

Pennsylvania Asthma Control Program

Year 1 Evaluation Report

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Executive Summary

In fiscal year 2020, the Pennsylvania (PA) Asthma Control Program (ACP) was awarded a four-year Centers for Disease Control and Prevention (CDC) cooperative agreement grant for evidence-based asthma interventions and implementation of the EXHALE package (described in the table below). Building upon prior partnerships in asthma patient care and community services, the Community Asthma Prevention Program (CAPP), American Lung Association (ALA), and Quality Insights (QI) continue their work within the ACP joining with Allegheny County Health Department (ACHD), Women for a Healthy Environment (WHE), and Duquesne University School of Pharmacy Center for Integrative Health (DUCIH).

PA Department of Health (DOH) contracted with Public Health Management Corporation’s (PHMC) Research & Evaluation Group (R&E) to evaluate the ACP for CDC reporting purposes and internal quality improvement efforts. A Strategic Evaluation Plan (SEP) was developed in collaboration with ACP partners to guide priorities and activities. Evaluators reviewed CDC evaluation resources and technical assistance (TA) webinars; led monthly evaluation planning meetings for the ACP broadly and individual program components; developed Individual Evaluation Plans (IEPs); created data collection tools; observed PA Asthma Partnership meetings; and reviewed monthly and quarterly reporting by partners. The following table contains a snapshot of Year 1 progress towards objectives and EXHALE strategy highlights.

EXHALE Strategies and Highlights	Progress to Objectives
Education on asthma self-management (AS-ME) <i>Five schools hosted AS-ME clinics, and 15 individuals were certified to lead AS-ME programs.</i>	Met with changes
Extinguishing smoking and second-hand smoke <i>There was no pause in referrals to cessation resources during the pandemic, and cessation classes restarted in person.</i>	Met
Home visits for trigger reduction and AS-ME <i>A new program was planned and intends to fill part of the gap left by another program that ended.</i>	Met with changes
Achievement of guidelines-based medical management <i>Practices were recruited from Southeastern PA and a new region in Northeastern PA for quality improvement activities.</i>	Met with changes
Linkages and coordination of care <i>Partners maintain a variety of linkages with payors, community organizations, state-level programs, and</i>	Met with changes

<i>other healthcare entities around care coordination and resources to address social determinants of health.</i>	
Environmental policies to reduce indoor and outdoor asthma triggers <i>A legislator volunteered to champion the school stock albuterol policy.</i>	Met

Introduction

In fiscal year 2020, the Pennsylvania (PA) Asthma Control Program (ACP) was awarded a four-year Centers for Disease Control and Prevention (CDC) cooperative agreement grant for evidence-based asthma interventions. The PA ACP has been in existence since 2006 and represents the collective work and interventions of many different partners at the state and community levels. Building upon prior partnerships, the Children’s Hospital of Philadelphia’s (CHOP) Community Asthma Prevention Program (CAPP), American Lung Association (ALA), and Quality Insights (QI) continue their work within the ACP joining with Allegheny County Health Department (ACHD), Women for a Healthy Environment (WHE), and Duquesne University School of Pharmacy Center for Integrative Health (DUCIH) to strengthen and expand upon asthma care systems in PA and implement the EXHALE technical package (strategies described in the table above).

PA Department of Health (DOH) contracted with Public Health Management Corporation’s (PHMC) Research & Evaluation Group (R&E) to evaluate the ACP for CDC reporting purposes and internal quality improvement efforts. R&E was involved in the ACP’s prior CDC funding cycle (1404) as evaluator of the CAPP. Year 1 of the ACP evaluation occurred during October 2020 to August 2021. As program activities were focused on re-booting several ACP functions and re-establishing connections with partners, evaluation activities focused on formative evaluation and planning for summative evaluation in future years.

The purpose of this report is (a) to provide an overview of the PA ACP evaluation activities completed in Year 1; (b) to summarize findings from formative evaluation activities, and (c) to describe the outlook for evaluation work moving into Year 2. Findings describe progress toward program objectives, implementation challenges, and recommendations for Year 2 planning and implementation. See Figure 1 for a timeline of Year 1 evaluation activities and program milestones.

Evaluation Activities

In accordance with funding requirements, the Strategic Evaluation Plan (SEP) and Data Management Plan (DMP) were submitted to the CDC within the first six months of the award.

