

# Oakland/Berkeley Community Action to Fight Asthma



CAFA

## Report to the Community on Asthma

Oakland/Berkeley Community Action to Fight Asthma (OB-CAFA), a project of the Alta Bates Summit Medical Center Ethnic Health Institute, seeks to reduce environmental asthma triggers for school-aged children in Oakland and Berkeley through local and regional policy/systems change. OB-CAFA works with a variety of community partners to address asthma. These include school districts, community-based organizations, environmental justice groups, public health departments, medical centers, community service agencies, health plans, and other government agencies.

OB-CAFA's efforts are generally focused in two areas: schools and outdoor air. OB-CAFA advocates for "asthma-friendly" policies in schools and communities with a focus on improving classroom indoor air quality (IAQ) and reducing children's exposure to diesel pollution. Currently, OB-CAFA is collaborating with Oakland Unified School District (OUSD) to implement the IAQ components of its Wellness Policy and to leverage Williams Settlement Emergency funds to repair school facilities and improve IAQ. Additionally, OB-CAFA is collaborating with the City of Berkeley Public Health Division, School Linked-Health Services Program to support the adoption of an asthma policy within Berkeley Unified School District. OB-CAFA is also part of the Ditching Dirty Diesel Collaborative and Bay Area Environmental Health Collaborative, working to protect the health of communities heavily impacted by air pollution.

**ASTHMA, AN INFLAMMATORY LUNG DISEASE,** is one of the most common chronic diseases of children. Common symptoms include recurrent wheezing and coughing, difficulty breathing, and tightness of the chest. Asthma attacks can range in severity from inconvenient to life threatening. Although there is no known cure for asthma, it can be controlled by following a medical management plan and by reducing exposure to environmental "triggers," such as air pollution, cockroaches, dust mites, furry pets, mold, tobacco smoke, and certain chemicals.

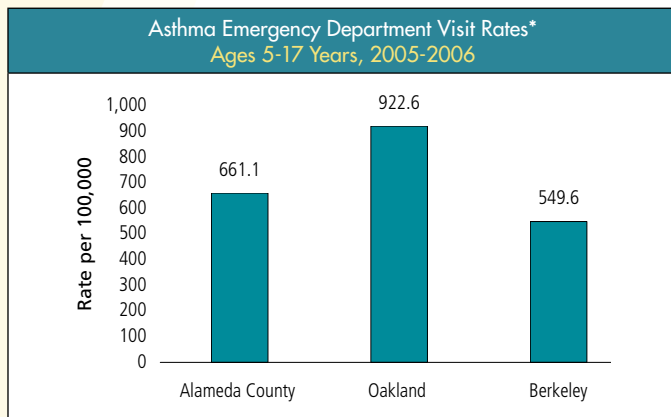
Asthma is a problem that needs to be addressed through policy change. Because the reduction of environmental triggers is an essential component of asthma control and prevention, individuals, communities, and policy makers must work together to find solutions. This report, which includes the latest data for Alameda County, will outline the problem of asthma, describe some of the work being done to address the problem, and highlight some specific policy recommendations. Information specific to Oakland and Berkeley are presented whenever possible.

## Asthma Prevalence

In 2005, the California Health Interview Survey (CHIS) found that almost one in four children (23.6%) ages 5 to 17 years in Alameda County had been diagnosed with asthma. Statewide, the figure is fewer than one in five (18.0%).<sup>1</sup>

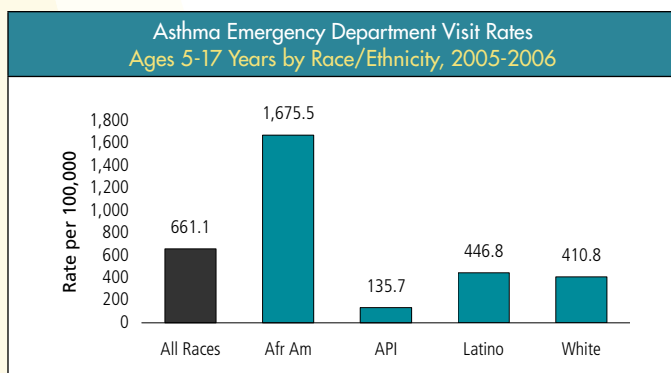
## Emergency Department Visits for Asthma\*

Each year there are about 1,710 visits to hospital Emergency Departments (EDs) among children 5 to 17 years of age in Alameda County.<sup>2</sup> Of all cities in Alameda County, Oakland has the highest rate of ED visits (about 40% higher than the county rate).



\*Data on ED visits reflect only those that were treated and released. Those ED patients admitted to the hospital are reflected only in the hospitalization data.

