

# Learning As We Grow

Evaluation Highlights from CDC's  
National Asthma Control Program Grantees, 2018



Centers for Disease  
Control and Prevention  
National Center for  
Environmental Health

# Acknowledgments

On behalf of CDC's National Asthma Control Program, the evaluation team would like to thank our state partners, who shared their evaluation experiences for this publication. This year's submissions are an impressive indication of the evaluation capacity that has been built among our asthma programs and partners. The examples clearly demonstrate that the practice of evaluation has gained significant traction and become an intrinsic component of the National Asthma Control Program. This year, we decided to award evaluations by the particular category that stood out or exemplified excellence. As a whole, we believe the evaluations reflect substantial growth in understanding evaluation approaches, methodologies, and use of findings and in evaluative thinking amongst your programs. It is so gratifying for us to witness such progress!

Thank you for letting us be a part of your journey in learning and growing through evaluation. We are extremely grateful to all of you for your commitment and dedication to evaluation.

We would also like to express our gratitude to the panel of reviewers for their many hours of participation in the awards process: Chelsea Austin, James Guest, Jr., Obinna Jude Okeke, evaluation technical advisors, and numerous other members of the CDC evaluation team.

## Citation

Centers for Disease Control and Prevention. Learning As We Grow: Evaluation Highlights from National Asthma Control Program Grantees, 2018. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Environmental Health, Division of Environmental Science and Practice, Asthma and Community Health, December 2018.

Centers for Disease Control and Prevention  
National Center for Environmental Health  
Division of Environmental Health Science and Practice  
Asthma and Community Health Branch  
Website: <http://www.cdc.gov/nceh/airpollution/>





March 13, 2018

Dear Asthma friends,

I was so looking forward to presenting these awards in person, not only to recognize the great work of these grantees but to celebrate the incredible work of the asthma evaluation team in supporting you. The CDC Framework turns 20 next year. It represented a seismic shift in how we viewed evaluation from a type of research to an orientation to continuous program improvement. From “proving” to “improving” as Michael Patton says. That the conference was undone by a water main break is unfortunate, but instructive. It reminds us that “infrastructure matters.” No program staff has realized more than the asthma evaluation team that if we are in the “improving business” then we at CDC are YOUR servants; our role is to support you with tools and expertise to help you understand your goals, thoughtfully reflect on how you’re doing, and then, most importantly, take action to do better. Whether it’s called performance monitoring, or quality improvement, or system thinking, or collective impact, or just good old evaluation, it can’t happen without evaluations that meet the standards we’ve aspired to for 20 years: useful, feasible, ethical, and accurate.

Congratulations to the following evaluations that represent excellent practice in the field. We should all be proud of their work and of the dedicated CDC asthma staff who have supported them and all of you.

Tom Chapel

Chief Evaluation Officer

Centers for Disease Control and Prevention



# Winners of the 2018 NACP Grantees Evaluation Awards

## Best Overall Evaluation Practice

**Gold:** Utah Department of Health Asthma Program

**Silver:** Pennsylvania Asthma Control Program

**Bronze:** Vermont Department of Health Asthma Program

## Best Infographic

Rhode Island Asthma Control Program

## Best Logic Model

Connecticut Asthma Program

## Best Evaluation Methodology

Maine Center for Disease Control and Prevention

## Best Partnership Evaluation

Missouri Asthma Prevention and Control Program

## Best Evaluation Plan

New York State Asthma Control Program

## Best Program Activity Visual

Illinois Department of Public Health Asthma Program

## Best Evaluation Presentation

Massachusetts Department of Public Health

## Best Stakeholder Engagement

Michigan Asthma Prevention and Control Program

## Best Evaluation Summary

Montana Asthma Control Program

## Best Use of Evaluation Findings

Ohio Department of Health Asthma Program



# Contents

<b>INTRODUCTION</b> .....	<b>1</b>
<b>BEST OVERALL EVALUATION PRACTICE</b> .....	<b>3</b>
<b>Gold:</b> Utah Department of Health Asthma Program: Improving the Utah Asthma Home Visiting Program (UAHVP) Three Es: Efficiency, Effectiveness, and Excellence through Data and Evaluation	
<b>Silver:</b> Pennsylvania Asthma Control Program: Evaluation of the Community Asthma Prevention Program (CAPP)	
<b>Bronze:</b> Vermont Department of Health Asthma Program: Vermont Asthma Program Evaluation	
<b>BEST EVALUATION METHODOLOGY</b> .....	<b>10</b>
Maine Center for Disease Control and Prevention: Maine In-Home Asthma Education Program: Evaluation Results 2016–2017	
<b>BEST EVALUATION PLAN</b> .....	<b>13</b>
New York State Asthma Control Program: The Healthy Neighborhoods Program (HNP)/Regional Asthma Coalition (RAC) Partnership Evaluation	
<b>BEST EVALUATION PRESENTATION</b> .....	<b>15</b>
Massachusetts Department of Public Health (MDPH): MDPH Asthma Learning Collaborative	
<b>BEST EVALUATION SUMMARY</b> .....	<b>18</b>
Montana Asthma Control Program: Evaluating Service Activities—School Asthma Mini-grants	
<b>BEST INFOGRAPHIC</b> .....	<b>20</b>
Rhode Island Asthma Control Program: Rhode Island Home Asthma Response Program	
<b>BEST LOGIC MODEL</b> .....	<b>23</b>
Connecticut Asthma Program: Quality Improvement Asthma Initiative	
<b>BEST PARTNERSHIP EVALUATION</b> .....	<b>26</b>
Missouri Asthma Prevention and Control Program: CALM2 School Nurse and Health Staff Professional Development Plans	
<b>BEST PROGRAM ACTIVITY VISUAL</b> .....	<b>28</b>
Illinois Department of Public Health Asthma Program: Using Community Health Needs Assessments to Investigate Asthma Health Priorities in Illinois	
<b>BEST STAKEHOLDER ENGAGEMENT</b> .....	<b>30</b>
Michigan Asthma Prevention and Control Program: Managing Asthma through Case Management in Homes (MATCH) Data Quality Improvement	
<b>BEST USE OF EVALUATION FINDINGS</b> .....	<b>32</b>
Ohio Department of Health Asthma Program: Children’s Hospital Asthma Collaborative Evaluation	



# Introduction

More than 24 million Americans have asthma, affecting 1 in 12 children and 1 in 14 adults.<sup>1</sup> Asthma accounts for more than 439,000 hospitalizations, 1.6 million emergency department (ED) visits, and 10.5 million physician office visits annually<sup>2</sup>—costing private insurance, Medicaid, Medicare, and other sources an estimated \$62.8 billion in 2009.<sup>3</sup>

There are racial and socioeconomic disparities among those who have and suffer from poorly controlled asthma. Asthma is particularly prevalent among low-income populations when compared to high-income populations.<sup>4</sup> Black Americans are 2–3 times more likely to die from asthma than any other racial or ethnic group.<sup>5</sup>

Asthma is controllable, and since 1999, the National Asthma Control Program (NACP), in the Centers for Disease Control and Prevention’s (CDC) Asthma and Community Health Branch (ACHB), has been working with national and state-level partners to promote strategies and programs that will reduce this burden and help persons with asthma lead healthy, productive lives.

For the past 19 years, the NACP has funded selected states to address asthma from a public health perspective. NACP has supported states to develop state-specific asthma surveillance systems; partnerships for coordinated efforts to address state asthma goals and objectives; and interventions to control asthma among persons living with asthma. As evaluation is an essential component of public health practice, NACP has always acknowledged its importance and since the 2009 funding cycle, the NACP has continued to prioritize and promote evaluation capacity among its funded grantees. Please see <http://www.cdc.gov/asthma/nacp.htm> for additional information.



## CDC Evaluation Resources and Technical Support

Throughout the 5-year grant period, a team of Evaluation Technical Advisors (ETAs) within NACP worked together with evaluators in funded state programs to strengthen and expand evaluation capacity among states and their partners. As ETAs, our role was to provide strategic evaluation guidance to our state partners in planning and implementing high quality evaluations, striving to assure that evaluation findings were useful to stakeholders, and would be used for making programmatic decisions and improvements. This focus on generating useful information for programs is one of the critical foundations of the asthma-focused evaluation framework and series, *Learning and Growing through Evaluation* ([http://www.cdc.gov/asthma/program\\_eval/default.htm](http://www.cdc.gov/asthma/program_eval/default.htm)).

Similarly, at the state level, asthma program evaluators used the *Learning and Growing through Evaluation* framework to guide their work with key stakeholders in planning and implementing at least one evaluation from one of three core program components: infrastructure, services, and health systems. The vast majority of the evaluations generated findings that were useful to programs, whether for improving their operations, restructuring activities or approaches, or guiding decisions to expand or, in some cases, halt programs. Without exception, our states and their partners learned immensely from the planning, implementation, analysis, and dissemination processes and, perhaps most importantly, they recognized the importance of engaging stakeholders throughout the evaluations.

## NACP Evaluation Award Program

To highlight the importance of good evaluation practice and to recognize states for their achievements, the NACP Evaluation Award program was created. Starting in 2013 and repeated in 2014 and 2018, state asthma programs nominated evaluations that demonstrated valuable use of findings. These nominations underwent a standardized review process conducted by external reviewers. This compendium showcases the award-winning evaluations that exemplify the value and utility of evaluation and the respective awards each earned. On the following pages you will read the narratives written by state asthma programs illustrating how they evaluated their work and used their findings to improve and enhance their efforts to better serve persons with asthma.

The NACP is honored to present these state achievements in evaluation and hopes that as you read this document, you will begin to appreciate the commitment that asthma programs have shown to evaluation and to achieving optimal care for persons and communities in need. The stories in this compendium will hopefully serve to inspire continuing high-quality evaluation and program innovation.