The SEP was written in collaboration with the broader ACP Evaluation Planning Team, which included R&E, DOH, and staff from ACP partner organizations. The DMP was led by DOH, and R&E contributed as needed. The process used to identify evaluation priorities activities was from the CDC's *Learning and Growing through Evaluation: State Asthma Program Evaluation Guide* (Evaluation Guide). Previous ACP evaluations and other program-specific evaluations conducted outside of the ACP also informed evaluation design.

Evaluators guided the team through the planning process by hosting meetings, gathering historical information to share with partners, and creating opportunities to provide feedback. Partners engaged in planning meeting discussions by drawing on their program expertise and prior knowledge to identify priority program activities for the evaluation. Throughout this process there was open dialogue in large group meetings, one-on-one meetings with individual partners, and through online surveys where feedback was provided.

Figure 1. Timeline of Year 1 Program Milestones and Evaluation Activities

Oct. -Dec.	Jan.-March	April-June	July-Aug.
<i>Note: Program milestones are in white rows, and evaluation activities are in gray rows.</i>			
Evaluation activities related to ACP operations and infrastructure			
Contracting process with DOH Monthly PHMC & DOH project evaluation meetings	Monthly ACP partner meetings Reviewed CDC evaluation resources and technical assistance (TA) webinars SEP planning meetings and voting surveys, development of DMP	SEP and DMP submitted to CDC and reply comments received. Development of IEPs initiated	Performance measure data collection tool created and data entry training sessions held with partners Review of monthly and quarterly reporting processes
Home visit services provided virtually (CAPP)	Planning for implementation of new home visiting program (DUCIH)	Home visit services in-person resume, virtual option also continues (CAPP) Patient recruitment for home visiting program (DUCIH)	
Evaluators attended Asthma Disparities Summit hosted by CAPP	Evaluation planning meetings for home visiting programs (CAPP, DUCIH, ACHD)	IEP drafted for home visiting programs, except for economic analysis	Evaluation and AS-ME curriculum TA meeting (DUCIH)
Recruitment of QI practices (QI)		QI activities initiated with QI practices (QI)	
	Evaluation planning meeting for QI		

PAP reboot of infrastructure, membership, and work groups	First formal PAP meeting, workgroups formed	Workgroup meetings Planning for Asthma Strategic Plan	
	Observation of PAP meeting	PAP evaluation planning meeting, IEP development	Observation of PAP meeting, Adapting Partnership Self-Assessment Tool for the PAP
Oct. -Dec.	Jan.-March	April-June	July-Aug.
	Virtual workshops and events share information about asthma, green cleaning kits distributed (WHE) AS-ME provided in community-based clinics (DUCIH)	Local outreach in-person at a variety of community locations (non-clinical) (WHE)	
		Community-based services IEP development	Engaged in ACP partner discussion about formalizing WHE referral processes
Referrals to smoking cessation programs continue (DUCIH, CHOP)	Smoking cessation outreach and virtual smoking cessation cohorts (DUCIH)		
		Development of IEP for smoking cessation referrals and services	Engaged in ACP partner discussion about formalizing referral processes
School-based ASME implemented with students (DUCIH)	Kickin' Asthma (KA) & Open Airways for Schools (OAS) facilitators trained (ALA)		School AS-ME clinics are scheduled for SY21-22 (DUCIH)
		Development of IEP for school-based AS-ME	KA & OAS data collection instruments drafted

		ACHD hires program manager	Allegheny County Asthma Task Force planning under way
Stock albuterol policy education initiative (ALA)		Stock albuterol policy champion identified and bill introduced (ALA)	
		Development of IEP for policy initiatives	Key informant interview participants identified for outreach

In March 2021, the Evaluation Planning Team met to discuss the initial draft of the SEP and the collective voting results. Partners wanted to learn more about each other's work to inform future revisions on the SEP. In response, DOH and evaluators set monthly ACP partner calls during April to November 2021. The primary purpose of these calls was to share program updates and learn about partners' history and programming, related to the ACP and more broadly.

These monthly calls were well-received and incredibly valuable for all involved. When extra time was available in the meeting agenda, it was used for evaluation planning for individual program components. There were also conversations around casting vision for specific activities in the ACP work plan not yet addressed. For example, referral processes and infrastructure that were not formalized, or a teen-focused curriculum for CAPP participants. These conversations demonstrated a growing sense of synergy between ACP partners as they used knowledge and experiences to contribute toward building more concrete linkages between entities, to ultimately improve comprehensive services for patients.

