

ENVIRONMENT

Setting the stage: Key accomplishments

WAC school walkthrough

The ultimate goal of the WAC [school walkthrough program](#) is to increase school attendance by reducing exposure to environmental asthma triggers found within the school. This program identifies and recommends low- and no-cost solutions to schools. By 2014, the program has been implemented in more than 45 Wisconsin schools, representing more than 18 school districts.

WAC home walkthrough

The goal of the WAC [home walkthrough program](#) is to improve the quality of life and management of asthma by reducing environmental asthma triggers found within the home. While this program can be implemented widely, the target is home visitors who can incorporate the program into existing activities. This program identifies and recommends low- and no-cost solutions to individuals and families with asthma. Through mini grant funding, the WAC home walkthrough program has primarily been implemented in Fond du Lac County and the City of West Allis.

WAC child care walkthrough

The goal of the WAC [child care walkthrough program](#) is to reduce exposure to environmental asthma triggers found in child care centers. This program was created in 2014 after a Milwaukee-based mini grant project used the WAC school walkthrough program in child care centers. Project staff found that state regulations for child care centers (e.g., sanitation) differ from the information provided in the school walkthrough program. Child care centers also have other areas that need to be considered in a walkthrough (e.g., sleeping areas).

Cleaner Milwaukee Coalition

The WAC participated in the Cleaner Milwaukee Coalition (CMC), a coalition of health

Partnering with WAC

The WAC funding awarded to our district allowed the maintenance person and me to complete the school walkthrough in each of our elementary schools. The program resulted in an increased ability to identify triggers and the strategies to decrease them. For example, we implemented a systematic removal of chemicals that had collected over time. As the school nurse, I developed great relationships with the professionals in the WAC and pediatric specialty care, who provided me encouragement every step of the way. I can't say thank you enough.

- Valerie Hon, BS, RN, NCSN, Portage School District



advocacy groups, civil rights organizations, faith and grassroots organizations, local service providers and individuals concerned about the health of Milwaukee area families and the community. The CMC believes in a future where all residents of the Greater Milwaukee area equally enjoy clean water, clean air and a healthy environment. The CMC advocated for the conversion of the Menomonee Valley coal-fired power plant to natural gas and the utility agreed to convert by 2016. In January 2014, the Wisconsin Public Service Commission approved the proposed conversion and the process is underway and scheduled for completion in 2016.

Support of tobacco prevention and control efforts

Following the 2010 passage of the Wisconsin smoke-free workplace law, WAC actively participated in activities to support and maintain smoke-free policies. For example, through mini grant funding, the WAC supports education to landlords and property owners about the benefits of voluntary smoke-free policies in multi-unit housing.

Workplan

Goal: Improve environmental control measures to avoid or eliminate factors that precipitate asthma symptoms or exacerbations.

Objective A: Increase implementation of school environmental programs.

Activity	Target date
1. Continue implementation of the WAC school walkthrough program <ul style="list-style-type: none"> a. Maintain partnership with eSchoolCare, Green and Healthy Schools, etc. b. Incorporate school walkthrough into annual school maintenance protocol c. Create recognition program for schools that complete the school walkthrough program d. Expand the target audience (e.g., teachers, janitorial, maintenance staff) 	Ongoing
2. Promote U.S. Environmental Protection Agency's school flag program to alert the community of outdoor air quality	2015
3. Provide education on environmental control measures	Ongoing
4. Promote policies that limit exposure to diesel exhaust from school bus idling	Ongoing



5. Implement the WAC child care walkthrough program	2015
6. Partner with and encourage parent and teacher organizations or associations to support school environmental programs	2018

Evidence rating: Scientifically supported

Basis for evidence rating: 7 descriptive studies (a, b, c, d, e, f, g)

- a. Abramson SL, Turner-Henson A, Anderson L, et al. Allergens in school settings: results of environmental assessments in 3 city school systems. *Journal of School Health*. 2006; 76: 246-249.
- b. Mazer ME, Jacobson Vann JC, Lamanna BF, Davison J. Reducing children's exposure to school bus diesel exhaust in one school district in North Carolina. *The Journal of School Nursing*. 2014; 30: 88-96.
- c. Hester LL, Wilce MA, Gill SA, Disler SL, Collins P, Crawford G. Roles of the state asthma program in implementing multicomponent, school-based asthma interventions. *Journal of School Health*. 2013; 83: 833-841.
- d. Wheeler LS, Merkle SL, Gerald LB, Taggart VS. Managing asthma in schools: lessons learned and recommendations. *Journal of School Health*. 2006; 76: 340-344.
- e. Goei R, Boyson AR, Lyon-Callo SK, Schott C, Wasilevich E, Cannarile S. Developing an asthma tool for schools: the formative evaluation of the Michigan asthma school packet. *Journal of School Health*. 2006; 76: 259-263.
- f. Merkle SL, Wheeler LS, Gerald LB, Taggart VS. Introduction: learning from each other about managing asthma in schools. *Journal of School Health*. 2006; 76: 202-204.
- g. Petronella SA, Bricker SK, Perrotta D, Brown C, Brooks EG. Addressing asthma in Texas: development of a school-based asthma surveillance program for Texas elementary schools. *Journal of School Health*. 2006; 76: 227-234.

Objective B: Increase implementation of home environmental programs.

