



Policy Concept: Safe & Healthy Air Cleaners

Background

Air cleaners, sometimes called air “purifiers”, can help reduce the impact of wildfire smoke in low-income communities and reduce indoor asthma triggers for those with asthma. In response to the growing threat of wildfire smoke across California, schools, air districts, healthcare providers, and other agencies have begun providing air cleaners to low-income Californians at-risk from wildfire smoke, including people with asthma, pregnant women, older adults and children. Recent updates to Medi-Cal policies allow health plans to provide air cleaners to patients with asthma.

Unfortunately, not all air cleaners are safe and effective. Mechanical air cleaners are beneficial; they filter out particles using High-Efficiency Particulate Air (HEPA) or similar filters. Electronic air cleaners rely on technologies that can produce ozone or other byproducts harmful to health. Electronic air cleaners include ionizers, electrostatic precipitators, PCOs, hydroxyl generators, and devices with UV lights.

In 2006, AB 2276 (Pavley) directed the California Air Resources Board (CARB) to regulate indoor air cleaners for ozone safety. That law requires all portable indoor air cleaning devices sold in California to meet an ozone emission limit of 50 parts per billion (ppb).

Problem

New scientific research has demonstrated that even extremely low levels of ozone are associated with health impacts, including aggravating asthma, chronic bronchitis, and emphysema. A recent literature review determined exposure to ozone at 5 ppb was associated with an increased risk for asthma-related emergency room visits and hospital admissions. As such, the state’s ozone standard for air cleaners is no longer aligned with current scientific evidence.

In addition to the direct health risk posed by exposure to ozone emitted from electronic air cleaners, ozone poses additional risks as it is reactive with other common indoor chemicals which can lead to the formation of harmful byproducts. Researchers at the University of California, Davis recently released [an in-depth report](#), commissioned by CARB, noting that: “compounds of clear concern are ozone, formaldehyde, and ultrafine particles, which were widely observed across studies from use of electronic air cleaners.”

Solution

The solution to this problem is legislation directing CARB to reduce the allowable level of ozone emitted from air cleaners in California from 50 ppb to 5 ppb to align with the current scientific evidence about the harms of ozone exposure. This would be easy to implement as there is a new testing standard (UL 2998) compatible with existing state laboratories and certification procedures that can reliably detect ozone down to 5 ppb.

The solution is supported in the UC Davis white paper where authors state, “While California already requires electronic air cleaners have ozone emissions less than 50 ppb, we recommend California further reduce ozone emissions from electronic air cleaners by requiring compliance with UL2998, a more stringent ozone emission standard of 5 ppb. This would reduce the allowable indoor ozone emissions by an order of magnitude which would provide a direct health benefit and subsequently reduce secondary formaldehyde and ultrafine particle formation that is driven by ozone chemistry.”