Individual Evaluation Plans (IEPs) started to come together in May to August 2021. Through discussion with partners about past program evaluations, areas of interest, and alignment with CDC evaluation questions, evaluators documented data collection strategies, instruments, and timelines in IEPs. As the ACP program components are in various stages of development and implementation, IEPs reflect this by addressing the appropriate formative or summative evaluation activities most useful to the program staff. For IEPs of program components that have not been examined in prior ACP funding cycles, the IEPs also serve as learning tools for evaluators and DOH to understand operations and implementation.

In preparation for this annual evaluation summary and CDC performance measure (PM) reporting, evaluators worked with DOH to review PM guidance documentation and create a data collection tool for partners. PM guidance, shared by the CDC, was adapted to serve as instructions for partners, and a spreadsheet was designed for entering and compiling data across programs. In one of the monthly partner meetings, evaluators introduced PM data collection to partners and demonstrated how to use the PM spreadsheet. Technical assistance calls were scheduled with individual partners as needed to answer questions and ensure data quality. A review of PM data was completed for each program component in the following section, and additional data sources were incorporated as described.

Brief Findings by Program Component

The SEP organizes the ACP's activities by type of intervention, and this evaluation report organizes findings similarly. Formative findings in the following sections were summarized to (a)

document progress made in accordance with the ACP work plan; (b) note the evaluation questions that could be addressed at the time of reporting; and (c) outline recommendations for Year 2 planning and implementation. Overall, the ACP predominantly focused on re-establishing program infrastructure and operations during Year 1; this was due to DOH taking on PAP leadership, the funding gap since the 1404 grant ended, and individual partners navigating activities in a COVID-19 context.

The following program components are organized in order of priority according to partners in the Year 1 SEP; all program components are included except for evaluation of the Allegheny County Asthma Taskforce because the Taskforce had not yet reconvened at the time of reporting. Evaluation questions addressed in Year 1 with their associated data sources (available at the time of reporting) are described in the table accompanying each component. Additional program outcomes evaluation questions described in the SEP will be discussed in future years as data become available.

School-based asthma self-management education and services

Evaluation Questions	Data Sources
What are barriers and facilitating factors to implementation and expansion?	Informal interviews with staff
What methods have been successful in recruiting participants?	Meeting notes
How effective is the program at achieving intended asthma-related outcomes?	Monthly and quarterly reporting Performance measure data

Progress to objectives: School-based AS-ME activities met the objectives set for number of schools and locations recruited to host programming; however, it remains to be seen how student participants will be engaged and retained in the programs. DUCIH offered clinics in four school districts (Hazelwood, Braddock, Clairton, and South Allegheny School District), and specifically at five different school locations. A program administrator said these school districts were where DUCIH had strong, positive relationships with school administration. Some of the participating schools have been working with DUCIH for several years. Open Airways (OAS) and Kickin’ Asthma (KA) implementation was on hold during recruitment of facilitators and schools. Training of facilitators continued throughout the year, and facilitator training and student curriculum were adapted to better serve participants in a virtual setting.

During Winter 2020 DUCIH provided AS-ME through telehealth visits, and they returned to in-person services in February 2021. DUCIH maintained linkages to transportation and food resources for participants to access as needed. They also engaged other health care entities to promote care coordination, including patient centered medical homes, a children’s hospital, University of Pittsburgh Medical Center (UPMC), a pharmacy supplier, and a disease management program. Patients were referred to them through their internal provider network and UPMC.

DUCIH provided 110 AS-ME sessions to a total of 40 participants; each participant received a mean of three sessions. Participants received a different total number of sessions because the number of sessions was tailored to their diagnosis, asthma control at follow up, and medication adherence. Three-quarters of participants were aged 5 to 11, and one-quarter were aged 12-17. Among all participants, 43% had poorly controlled asthma upon enrollment and 30% had at least one hospitalization or emergency room (ER) visit in the prior 12 months. Assessing asthma control outcomes was difficult due to a lack of follow-up data. Of those attending at least one follow-up session (or two sessions total), 33% had poorly controlled asthma. Four participants had follow-up data, and one of them reported improved asthma control at least one month post-participation.

OAS and KA implementation remained on hold through the remainder of the school year. By the end of Year 1, 15 facilitators were trained between Philadelphia and Allegheny counties (seven certified in OAS and eight in KA). All trained facilitators, except for one ACHD staff member, were connected to schools via their role as a school nurse. All CAPP staff who were certified facilitators work in schools in West and Southwest Philadelphia. ACHD assisted with networking among after school community centers and school districts to discuss interest in hosting OAS and KA.

