

Tulare County Asthma Coalition



Report to the Community on Asthma

The Tulare County Asthma Coalition (TCAC) is a community-based health organization that was formed in September 2000 by local respiratory therapists who brought a cross section of people together who have a stake in asthma education, management and ultimately, prevention.

The coalition's mission statement is: To improve health and community awareness related to asthma and its slogan is, "I CAN" initiative to control asthma now.

TO IMPROVE
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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. There is no known cure for asthma, but 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 and research, will outline the problem of asthma in Tulare County, describe some of the work being done to address the problem, and highlight some specific policy recommendations.

Asthma Prevalence & the Impact of Our Geographical Location

UNITED STATES

From 2003-2005, 14.2% (95% CI: 13.7-14.7) of children age 5-17 had been diagnosed with asthma at some point in their lives.{{326 CDC National Center for Health Statistics (NCHS) 2005; }}

CALIFORNIA

In 2005, nearly 1.3 million children age 5-17, or 18.0% (95% CI: 16.8-19.1), had been diagnosed with asthma at some point in their lives.{{301 California Health Interview Survey (CHIS); }}

CENTRAL VALLEY REGION

(*Includes the counties of Fresno, Kern, Madera, Tulare, Kings, Stanislaus, San Joaquin, and Merced)

In 2005, 24.2% (95% CI: 20.5-27.8) of children age 5-17 were diagnosed with asthma at some point in their lives.{{301 California Health Interview Survey (CHIS); }}

TULARE COUNTY

Tulare County is home to 133,720 children, ages 0-17, or 1% of California's child population. In 2005, 27.6% (95% CI: 17.2-37.9) of children age 5-17 years had been diagnosed with asthma at some point in their lives.{{301 California Health Interview Survey (CHIS); }} In 2006, 530 children or 6%, age 5-17, visited an emergency room because of asthma. Tulare County is located in the Central Valley region of California and is bordered by Fresno, Inyo, Kern and Kings Counties, and has over 4,000 miles of roadways. The total population of Tulare County is 419,909 residents {{307 U.S. Census Bureau: American Community Survey 2006;



- The geography of the San Joaquin Valley acts as a trap for outdoor air pollution. Surrounding mountains trap airborne pollutants near the Valley floor where people live and breathe. These statistics place the young, sick and elderly at a greater risk of asthma, bronchitis and emphysema, retards the growth of crops, and threatens the overall economy and quality of life in the region. Continued population growth and urban

sprawl are also a cause for outdoor air pollution; increasing numbers of people mean more activities and developments that contribute to poor air quality.

- Studies show that ozone (O₃) and Particulate Matter (PM₁₀) pollution play a role in the development of asthma, increased symptoms of asthma, and increased premature deaths due to lung and heart disease. Cars and trucks (especially diesels), fireplaces, woodstoves, windblown dust from roadways and construction are the major contributors of particulate matter. Motor vehicles, industrial emissions, and consumer products, contribute to the production of ozone. Ozone is not generated directly by these sources, rather, chemicals emitted by these precursor sources react with sunlight to form ozone in the atmosphere. The San Joaquin Valley continues to hold 4 of the top 6 most ozone-polluted cities in the nation on an annual list of "America's Smoggiest Cities", according to the American Lung Association, State of the Air: 2007. The San Joaquin Valley cities listed are Bakersfield, Fresno-Madera, the Visalia-Porterville area, and Merced, with the Visalia-Porterville area, located in Tulare County, ranking 3rd. Nowhere is this more evident than in California's San Joaquin Valley, where children have a significantly higher rate of asthma compared to children in other areas of the state. Poor air quality may play a significant role in the San Joaquin Valley's continual rise of asthma prevalence in our children.

Asthma in Our Schools

Today, clear and convincing research shows that improving specific factors such as school indoor and outdoor environmental quality improves attendance, academic performance, and productivity. The consequences of asthma make it difficult for many children to live, learn and play. Because asthma is the most common chronic childhood disease, it is the number one reason that students miss school, totaling over 14 million missed school days a year in the U.S. Because the average daily attendance is a key factor in determining the operating budget for a school, students' absences have long-term effects for school district budgets.

Each school day, 54 million children and 6 million adults – that's 20% of the total U.S. population – spend their workdays inside school buildings. Many school environmental factors can affect the health of children and employees. Thousands of schools are severely overcrowded, which compromises ventilation systems, recess and sanitation, to name a few. There is a need to adopt and fund standards and programs to promote environmentally healthy design standards or "Green Schools", the use of environmentally

preferable materials for school construction, instruction, maintenance, repair, and cleaning, such as integrated pest management and green cleaning products. The U.S. EPA estimated that up to half of all schools in the U.S. have problems with indoor environmental quality. Children also spend extra hours in vehicles or buses because their schools are beyond safe distances for walking and biking to school. www.GG_Green_School_Report.pdf and <http://www.epa.gov/schools/>

