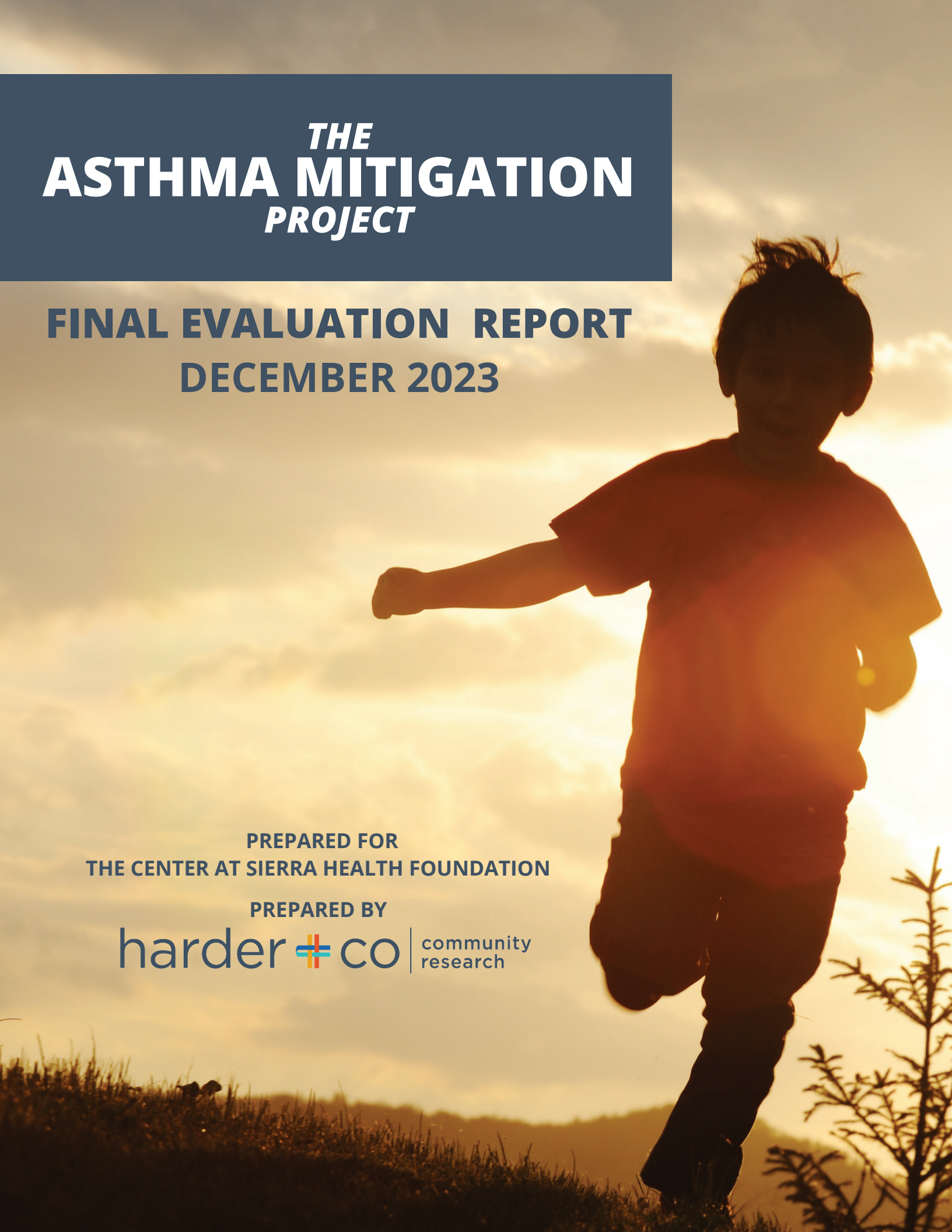
THE ASTHMA MITIGATION *PROJECT*

FINAL EVALUATION REPORT
DECEMBER 2023



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Asthma Mitigation Project

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EXECUTIVE SUMMARY

About the Asthma Mitigation Project

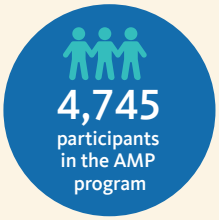
Asthma is a common chronic respiratory condition and a leading cause of hospitalization. Although it affects Californians of all ages, races, and ethnic groups, low-income communities and communities of color suffer substantially higher fatality rates, hospital admissions, and emergency department visits. Many studies have shown that asthma home visiting programs can improve asthma control, thereby reducing emergency department visits, hospitalizations, and missed work or school days.