Challenges: Implementation with students was impacted by the COVID-19 pandemic, as school staff prioritized managing COVID operations, and it was not possible to meet students in person during the first part of the year. Contract execution delays also shortened the length of time for individuals to be trained as OAS and KA facilitators and brought into schools before the end of the school year. Virtual sessions with students were less conducive to obtaining follow-up data. Networking with community-based organizations and schools during the summer was a challenge likely due to understaffing of community centers and camps.

Opportunities: The restructured curricula and facilitator training content for virtual sessions may afford new opportunities in the future for online program offerings. All newly trained facilitators have a certification lasting three years, so recertification efforts will not be needed for some time. Outcomes of OAS and KA will be measured by data collection instruments adapted from ALA programs in New York capturing participation, asthma knowledge, and asthma control. These instruments have been field-tested, and NY ALA team members are a good resource for troubleshooting and technical assistance. Collaborating with ACHD staff who also work with other chronic disease and healthy living programs may provide beneficial community linkages. Implementation with students is scheduled for the SY21-22 school year for all DUCIH AS-ME sites.

Smoking cessation services and referrals

Evaluation Questions	Data Sources
<p>How are referrals made to smoking cessation resources, and what infrastructure is set up to support referral systems?</p> <p>How are referral processes integrated into existing program implementation and workflow?</p>	<p>Meeting notes</p> <p>Monthly and quarterly reporting</p> <p>Performance measure data</p>

Progress to objectives: Smoking cessation services and referrals were integrated into existing program processes. Although the reach of these services and referrals was limited in Year 1 due to the decrease in AS-ME program participation and attrition at follow-up due to the COVID-19 pandemic, cessation referral processes were operational throughout Year 1. CAPP maintained cessation referrals to resources, like the PA Quitline, for home visiting participants and their caregivers. DUCIH staff continued to screen residents of Allegheny County for tobacco use at community outreach events and through the school and community-based asthma clinics. All who screened positive were referred to the PA Quitline as well as the DUCIH tobacco cessation program. DUCIH paused cessation classes due to COVID in Winter 2020 and restarted with fewer class options. Nineteen residents screened positive and were referred to the PA Quitline and the DUCIH cessation program. One participant in the cessation program completed the classes. By August three more individuals enrolled, but only one completed classes. The next cessation program cohort planned for September had three registrants from a multi-unit housing complex scheduled to attend. In the new home visiting program, scheduled to start in homes located in Hazelwood and Clairton, DUCIH community health workers (CHWs) planned to include tobacco use disorder screenings in their protocol. All referrals are documented in DUCIH electronic medical records (EMR).

Challenges: COVID-19 program implementation limitations altered the reach of these services. Process metrics, such as number of individuals screened and then referred, were not collected consistently or uniformly for evaluation purposes; counts in this report are likely an underestimate. Following up to confirm a participant received services from a referral can be a challenge due to attrition or lack of staffing capacity to collect this information.

Opportunities: DUCIH’s new home visiting program will add “touch points” to existing patients and expand reach of in-home interventions. A gradual return to pre-pandemic levels of service utilization and interaction will determine how these resources are accessed in Year 2.

Community-based services

Evaluation Questions	Data Sources
What are barriers and facilitating factors to implementation and expansion? What methods have been successful in recruiting participants? To what extent are program participants (a) being referred to and (b) utilizing referrals to community-based services?	Meeting notes Monthly and quarterly reports Performance measure data

Progress to objectives: WHE’s Healthy Homes Program thrived in community events and third spaces where residents spend their leisure time, despite the COVID-19 environment. In-person workshops were on hold until the appropriate outdoor setting and social distancing with masks were feasible. Nine workshops and virtual sessions were hosted featuring content on healthy homes, indoor air quality, and reducing asthma or allergy triggers. Program staff had a presence at twelve community events where they distributed information on healthy home environments, asthma, and indoor air quality. These events were at the following locations: Lawrenceville Farmers Market, Homewood Farmers Market, Wilkinsburg Fresh Produce Distribution, Pittsburgh Earth Day Celebration, Asthma Awareness Pop Up at Clairton Produce Market, Asthma Awareness Pop Up at Latterman Family Health Center-McKeesport, Asthma Awareness Pop Up at Cornerstone Care Community Health Center of Clairton, McKeesport Good Neighbor Day, Duquesne Family Center Community Day, and Mon Youth Overdose Prevention and Health Resource in McKeesport. Between April and June, 655 individuals were reached through these events, and over 150 green cleaning kits were distributed to families.