Activity	Target date
1. Continue implementation of the WAC home walkthrough program (e.g., home visitation programs, case management)	Ongoing
2. Support additional home environmental programs that include home assessment and education on trigger control and/or reduction	Ongoing
3. Support asthma-friendly housing <ul style="list-style-type: none"> a. Outreach to housing authorities and developers b. Assess cultural practices and identify the effect on the home environment c. Increase neighborhood capacity to address asthma-related housing issues 	2019

Evidence rating: Scientifically supported

Basis for evidence rating: 3 systematic reviews (a, b, c); 2 experimental/quasi-experimental studies (d, e); 1 descriptive study (f)

- a. Crocker DD, Kinyota S, Dumitru GG, Ligon CB, Herman EJ, Ferdinands JM, et al. Effectiveness of home-based, multi-trigger, multicomponent interventions with an environmental focus for reducing asthma morbidity: a community guide systematic review. *American Journal of Preventative Medicine*. 2011; 41: S5-S32.
- b. Nurmagambetov TA, Barnett SBL, Jacob V, Chattopadhyay SK, Hopkins DP, Crocker DD, et al. Economic value of home-based, multi-trigger, multicomponent interventions with an environmental focus: a community guide systematic review. *American Journal of Preventative Medicine*. 2011; 41: S33-S47.
- c. Jie Y, Ismail NH, jie X, Isa ZM. Do indoor environments influence asthma and asthma-related symptoms among adults in homes? A review of the literature. *Journal of the Formosan Medical Association*. 2011; 110: 555-563.
- d. Morgan WJ, Crain EF, Gruchalla RS, O'Connor GT, Kattan M, Evans R, et al. Results of a home-based environmental intervention among urban children with asthma. *The New England Journal of Medicine*. 2004; 351: 1068-1080.



- e. Parker EA, Baldwin GT, Israel B, Salinas MA. Application of health promotion theories and models for environmental health. *Health Education and Behavior*. 2004; 31: 491-509.
- f. Levy JI, Brugge D, Peters JL, Clougherty JE, Saddler SS. A community-based participatory research study of multifaceted in-home environmental interventions for pediatric asthmatics in public housing. *Social Science and Medicine*. 2006; 63: 2191-2203.

Objective C: Reduce the burden of asthma in the workplace.

Activity	Target date
1. Continue surveillance of work-related asthma	Ongoing
2. Increase awareness of asthma as an occupational health issue	2017
3. Integrate asthma education, programs and policies in worksite health, safety and wellness programs	2018
4. Increase knowledge of asthma-friendly cleaning and sanitation practices	2019

Evidence rating: Some evidence

Basis for evidence rating: 3 descriptive studies (a, b, c)

- a. Szema AM. Work-exacerbated asthma. *Clinical Chest Medicine*. 2012; 33: 617-624.
- b. Lemiere C, Ameille J, Boschetto P, Labrecque M, Pralong JA. Occupational asthma: new deleterious agents at the workplace. *Clinical Chest Medicine*. 2012; 33: 519-530.
- c. Fischwick D. New occupational and environmental causes of asthma and extrinsic allergic alveolitis. *Clinical Chest Medicine*. 2012; 33: 605-616.

Objective D: Reduce exposure to asthma triggers in outdoor environments.

Activity	Target date
1. Promote effective environmental educational tools and messaging (e.g., videos, website, apps, media alerts)	Ongoing
2. Identify and promote evidence-based guidance linking asthma to air quality issues (e.g., wood smoke, outdoor wood-fired boilers, recreational fire, leaf burning, burn barrel hazards) <ul style="list-style-type: none"> a. Research and share model ordinances and policies b. Educate policy leaders on burning-related health hazards 	Ongoing
3. Identify and promote evidence-based asthma-related messaging on broader transportation and environmental issues of statewide concern	Ongoing
4. Develop and disseminate guidance on how to respond to air quality alerts (e.g., businesses, general public, media, nursing homes, schools)	2016



5. Provide support and collaborate with partners on efforts to reduce air pollution and promote clean air through innovative programs (e.g., stove exchange programs, Cleaner Milwaukee Coalition)	As opportunities arise
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Evidence rating: Scientifically supported
 Basis for evidence rating: 2 systematic reviews (a, b)

- a. Sousa SIV, Alvim-Ferraz MCM, Martins FG. Health effects of ozone focusing on childhood asthma: what is now known-a review from an epidemiological point of view. *Chemosphere*. 2013; 90: 2051-2058.
- b. Sterling YM. Impact of the environment on asthma control. *Journal of Community Health Nursing*. 2012; 29: 143-153.

Objective E: Support statewide tobacco prevention and control efforts.

Activity	Target date
1. Support smoke-free multi-unit housing efforts	2015
2. Support tobacco prevention and control efforts on college campuses, parks, beaches and other public open air places	As opportunities arise
3. Promote smoking cessation in households with persons with asthma	Ongoing
4. Monitor research and policies related to maintaining smoke-free environments, e-cigarettes and other smoking-related practices	Ongoing
5. Promote asthma-related messaging of other tobacco products, e-cigarettes and delivery devices (e.g., hookahs) as evidence arises	Ongoing
6. Support efforts to eliminate marketing tobacco products to children	Ongoing
7. Support efforts to create smoke-free casinos	As opportunities arise

Evidence rating: Scientifically supported
 Basis for evidence rating: 1 systematic review (a)

- a. Turner S. Environmental exposures and respiratory outcomes in children. *Pediatric Respiratory Reviews*. 2012; 13: 252-257.