Thank you to everyone for their exceptional evaluations!





# UTAH



**Award:** Best Overall Evaluation Practice (Gold)

**Grantee:** Utah Department of Health Asthma Program

**Evaluation Name:** Improving the Utah Asthma Home Visiting Program (UAHVP)  
Three Es: Efficiency, Effectiveness, and Excellence through Data and Evaluation

## Overall Description of the Project

The UAHVP aims to provide comprehensive asthma care to those who have poorly controlled asthma. The program consists of three home visits conducted by health educators and includes asthma self-management education and an in-home environmental assessment aimed at reducing asthma triggers. The Utah Asthma Program (UAP) completed an evaluation of the UAHVP after 6 months of implementation. The purposes of the evaluation were (1) determine program effectiveness, (2) determine implementation fidelity to program processes including barriers, and (3) assess the efficiency of program processes including data collection methods.





## What We Did

An evaluation plan was created and later modified according to input received from partners through several meetings and emails. Input included ideas on how to measure effectiveness, efficiency, and fidelity to program implementation. Partners also helped define the “standards for success” for each indicator. After completion of the evaluation, partners worked together to create an action plan for implementing recommendations.

Action plan activities were ranked according to importance, urgency, and difficulty by the UAP and partners. Selected activities were then added to the UAP staff work plans and partner contracts to ensure the activities would be completed. Another evaluation is planned to assess the success of the activities and the effectiveness of the changes.

The evaluation employed a mixed methods sequential triangulation design to enhance the validity of evaluation findings [Morse, J. M. (1991)].<sup>6</sup> Data on participant outcomes, referral sources, and information from satisfaction surveys were used to assess program effectiveness and content. These data were also used to develop additional tools for key informant interviews and document reviews. Thematic coding of qualitative data was used to assess implementation processes, data collection methods, and corroborate quantitative data.

## What We Learned

The UAHVP is an effective program. About 70% of participants reported improved quality of life and 80% reported more confidence in managing their asthma because of the program. About 74% had an increase in asthma knowledge test scores, and 79% had improved Asthma Control Test scores from pre- to post-program. These numbers met or exceeded “standards of success.”

Several processes had barriers to implementation. The referral system identified potentially eligible participants, with 96% of referrals coming from the target population (i.e., those with poorly controlled asthma). However, the majority of referrals were not from targeted geographic areas due to difficulties working with referral partners in these areas. Barriers in data collection and participant tracking processes included inadequate software capabilities and an overburden of unorganized paper forms.

Customer satisfaction surveys showed that the program is effective and efficient with a few areas in need of improvement. Between 94% and 100% of participants reported that for each visit the program length, time between visits, and the amount of information covered was “about right.” Visit 3 had the lowest percent of being ranked as “excellent” at 78%. Visit 2 materials were ranked the lowest as “easy to understand” at 55%.

## How We Grew

The most significant changes included addressing barriers in recruitment and referral processes, reducing barriers to data collection, and changing visit content.

The UAP and partners worked to build relationships with clinics in high-need areas to increase referrals. This included working with clinic staff to create clinic-specific referral forms. Additionally, a noteworthy success was the formation of a partnership with a large health system that involved creating a systematic referral process that greatly increased eligible referrals from the target population.

Data collection forms were changed to follow the natural progression of each visit. Additionally, the data submission process was streamlined and now includes a data quality check. On-going data checks have shown that these changes have improved data collection completion and quality.

Visit 3 was given more structure, with standardized key concepts and activities. This change was aimed at increasing the quality of visit 3. Preliminary data show that this change has been successful, with an increase of participants reporting the visit quality as “excellent” from 75% to 95%. A PowerPoint explaining visit 2 concepts was added to visit 2. The percent of people who reported that visit 2 materials were “completely easy” to understand increased from about 55% to 76%.

For more information about this evaluation, please visit <http://www.health.utah.gov/asthma/data/eval.html> or contact: Holly Uphold, [huphold@utah.gov](mailto:huphold@utah.gov)





# PENNSYLVANIA



**Award:** Best Overall Evaluation Practice (Silver)

**Grantee:** Pennsylvania Asthma Control Program

**Evaluation Name:** Evaluation of the Community Asthma Prevention Program (CAPP)

## Overall Description of the Project

Between September 2014 and August 2016, staff at Public Health Management Corporation evaluated the *Community Asthma Prevention Program (CAPP)*, the Pennsylvania Asthma Control Program (PA ACP)'s primary community-based intervention implemented by the Children's Hospital of Philadelphia (CHOP) for over 20 years. CAPP targets children (2–16 years) in Philadelphia and surrounding areas who suffer most severely from asthma, and provides their caregivers with four educational home visits by a Community Health Worker (CHW). In addition to the age requirement, children must have (1) a diagnosis of moderate to severe-persistent asthma; (2) either one inpatient admission or two asthma-related emergency department (ED) visits within the past year; and (3) a prescription for at least one inhaled corticosteroid controller medicine. The CHW provides participating families with asthma self-management education, in-home assessments for asthma triggers, cleaning supplies and other remediation items (e.g. mattress covers), and connections to community-based resources to help improve their child's asthma management and control. The primary outcomes of interest are reductions in ED visits and inpatient hospitalizations, missed school days and parent work days, and indoor environmental triggers.



## What We Did

PA ACP conducted an outcome evaluation using a pre/post design to assess changes in outcomes of interest between program enrollment and 12-month follow-up. Surveys were administered by CHWs and completed by the primary caregiver at multiple time points throughout the intervention. Analysis focused on outcomes obtained and maintained one year after program implementation. Three different survey instruments collected data:

1. Caregiver survey read by the CHW to the caregiver, including questions about demographic characteristics, asthma medications, asthma symptoms and management, health care utilization, and work and school absenteeism;
2. Home environment assessment completed by the CHW based on direct observation of environmental triggers present in the home; and
3. Asthma knowledge quiz completed by the caregiver.

Data collection instruments were adapted from existing program instruments developed by CAPP Founder and current Medical Director, Dr. Tyra Bryant-Stephens, at CHOP. Data were collected via paper surveys, entered into CHOP's Research Electronic Data Capture (REDCap) system, and transmitted to the evaluation team via the Department of Health for analysis.

## What We Learned

Between September 2014 and August 2016, CAPP enrolled 188 families in the home visit program and conducted 12-month follow-up with 130 families. Nearly 100 percent of families due for follow-up completed it as scheduled, which was a testament to strategies employed by the program team. CHWs completed follow-up visits at three, six, and nine months to establish strong relationships with families. They visited the home or left "we miss you" cards at the homes of difficult-to-reach participants, and identified families for outreach during weekly staff meetings.

Key findings from the evaluation indicate that CAPP is effective at increasing caregiver knowledge of asthma management and symptoms, decreasing asthma-related inpatient hospitalizations and ED visits, decreasing school and work absenteeism, and decreasing prevalence of common household asthma triggers. Specifically, at the 12-month follow-up: **81.6%** of caregivers improved their knowledge of asthma management best practices; **41.9%** of families reported a decrease in asthma triggers (**44.4%** of families reported neither an increase nor a decrease in triggers). On average, families experienced **1.1** fewer asthma-related ED visits ( $p<0.001$ ) and **0.42** fewer inpatient asthma hospitalizations per year ( $p<0.01$ ); and **3.9** fewer missed school days due to asthma ( $p<0.001$ ) and **1.6** fewer missed work days due to asthma each year ( $p<0.01$ ).

## How We Grew

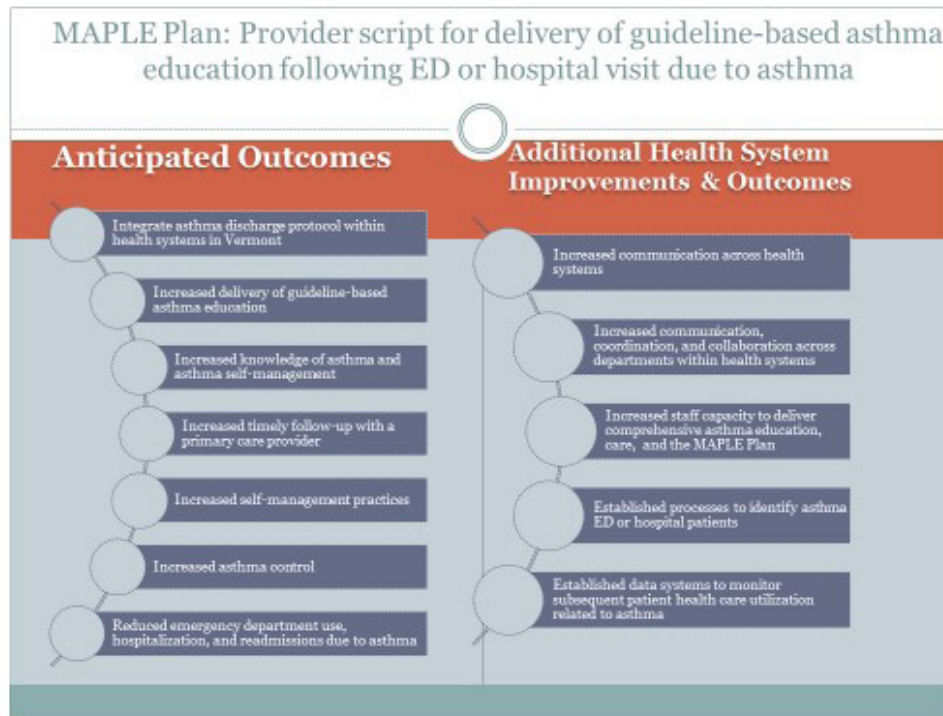
From the evaluation findings, the PA ACP learned that CAPP is effective at achieving positive asthma-related outcomes within the Philadelphia County context in which it was initially designed and delivered. The evaluation also revealed limited means and strategies to assess program implementation, suggesting the need to develop additional process and fidelity measures. Given ongoing preparations to expand CAPP to Allegheny County, this will be especially important for capturing the extent to which the program is successfully replicated in a new setting. The evaluation team also learned that evaluation is only as useful as the products, recommendations, and learning that it produces. Dense, data-heavy evaluation reports are often not useful for stakeholders who need to quickly reference specific outcomes, are more concerned with implications for future programming, and may not be data geeks (like evaluators). As a result, we developed new visual, digestible reports that highlight key information and are more readily accessible for sharing results with program partners.