WHE also conducted outreach and healthy home assessments in the Mon Valley, where environmental justice communities were identified. This work was funded through a different source outside of the ACP but complements ACP’s goals. In these assessments, asthma and allergy resources and educational programming are provided along with healthy home remediation tools to improve the home environment.

Additional community services provided were online awareness and education events; planning for future community clinic events occurred through the year. WHE Create Change Speaker Series, in two online sessions, reached 115 individuals during Asthma Awareness Month. WHE hosted this as a live online event in collaboration with ALA. DUCIH discussed participation in community asthma clinics with families and assessed their interest in the new home visit program. Their community asthma clinics were re-started, but retention and engagement were difficult.

Challenges: When ACHD’s Safe & Health Home Program (SHHP) support of asthma home inspections ended, WHE and DUCIH lost a resource that was advertised and referred to at these events. New home inspections or interventions addressing home structural environments will need to be identified. Recruitment and participation in DUCIH community clinics was also a challenge.

Opportunities: Social media provides a centralized mode of communication to target geographical neighborhoods or special interest groups, such as parents with children in a particular school district or mothers interested in green cleaning and healthy school environments. Joining the special interest group conversations online may yield community linkages in addition to reaching families.

Home visit services

Evaluation Questions	Data Sources
<p>What are barriers and facilitating factors to implementation and expansion?</p> <p>What methods have been successful in recruiting participants?</p> <p>To what extent are program participants (a) being referred to and (b) utilizing referrals to community-based services?</p> <p>How effective is the program at achieving intended asthma-related outcomes?</p> <ul style="list-style-type: none"> a. To what extent has participants’ asthma control improved? b. To what extent has the program reached families in areas with the greatest adverse health outcomes? 	<p>Meeting notes</p> <p>Monthly, quarterly, and annual reports</p> <p>Program materials/documentation shared at meetings</p> <p>Performance measure data</p>

Progress to objectives: ACHD’s SHHP was operational until April 2021, when at that time the program’s source of funding changed and asthma home inspections were no longer supported. Of the 14 inspections performed since the ACP resumed operations, 10 of those families reported at least one person in the home with asthma and received supplies to improve the

indoor home environment. WHE provided information about SHHP in all workshops until April, and it was estimated that six individuals made a connection with SHHP through the WHE CHW.

DUCIH was in the planning phase of their new home visit program and at the end of the year began to speak with families at community clinic events about their interest in the program. Program leadership hired and trained staff, finalized the curriculum, and informally consulted with CAPP and evaluators on best practices.

CAPP met objectives to expand CAPP through existing referral systems and to North Philadelphia through CAPP collaboration with Health Federation of Philadelphia. Two CHWs were trained in CAPP Academy. CAPP works with Aetna Better Health and Keystone First to establish plans for implementation and reimbursement of home visit services. In addition, they maintain linkages with community services such as contractors for home repairs, pest management, financial counseling, home inspections, clutter removal, and beds for children to sleep.

Ninety-two children enrolled in the CAPP home visit program between July 2020 and August 2021. CHWs completed 309 total intervention visits (169 in-person, 140 virtual), and 122 follow-up visits at 3, 6, and 12-months post enrollment (38 in-person, 84 virtual). These counts include children who were enrolled in the prior fiscal year and continued receiving follow-up visits. Of the 75 children reported in CDC performance measure data collection, 64% had poorly controlled asthma at enrollment, and all had at least one hospitalization or ER visit in the 12 months prior. The largest proportion of children were aged 0-4 (45%), and the smallest proportion were aged 12-17 (12%). Follow-up data on asthma outcomes was not available at the time of reporting.

Challenges: Virtual visits with participants were less conducive to successful follow-up appointments. Some participants enrolled in CAPP or eligible to enroll were cautious about having outside guests in their home during the pandemic. SHHP's sources of funding changed, such that it now prioritizes other public health and safety issues in homes and the program can no longer directly address asthma in home inspections.

Opportunities: The new DUCIH home visit program can expand the reach of services and may consider if/how it can fill the role that SHHP had in comprehensive asthma services. QI working with practices in or near the CAPP service area may help to create lines of communication between providers and CAPP for asthma care coordination. Since CHOP also has the CAPP Plus program to address home repairs and reduce asthma triggers indoors, this would be a valuable resource to QI practices serving low-income homeowners.

