



asthma home assessment program

annual report 2024

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overview

overview: who & what

- Community Health Workers (CHW) can go into the home, and often have more open and trusting relationships with patients and their families
- Asthma CHWs focus on
 - Education reinforcement
 - Medication and appointment compliance
 - Work to address environmental triggers
 - Identifying and addressing social needs
 - Assessments monitoring asthma control (via Asthma Control Test/ACT), quality of life, and knowledge



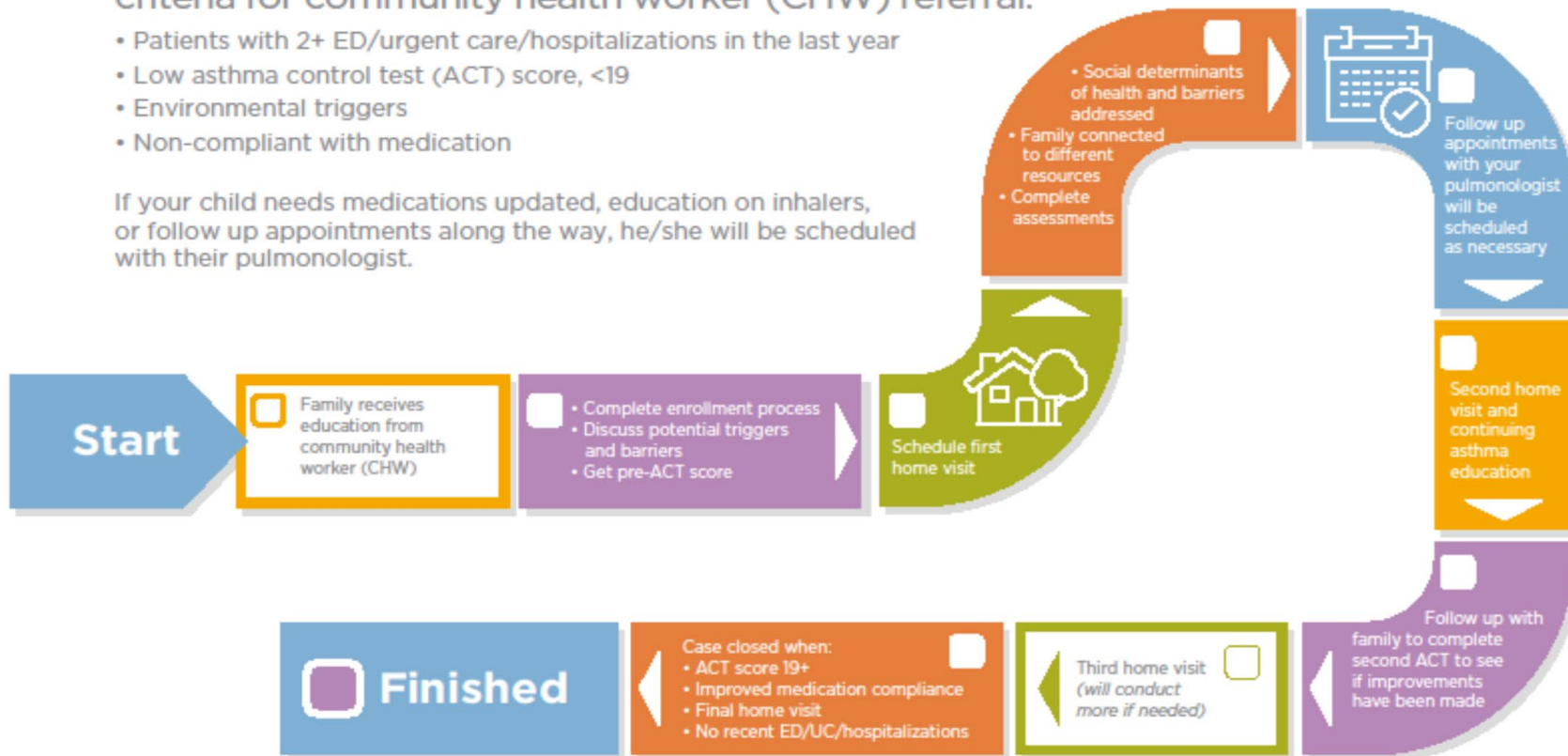
overview: how

your guide to asthma care with a community health worker

criteria for community health worker (CHW) referral:

- Patients with 2+ ED/urgent care/hospitalizations in the last year
- Low asthma control test (ACT) score, <19
- Environmental triggers
- Non-compliant with medication

If your child needs medications updated, education on inhalers, or follow up appointments along the way, he/she will be scheduled with their pulmonologist.



goal, objectives and milestones



Mason, 8 yrs. old in DCH asthma program read more here:
<https://www.childrensdayton.org/the-hub/empathy-action-role-community-health-workers-asthma-treatment>

goal: reduce asthma disparities by race and geographic regions

Objective	Critical Success Factors
Improve access to healthy home environments for all children in our region	<ul style="list-style-type: none">• Develop consistent approach for community health workers to address triggers in home environments• Develop an asthma-friendly certification program with contractors who do home improvements• Collaborate with housing community to build “healthy homes” pipeline
Address the social needs of children with asthma	<ul style="list-style-type: none">• Improve access to healthy foods, safe housing and other social correlates of health for children with asthma• Serve as a “community resource hub” for children with asthma and those who provide care to this population
Expand best practices for asthma within the primary care environment	<ul style="list-style-type: none">• Improve co-management of asthma between hospital and primary care practices• Build capacity for telehealth visits for asthma• Improve health literacy around asthma
Expand advocacy and education around issues impacting children with asthma	<ul style="list-style-type: none">• Impactful advocacy responsive to the needs of children with asthma (i.e. pharmaceutical costs, better housing)• Continued school-based education and intervention

milestones

- Develop and enhance asthma data dashboard
- Automation of referral for asthma control test (ACT) score <19
- Identification of % of asthma patients connected to CHWs in areas of highest need



asthma data dashboard created July 2023

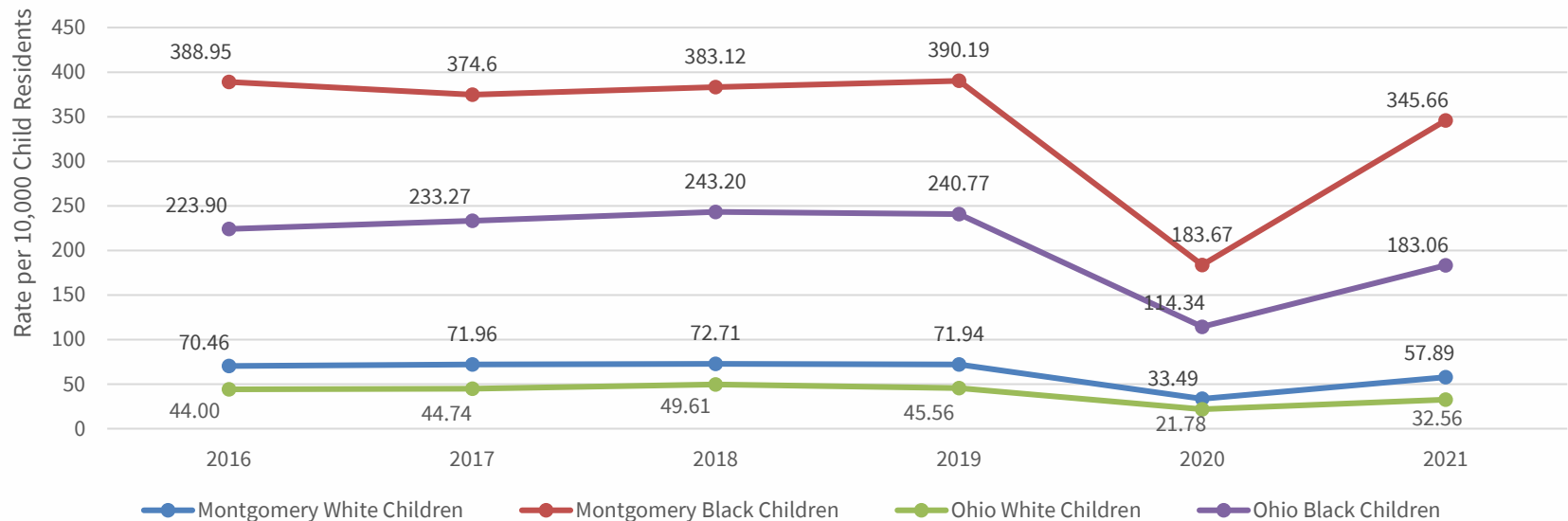


data & activities



rates of asthma hospitalization & emergency department visits by race-age group, montgomery county 2016-2021