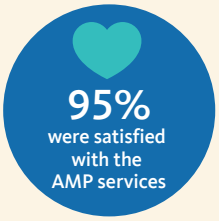
The Center at Sierra Health Foundation (The Center) was awarded $15 million from the California Department of Health Care Services (DHCS) to implement the Asthma Mitigation Project (AMP), which supports asthma home visiting services to individuals with poorly controlled asthma throughout the state. AMP awarded almost $12 million in grants to 28 "funded partner" organizations, who delivered culturally and linguistically responsive asthma home visiting services, mitigation supplies, and resources to children and adults in low-income communities and communities of color with disproportionate rates of asthma. The Center, along with subject matter experts from Regional Asthma Management and Prevention (RAMP), California Pan-Ethnic Health Network (CPEHN), and Children Now, provided infrastructure and technical assistance, to build asthma home visiting workforce capacity and create a statewide asthma service provider network for Medi-Cal members and people who do not have health insurance.

The Center partnered with Harder+Company Community Research to evaluate AMP, with the goal of generating useful data that improves program implementation and assesses changes in program participants' short- and intermediate-term asthma outcomes. This AMP final evaluation report builds on findings from the Year 1 and Year 2 evaluation reports, summarizes AMP's implementation, and describes how outcomes were met. It is intended as a resource for those seeking to provide and/or support community-based asthma home visiting services, education, environmental trigger mitigation, and disease-management services to individuals with poorly controlled asthma.

Each AMP funded partner designed and implemented its asthma home visiting program to **reflect the needs of their communities and priority populations**, as well as the organization's unique infrastructure and approach. Common elements that were key to AMP programs' successes included:

- **In-person and virtual home visits**
- **Mitigation supplies and services**
- **Community health worker model**
- **Comprehensive asthma education**
- **Culturally responsive services**
- **Participant-centered and holistic approach**



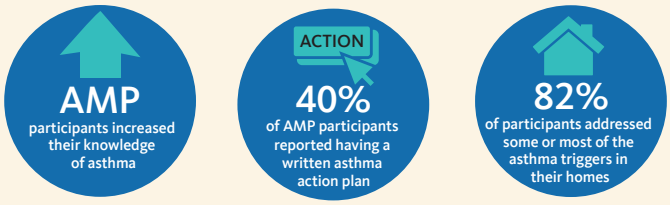


Funded partners successfully reached AMP's priority populations, including communities of color and other historically underserved or under-resourced communities with higher rates of poorly controlled asthma. Funded partners enrolled 4,745 participants in the AMP program between August 2020 and May 2023, and conducted 19,478 home visits, which included both in-person and virtual visits as well as environmental assessments. AMP participants reported a positive experience with AMP services. Almost all participants (95%) were satisfied with the AMP services provided to them.

AMP Funded Partner Successes

Funded partners achieved the following **short- and intermediate-term program outcomes** aligned with AMP's logic model displayed on page 15:

- AMP participants increased their knowledge of asthma and asthma self-management.
- AMP participants improved asthma self-management skills and confidence, as well as attained better medication adherence and asthma control. Over 40% of AMP participants reported having a written asthma action plan after program participation, a substantial improvement from 14% with such a plan at enrollment.
- AMP participants experienced improved home environments and reduced asthma triggers. Asthma mitigation supplies — combined with asthma education — helped 82% of participants address some or most of the asthma triggers in their homes.



Funded partners identified **key program-related factors** that facilitated their ability to successfully deliver AMP services. These included:

- Passionate, culturally and linguistically responsive, non-judgmental staff who are adequately trained on asthma and asthma home visiting services.
- Sufficient organizational infrastructure, funding, and resources to cover the comprehensive costs of implementing AMP programming.
- Supportive internal leaders and champions who provide program staff the flexibility and resources to implement and adapt their programs to meet communities' needs.
- Partnerships with community-based organizations, public agencies, health plans, and medical providers to facilitate outreach, referral, enrollment, and service delivery.
- Technical assistance supports such as RAMP's individualized technical assistance and asthma home visiting resources, the California Breathing AsMA Academy, and peer networks.

AMP partner Little Manila Rising's image showcases their commitment to asthma health education at an outdoor community event

AMP Funded Partner Challenges

As funded partners successfully supported individuals with asthma in communities across California over the past three years, several notable challenges emerged that others who are conducting community-based asthma home visiting services should consider and plan for. These challenges fall into two broad categories: challenges related to program implementation and those related to systems-level inequities.

Implementation Challenges

Funded partners and participants found implementation challenges related to staffing, funding, partnerships, and program sustainability.

Staffing. Almost all funded partners reported staffing shortages and turnover that led to higher workloads for remaining staff, interruptions in service for program participants, and changes in relationships with partner organizations.