Asthma friendly policy promotion

Evaluation Questions	Data Sources
<p>To what extent have partnerships and policies been leveraged to expand the EXHALE strategies? What are the barriers and facilitating factors to implementation and expansion?</p> <p>How has the PAP informed and educated various communities, organizations, and key individuals to influence policy changes that are supportive of school stock albuterol policy?</p>	<p>Key informant interviews</p> <p>Meeting notes and artifacts</p> <p>Monthly and quarterly reporting</p> <p>Performance measures data</p>

Progress to objectives: A sponsor was identified to introduce the stock albuterol bill to the Pennsylvania state legislature, which would allow schools statewide to keep a supply of emergency asthma medication for students. ALA has promoted the stock albuterol bill since the prior funding cycle. To encourage PAP members, ACP partners, and community members to contact representatives and request support, ALA sent two Action Alerts to an email network in May, Asthma & Allergy Awareness Month. Fifteen state legislators signed onto the stock albuterol bill co-sponsorship memo. Language for the policy was developed by ALA to be shared with the state legislature as well.

WHE supports best practice environmental policies by educating the public about air quality improvement practices that can be implemented in households, schools, and community centers. This year, WHE offered online educational workshops and held two Facebook Live video events; one of these featured John Keith from ALA as a speaker.

Challenges: Progress on the stock albuterol initiative paused during the summer when the legislative session adjourned. Competing priorities within the legislature, especially during the COVID-19 pandemic, also posed a challenge to the efficiency of creating and passing the stock albuterol bill. Finally, ALA is aware that when the bill passes, personnel will need to be identified at schools across the state so the policy can be implemented. The school nurse to student ratio in Pennsylvania is low (1:1,500), so identifying key personnel to be trained in albuterol administration at all schools will be critical.

Education initiatives are central to policy work and can be a challenge. For example, even professionals working with patients with asthma may not know about the benefits of a stock albuterol policy. Connections made in the ACP were utilized to further education initiatives; for instance, Dr. Tyra Bryant-Stevens from CHOP/CAPP spoke at a roundtable hosted by ALA that brought together elected officials and members of the PA Legislative Black Caucus. There was also a virtual roundtable with a widespread public audience in Spring 2021, where Dr. Tyra Bryant-Stevens and Dr. Jennifer Elliott from DUCIH were speakers.

Another network that has historically supported asthma-friendly policy initiatives is PAP. Connections through the PAP are not as active as they may have been in the past, since the PAP paused activities and started again with new members. PAP is smaller than it used to be, and active members reported to evaluators they don't know everyone well or have a clear sense of who they may recruit to be new members. Members of the PAP for several years looked to the PAP to intentionally reach out to communities most affected by asthma, elevate stories of community members to inspire policy change, and expand in numbers and diversity. This level of synergy must be further developed.

Opportunities: In Fall 2021 to Winter 2022 the stock albuterol policy is anticipated to go to legislative review where it could get a bill number and eventually be voted upon. In the future, ALA may also begin work on advocating for clean air policy. There has been renewed interest from business owners regarding smoke-free policies because the short-term smoke-free policies required during the COVID-19 pandemic helped business rather than hurt it. WHE will continue community-based education efforts to increase the number of asthma-friendly environmental practices in Allegheny County.

Implementation of quality improvement processes to establish & encourage guideline-based care

Evaluation Questions	Data Sources
Is the Quality Insights Initiative (QI) being implemented as intended? a. How many QI practices have been recruited? b. How many practices have completed the workflow assessment and developed practice goals? c. What are facilitators and barriers to implementation of the QI project for both the QI staff and Practices?	Informal interview with QI staff Meeting notes and artifacts Monthly and quarterly reporting Performance measures data

Progress to objectives: Three medical practices were recruited and contracted with QI to participate in quality improvement activities; at the time of reporting, a fourth practice was in conversation with QI. The locations of the three contracted practices are in the counties originally proposed, but QI also expanded recruitment to other areas of the state (outside of Delaware, Philadelphia, and Montgomery counties). Chart review, the first step in the QI activities, was completed in one practice by August 31, 2021 and in the planning phase for the others. QI also distributed its e-newsletter, *Asthma Insights*, in March and June.

Challenges: Recruitment of practices was challenging due to the overwhelming demand of COVID-19 care. This contributed to delays in starting QI processes and the decision to expand recruitment outside of the proposed counties. Recruitment delays slowed practice workflow data collection and analysis.

Opportunities: Evaluators encourage the strategy initiated by communicating with ALA and PAP members to leverage relationships in identifying and recruiting potential practices.