Outdoor environmental triggers consist of ozone, exhaust from transportation vehicles or maintenance equipment, dust, pollens, use of pesticides, and schools near freeways or busy roads. A school's location can have a negative impact on school health. The first study in the nation to link children's respiratory problems with traffic pollution found a 7 percent higher rate of asthma and bronchitis in children attending schools near busy roads or freeways. In 2005, roughly 700 of California's public schools are within 500 feet of roads that carry more than 25,000 vehicles a day, according to researchers at the state Office of Environmental Health Hazard Assessment. Their study found that these schools are close enough to freeways or busy roads to have a level of air pollution that can worsen asthma. Some research does suggest that larger buffer zones are needed and schools citing a location near a freeway or busy roadway should study airborne pollutants up to half a mile from the potential site, rather than the current quarter mile. www.oehha.ca.gov/public_info/factspdf/Factsheetschools.pdf

The Tulare County Office of Education serves 265 schools in Tulare County. The Tulare County Asthma Coalition has implemented a few approaches to help create healthier school environments:

OUTDOOR AIR QUALITY FLAG PROGRAM

The Tulare County Asthma Coalition has implemented an air quality notification system that acts as a daily indicator of the air quality to help protect the community from exposure to air pollutants. The system utilizes four colored flags based on the Air Quality Index (AQI) used by the San Joaquin Valley Air Pollution Control District, Air Resources Board and the U.S. Environmental Protection Agency.

Each day, a flag that corresponds to the color of the Air Quality Index, will be raised on the flagpole. The color of the flag determines the schedule of outdoor activities at school. A green flag means good air quality and no outdoor activity restrictions. An orange flag means the air quality is unhealthy for sensitive people. Active children, adults, and people with respiratory diseases, such as asthma or heart disease should limit prolonged

outdoor exertion and alternative indoor activities will be made for children at school.

School districts like Tulare City and Visalia Unified, and agencies like Tulare District Hospital and the City of Tulare have implemented the Flag Program and a policy to protect students and employees from the harmful effects of air pollution by modifying outdoor activities. The asthma coalition and its partners hope to protect the health of the community and improve school attendance and academic achievement.

http://CalAsthma.org/resources/show_resources/637/

LOW-ALLERGY OR ASTHMA FRIENDLY LANDSCAPING

The Tulare County Asthma Coalition partners with schools to implement low-allergy or asthma-friendly landscaping. A brochure was compiled listing low-allergy plants and trees. Schools and community members can use this list to assist them in choosing plants to enhance their environment while providing a minimum potential to cause allergic reactions. The plants listed have a rating of less than 4 on the OPALS scale developed by Tom Ogren. The OPALS scale takes into account the method of pollination, plant family size, fragrance, length of pollination time, and pollen factors. Brian Kempf, founder and director of "The Urban Tree" and arboriculture and urban forestry consultant offers his expertise to schools to assist them with landscaping plans and best-use plants. Brian can even assist smaller school districts with grant writing to acquire funding for the project. www.theurbantree.org. For plant list, go to: http://www.CalAsthma.org/resources/show_resources/

INDOOR AIR QUALITY MAINTENANCE AND PREVENTION TOOLS FOR SCHOOLS

U.S. EPA's Tools for Schools program is a resource to help schools maintain a healthy environment in school buildings. The Tulare County Asthma Coalition is in the process of partnering with Tulare County Schools to implement the EPA's Indoor Air Quality Tools for Schools program. First, by evaluating the school campus for indoor environmental triggers, identify and then implement no cost to low cost solutions to attain asthma-friendly classrooms, free of indoor environmental triggers. Teachers and staff are also given education on asthma, environmental triggers and strategies. Some simple solutions are: use non-toxic or green cleaning supplies, use unscented products such as hand washing soaps or whiteboard markers, make sure air is circulating at all times, HVAC units are clean and working properly, that windows are free of condensation, no animals, no food, and no carpets and such things that collect dust are in the classroom. <http://www.epa.gov/iaq/schools/actionkit.html>

POLICY RECOMMENDATIONS

Encourage your local, regional and state policy-makers to adopt measures to control environmental asthma triggers and help create healthier schools for our children.

- Adopt uniform policies implementing appropriate health advisories for daily air quality notifications with tools such as the Air Quality Flag Program/ Active Indoor Recess curriculum, and U.S. EPA's Tools for Schools to reduce exposure risk.
- Change policy to prioritize "low-allergy" landscaping for all new or renovating schools and local government buildings.
- Implement environmentally healthy design standards and guidelines (e.g. more stringent proximity to freeways rule, asthma-friendly building materials, etc.) to reduce asthma triggers at local schools and recreational facilities.
- Support transportation and land use policies that reduce automobile use and emissions.

OTHER RECOMMENDATIONS:

- Increase Resources for School Facility Maintenance and Repair
- School environmental problems can be traced to understaffed maintenance. Less maintenance staff can lead to poorly maintained HVAC systems which impact air quality, water-stained ceiling tiles, leaky faucets not repaired, which inhibits mold and mildew growth, the ability to mow the lawns while children are not at school. The health-related consequences of financial cut backs for maintenance staff will create more disparities. Increasing the funding for maintenance staff could be worth its weight in gold.
- Increase Resources for Chronic Disease Management Plans

We need to protect and support those students in school with a variety of chronic conditions, such as asthma. School nurses and health aide staff should be increased so that each school has one health care provider on staff at all times. Uniform health management plans, such as asthma management plans or asthma action plans for each child diagnosed with asthma, yearly asthma management training and medication updates to the staff, should be implemented countywide.

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Community Action to Fight Asthma

Funded by

 The
California
Endowment