Funding. Most funded partners reported that remediation services and home repairs typically exceeded their allowed budget and/or that they had trouble partnering with vendors due to complex contracting and billing requirements. Likewise, both funded partners and participants expressed concerns about participants' ability to sustain home mitigation changes, particularly if they could not afford to replenish supplies after leaving the program.

Partnerships. As some AMP funded partners pursued contracts with Medi-Cal Managed Care Plans to continue providing asthma home visiting services beyond the life of the grant, some found that the process of contracting with managed care plans is complex and challenging, especially for smaller community-based organizations with limited resources and experience. The intricate requirements, extensive documentation, and competitive nature of contracting pose significant obstacles. Similarly, the systems within which community-based organizations and medical providers operate can be very different; for example, they often do not use the same data systems or abide by the same privacy laws, creating challenges for referring potential program participants.

Sustainability. Funded partners are charting different courses to a post-AMP future. Sixteen funded partners (57%) have secured additional funding, three (11%) plan to continue their programs but lack funding, four partners are unsure of the future of their programs (14%), and five others (18%) have decided not to continue with their asthma home visiting programs after the end of AMP. A large majority of funded partners including those continuing services and those needing to pause services, named concerns such as the complex nature of securing contracts with Medi-Cal managed care plans, managing new Medi-Cal billing and reimbursement structures, and being able to continue asthma home visiting and education and retaining the bilingual staff needed without Medi-Cal funding.

External Factors

AMP services were designed for Medi-Cal members and people who do not have health insurance, in low-income communities and communities of color with disproportionate rates of asthma. As such, participants were more likely to face structural and systemic inequities that made it more difficult for AMP to improve asthma control. These challenges included:

Housing. Many funded partners worked with participants living in substandard housing with unaddressed mold, outdated heating and air systems, and poor insulation. Many of these had property owners/landlords that were resistant to remediation, denying or sometimes ignoring requests to make home repairs.

Unequal exposure to environmental triggers. Participants' exposures to asthma triggers outside their homes — including air pollution, pesticides, and the effects of climate change including wildfires and extreme weather — varied based on socioeconomic factors such as income, neighborhood, and occupation.

Healthcare access. Although 82% of AMP participants had Medi-Cal coverage, many had difficulty accessing care due to a shortage of Medi-Cal providers, particularly providers with linguistic and cultural competence. Participants also described challenges getting appointments, navigating those appointments, and advocating for appropriate asthma care.

Poverty. When participants are in survival mode, seeking basic needs such as employment, housing, and food, asthma care often becomes less of a priority.

> ***"There are a lot of socioeconomic factors that our program obviously cannot address directly...Being an advocate for the client and trying to identify resources that could help mitigate some of those challenges has also been an ongoing challenge."***

Five Successes of AMP That We Recommend For All Future Asthma Home Visiting Programs

To address program and system barriers to increasing access to asthma home visiting services, the following recommendations are proposed, emerging from lessons learned delivering AMP services:

1. **Design programs that include the common elements that were key to AMP programs' successes** including: in-person and virtual visits, comprehensive asthma education, mitigation supplies and resources, a community health worker model, culturally and linguistically responsive services, and a participant centered and holistic approach. These core components of AMP facilitated successful implementation and led to improved asthma outcomes for participants.

2. **Public and private funding should build technical assistance into asthma mitigation work that supports the administrative, organizational, and service delivery needs of organizations implementing this work.** Technical assistance within AMP has proven to be a successful and necessary resource for organizations offering asthma services, especially those who are newer to asthma home visiting. Launching new programs and refining approaches takes time and experimentation, especially given the systemic barriers such as complex healthcare systems and billing structures that may pose additional challenges for smaller grassroots organizations. Programs thrived with the technical support that helped adjust and adapt their models.

3 **Funders, both private and public, should continue to support a diverse range of agency types, including small and large organizations, government and community-based organizations (CBOs), and health and social service providers.** Recognizing that all communities have unique needs, this approach ensures that a variety of organizational structures are available to address those needs effectively. Program data demonstrated that participant outcomes did not vary by organization type, thus reinforcing the importance of allowing communities to be served by the funded partners that best align with their needs.

4 **Funders, both private and public, should offer flexible budgets and collaborate to connect funding resources.** Acknowledging funding siloes, technical assistance providers and funders should collaborate to connect the funding dots at the state and funder level to support smaller organizations' access to the financial resources necessary to sustain their programs. Additionally, to accommodate start-up time, staffing fluctuations, changing program needs, and unanticipated challenges, supporting budget flexibility allows programs to adapt to real-time learning and evolving circumstances.