For more information about the evaluation, please contact: Alexandra Ernst, Project Manager, Research and Evaluation Group at Public Health Management Corporation (PHMC), 215-985-2551, [aernst@phmc.org](mailto:aernst@phmc.org)





# VERMONT



**Award:** Best Evaluation Practice (Bronze)

**Grantee:** Vermont Department of Health

**Evaluation Name:** Vermont Asthma Program Evaluation

## Overall Description of the Project

To promote guideline-based asthma care within health systems in Vermont, the Asthma Program collaborated with Rutland Regional Medical Center (RRMC) and Springfield Medical Center System (SMCS) to implement the MAPLE Plan. The MAPLE Plan is a provider script designed to assist health care professionals in delivering comprehensive guidelines-based asthma education to patients at the time of or following discharge from a hospital or emergency department visit due to asthma. The information and education messages in the MAPLE Plan are intended to promote asthma self-management knowledge and behaviors among individuals with asthma. Evaluation of this MAPLE Plan initiative was conducted to understand and describe implementation within each centers' system of care, monitor use of the MAPLE Plan, and assess subsequent hospital and emergency department use by patients.



## What We Did

The Vermont Asthma Program implemented an outcome evaluation for each health system in 2015 (RRMC) and 2016 (SMCS) using qualitative and quantitative methods. Information gained throughout the evaluations identified opportunities to strengthen implementation and reach of the MAPLE Plan. The Asthma Program was interested in understanding ongoing reach of the initiative across health systems and the impact on patient outcomes, including timely follow-up with a primary care provider

and subsequent asthma-related emergency department and inpatient use.

Data collection consisted of tracking process data including the number of eligible patients, demographic information, patients called, and the outcome of the call (completed, declined, nonresponsive), as well as outcome data including tobacco use, visit with PCP, and emergency department and/or inpatient utilization.

---

## What We Learned

### SMCS

As SMCS implemented the MAPLE plan over two years, the initiative led to increased communication and coordination across departments; increased staff capacity to deliver comprehensive asthma education (e.g., certified asthma educator and asthma training to care coordinators); established processes to identify asthma-related emergency department visits or hospitalizations; and established data systems to monitor patient health care utilization following the MAPLE Plan call. Of the eligible patients identified, 27% completed a follow up call. Findings included:

- ◆ Established a protocol and processes to integrate the MAPLE Plan into SMCS systems of care;
- ◆ Strengthened communication and coordination across providers and departments;
- ◆ Instituted a regular practice of data collection and monitoring between care coordinators and administrators; and
- ◆ Challenges completing follow up calls due to lack of staff capacity and patient availability and responsiveness.

### RRMC

Initiated in 2015, RRMC implemented the MAPLE Plan through 2017. Implementation evaluation and ongoing data collection and monitoring of process and reach were useful in identifying opportunities to strengthen and improve processes for delivering the MAPLE Plan. However, RRMC found challenges in collecting outcome data to understand impact of the initiative. For example, data are collected in separate systems at the medical center which do not link to the electronic health record (EHR) system. The MAPLE Plan call data were captured in a software program that does not link to the RRMC EHR. Linking MAPLE Plan patient data across the two systems is manual, requiring staff time and prioritization. Gaining understanding of the data collection and reporting processes, and evaluation data needs, across the RRMC and Asthma Program teams was a slow process. Of eligible patients identified, 54% completed a follow-up call, however, patient demographic data and outcome data were not consistently available. Findings included:

- ◆ Systems to support the MAPLE Plan were challenging to implement which limited growth, although it has served as a referral source into the home visiting program;
- ◆ Call completion rate was lower than desired; and
- ◆ Data to determine outcomes among those that completed a MAPLE Plan call were not reliably available.



## How We Grew

The Vermont Asthma Program reviewed the data for each of the sites and discussed the successes and challenges of implementation noted in the evaluation report. The evaluation report contributed to quality improvement efforts within the program, including identifying software storage glitches that were corrected at SMCS, recognizing that 72 hours from discharge was a key factor for successful follow-up with a patient, and determining the value-added of the MAPLE Plan to support a systems approach to care. For example, at SMCS the MAPLE Plan is becoming well-integrated into its systems of care and data collection processes and helping to provide a feedback loop from patient identification to referral. In contrast, the challenges at RRMC prevented the MAPLE Plan from being effectively integrated into its system, or producing satisfactory outcomes. RRMC will continue to

integrate asthma education into its hospital discharge calls but it will not prioritize the MAPLE Plan as a specific intervention that requires separate reporting.

Therefore, the Vermont Asthma Program redirected the MAPLE Plan resources toward more impactful interventions. The reallocation of these funds is supporting expansion of intensive self-management education at a federally qualified health clinic in Rutland and increasing implementation efforts within SMCS including MAPLE Plan and referral tools like One Touch.

For more information, please contact: Fonda Ripley, 802.651.7408, [fonda\\_ripley@jsi.com](mailto:fonda_ripley@jsi.com) or Anna Ghosh, 603.573.3334, [anna\\_ghosh@jsi.com](mailto:anna_ghosh@jsi.com)





# MAINE



**Award** Best Evaluation Methodology

**Grantee:** Maine Center for Disease Control and Prevention

**Evaluation Name:** Maine In-Home Asthma Education Program: Evaluation Results 2016–2017

## Overall Description of the Project

The Maine Center for Disease Control and Prevention's In-Home Asthma Education Program (Maine HAEP) is an innovative, home-based asthma education program that targets Maine adults and children whose asthma is not well controlled. The program was developed by staff at the Maine CDC, a Certified Asthma Educator (CAE) at a local public health department, and staff at an independent evaluation agency. It includes six modules that are completed in about 3 visits. With support from the Maine CDC, the program was piloted by a public health nurse in 2016, and expanded in 2017 to include community paramedics and community health workers as implementers.

The Program is designed to achieve the following: (1) increased client/caregiver asthma self-management knowledge and skills; (2) improved health outcomes for clients receiving home visits; and (3) improved knowledge and understanding among professionals of appropriate asthma management practices and effective public health strategies related to asthma management. The evaluation assessed the effectiveness of the program by measuring clients' self-management behaviors, health outcomes, and quality of life measures.



## What We Did

Partnerships For Health implemented an outcome evaluation to assess the extent to which the Maine HAEP impacted participants' self-management behaviors and health outcomes. The evaluation follows a longitudinal, fixed mixed-methods, with pre, post, and ex-post design.

Three tools are used to collect data for the evaluation: client surveys, intervention logs, and a modified Inhaler Device Assessment Tool<sup>®</sup>. Client surveys capture data including demographic characteristics, medical history, asthma control, asthma controller medication adherence, and asthma-related quality of life. The surveys use existing, standardized tools where possible, such as: The Asthma Control Test<sup>™</sup>; Test For Respiratory Asthma Control In Kids (Track); The Childhood Asthma Control Test; The Mini Asthma Quality of Life Questionnaire<sup>®</sup>; and the Pediatric Asthma Caregiver's Quality of Life Questionnaire.<sup>®</sup> An intervention log is completed for each client capturing their referral source, modules and forms completed, and implementer notes. The Inhaler Device Assessment Tool<sup>®</sup> is used to assess client's skills with their inhaler.

From January 1, 2016–August 31, 2017, 52 Maine residents (30 adults and 22 children) participated in the program and evaluation. Short-term Program efficacy was assessed using pre and post survey data. Descriptive and inferential statistics were used to analyze data. Data on demographic, socioeconomic, and other individual variables were tabulated to describe clients and their outcomes. Inferential statistics were used to examine client outcomes. Specifically, asthma control, quality of life and service utilization were compared pre- and post-Program implementation.

## What We Learned

The evaluation findings suggest that the Maine HAEP was effective in improving clients' self-management behaviors, health outcomes, and quality of life immediately after completing the Program compared with 3 months prior to participation.

Compared with 3 months prior to participation, immediately after the Program:

- ◆ Participants with asthma action plans increased 100% among adults (from 11 to 22) and 143% among children (from 7 to 17).
- ◆ Participants who demonstrated use of correct controller device increased 257% among adults (from 7 to 25) and 186% among children (from 3 to 20).
- ◆ Self-reported achievement of adherence to long-term controller medication increased 58% among adults (from 12 to 19) and 22% among children (from 9 to 11).
- ◆ The total number of work/school days missed by participants decreased among adults (from 53 to 35 days) and children (from 52 to 12 days).
- ◆ Asthma that is well controlled increased 117% among adults (from 6 to 13 participants) and 100% among children (from 7 to 14 participants).
- ◆ Use of oral steroids decreased by 76% among adults (from 21 to 5) and by 71% among children (from 14 to 4).
- ◆ Asthma-related emergency room visits decreased by 92% among adults (from 39 to 3 visits) and by 95% among children (from 21 to 1 visit).
- ◆ Before the Program, 21 participants (9 adults; 12 children) visited urgent care facilities 28 times. Immediately after the Program, no adults reported visiting urgent care facilities and 2 children had a total of 2 visits.





