New Study Finds Air Quality and Health Improvements from the California Goods Movement Plan

Documents Health Benefits for California Medi-Cal Patients

Boston, MA (May 27) – A new study published today by the Health Effects Institute (HEI) 1 at www.healtheffects.org has found that a series of actions taken to reduce pollution from California goods movement activities resulted in reduced exposure to air pollution and to improved health outcomes for lower-income Californians enrolled in the state’s Medi-Cal program. Improvements were greatest for people who suffer from asthma and COPD. The study is the latest report from HEI’s Accountability Research program, which tests whether actions taken to improve air quality have reduced pollution and improved health.

In Improvements in Air Quality and Health Outcomes Among California Medicaid Enrollees Due to Goods Movement Actions, HEI-funded investigator Ying-Ying Meng at the University of California, Los Angeles, and colleagues compared changes from the pre-policy period (2004–2007) to the post-policy period (2008–2010), when a series of actions to reduce air pollution from goods movement had been implemented. They tested effects in three areas based on proximity to major goods movement transit routes: areas near ports and freeways with truck traffic, areas near freeways without truck traffic, and control areas not near ports or freeways. Results from this study demonstrated that actions to reduce emissions related to goods movement may be effective in improving local air quality levels and healthcare utilization among disadvantaged people.

Diesel emissions related to the movement of traded goods into, out of, and across California contribute to elevated air pollution levels in communities adjacent to ports and freeways. At the same time, these communities tend to consist of households from lower socioeconomic backgrounds, which may be more susceptible to air-pollution-related health effects. To address this issue, the California Air Resources Board implemented a sweeping, multiyear plan to reduce goods movement emissions through both mandatory and voluntary actions. Examples of these actions included requiring electric shore power for ships, switching cargo handling equipment to low-sulfur fuels, and incentives for retrofitting truck fleets with higher efficiency, cleaner engines.

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The HEI Review Committee, in its independent peer review of the study, concluded that: “Overall, this study provided evidence that regulatory actions to limit emissions from goods movements in and around major ports and freeways may decrease emergency care utilization among disadvantaged people who live close to those locations, and also suffer from respiratory-related chronic conditions.” They added that it will “be useful to evaluate whether similar improvements are observed elsewhere when goods movements actions are implemented, targeting ports and other major distribution hubs.”

Since 2003, HEI’s Accountability Research Program has funded eighteen studies that evaluated the effectiveness of air pollution regulations on air quality and public health across the globe, with the goal of fostering the development of study methods for accountability research and taking advantage of recent advances in data collection and statistics that improve assessments. Thirteen studies have been completed to date. Most of the earlier studies focused on short-term, local-scale interventions, such as reducing traffic congestion during the Atlanta Olympics. More recent studies covered broad regulatory changes over longer periods of time, such as national air pollution control programs in the United States and China.

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