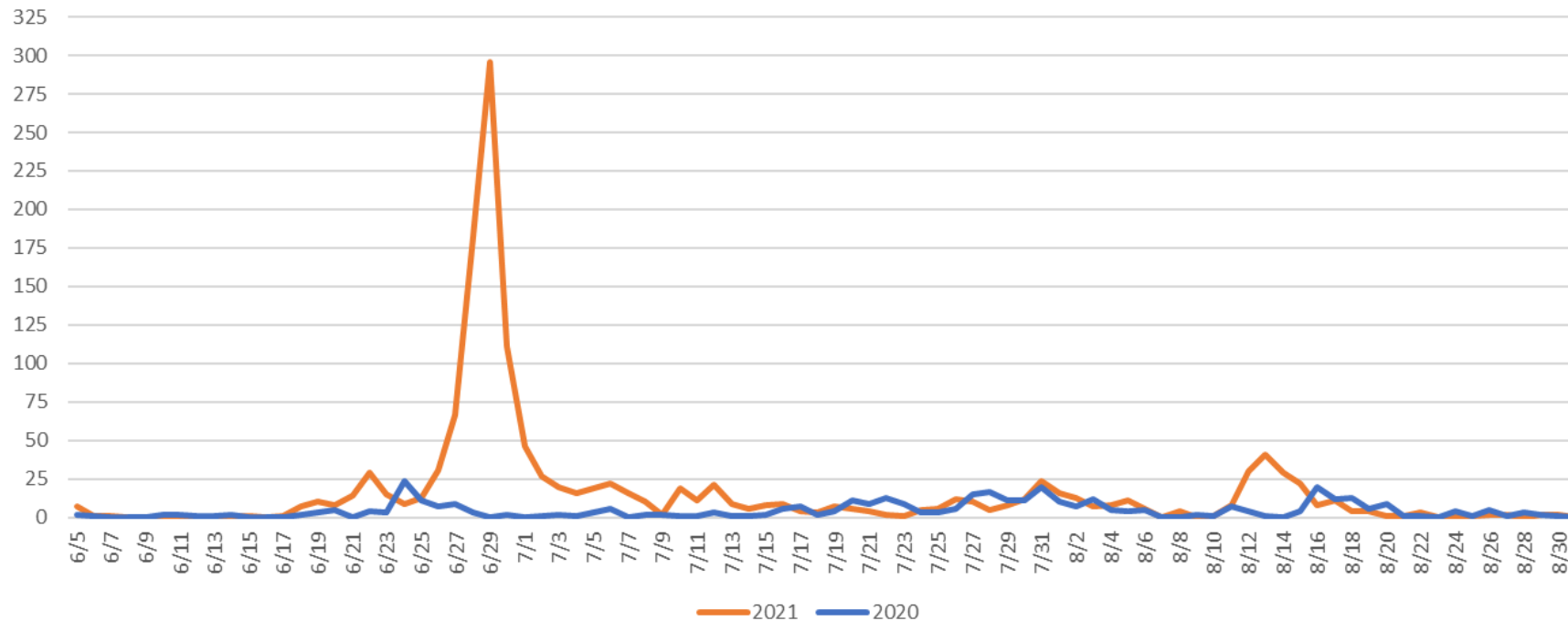
- 2021: 74/90 days had higher PM2.5 levels than the same day in 2020
- Deschutes County: 20% higher ALI ED visits in 2021 than 2020
- Klamath-Josephine-Jackson Counties combined: 20% higher ALI ED visits in 2021 than 2020
- Lake-Harney-Malheur combined: ~ as many 2020 & 2021 ALI ED visits
- Statewide 5% more asthma-like illness (ALI) emerg. dept. (ED) visits in 2021 than in 2020

Excessive Heat Health Impacts & Vulnerable Populations

- Heat stroke – most serious, body unable to control its temperature
- Heat exhaustion – milder illness, caused by prolonged exposure to high temperatures, especially when not drinking enough or right kind of fluids
- Infants and young children
- People with chronic medical conditions
- People taking certain medications
- Unsheltered people
- Outdoor workers
- Low income
- Less tree canopy
- Social isolation
- Athletes

Interim Findings: Oregon Statewide Heat-Related Illness 2021

Oregon Heat-Related Illness Visits
5/1-8/31 2020 and 2021



- 59% of heat-related illness ED visits in 2021 were from zip codes with a median household income below \$50,000
- At least 96 heat-caused deaths from the June 2021 heat wave (6/24-7/13)

https://www.opb.org/pdf/OREGON_heat_deaths_revised_1628632311939.pdf

- Statewide: 341% more heat-related emerg. dept. (ED) visits in 2021 (1275 versus 289)

Questions?

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