## How We Grew

The integration of the evaluation within the Maine HAEP resulted in an increase of knowledge for both the implementers and evaluators. Evaluators' knowledge about asthma and the real-time challenges associated with implementing an in-home program grew and the implementers' gained deeper insights and understanding of evaluation. While the collaborative approach was resource intensive, the time and effort resulted in reductions in data reporting burden and increased data accuracy.

The promising results from the pilot resulted in the state's decision to expand implementation geographically and encourage community paramedics and community health workers to integrate the program into their practice. This expansion to health extenders increased access to the program for some of the most vulnerable populations in Maine and strengthened their self-management and improved health outcomes.

During the data validation process, the evaluators discussed data inconsistencies with implementers and learned about client barriers, and misconceptions regarding medication use emerged. Primarily, we learned that clients may not understand the difference between a controller medication and a rescue medication, and may be incorrectly using their rescue inhaler

daily. The program adapted to include an inhaler poster (developed by Minnesota Department of Health) so that clients can identify which medication they are using and understand the differences.

As the implementers' confidence grew and the evaluation findings continued to show program efficacy, ways of scaling up the program were discussed and two additional strategies were added: (1) expanding recruitment strategies to include referral systems with primary care practices and hospitals; and (2) developing a curriculum to implement the program in a group setting.

The evaluation is being revised to assess the effectiveness of the two different implementation formats (individual and group). The evaluation results will continue to be shared with implementers, public health professionals, and other potential implementing partners in Maine.

For more information, please visit <https://www.maine.gov/dhhs/mecdc/population-health/mat/information-and-publications/burden-report.htm> or contact: Michelle Mitchell, Partnerships For Health, 207-620-1113, [Michelle.mitchell@partnershipsforhealth.org](mailto:Michelle.mitchell@partnershipsforhealth.org)





# NEW YORK



Photo Credit: NYSACP

**Award:** Best Evaluation Plan

**Grantee:** New York State Asthma Control Program (NYSACP)

**Evaluation Name:** The Healthy Neighborhoods Program (HNP)/Regional Asthma Coalition (RAC) Partnership Evaluation

## Overall Description of the Project

The Healthy Neighborhoods Program (HNP)/Regional Asthma Coalition (RAC) Partnership is designed to support the implementation of evidence-based home-based asthma services while enhancing bi-directional referrals and delivering comprehensive, guideline-concordant self-management education. The local HNP/RAC partnerships support an enhanced referral process to identify residents with asthma that is not well-controlled, and provide targeted activities in three of the highest asthma burden areas in New York (outside of NYC): Schenectady County, Orange County and Erie County.

The NYSACP evaluated the effectiveness of this enhanced model that identifies and targets highest-risk individuals with asthma to receive a comprehensive in-home environmental assessment, along with education on reducing asthma triggers and improving asthma self-management. The evaluation assessed whether results vary by partnership. Asthma knowledge and self-management outcomes were assessed, as well as the intervention's impact on health outcomes, including symptom-free days, use of quick relief medication, and asthma-related emergency department (ED) visits and hospitalizations. This evaluation identified "best-practices" to inform strategies for expanding the program to additional HNP sites in the future. A secondary aim of this evaluation was to estimate cost savings, when feasible.



## What We Did

Target ZIP codes in the three counties that have high burden for asthma ED visits and hospitalizations were identified to address burden and health disparities related to social determinants of health. Data collection and reporting tools were developed for each partnership to collect dwelling assessment information (e.g. presence of mold/mildew, smoking, leaks, and pests in the home) and individual asthma assessment information for each resident. From September 2015–October 2017, data were collected and assessed by the evaluation staff.

Feedback on data quality was provided to HNP/RAC partnerships to improve the overall data collected from home-based services with asthma visits. Reporting protocols were identified and established to improve data quality, and as a result of these efforts, programs had to spend less time reviewing, clearing, and resubmitting data. Process evaluation efforts focused on examining how many residents received a visit through the referral system and whether improvements occurred in the ability to target those whose asthma was not well-controlled. Outcome measures assessed whether improvements occurred in the home environment, in asthma knowledge, self-management, and health outcomes. Where possible, results were compared by asthma control status and by partnership.

## What We Learned

Results indicated that the three partnerships were successful in visiting over 1,000 homes and 1,400 residents with asthma. Variation occurred across the partnerships in the percentage of residents whose asthma was not controlled and who received both an initial and revisit. Schenectady County had the greatest proportion of residents who were poorly/not well-controlled that received a revisit. Outcome data demonstrated significant improvement in the overall asthma trigger score among these residents.

Assessing individual trigger items showed improvement (reduction) in the presence of rodents, cockroaches, structural/plumbing leaks, and mold/mildew. Improvements in asthma self-management and knowledge included increases, between the initial and revisits, in patients' knowledge of personal asthma triggers, confidence in avoiding those triggers, having written asthma action plan, controlled medication prescriptions and controller medication use daily. Significant reduction also occurred in the number of days or nights with asthma symptoms and frequency of quick relief medication use. Reduction in unscheduled visits to the doctor/urgent care, ED visits, and hospitalizations was also observed. The results also suggest that the greatest impact occurs among residents whose asthma is poorly/not well-controlled at the initial visit, and that programs should seek to concentrate efforts on revisiting those residents.

## How We Grew

Throughout the duration of the HNP/RAC partnerships, technical assistance was provided by NYSACP and findings were used to inform and improve implementation and reporting. Data quality improved, as well as the quality of the home-based services provided. Findings informed the release of a new e-Form data collection tool for home-based services. The e-Form better aligns with CDC performance measures and reporting requirements. The e-Form also improved the bi-directional referral system and enhances partner communication through the development of pdf reports that can be sent back to the referring provider. The updated asthma assessment form will be implemented across all 19 HNP contractors. Previously, implementation was limited to HNP/RAC partnerships in 3 counties and required a supplemental asthma assessment form. The standardized assessment form will allow 19 counties to report asthma data in one database.

Schenectady County was identified through the evaluation as having the greatest success among the partnerships in targeting and revisiting those whose asthma was poorly or not well-controlled. Representatives from the Schenectady County partnership participated in the NYSACP asthma training provided to all 19 counties to share the practices used to achieve their success rate.

For more information, please contact: Stephanie Mack, (518) 474-4237, [stephanie.mack@health.ny.gov](mailto:stephanie.mack@health.ny.gov)





# MASSACHUSETTS



**Award:** Best Evaluation Presentation

**Grantee:** Massachusetts Department of Public Health (MDPH)

**Evaluation Name:** MDPH Asthma Learning Collaborative

## Overall Description of the Project

The Asthma Prevention and Control Program works to improve the quality of life for all Massachusetts residents with asthma and to reduce disparities in asthma outcomes. The program supports an Asthma Learning Collaborative (Asthma LC) to share resources and models for coordinated clinical/school/community/home-based asthma interventions. The first series of the Asthma LC was launched in 2015 to improve linkages between clinical and community organizations in seven Massachusetts regions that have experienced a higher burden of asthma outcomes, such as hospitalizations. These regional collaborations have received state health care reform funding to launch pilots to better address asthma under the Prevention and Wellness Trust Fund (PWTF). The Asthma LC is important an forum where grantees gain knowledge from expert faculty while sharing their own expertise and experiences as they launch their interventions and the many components, staffing models, and collaborations that are new to their organizations. This evaluation was conducted to ensure that the Asthma LC serves as an effective source of expertise, innovation, and technical assistance for its members and stakeholders. As members share their experiences and tools, this evaluation has examined how effective Learning Collaborative activities have been at enhancing members' asthma initiatives.



## What We Did



The Massachusetts Asthma Prevention and Control Program undertook a formative (process) evaluation that employed a multiple mixed-method evaluation design with both quantitative and qualitative components. Evaluation methods included post-training evaluation forms following each session, a June 2015 midcourse and an August 2017 final survey of participants, and observation of activities such as the quarterly in-person sessions and bi-monthly Office Hour Calls. Individual evaluations of programs including the Community Health Worker (CHW)-Led Home Visiting Toolkit, CHW Training and Mentoring components, and an Asthma E-Referral Gateway (piloted to link clinical providers to school nurses) were considered as a whole to help strengthen these related initiatives. Evaluators also garnered further input from PWTF participants through key informant interviews and semi-structured group discussions. The primary evaluation questions were:

1. What is the extent to which participants find the Asthma LC useful?
2. How can the Asthma LC process be improved for subsequent iterations?
3. What, if any, quality improvements has participation in the Asthma LC resulted in home, school, and/or clinic-based interventions?
4. What best practices have been identified through Asthma LC cycles?

## What We Learned

**Content:** More time was needed for sites to fully understand the intervention components and for the Massachusetts Department of Public Health (MDPH) to clarify their own expectations as funder. A focus on establishing roles and responsibilities and establishing partnership relationships and communication systems could be beneficial. Support was needed to establish systems that provide needed infrastructure, such as means of communication and data collection.

**Format:** Site presentations were valuable as well as breaking into groups by similar roles/responsibilities. Webinars and breakout groups allowed tailoring content where experience/educational background is most varied. Office hours were useful for targeted assistance.

**Materials:** SharePoint tools were useful once reviewed with the group. Protocols and educational materials are valuable, but needed more extensive and ongoing training time. Tools are important to help sites set up, i.e. for high-risk registries, tracking process and outcome measures, Electronic Medical Record, e-Referral, Electronic Health Documentation for Schools, etc.

**Monitoring & Evaluation:** Initial assessment of site experience and capacity could be valuable. The summative evaluation of outcomes was important to establish and focus on intervention components in addition to quality improvement. Assessment of partnerships and CHW integration into care teams could strengthen interventions. The collection of outcome measures was often problematic.



## How We Grew

Findings were put to use immediately to improve Learning Collaborative sessions based on participant suggestions, including for more peer learning to share workflows and approaches.