Pennsylvania Asthma Partnership

Evaluation Questions	Data Sources
How has the PAP promoted statewide planning, coordination, and expansion of asthma activities and resources?	DOH website content
How has the PAP engaged members, community members, and key individuals, and what are the characteristics of those groups?	Meeting notes and supplement materials
How has the PAP demonstrated addressing health equity in their work?	Key informant interviews

Progress to objectives: The past two years have been a transition period for the PAP. Since the end of prior funding cycle, the PAP was largely inactive, and at the beginning of Year 1 PAP leadership shifted to DOH. Within the first six months DOH compiled a membership list, established a collaborative workspace on Microsoft Teams, set priorities into workgroups, and held two formal PAP meetings. The initial reporting period PAP membership list contained 27 individuals (not including ACP leadership and evaluators), and attendance at the kick-off meeting in January was 23. Outside of 13 people from ACP partner organizations, the membership list contained four county health department representatives, two Environmental Protection Agency (EPA) staff, DOH Office Health Equity, Southwest PA Environmental Health Project, Allergy and Asthma Network, PA Integrated Pest Management, PA Association of Community Health Centers, and four additional DOH staff assisting with the project. A large majority of these individuals were from government entities and only four from community-based organizations or non-profits.

PAP meetings were scheduled in advance using a Doodle poll for members to indicate their availability. DOH would lead writing the agenda and consult with ACP members if there were specific program updates or questions to pose to PAP, such as which policy work to prioritize. The first meeting focused on member introductions, mission and vision of PAP, and setting procedures for how the group would operate on-going. In later meetings the agenda would include updates from work groups, discussion of data needs and data communication products, and support needed for drafting the Strategic Plan.

PAP members were engaged in meetings in a variety of ways including the following:

- an interactive Jamboard activity to define vision, mission, and preferences about scheduling and meeting logistics;
- large group discussion about strengths and challenges of reducing asthma burden in PA;
- data discussions focused on what data would be helpful to them and review of new factsheets and maps produced by DOH;
- a feedback survey asked members to share opinions about the prior Strategic Plan and what changes they would like to see in the new plan.

Workgroups were established in Spring 2021 to provide focused effort on three priority areas – 1) communications, 2) strategic plan development, and 3) health equity. All PAP members were invited to join a workgroup of interest to them, and each group had two to three members. Shared files were stored in the Microsoft Teams platform hosted by DOH. Outside of meetings, workgroup members were asked to review resources and materials relevant to their topic. Each workgroup met at least once and reported updates in the July PAP meeting. The communications team addressed updates to the DOH asthma web page, data products, and planning a media campaign. The health equity workgroup compiled standard definitions and language to create a framework for how the PAP would approach antiracism and environmental justice. The strategic plan workgroup wrote a timeline, action steps, identified needs and delegation to draft. The original timeline for drafting the strategic plan was pushed back from an August deadline to completion in March 2022. Design of the public media campaign was also moved into Year 2 activities.

Challenges: Administrative delays in hiring and contracting with ACP partners contributed to a delay in initial PAP meetings. In addition, program administrators had to re-establish the PAP with a lack of documentation (i.e., mission, values, bi-laws, meeting guidelines, sub-committee memberships) from prior operations, which also took more time. After the initial two PAP meetings, ACP leadership described engagement from members as limited and sluggish. Evaluators received feedback from PAP members on how they would like more transparency about who was invited to be part of PAP and why.

Opportunities: ACP leadership and evaluators discussed an interest to include community members, patients, or participants in any of the partners' programs in discussions about program planning, implementation, and evaluation. This was not feasible in Year 1 given the ACP reboot was behind schedule in certain activities. Many PAP members consider health equity as an important value in the partnership's work, and this will contribute positively toward PAP's willingness to engage communities most impacted by asthma health disparities in an on-going manner.

Reflections and Next Steps

Considering the body of data from Year 1 and ACP's status at the end of the prior funding cycle, the ACP accomplished re-establishing infrastructure and maintaining operations during COVID-19. Every EXHALE component met at least two or more objectives. Reasons why objectives were not yet met included changes in funding source, the COVID-19 environment, and administrative delays. DOH leadership and ACP partners explored together adjustments to implementation throughout the year and co-designed objectives for Year 2. It is yet to be seen when and how communities will transition to activities at a pace similar to pre-pandemic levels; this process will continue to have an impact on program participation and service utilization into Year 2.