Black Children in Montgomery County Experienced Higher Rates of Asthma Hospitalizations and Emergency Department Visits Compared to their White Counterparts

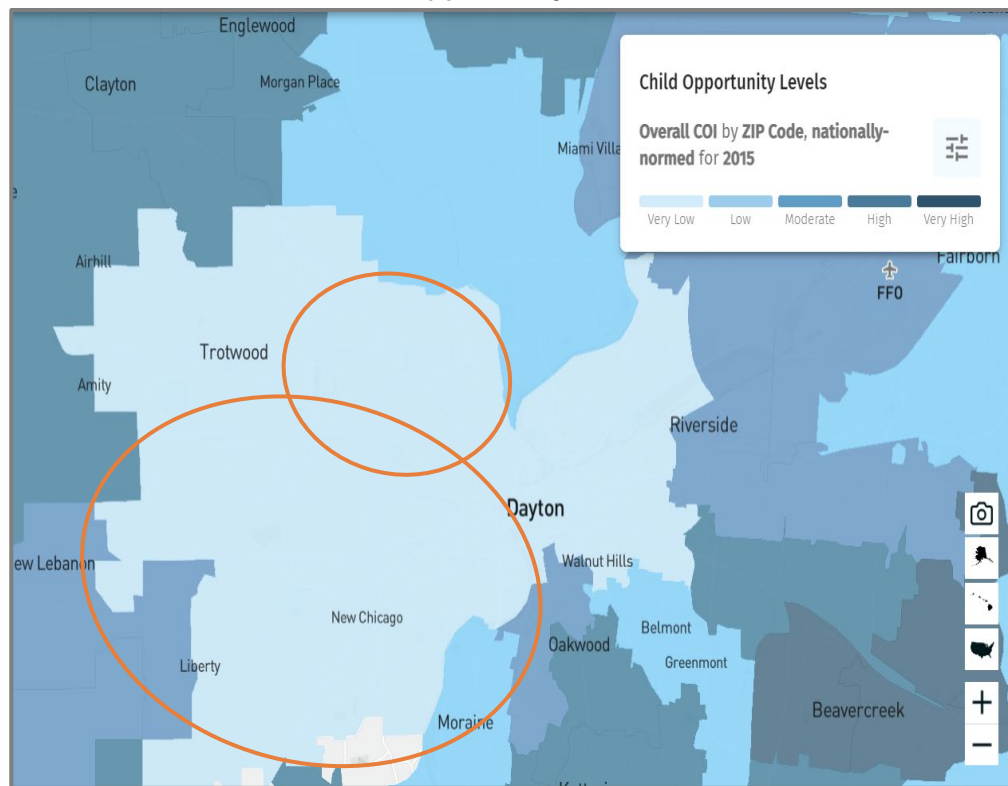


Original Source: United States Department of Health and Human Services (US DHHS), Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Single Race Population Estimates, on CDC WONDER On-line Database, 2016-2021.

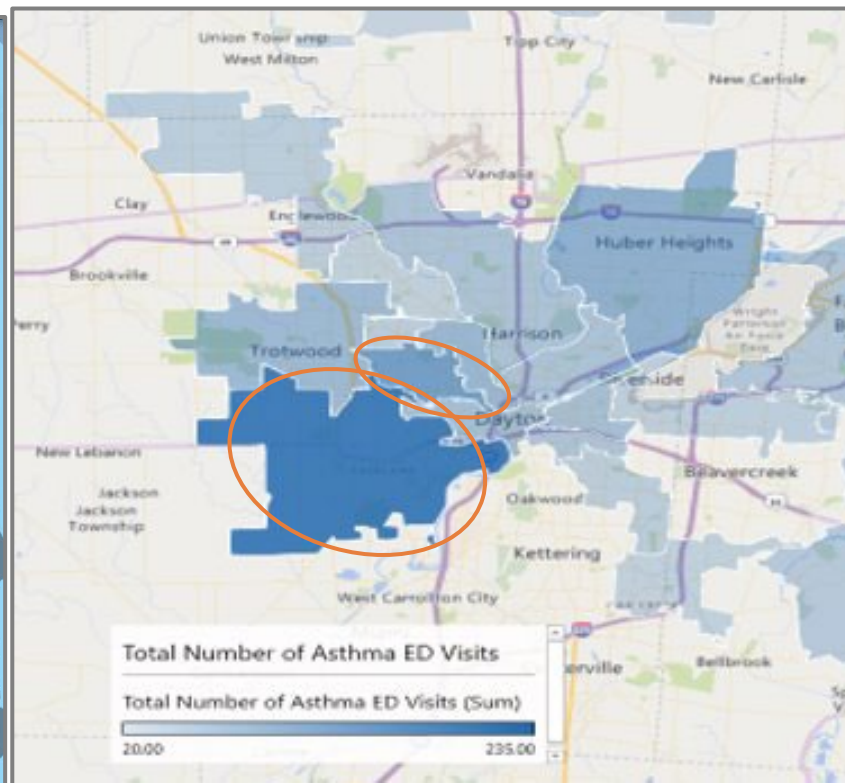
Retrieved from: Ohio Department of Health, Asthma Program, "Montgomery County: The Current Status of Asthma Burden 2023"
<https://odh.ohio.gov/know-our-programs/asthma-program/health-equity/montgomerycounty>