5 **Partnerships between programs, health plans, providers, and funders should be encouraged to support sharing resources and best practices.** As the program concludes, AMP funded partners should continue to take advantage of the emerging communities of practice centered around asthma home visitation. By sharing experiences, best practices, and challenges, these programs can continue to improve their services. This could build on RAMP's ongoing capacity building workshops, including the California Asthma Financing Workgroup, a network of diverse stakeholders committed to improving the financial sustainability of home-based asthma education and environmental trigger reduction, and the California Healthy Housing Network. Many AMP funded partners already participate in these networks; all would benefit from joining and continuing participation. The Center should consider continuing to support this community of practice by sharing contact information, connecting partners, and, if resources allow, hosting ongoing touch points through newsletters or virtual meetings.

These recommendations aim to create an environment of collaboration, flexibility, and learning among all partners involved in asthma home visiting services. By fostering connections, aligning funding processes, supporting diverse agency types, allowing budget flexibility, and providing time for program development, all partners can work together to build the quality and accomplishments of their programs, leading to improved health and quality of life for individuals, families, and communities affected by asthma.

AMP partner Mercy Foundation of Bakersfield highlights an asthma health educator conducting a home visit.

ABOUT THE ASTHMA MITIGATION PROJECT (AMP)

Asthma is a common chronic respiratory condition affecting more than 25 million people in the United States.[1] In California, 7.4% of children and 9.1% of adults currently have asthma, and it is one of the leading causes of hospitalization.[2] Although asthma affects individuals of all ages, races, and ethnic groups, low-income communities and communities of color suffer substantially higher fatality rates, hospital admissions, and emergency department visits due to asthma.[3]

Many studies — including randomized controlled trials[4,5] and systematic reviews[6,7,8,9] — have shown that asthma home visiting programs can improve asthma control while reducing emergency department visits, hospitalizations, and missed work or school days[10,11,12,13] Home visits for trigger reduction and asthma self-management education are also a core component of the Centers for Disease Control and Prevention (CDC) National Asthma Control Program.

The Center at Sierra Health Foundation (The Center) was awarded $15 million for the California Department of Health Care Services' (DHCS) Asthma Mitigation Project (AMP). Authorized through Assembly Bill No. 74 (AB74), AMP supports local health departments, healthcare providers, and community-based organizations to offer asthma home visiting services to individuals with poorly controlled asthma throughout the state, with a focus on families who are members of Medi-Cal or do not have health insurance, low-income communities, and communities of color with disproportionately high rates of asthma.

In August 2020 — at the height of the COVID-19 pandemic — The Center's Asthma Mitigation Project funded 22 organizations statewide (referred to as *Round One Funded Partners*) to offer AMP home visiting services. In August 2021, The Center expanded to fund six additional organizations (referred to as *Round Two Funded Partners*) who served priority populations and geographies not reached in the initial funding release. The Center awarded close to $12 million through both rounds of funding. See Exhibit 1 for a map of the funded partners across California, and Appendix Exhibit A1 for more information about each funded partner.

The Center — along with subject matter experts from the Regional Asthma Management & Prevention (RAMP), California Pan-Ethnic Health Network (CPEHN), and Children Now — provided infrastructure and technical

AMP At-A-Glance

The Asthma Mitigation Project's 28 funded partners provided culturally and linguistically responsive asthma home visiting services — as well as funding for asthma mitigation supplies and resources — to children and adults with poorly controlled asthma in low-income communities and communities of color with disproportionate rates of asthma. Programs were funded from August 2020 through May 2023. Funded partners that had not used all grant funds by the program end date were offered the opportunity to continue providing asthma service to their communities through December 2023. AMP was administered by The Center at Sierra Health Foundation (The Center). With offices in Sacramento and Fresno, The Center pursues the promise of health, racial equity, and justice in communities across California.

assistance to funded partners to create a statewide asthma service provider network. This network was designed to increase funded partners' capacity to serve individuals with poorly controlled asthma and build advocacy networks to support asthma prevention and treatment.

About this Report

The Center partnered with Harder+Company Community Research (Harder+Company) to evaluate AMP, with the goal of generating useful data that improves program implementation and assesses changes in program participants' short- and intermediate-term asthma outcomes. To learn more about the evaluation methods, see the Detailed Methods section of the Appendix (Exhibit A2).