Evaluators identified the following recommendations from the data sources referenced earlier in this report, such as qualitative data collected in interviews and meeting documentation; review of monthly and quarterly reporting; and observation of communication norms. In addition, evaluators reflected on evaluation design and workflow to critically consider how utility, feasibility, and propriety could be improved. The content of this report will be reviewed with DOH and ACP partners, and partners will be encouraged to share feedback. Figure 2 below contains an estimated timeline of Year 2 evaluation activities.

Create opportunities for PAP members to build relationships. Since PAP paused and rebooted with changes in membership and leadership, the social dynamic and synergy of the group has changed. Relationships and cohesion in the PAP will contribute to synergy and collective progress to goals. Trust can be built by creating transparency around (a) how members were invited to the PAP; (b) how planning and drafting of the Strategic Plan will occur; and (c) how goals will be chosen and prioritized in the Strategic Plan. Evaluators may act as an outlet for members to share their expectations for progress in PAP and feedback about their experience as a member.

Establish formal referral pathways and processes. Referral patterns exist between programs and partners, but they vary in formality and do not consistently support bi-directional information sharing. ACP may consider creating processes to maximize utilization of services and efficiency. Where possible, use existing referral platforms or EMR integration to do this. Dr. Bryant-Stephen's *Primary Care Clinical Pathway for Children with Known Asthma Diagnosis or Suspected Asthma* is an example from the clinical viewpoint of how these processes can be communicated and standardized. This will take ACP a step toward strengthening linkages and achieving care coordination goals.

Identify creative ways to include community members. Depending on interest and capacity, the ACP may consider ways to engage community members with asthma and their

families in the broader program conversation. Overlapping interests between community members and ACP or PAP activities might be opportunities for synergy and tapping passion of individuals who want to see improvement in asthma care. For example, multi-media communications could be designed or informed by the populations and communities they are intended to reach (i.e., youth, caregivers, African Americans).

Refine collection of process measures. Evaluators are reviewing reporting and meeting agenda templates to streamline where and how often process measures are recorded. Metrics related to fidelity of implementation may help establish consistency in newer programs or referral pathways.

Figure 2. Tentative Timeline for Year 2 Evaluation Activities

Key Evaluation Activities	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Evaluation Planning												
Update Strategic Evaluation Plan												
Monthly evaluation calls with DOH												
Refine Individual Evaluation Plans in alignment with SEP												
Provide feedback on collection of process measures												
Select topics and schedule for Evaluation Learning Sessions												
Discuss options for home visit economic analysis with CAPP staff												
Data Management and Analysis												
Revise PM spreadsheet and instructions, gather feedback from partners												
Field PAP self-assessment tool												
Launch OAS & KA data collection tools												
Conduct key informant interviews about policy initiatives												
Set up data sharing procedures and analysis plan for DUCIH home visiting outcomes data												
Analysis of home visit, OAS & KA data												
Review monthly and quarterly reports, provide feedback												
Reporting												
Quarterly Data Discussion												
Annual Evaluation Summaries Year 1												

Note: Not all evaluation activities are reflected in this table; some activities are dependent upon further development of IEPs and ACP priorities.

Pennsylvania Asthma Partnership Membership (last updated Aug. 2021)

Name	Organization
Hannah Hardy	Allegheny County Health Department
Jim Weeden	Allegheny County Health Department
John Keith	American Lung Association
Shelly Cree	American Lung Association
Michelle Naccarati-Chapkis	Women for a Healthy Environment
Hanna Beightley	Women for a Healthy Environment
Jennifer Elliott	Duquesne University
Paige Williams	Duquesne University
Brittani Namey	Duquesne University
Elizabeth Robinson	CHOP CAPP
Tyra Bryant-Stephens	CHOP CAPP
Andrea Rodi	Quality Insights
Robina Montague	Quality Insights
Sarah String	PHMC
Jaime Metzger	PHMC
Isaac Lief	Philadelphia Department of Public Health
Dave Synnamon	Allentown Health Bureau
Tori McQueen	Montgomery County Department of Health & Human Services
Sally Schoessler	Allergy & Asthma Network

Erin Sullivan	EPA
Janice Bolden	EPA
Debbie Larson	SWPA Environmental Health Project
Dion Lerman	PA IPM
Valerie Luebke	Erie County Department of Health
Cheryl Bumgardner	PA Association of Community Health Centers
Barb Fickel	PA DOH-BHPRR
Sara Thuma	PA DOH-BHPRR
Amy Flaherty	PA DOH-BHPRR
Barb Orwan	PA DOH-BHPRR
Jun Yang	PA DOH-EPI
Judelissa Rosario	PA DOH-OHE

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