WHEREAS, in the United States, more than 11.5 million people with asthma, including nearly 3 million children, report having had one or more asthma attacks in 2015; and

WHEREAS, household air pollution is a major health problem. Worldwide, it is responsible for more than three million deaths a year, and indoor air pollution is strongly linked to asthma; and

WHEREAS, household and outdoor air pollution are social determinants of health and associated with an increased risk of asthma; and air pollution contributes to health disparities in asthma; and

WHEREAS, according to the United States Environmental Protection Agency (EPA), a growing body of scientific evidence indicates that, even in large cities, indoor air can be more polluted than the outdoor air; and

WHEREAS, burning natural gas creates nitrogen dioxide (NO2), particulate matter (PM2.5), carbon monoxide (CO), and other byproducts that contribute to air pollution; and

WHEREAS, nitrogen dioxide levels are significantly higher in homes with gas stoves than homes with electric stoves; and


Whereas, In a simulation of homes where gas cooking stoves are used without exhaust ventilation hoods, indoor NO₂ levels exceed outdoor air quality standards in 41%–70% of homes;¹¹ and

Whereas, The burning of natural gas in stoves releases nitrogen oxides (NOₓ) into indoor air and is an important source of household air pollution in the United States;¹² and

Whereas, According to the EPA, “Breathing air with a high concentration of NO₂ can irritate airways in the human respiratory system. Such exposures over short periods can aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms. Longer exposures to elevated concentrations of NO₂ may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO₂.”,¹³ and

Whereas, The World Health Organization recognized the associations between cooking with gas stoves, indoor NO₂ levels, and asthma in their 2010 guidelines for indoor air quality;¹⁴ and

Whereas, Children living in a home with a gas cooking stove have a 42% increased risk of current asthma and a 24% increased lifetime risk of asthma according to a meta-analysis;¹⁵ and

Whereas, A year-long, prospective study of NO₂ exposure in 1,342 children with active asthma in Massachusetts and Connecticut found a dose-response relationship between the amount of NO₂ exposure and risk of asthma severity. Every five-fold increase in NO₂ exposure above 6 parts per billion (ppb) was associated with a dose-dependent increase in the risk of asthma severity, wheeze, and rescue medication use;¹⁶ and

Whereas, About one-third of households in the United States cook with gas stoves;¹⁷ and

Whereas, In homes with gas cooking stoves, children whose parents reported never using exhaust fans, or who did not have them available had lower lung function and higher adjusted odds of asthma 1.56 (1.03, 2.32), wheeze, 1.66 (1.16, 2.38), and bronchitis 1.66 (1.05–2.70) compared to children in homes where parents reported using exhaust fans;¹⁸ and

Whereas, In a randomized study comparing replacing gas stoves with electric stoves, using a free-standing high efficiency particulate air (HEPA) filters and installing above-stove hoods with exhaust fans were effective in reducing NO₂ levels;¹⁹ and

---

Whereas, Informal questioning found that many parents, health professionals, local health
departments, local boards of health, and others did not know about the association between
cooking with gas stoves and increased risk of asthma; and

Whereas, Parents, public health staff, building inspectors, teachers, and many others should
know about this association so that they can help protect children from household air pollution
produced by gas stoves and reduce the risk of asthma; therefore, be it

RESOLVED, That our American Medical Association recognize the association between the
use of gas stoves, indoor nitrogen dioxide levels and asthma (New HOD Policy); and be it
further

RESOLVED, That our AMA inform its members and, to the extent possible, health care
providers, the public, and relevant organizations that use of a gas stove increases household
air pollution and the risk of childhood asthma and asthma severity; which can be mitigated by
reducing the use of the gas cooking stove, using adequate ventilation, and/or using an
appropriate air filter (Directive to Take Action); and be it further

RESOLVED, That our AMA advocate for innovative programs to assist with mitigation of cost
to encourage the transition from gas stoves to electric stoves in an equitable manner.

(Directive to Take Action)

Fiscal Note: Not yet determined

Received: 05/18/22

20 Personal communication from T. Stephen Jones and Andee Krasner April 4, 2019.