ED utilization and the childhood opportunity index

Child Opportunity Index



Asthma ED Visits for 2022



Source: (Left) Child Opportunity Index, <https://www.diversitydatakids.org/child-opportunity-index>, 2015. (Right) Dayton Children's Hospital Electronic Medical Record (EPIC) data, Asthma Emergency Department Visits, 2022.

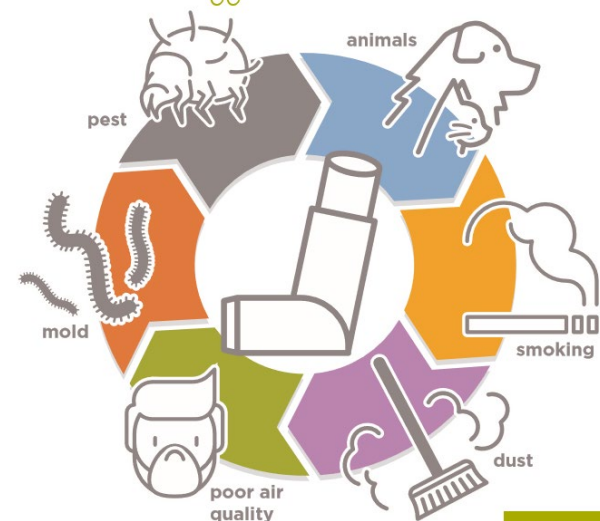


partnership & evaluation

partnership: dayton asthma alliance

- School-based work
 - Dayton Public Schools Open Airways Program
 - Asthma Mobile Unit
 - Miami Valley Child Development Center
- Clinic-based work
 - Community health workers
 - Pulmonary clinic programs
 - Co-management project
 - Medical-Legal Partnership
- Community-based work
 - Smoking/vaping cessation
 - Community events
 - Turn-Key Environmental (mold assessment)
 - Dayton Home Repair Network
 - Local Office of Minority Health

Most common triggers found in homes



evaluation: cost-effectiveness analysis

Key Assumptions:

Years of Evaluation – 3

Net Effective Annual Attrition Rate – 12%

Average Cost per Child Served – \$2,078

Total Persons Over 3 years (Enrollment rate)	
Inpatient – 3-4 Years	30
Inpatient – 5-14 Years	36
Inpatient – 15+ Years	30
ED – 3-4 Years	54
ED – 5-14 Years	72
ED – 15+ Years	54
Total Persons over Project	276
Total Cost Avoidance Savings	\$2,433,330
Total Program Costs	\$596,858
Program Net Savings	\$1,836,472
Net Present Value (2023 dollars)	\$1,546,248

evaluation:

As of March 2024 -- Asthma CHW's are following 82 patients. Early data shows 18 out of 35 patients 51% showed an improvement of 3 or more points on the ACT test after involvement with a CHW.



sustainability

sustainability

- Program facilitators
 - Pediatric Clinics Main Campus & Northwest
 - Dayton Children's Pulmonary
- Sustainability
 - Hospital investment has been made in this work
- Policy change
 - Partnership with Local Office of Minority Health – listening sessions
 - Collaboration with public housing for integrated pest management

next steps

- Continuous refinement of dashboard to track CHW metrics
- Evaluation of CHW intervention on health outcomes and reduction of disparities
- Continued co-development of program improvements from the Community Advisory Board