

Addressing Asthma and Air Pollution: How the West Oakland Middle School Health Center launched a comprehensive asthma program

West Oakland is a small neighborhood in Alameda County, California, on the shores of the San Francisco Bay, where residents live near thousands of moving and stationary sources of diesel pollution. Container trucks carry goods to and from the Port of Oakland, U.S. Postal Service trucks carry mail to a major distribution center, and trucks and automobiles move overhead on freeways that surround the community.¹ In 2008, the California Air Resources Board (CARB) conducted a health risk assessment and reported that West Oakland residents are exposed to high concentrations of diesel particulate matter—almost three times higher than the average background levels in the Bay Area.² The population is predominantly African-American and 35% of residents live below the federal poverty line.³



Asthma is a significant public health concern for this community. Rates for Emergency Department visits due to asthma are higher in Alameda County than for the state and West Oakland children go to the Emergency Department with asthma almost twice as often as the county average. The West Oakland Middle School has 220 students enrolled and over 50 have been diagnosed with asthma and many more report undiagnosed respiratory concerns. The West Oakland Middle School (WOMS) Health Center recognized the disproportionate burden of asthma in their community and chose to prioritize asthma as one of the key health issues they address at their clinic.

Run by Lifelong Medical, the WOMS Health Center developed an asthma management program based on national clinical guidelines. Components of their asthma management program include: an assessment and health history with the nurse practitioner, assessment of asthma control, medication management, provision of an asthma action plan, and spirometry—a tool recommended in the national clinical guidelines but greatly underutilized in clinical practice. “Although spirometry is only used by 52% of providers, we know that it is an essential tool in the diagnosis and management of asthma and are committed to providing the highest standard of care,” says Kristine Carter, Nurse Practitioner.

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They also conduct asthma education in a group setting at their clinic. They work with an AmeriCorps: Community Health Corp volunteer to conduct the four-session training which covers: what asthma is; recognizing symptoms; understanding medications; and identifying and reducing exposure to environmental triggers at home, school, and in the community. “Students are hesitant about coming to class, but are always excited to share what they have learned and used,” shares Aaron Steinfeld, the Community Health Corp Volunteer. Forty students were able to complete the educational program in the 2014–2015 school year.



The staff at the WOMS Health Center are eager to strengthen their asthma program in the fall by adding a component that directly addresses the air pollution in West Oakland through implementing the EPA’s Flag Program. The Flag Program uses different colored flags to inform students, school staff, and the community of daily air quality conditions. The flag colors correspond to the colors used in EPA’s Air Quality Index (AQI), which tells how clean or polluted the air is for that day. Sharing the daily air quality through these highly visible flags increases awareness about air pollution. In addition to raising awareness, the flag program also serves as important guidance for modifying physical activity in order to protect the health and well-being of students.

In addition to expanding the breadth of their asthma program, the staff have plans to expand their reach. They will be expanding their own clinic services to include students from a nearby Charter Middle School. Additionally, they plan to replicate their comprehensive asthma program in another school-based health center run by Lifelong Medical in East Oakland, CA. Hana Shirriell-Dia, Health Center Supervisor, shares: “We know that our program is working and we’re excited to expand it to other locations to help children all across Oakland breathe easier.”

- 1 “Clearing the Air: Reducing Diesel Pollution in West Oakland” A West Oakland Environmental Indicators Project Report by the Pacific Institute in conjunction with the Coalition for West Oakland Revitalization November 2003. http://www.pacinst.org/wp-content/uploads/sites/21/2013/02/clearing_the_air_final3.pdf
- 2 Bay Area Air Quality Management District. “West Oakland Truck Survey Final Report” 2009. http://woeip.org/wp-content/uploads/2010/12/West-Oakland-Truck-Survey-Final-Report-Dec-2009.ashx_.pdf
- 3 Douglas, R. “A Brief History of West Oakland” adapted from Olmsted and Olmsted (1994)

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<http://www.lifelongmedical.org/services/school-based-services.html>

For more information on how school-based health centers can address environmental asthma triggers, view the [Asthma Environmental Intervention Guide for School-Based Health Centers](#).