African American children visit the ED at a rate 12 times higher than Asian/Pacific Islanders and about 4 times higher than Latinos and Whites. African Americans make up 13% of the county population, Asians 24%, Latinos 21%, Whites 37%, and 5% other and mixed race.<sup>3</sup>



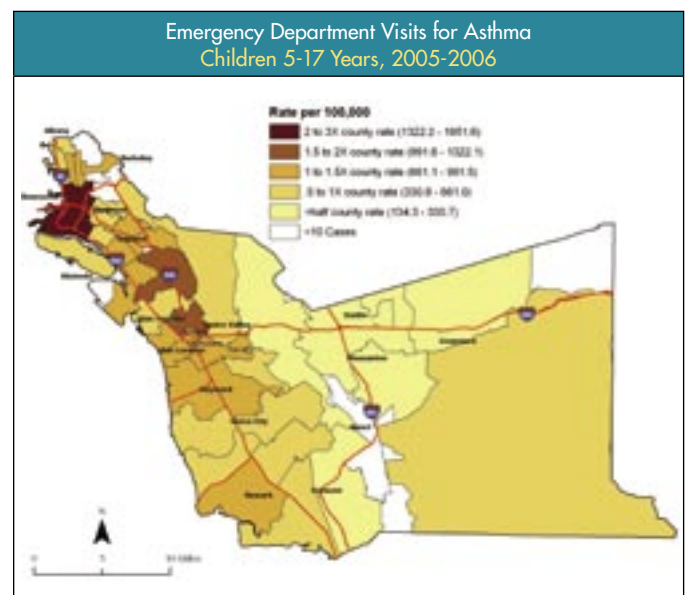
## Hospitalization for Asthma

From 2004 to 2006, there were 1,064 hospitalizations for asthma among children ages 5 to 17 years in Alameda County.<sup>4</sup> Most of these children (88-90%) were admitted from hospital Emergency Departments. Patterns of hospitalization for asthma are the same as those for ED visits. Young boys and African Americans were

hospitalized at higher rates than other children. In any given year, about 16% of Oakland and Berkeley youth hospitalized for asthma have a repeat hospital visit.<sup>5</sup>

## Major Geographic Inequities

Aggregate rates for cities and the county mask important geographic differences in the rate of ED visits at the zip code level. The map below shows that children living in North Oakland, Emeryville, West Oakland, and downtown Oakland visited the ED at a rate two to three times higher than the county rate. In general, rates are highest down the I-80 and I-880 corridor, in the proximity of concentrated industrial land use, in low income housing areas, and among non-white and immigrant residents.



West Oakland has a large African American population that is disproportionately affected by asthma. The community contains the Port of Oakland and the Union Pacific Railyard as well as the interchanges of several major freeways. Diesel emissions from trucks, ships, and trains serving the port, combined with freeway traffic and industrial emissions, produce high levels of pollution in West Oakland and surrounding neighborhoods.

A new study by the California Air Resources Board found diesel concentrations in West Oakland to be three times higher than in the Bay Area as a whole.<sup>6</sup> A 2003 study conducted by the Pacific Institute found that West Oakland residents are exposed to nine times more diesel particles in a given year than others living in Alameda County, the Bay Area, or California and that diesel concentrations inside West Oakland homes are five times higher than in homes in other parts of Oakland.<sup>7,8</sup>

Diesel exhaust contains many toxic and carcinogenic compounds, including benzene, arsenic, and formaldehyde. The black soot particles, known as Diesel Particulate Matter (DPM) are so small that they can go deep into the lungs and directly into the blood stream.<sup>9</sup> Many studies have shown that air pollution is harmful to health and is even associated with premature death.<sup>10-13</sup> It can trigger or worsen asthma, allergies, and bronchitis, especially among more vulnerable groups, including children and the elderly.<sup>14-16</sup>

## Asthma Burden in the Schools

### OUTDOOR AIR QUALITY

Recent studies have found high levels of toxic air contaminants around schools near and downwind of busy roadways. One study conducted in Alameda County found that children attending schools close to freeways were more likely to have asthma symptoms than those attending schools farther away.<sup>16,17</sup>

This finding, among others, was the impetus for a 2003 California Law that prohibits new schools from being situated within 500 feet of a high volume roadway.<sup>18</sup> In Alameda County, there are 10 public schools that presently lie within 500 feet of a high volume freeway (>=100,000 vehicles per day). These 10 schools accommodate over 5,400 children, mostly in elementary school, and could not be built today in their present locations due to unacceptably high levels of air pollution. Seven of the ten schools are in OUSD.<sup>19</sup> Children attending these schools are exposed to high levels of traffic pollution every day. Until the exposures are measured and children's health and development are monitored, the true health consequences of this exposure will remain unknown.