In conducting the evaluation we came to recognize that the MDPH asthma interventions are more complex than the context in which the LC models were developed. Therefore, beyond the sessions, in-depth assistance (via individual technical advisors and office hour sessions) was offered to better prepare sites to launch their interventions. Assistance has been tailored, recognizing that sites fall along a range in the continuum of experience with the various elements of the model, and each site has diverse partners with differing roles, backgrounds, and needs.

More in depth, step-by-step guidance is also being developed for helping set up the infrastructure to launch these types of collaborative interventions. These new offerings address:

1. How to engage and strengthen new partnerships
2. Exploration of new business models such as accountable care
3. Hiring, defining roles, supervising, and integrating the new CHW workforce into clinical and/or community service teams
4. Communication and coordination to support enhanced collaboration and provision of offsite services
5. Challenges such as staff turnover
6. Promoting systems change to address the underlining social determinants of health (e.g., racial equity).

Additionally, a highly experienced CHW Mentor was given a clearer and more prominent role among the Asthma LC faculty to support CHW integration and improve on-the-ground implementation. CHW trainings have also been improved and extended, including now offering sessions on how to support adolescents with asthma. School wellness and Integrated Pest Management (IPM) consultants were retained as additional supports. The CHW Asthma Home Visiting Toolkit was improved and is being supplemented by guidance on schools and IPM. New asthma fact sheets were also developed tailored for extremely low-literacy audiences.

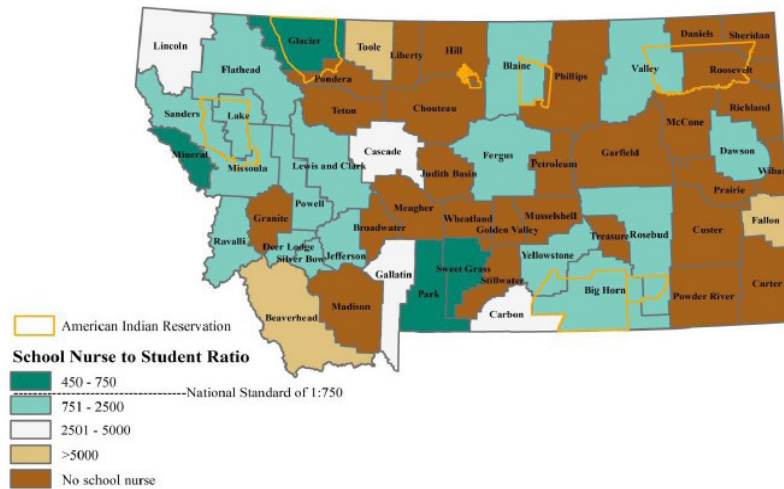
Through this process the APCP has increasingly adopted an evaluative thinking approach to its work, so that evaluation is a shared and ongoing effort incorporated into strategic planning, program design, and all stages of implementation that can be supplemented by outcome evaluation by independent evaluators.

For more information, please contact: Terry Greene, Consultant Evaluator for Massachusetts APCP, 617-482-9485, [tgreene@jsi.com](mailto:tgreene@jsi.com)





# MONTANA



**Award:** Best Evaluation Summary

**Grantee:** Montana Asthma Control Program

**Evaluation Name:** Evaluating Service Activities:  
School Asthma Mini-grants

## Overall Description of the Project

School Asthma Mini-grants (\$500 for an individual, \$1,500 for a group of 3) provide opportunities for children to benefit from specific asthma-related expertise and for nurses or certified asthma educators (AE-Cs) to develop personally and professionally. Projects that apply to any age range in K–12 can be completed. As of 2016, participants could choose among the following activities:

- ◆ School staff training
- ◆ Partnering with parents
- ◆ Assessing asthma-friendly school policies and procedures
- ◆ Attending the Asthma Educator Review Course or Big Sky Pulmonary Conference
- ◆ Teaching an asthma self-management curriculum
- ◆ Conducting a clean air campaign
- ◆ Referring students to the Montana Asthma Home Visiting Program (MAP), and
- ◆ Designing their own project

By participating in the mini-grant, school nurses and AE-Cs are helping students stay healthy and in school through the activities listed above. The mini-grant has previously been evaluated to learn more about participant perceptions, barriers to participation, and how to increase awareness about the available projects. The purpose of this evaluation was to explore benefits experienced by schools and mini-grant applicants, in addition to learning more about why some projects may have more successful outcomes than others.



## What We Did

The Montana Asthma Control Program (MACP) utilized the Success Case Method because they had participants from a variety of locations, all with different projects and different types of organizational cultures. This method allowed them to get to the heart of what they wanted to know: what enabled success, and what inhibited it.

MACP used mixed methods in their data collection by administering surveys, conducting follow-up interviews, and performing document reviews. A survey was administered to previous mini-grant recipients via Survey Monkey.<sup>®</sup> Responses were scored according to the level of success the respondents reached with their projects. Respondents who agreed to be reached for more information were contacted for an interview depending on their score.

Next, four school nurses were interviewed in sessions lasting from 11 to 29 minutes. Interviews were transcribed, and the recordings deleted after the transcriptions were verified.

Finally, they performed a document review of past applications, supporting documents, and outcome reports submitted by each grantee at the completion of their project. These outcome reports describe the number of students reached and the types of changes made as a result of the project. Data from the Montana School Health Profiles and the 2015 Montana Association of School Nurses Survey were also reviewed to provide additional context.

## What We Learned

Upon review of the evaluation findings, evaluation planning members agreed that these results demonstrate the school mini-grant activity is of value to those who participate. It has a positive impact on the schools in several ways, but particularly noteworthy are: (1) funding school nurses to buy important equipment can help kids stay in their seats and be ready to learn, which is one of the long-term goals of this activity, and (2) providing incentive and motivation to conduct asthma projects is important, as that may otherwise never happen. The mini-grant activity does not cost the Montana Asthma Control Program much money or time to administer, and remains a key component of the Strategic Plan, which emphasizes the importance of asthma control and education. This activity has been offered since 2010.

## How We Grew

The Montana Asthma Control Program learned several key lessons from this evaluation that they can apply to future evaluative work:

- ◆ The Success Case Method is a low-cost evaluation that provides actionable information about the current state of a project, and should continue to be used for MACP evaluations, when appropriate;
- ◆ Conducting two program evaluations simultaneously was confusing for stakeholders and participants, but this approach was effective for the project management team;
- ◆ Evaluations are a tool for confirming and/or reaffirming value and progress in an activity and are not simply for finding things to change or for finding “broken” program components.

Based on these findings, the MACP is considering ways to include ideas from evaluation participants into promotion/marketing of the activity. Mini-grants were opened to other participants, like school counselors and administrators, and other types of projects related to diabetes and hands-only CPR have been included to add more variety for participants.

For more information, please visit <https://dphhs.mt.gov/Asthma> or <https://dphhs.mt.gov/schoolhealth/grants>; or contact: William Biskupiak, (406) 444-7304, [wbiskupiak@mt.gov](mailto:wbiskupiak@mt.gov)







# RHODE ISLAND



**Award:** Best Infographic

**Grantee:** Rhode Island Department of Health (RIDOH)

**Evaluation Name:** Rhode Island Home Asthma Response Program

## Overall Description of the Project

Rhode Island's Home Asthma Response Program (HARP) was established in 2010 in partnership with Hasbro Children's Hospital (the sole children's hospital in the state of Rhode Island), and two federally qualified health centers—St. Joseph Health Services in Providence, RI and Thundermist Health Center in Woonsocket, RI. The program was established with these three partners because they are important channels to reach children with poorly controlled asthma in cities where the *child poverty* level is greater than 25%. These cities, termed core cities, are Central Falls, Pawtucket, Providence, and Woonsocket. The four core cities also have substantial numbers of children living in extreme poverty, defined as families with incomes below 50% of the federal poverty level.<sup>1</sup> Asthma disproportionately impacts low-income, minority, and inner-city urban children.

HARP is supported by CDC's 14-1404 grant. From 2012–2015, HARP was part of the New England Asthma Innovations Coalition, or NEIAC. NEIAC was a multi-state, multi-sector partnership aimed at increasing the supply and demand for high-quality, cost-effective health care services delivered to Medicaid children with severe asthma. Funding from NEIAC supported the expansion of HARP in Rhode Island's core cities and working toward a reimbursable model of care.

### Goal

The goal of HARP is to reduce preventable asthma ED visits and hospitalizations among children with poorly controlled asthma through home visits that provide asthma education, reduce asthma home triggers, and facilitate coordination with the health care system. HARP builds on previous evidence-based models, and was developed to provide comprehensive asthma care as part of a patient-centered medical home model.



## Basic components of HARP

1. Identification of children ages 0 to 17 years with 2 or more asthma-specific emergency department visits or 1 or more asthma-specific hospitalizations in the 12 months prior to HARP enrollment who reside in Providence, Central Falls, Pawtucket and Woonsocket
2. Referral for an initial home visit for asthma education and environmental in-home assessment provided by a certified asthma educator and a community health worker
3. Two subsequent follow-up visits for remediation of environmental allergens and triggers, including delivery of supplies to facilitate trigger control (three visits total)
4. Referrals to appropriate supports, including housing, social services, physical and mental health, and smoking cessation
5. Feedback to the health care provider on participation in HARP, including referrals provided
6. Follow-up with the child's primary care provider to coordinate a written asthma-action plan, if none exists. If an action plan exists it is obtained and reviewed with the family at a subsequent visit. Additional care coordination includes working with families so their child with asthma has a scheduled routine visit for with the primary care provider.