### SCHOOL INDOOR AIR QUALITY (IAQ)

Poor outdoor air quality from industry or traffic can contribute to poor indoor air quality, especially if school ventilation systems are old or in disrepair. Because children spend several hours a day in the classroom, the quality of school indoor air has an enormous impact on children's ability to effectively manage their asthma. Good IAQ helps maintain healthy and safe learning environments for teachers and students. Poor IAQ adversely affects the health, development, learning, and productivity of all students and staff, especially those with asthma. Additionally, since poor IAQ can trigger asthma attacks, it contributes to increased school absences and decreased school funding due to lower average daily attendance figures.<sup>20</sup>

### Some common causes of poor IAQ in schools are:

- Poor ventilation
- Scented products (e.g., air fresheners, perfumes, aerosols, incense, etc.)
- Cleaning products used in schools
- Clutter or materials that collect dust (e.g., carpets, sofas, stuffed animals, etc.)
- Off-gassing from building materials and furniture
- Water damage that produces mold and mildew
- Poor insect/pest control and use of pesticides

Between 2003 and 2005, staff from OB-CAFA, Oakland Kicks Asthma, and West Oakland Asthma Coalition conducted school walk-throughs in OUSD to help identify causes of poor IAQ and provide school staff with strategies to improve IAQ. Of the 15 schools surveyed, 100% were identified as having at least one of the following ventilation issues: temperature and humidity problems, elevated CO<sub>2</sub> levels, non-operable windows, improper use of the school HVAC system, and/or non-functioning HVAC systems. Additionally, 14 out of 15 schools were reported to have excessive dust and debris present, and 13 out of 15 schools had strong gas or other odors.

## The Williams Settlement and the Emergency Repair Program (ERP)

The Williams Settlement offers a great opportunity to address health, safety, and sources of poor IAQ in schools. Williams v. State of California (August 2004) was a class action lawsuit claiming that the constitutional rights of students were being compromised because there were not enough books, too few qualified teachers, and unsafe physical environments in many schools across the state. As part of the settlement, up to \$800 million has been secured to provide funding to eligible low-performing schools to make emergency repairs to their facilities. Presently about 50% of OUSD's 140 schools are eligible for Williams ERP grants. While the money can only be used for repairs, this program can help leverage funds for repairs that improve IAQ (i.e., broken ventilation systems, leaking roofs, etc.). Acquiring resources to improve IAQ is particularly important for Oakland schools as the Oakland Kicks Asthma project has found that in some Oakland schools as many as 30% of students have been diagnosed with asthma.<sup>21</sup>

## POLICY RECOMMENDATIONS

A range of policies is necessary to reduce the burden of asthma. "Asthma-friendly" policies include policies that improve indoor and outdoor air quality, facilitate effective medical management and support a broad range of issues affecting social and environmental justice. OB-CAFA supports the following policy recommendations:

### SCHOOLS:

- Work with school districts and the Office of Public School Construction (OPSC) to ensure the ERP program meets the needs of eligible schools, so that districts can easily receive Williams ERP grants to make repairs and improve IAQ in schools.
- Make resources available to upgrade heating and ventilation systems in schools, prioritizing those closest to freeways.
- Conduct health surveys in schools located within 500 feet of major roadways to determine if asthma prevalence is in excess of the prevalence observed in schools without major roadway exposures.
- Develop asthma management and IAQ policies/procedures and incorporate them in school wellness policies.
- Advocate for implementation of current policies such as the Oakland Unified School District Asthma and Wellness Policy which includes having a dedicated asthma nurse, asthma education for staff, students, and parents/guardians, and IAQ protocols.
- Use integrated pest management (IPM) procedures to control pests.
- Follow Facilities Management best practices such as green cleaning, environmentally preferable purchasing (EPP), and Collaborative for High Performance Schools (CHPS) criteria.

### OUTDOOR AIR QUALITY:

- Expand monitoring of air toxins from auto, diesel, and industrial sources to include more locations, i.e., low income communities and schools close to freeways and ports.
- Create and support policies that reduce exposure to diesel particulates such as eliminating diesel trucks in residential neighborhoods and enforcing the no-idling law near schools.

- Participate in local land use planning and development decisions and weigh air pollution impacts.
- Promote efforts around pollution reduction and prevention as well as prioritize high impact areas and vulnerable populations.
- Engage communities in decision-making through meaningful public participation such as conducting comprehensive outreach in accessible, understandable languages and formats so that residents have a real opportunity to influence policy outcomes.

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