## What We Did

Data from previous evaluations helped inform modifications to HARP, which now offers eligible families a choice of four home visitation packages, ranging from the full 3 visit model to a single in-home visit augmented by small group-based classes for families and their child with asthma at the child's school. Selection of the package is determined by a computer-generated algorithm, which assesses asthma control level and the family's eligibility for an appropriate package. The algorithm is an innovative approach to providing community-based asthma care to children with different levels of asthma control. New intake and home visit forms were also developed. Data are entered into Hasbro Children's Hospital's data management system for tracking visits, collecting performance measures, and documenting asthma management and referrals.

The Rhode Island Asthma control program (RIACP) has conducted an evaluation to determine if the new expanded program is implemented successfully and achieves the expected health outcomes. Further, with support from CDC's 6|18 initiative, RIACP developed a business case, establishing strong partnerships with national and state entities (CMS, Association of State and Territorial Health Offices, RI Governor's Office, RI Executive Office of Health and Human Services, RI Medicaid, commercial payers, managed care and accountable care organizations). RIACP is currently testing innovative ways of reimbursing for asthma home visiting models and program expansion.

## What We Learned

HARP evaluation data have shown improved health outcomes and reduced costs. RIACP's analysis of one-year pre/post intervention claims data on the first HARP participants (n = 158) showed a 75% reduction in asthma-related hospital and emergency department (ED) costs. High utilizers, defined as children with an asthma hospitalization and/or two or more asthma ED visits (n = 51) had reductions close to 80%. Overall, HARP data showed a 33% return on investment on ED/hospital costs (\$1 investment returned with extra 33 cents saved). These analyses are being extended using Medicaid claims data to compare HARP-enrolled children with a comparison group of Medicaid-enrolled children with poorly controlled asthma.

Self-report outcomes data for 100 of the original 144 participants showed other benefits, including a statistically significant pre- to post-intervention reduction in children's exposure to secondhand smoke in the home ( $p < 0.01$ ), and a decrease in parental fear due to the child's asthma ( $p < 0.006$ ). Phone interviews with HARP-enrolled families indicated high enthusiasm for the program, the staff, and the supplies provided.



## How We Grew

HARP has been highly successful in reaching urban children with poorly controlled asthma. The redesigned HARP is better meeting the needs of children with asthma. The intake form and screening algorithm have been effective in assigning families to the appropriate HARP model. Families who have a child with well-controlled asthma receive help in connecting with a primary care physician and in ensuring their child has a current asthma action plan, if needed. Data entry forms are working well to document the HARP visit, including the environmental assessment, CDC performance measures relevant to the intervention, family issues/concerns with respect to managing

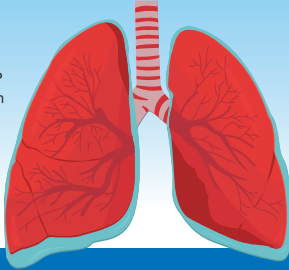
their child's asthma, referrals to the child's primary care physician, to other Comprehensive Integrated Asthma Care System programs, and to community-based services, such as rental assistance, food stamps, and legal aid.

For more information, please contact: Julian Drix, Program Manager, Rhode Island Department of Health Asthma Control Program, 401-222-7742, [Julian.Drix@health.ri.gov](mailto:Julian.Drix@health.ri.gov); Ashley E. Fogarty, Asthma Programming Services Officer, 401-222-6272, [Ashley.Fogarty@health.ri.gov](mailto:Ashley.Fogarty@health.ri.gov); or Deborah N. Pearlman, Epidemiologist/Evaluator, 401-222-5937, [Deborah.Pearlman@health.ri.gov](mailto:Deborah.Pearlman@health.ri.gov)

### The Home Asthma Response Program (HARP)

HARP is an evidence-based home asthma intervention designed to **reduce preventable asthma emergency department visits and hospitalizations** among low-income pediatric asthma patients. The HARP model utilizes a Certified Asthma Educator (AE-C) and a Community Health Worker (CHW) to conduct three home visits and:

- Assess patients' needs and their home environment
- Provide intensive asthma self-management education
- Deliver cost-effective environmental supplies
- Improve quality and experience of care



#### CLAIMS DATA: COST SAVINGS

Overall asthma costs include hospital utilization as well as office visits and medications that help keep asthma under control and reduce unnecessary hospital/ED visits. Based on claims data comparing 1 year pre-intervention to 1 year post-intervention, HARP participants had a 53% reduction in overall asthma costs, and an 80% reduction among the high utilizer subgroup.

**Cost savings were driven by reduced hospital and ED utilization, which had a 92% reduction.**

AVERAGES	PRE HARP COSTS	>	POST HARP COSTS	% REDUCTION
Overall asthma costs	\$1,981	>	\$922	<b>-53%</b>
Overall asthma costs - high utilizers	\$3,160	>	\$632	<b>-80%</b>
ED/Hospital costs	\$1,276	>	\$101	<b>-92%</b>
ED/Hospital costs - high utilizers	\$2,449	>	\$181	<b>-92%</b>

#### ANNUAL COST BURDEN FOR MEDICAID PEDIATRIC ASTHMA IN RHODE ISLAND

**253**  
asthma hospitalizations at approximately \$12,500 per hospitalization is **\$3.16 million**

---

**2,303**  
asthma-related emergency department visits at approximately \$1,400 each is **\$3.22 million**

---

Estimated total cost burden for asthma-related ED visits and hospital stays (Medicaid ages 0-18) is **\$6.39 million**

RIODH hospital discharge data, primary Dx asthma

**HARP shows a positive return on investment.** For children who had more than 1 asthma emergency department visit in the previous year, the ROI was .58 or 58%, meaning that every dollar spent comes back in savings with an additional 58 cents earned. For children with either >1 ED visit and/or an inpatient hospital stay, the ROI is 1.10 or 110%. For those children who were recruited from inpatient asthma hospitalization, the ROI is positive at 2.52 or 252%.

#### HEALTH OUTCOMES:

**Improved asthma control:** patient population went from 20% well controlled to 51.5% well controlled


**Improved quality of life:** Caregiver quality of life improved 17% based on validated surveys

**Reduction of Environmental Triggers:** observed reductions in the presence of mold, dust, pests, pets, tobacco smoke, and chemicals

**Reduction in Missed School/Work Days:** Caregivers report reducing missed work work days due to asthma by 62%. Patients cut missed school days almost in half.

**Increased Asthma Action Plans:** Availability and patient use of asthma action plans created by providers increased from 20% to 80% of participants.

HARP is part of the New England Asthma Innovation Collaborative (NEAIC). In Rhode Island, intervention is a partnership between the Rhode Island Department of Health, Hasbro Children's Hospital, Saint Joseph's Health Center, and Thundermist Health Center.







# CONNECTICUT



**Award:** Best Logic Model

**Grantee:** Connecticut Asthma Program

**Evaluation Name:** Quality Improvement Asthma Initiative

## Overall Description of the Project

The Connecticut Asthma Program (CAP) undertook this evaluation to learn about the successes and challenges of implementing a quality improvement (QI) training initiative with staff from a Federally Qualified Health Center (FQHC). The FQHC QI project was aligned with the state asthma goals related to clinical services and disease management and health systems change. The QI project was designed to increase access to guideline-based care and to facilitate the introduction and establishment of decision support tools, use of Electronic Health Records (EHRs) for care coordination, and reporting asthma-related processes and outcomes measures. The focus of the evaluation was to learn about the initial (pilot) QI implementation to identify areas of improvement before expanding the initiative to additional FQHCs. Secondary outcomes related to the QI project for each FQHC will be measured using future cohorts. Since the QI project had already been implemented prior to the strategic planning process, this evaluation was retrospective.



## What We Did

Staff from the CAP identified key stakeholders representing state government, FQHCs, hospital administration, and a pulmonary clinical nurse specialist to participate on the evaluation planning team. The evaluator facilitated the evaluation planning meetings which addressed: designing the evaluation, discussing the logic model, developing data collection measures (key informant interview questions), identifying key informants to participate in the evaluation, and analyzing and interpreting the data. Team members were engaged in each aspect of the process and provided critical feedback and structure for the evaluation. They also were instrumental in the analysis and interpretation of the key informant interview data. The evaluator facilitated a special meeting with the team to review the key informant transcript data for each question. The group was asked to identify the major themes by interview question which focused on organizational, process-level and patient-level successes as well as organizational and team challenges of the initiative. Once the themes were identified, the evaluator asked the evaluation planning team to determine what to keep, change, or remove about the QI initiative based on the results interpretation. Recommendations from the team were then used to create an action plan to improve future program implementation.

## What We Learned

The CAP learned that there is an invaluable benefit to have stakeholders analyze and interpret the data. Their analyses and interpretation of the data enriched their understanding of the key issues and how to move forward to improve the program, including noting the following barriers to program implementation:

### *Lack of buy-in about the importance of the QI program*

Most notably, the evaluation findings revealed the importance of determining the readiness of individual organizations (FQHCs) in participating in a QI project. It is critical that the FQHC leadership understands the QI project commitment and actively supports the project by making resources available to the QI team members. Successful QI teams have members who possess clinical, administrative, technical and quality improvement knowledge.

### *Lack of time for providers to participate in the program*

Participation in a QI Project is taxing to all members involved, therefore, it is imperative for the FQHC leadership to compensate QI team members for the time invested in the development and implementation phases of the QI project. Results indicated the need to provide incentives or some type of additional resources which led to the CAP's pursuit of partnering with other organizations like the Community Health Center Association of Connecticut to support FQHCs QI teams.

The CAP also learned that FQHCs' need to network with other organizations involved in QI to share their QI activities.



## How We Grew

Using recommendations based on their review of the data from the evaluation planning team, the evaluator created an Action Plan which was implemented by the CAP with FQHCs in the Asthma QI Initiative. The evaluation results led to the development of an “FQHC QI Readiness Checklist” to determine the level of readiness of future FQHC organizations in participating in an Asthma QI Project. Such tool has been used when soliciting other FQHCs in the Asthma QI Initiative. The CAP is supporting the promotion of continuous learning about QI through inviting former QI participants to present at the CT Annual Asthma Conference.

For more information, please contact:

Marie-Christine Bournaki, PhD, RN; 860-509-7258; [Marie-Christine.Bournaki@ct.gov](mailto:Marie-Christine.Bournaki@ct.gov)  
<https://portal.ct.gov/DPH/Health-Education-Management--Surveillance/Asthma/Asthma-Program#50324>





# MISSOURI



**Award:** Best Partnership Evaluation

**Grantee:** Missouri Asthma Prevention and Control Program

**Evaluation Name:** CALM2 School Nurse and Health Staff Professional Development Plans

## Overall Description of the Project

As part of its CALM2 Initiative, the Missouri Asthma Prevention and Control Program (MAPCP) began in 2014 a five-year partnership with 8 public school districts to provide enhanced training and support for school-based asthma care. CALM2 is a collaboration with Missouri's 1305 Coordinated Chronic Disease Program. In the fall of 2015 (the second school year for CALM2), school nurses and health aides selected from a list of 18 one or two personalized professional development goals which MAPCP would support with training, resources, and technical assistance. The MAPCP informed these staff that their choice of goals could be based on any factor, including interest level, potential impact on student health, feasibility, and/or alignment with other work-related activities.



## What We Did

During the first cycle (Fall semester), 56 staff, including 35 school nurses (i.e., RN, LPN) and 21 health aides, completed professional development plans, representing approximately 95% of the school health professionals employed by the eight participating public school districts. Staff prioritized and personalized one or two goals from the list of 18, documented improvements they expected to see from

personal experience, major activities that would facilitate progress toward the goals, and barriers that could impede successful implementation of their professional development plan. We analyzed goals and examined differences among those chosen by school nurses and health aides. Their follow-up procedure examined progress achieved during the following semester.

---

## What We Learned

The most frequently selected primary goals by the 56 participants are listed below; 75% of participants selected one of four goals:

1. Assure asthma action plans are current, relevant and shared with teachers, coaches and other personnel (23%)
2. Educate students with asthma to be safe and self-reliant at school (e.g., trigger identification, self-management, self-carry) (18%)
3. Provide supportive care education for families with standardized materials/ programs (18%)
4. Train school staff to identify needs of children with asthma (16%)

When primary and secondary goals are combined, the following goal is added to the list as one of the more frequently selected (i.e., more than 10% of participants selected this goal):

5. Prepare school personnel to provide emergency care at school or at off-campus events (e.g., sports, field trips) (12%)

There was a modest difference in interest among specific professional development goals between school nurses and health aides. Among the top 10 goals with “very high” interest for school nurses, only a few were rated differently by the health aides. A larger percentage of health aides had “very high” interest in providing inhalation instruction, self-management education, and reducing environmental triggers than school nurses. School nurses reported higher interest than health aides in preparing school personnel to provide emergency care at school or at off-campus events and medication options.

A follow-up survey of first cycle participants (after one semester) revealed all of participants made progress toward primary goals: 18% completed all planned activities, 40% reported significant progress, and 43% made some progress. When asked about the utility of the professional development plan, 30% would recommend school health staff use a professional development plan as part of their approach to improving asthma care for children; and 68% were still unsure.

---

## How We Grew

The MAPCP confirmed their approach in providing a limited set of 18 professional development goals was acceptable to participants. They learned that the majority of selected goals for this initial cycle are categorized as “education” (for the student) or “risk management.” The MAPCP is using the follow-up survey to guide and further support

continued implementation of the program and to guide modifications in an effort to yield a more focused and tailored approach to technical assistance by MAPCP program staff.

For more information, please contact: Eric S. Armbrrecht, PhD, [eric@openhealth.us](mailto:eric@openhealth.us)







# ILLINOIS



**Award:** Best Program Activity Visual

**Grantee:** Illinois Department of Public Health  
Asthma Program

**Evaluation Name:** Using Community Health Needs  
Assessments to Investigate Asthma  
Health Priorities in Illinois

## Overall Description of the Project

The Illinois Asthma Program (Program) team initiated this project to analyze Illinois hospitals' Community Health Needs Assessment (CHNAs) to identify existing infrastructure to expand the asthma programs. The evaluation goal was to assess the extent to which hospital systems within Illinois address asthma through their CHNAs and identify ways to leverage this information in hopes of bolstering the asthma partnership's infrastructure throughout the state and establishing more collaboration within the Illinois Asthma Partnership. The goal of the an individual CHNA is to have information readily available regarding the assessed health needs of the community in question so that understanding and partnerships can exist to address those community health needs. Whether the associated community individuals seek care through hospitals, physician groups, or home care; the CHNA process helped to assess those health priorities.



## What We Did

We assessed the extent to which hospital systems within Illinois had indicated an interest in addressing asthma health outcomes through community health needs assessments (CHNAs). At the time of the analysis, available CHNAs were from 2013-2016. The IAP evaluator used Adobe Acrobat XI Pro's search function to scan all available CHNAs (one link was excluded because it was down) for any reference to "A/asthma". When a reference to "A/asthma" was discovered within a CHNA, the name of that CHNA's hospital was recorded and that individual CHNA was set aside for further analysis. Once that subgroup of CHNAs that referenced asthma were compiled, further analysis was based on the quality of asthma-related content. In the next step, inclusion of this analysis was based on active asthma projects and where asthma was listed in the hierarchy of priority health issues expressed at the end of every CHNA. Only CHNAs and their corresponding hospital affiliate were included in the evaluator's final report.

After the analyses was completed, a map was created to illustrate the location of hospitals that indicated interest in asthma, along with asthma prevalence by county. The purpose of the map was to demonstrate which hospitals were interested in asthma and to show where asthma prevalence was high, and if those two factors every matched, providing motivation to seek partnerships in those areas. After obtaining these data, we provided Illinois Asthma Program (Program) partners with a list of possible opportunities for quality improvement and linkages to care.

## What We Learned

Of the 130 CHNAs reviewed, 16 CHNAs reported their organization, associated health system, or the community within their coverage area had an interest in asthma outcomes. The greatest concentration of hospitals was in the Cook County area ( $n=7$ ) and more specifically, Chicago, IL ( $n=6$ ). Twelve of the 16 hospitals reside in counties where emergency department pediatric asthma prevalence were in the top two quartiles (above state mean of 69.9/100,000). Three counties (Cook, Peoria, and Sangamon) are considered fully engaged, meaning each had higher rates, contain at least one hospital with asthma as a health priority, and contain state-supported asthma projects. Eight counties (Adams, Champaign, Jackson, Kankakee, Macon, Madison, St. Clair, and Winnebago) lack hospital engagement, but have higher rates and state-supported asthma projects. Finally, there are 24 counties with higher rates, but lacking both hospital and program engagement. With several counties having higher rates and low support, these gaps in services indicated a need to be addressed by Illinois Department of Public Health and the IAP.

## How We Grew

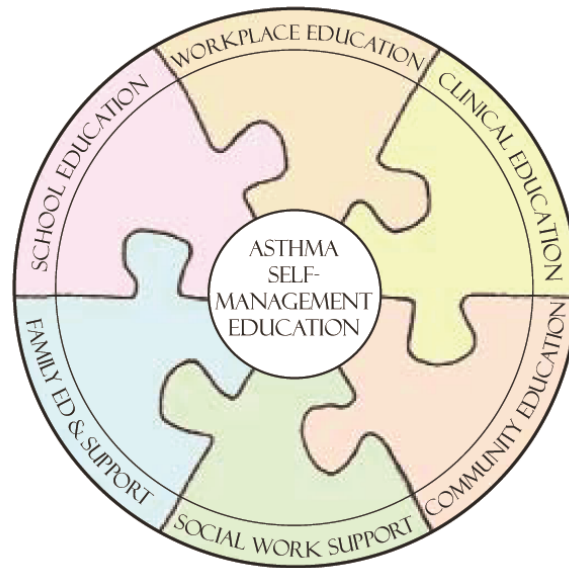
The analysis found that of the 34 local programs supported by the state, only three local programs are fully engaged. These findings have encouraged the IAP to lead efforts to reach out to health care and community leaders to discuss perceptions of needs and competing priorities. Counties with increased rates and a state-supported program without CHNA prioritization indicates IAP efforts are needed to raise community awareness of asthma.

Overall, this document review had a minimal cost and led to a straightforward way to assess the prioritization of asthma in communities, organizations and health systems throughout the state. Further, analysis of CHNAs was a novel method for identifying common interests in asthma outcomes, with potential for new partnership development and the ability to inform state programmatic decisions. Looking into this type of reporting is a benefit to the Illinois Department of Public Health and its partners, since identifying areas with both high asthma prevalence and local prioritization of asthma health status are data important to ongoing work to improve asthma services and outcomes within this state.

For more information, please contact: Nikki Woolverton, [Nikki.Woolverton@illinois.gov](mailto:Nikki.Woolverton@illinois.gov)



# MICHIGAN



**Award:** Best Stakeholder Engagement

**Grantee:** Michigan Asthma Prevention and Control Program (MiAPCP)

**Evaluation Name:** MATCH Data Quality Improvement

## Overall Description of the Project

The Michigan Asthma Prevention and Control Program (MiAPCP) has been working to assist Managing Asthma through Case Management in Homes (MATCH) programs to foster data collection and improve data quality and completeness. These programs are housed in various types of organizations, including health systems and non-profits, which have diverse methods of data collection, including different databases and electronic health record (EHR) systems. The goal of MiAPCP was to collect evaluation data from all the MATCH programs, then calculate and aggregate performance measures. During the first year in which the programs supplied data, there were many missing variables and not enough data to calculate performance measures. Therefore it was imperative that they streamline data collection by creating a well-designed list of variables, with their MATCH partners' input, to minimize their burden and improve their chances of getting complete and accurate data.



## What We Did

The MiAPCP compiled a list of variables that could be used to calculate performance measures, and those they thought were also likely to be collected by the programs as part of good program evaluation. These variables were then defined in a table and used to construct an Excel database. Staff met with each program, sharing the list of performance measures along with the reasoning and need behind every variable on their list. They became familiar with the information they were already collecting, integrated it with the variables, worked through identified problems and made edits. They set up a quarterly data submission schedule to get used to the data collection process and offer the opportunity to ask clarifying questions and provide feedback. During monthly calls, evaluation was a standing agenda item, with time to discuss variables that were complicated to measure and to brainstorm solutions to their questions as a group. Data analysis methods, the aggregate data, and performance measures were shared with all of the programs.

## What We Learned

MATCH partners understood that MiACP reported the data as performance measures to the CDC but needed to know how the data would be used. MiACP presented the CDC's brief description of the data's use, which was to paint a picture of asthma case management across the country. MiACP reinforced the idea that providing high quality data was important in this big picture because of the MATCH model and its program maturity. They also learned that they needed to listen more to these partners, and use their input to make the data collection more relevant to them. Armed with this knowledge and the confidence gained through this process, they became enthusiastic and invested in not only providing data but working to improve it. MiAPCP does not provide financial compensation to MATCH programs for their data, but seeing how their data compares to other MATCH programs, to other states' case management programs, and contributing to the larger base of knowledge keeps them interested and committed.

## How We Grew

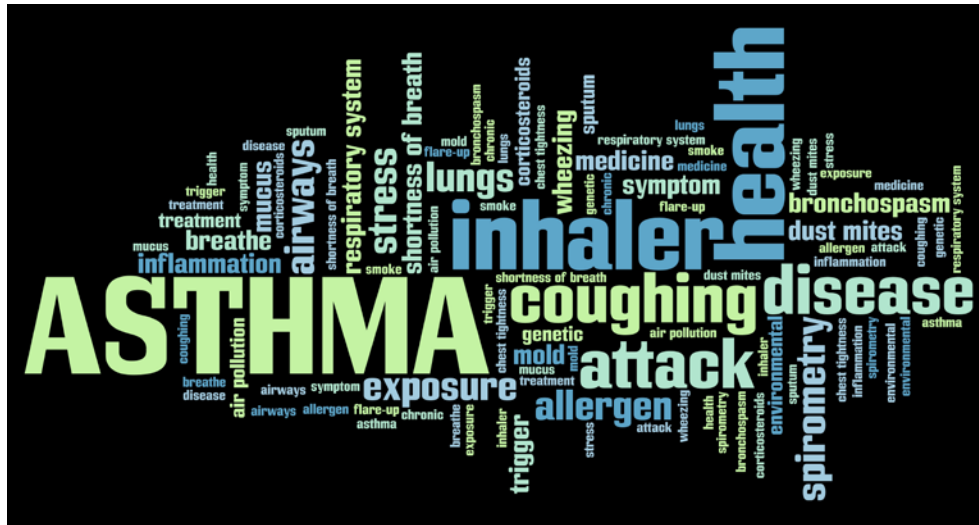
Over the past year, there has been slow but considerable improvement in MATCH data collection and quality. The big picture lesson has helped MiACP work with the programs to reduce the number of missing ACT scores. Since the importance of these scores in the calculations was highlighted, they have had great discussions about why they were missing, giving us an opportunity to brainstorm together ways to make improvements. Evaluation continues to be a standing agenda item during their monthly calls, and they are eager to collect similar data in similar ways to improve consistency across all of the programs. As new MATCH programs get started, MiACP meet with them in person to share information about good program evaluation, how they can contribute to their performance measures, and why providing good data is important. They have also continued to request data quarterly, following up with results, reports and feedback through hour-long conference calls with each program. These calls provide an opportunity to listen to their challenges and concerns and allow for additional individualized technical assistance as needed.

For more information, please contact: Tisa Vorce, [VorceT@michigan.gov](mailto:VorceT@michigan.gov)





# OHIO



**Award:** Best Use of Evaluation Findings

**Grantee:** Ohio Department of Health Asthma Program (ODHAP)

**Evaluation Name:** Children’s Hospital Asthma Collaborative Evaluation

## Overall Description of the Project

Strategic Research Group (SRG), the external evaluator of the Ohio Department of Health Asthma Program (ODHAP), observes and evaluates the Children’s Hospital Asthma Collaborative (CHAC) meetings, which bring together staff from children’s hospitals across the state as well as key stakeholders. These meetings, which began in 2015 and occur bi-annually, typically includes a guest speaker, presentations from the hospitals, updates on the burden of asthma in Ohio, and breakout sessions. SRG attends and observes every CHAC meeting, and we have administered a post-meeting web survey after each event to gain feedback on the most recent meeting, gather suggestions for future meetings, and learn about the asthma care provided by Ohio’s children’s hospitals. Ultimately, CHAC evaluation is used to assess member engagement, barriers to progress, meeting effectiveness, and identifying potential actions to continue improvement.



## What We Did

The findings from the most recent post-CHAC survey raised some concerns, particularly some barriers to progress, leading to further evaluation work with their Strategic Evaluation Planning Team (SEPT). The SEPT is a group of key stakeholders and representatives who meet quarterly to assist ODHAP and SRG in planning and reviewing evaluation activities to ensure their utility and appropriateness.

Findings from the most recent CHAC evaluation revealed that attendees, particularly regular attendees, perceive the afternoon breakout sessions to be less useful than in the past. Attendees also expressed a wish for more networking time with each other, as they do not often get opportunities to come together throughout the year.

ODHAP discussed these findings at their bi-weekly internal (ODHAP and SRG) evaluation meeting, and decided to use an upcoming SEPT meeting to brainstorm possible changes or alternatives to the CHAC breakout sessions, as well as suggestions for how to improve networking. They shared the CHAC survey findings with the SEPT and facilitated a brainstorming session to identify possible changes to the CHAC meeting format.

## What We Learned

The brainstorming session, which was facilitated by SRG, was highly productive and resulted in many useful suggestions to improve the existing meeting structure. Multiple attendees suggested switching to a panel format instead of the breakout sessions, which would allow ODHAP to continue to focus efforts on central topics while allowing for a different type of dialogue for CHAC attendees. They suggested choosing one or two topics per meeting to allow for more in-depth conversations. Regarding networking, attendees also had some valuable suggestions for ways to improve that aspect of the meetings, such as a brown bag lunch networking session, topical networking tables, or a “speed dating” networking session.

By using the SEPT to review the CHAC evaluation findings and conduct a brainstorm to identify actionable suggestions for improvement, ODHAP helped their SEPT members improve their capacity for evaluation. The brainstorm fostered engagement in the SEPT, and the results will be used to foster engagement in the CHAC.

## How We Grew

ODHAP changed the meeting format at their subsequent CHAC meeting based on the feedback from the post-meeting survey and their brainstorming session. By taking the time to evaluate each of these meetings, ODHAP has been able to continuously improve them over time and keep attendees engaged. The CHAC meetings have been well-received and productive since their inception. This collaborative continues to grow by being receptive to the evaluative feedback we obtain and engaging stakeholders' assistance to address the concerns voiced by their CHAC attendees. The decision to meet bi-annually, selection of previous guest speakers and topics, and changes made to the breakout sessions are just a few examples of the successful modifications made in the past based on their ongoing evaluations. For subsequent meetings, ODHAP anticipates both improvements and lessons learned from the application of their most recent findings. As always, they will send a post-meeting evaluation survey, digest the findings, and adjust when and if necessary.

For more information, please visit <https://www.odh.ohio.gov/-/media/ODH/ASSETS/Files/chss/asthma/201508Strategic-Plan-20142019.pdf?la=en> or contact: Kathleen Carr, PhD, Strategic Research Group, 614-220-8860, [kcarr@strategicresearchgroup.com](mailto:kcarr@strategicresearchgroup.com)



# References

1. Centers for Disease Control and Prevention. *Most Recent Asthma Data*. Accessed 21 July 2018.
2. Centers for Disease Control and Prevention. *Most Recent Asthma Data*. Accessed 21 July 2018.
3. Nurmagambetov T, Kuwahara R, Garbe P. The Economic burden of asthma in the United States, 2008-20013. *Annals of American Thoracic Society*. 2018; 15(3):348-56.
4. Centers for Disease Control and Prevention. *Most Recent Asthma Data*. February 2017. Available at Centers for Disease Control and Prevention. Most Recent Asthma Data. Accessed 21 July 2018.
5. Centers for Disease Control and Prevention. *Asthma's Impact on the Nation: Data from the CDC National Asthma Control Program*. Available at Centers for Disease Control and Prevention. Asthma's Impact on the Nation: Data from the CDC National Asthma Control Program. Accessed 21 July 2018.
6. Morse, J. M. (1991). Approaches to qualitative-quantitative methodological triangulation. *Nursing Research*, 40, 120–123.

## In Appreciation...

We would like to thank all of our grantees for their dedication to evaluation and for recognizing the true value of evaluation. By asking the right questions, careful planning, and execution with fidelity, programs and partners have learned a lot. These success stories exemplify just how well evaluation has been integrated and used by asthma programs for program improvement, for important decision-making, and for guiding future planning. We fully acknowledge that there are many other fine examples of evaluation efforts that are not featured in this publication, and encourage continuing success while you and your partners continue to learn and grow through evaluation.

Sincerely,

NACP's Evaluation Team