This final report, which builds on AMP Year 1 and Year 2 evaluation reports, summarizes AMP's implementation and describes how outcomes were met. The report includes:

- An **Overview** of the AMP program model.
- Key **Outcomes** for program participants, including health improvements and their experiences with AMP services.
- Insights into **Implementation,** including what it takes for organizations to offer culturally and linguistically appropriate asthma home visiting services.
- A look to the **Future**, sharing a glimpse into next steps for AMP funded partners. This section also provides considerations for organizations that would like to support programs providing asthma home visiting services as part of Medi-Cal's expanded asthma services and benefits, and those that have chosen to continue asthma home visiting using other funding sources. The section wraps with overarching recommendations emerging from the lessons learned delivering AMP services.

The report is intended as a resource for those seeking to provide and/or support community-based asthma home visiting services, education, environmental trigger mitigation, and disease-management services to individuals with poorly controlled asthma.

Readers are encouraged to read the sections that most align with their areas of interest and are most relevant to their own efforts to improve the quality of their programs, support organizations implementing these programs, and work together toward improved health and quality of life for individuals, families, and communities affected by poorly controlled asthma.

AMP partner El Sol's image displays the youngest AMP client receiving a certificate of completion after 10 hours of participation in the Asthma Mitigation Project.

Exhibit 1. AMP funded partner organizations

THE CENTER
at Sierra Health Foundation

THE ASTHMA MITIGATION PROJECT

Round One
$10 million – 22 partners

Round Two
$1.85 million – 6 partners

1. **Alameda County Public Health Department**
   Alameda County
2. **Breathe California of the Bay Area, Golden Gate, and Central Coast**
   Alameda, Contra Costa, Monterey, San Benito, San Francisco, San Mateo, Santa Clara and Santa Cruz Counties
3. **El Concilio, Catholic Council for the Spanish Speaking of the Diocese of Stockton**
   San Joaquin County
4. **Central California Asthma Collaborative**
   Fresno County
5. **Comite Civico del Valle, Inc.**
   Imperial County
6. **Community Action Partnership of Kern**
   Kern County
7. **Contra Costa Health Services**
   Contra Costa County
8. **El Sol Neighborhood Educational Center**
   San Bernardino County
9. **Esperanza Community Housing Corporation**
   Los Angeles County
10. **La Maestra Family Clinic, Inc.**
    San Diego County
11. **LifeLong Medical Care**
    Contra Costa County
12. **Juddah Project**
    Sacramento County
13. **Little Manila Foundation**
    San Joaquin County
14. **Mercy Foundation–Bakersfield**
    Kern County
15. **Mutual Assistance Network of Del Paso Heights**
    Sacramento County
16. **Roots Community Health Center**
    Alameda County
17. **San Mateo County Family Health Services**
    San Mateo County
18. **Santa Barbara Neighborhood Clinics**
    Santa Barbara County
19. **Santa Rosa Community Health Centers (SRCHC)**
    Sonoma County
20. **Sigma Beta XI, Inc.**
    San Bernardino and Riverside Counties
21. **Visión y Compromiso**
    Kern, Madera and Riverside Counties
22. **Watts Healthcare Corporation**
    Los Angeles County

23. **Asian Pacific Self-Development and Residential Association**
    San Joaquin County
24. **International Rescue Committee**
    Stanislaus, Merced, Mariposa and Madera Counties
25. **Jakara Movement**
    Sutter County
26. **McKinleyville Community Collaborative**
    Humboldt County
27. **Nexus Youth and Family Services**
    Amador and Calaveras Counties
28. **Somali Family Service of San Diego**
    San Diego County

The Asthma Mitigation Project is funded by the California Department of Health Care Services and is managed by The Center at Sierra Health Foundation.

Key terms

- **Asthma action plan:** A written, individualized management plan created with a physician with the goal of reducing or preventing asthma flare-ups and emergency department visits. Plans cover asthma medications, triggers, symptoms, management strategies, and when to get emergency care.
- **Asthma control:** People with well-controlled asthma experience very few symptoms throughout the day and night and can perform daily activities without shortness of breath, chest tightness, coughing, or wheezing. Poorly controlled asthma, a requirement for AMP participation, is determined by asthma-related emergency department visits or hospitalization, two asthma-related sick or urgent care visits in the past 12 months, a score of 19 or lower on the Asthma Control Test, or the recommendation from a licensed physician, nurse practitioner, or physician assistant.
- **Asthma home visitors:** An array of professionals who provide asthma home visiting services. Visitors may include qualified, non-licensed providers such as community health workers (CHWs), promotoras, lay health educators, certified asthma educators, and healthy housing specialists.
- **Asthma mitigation:** Any effort to control the environmental exposures and asthma triggers that can exacerbate asthma symptoms.
- **Asthma Preventive Services state plan amendment:** A Medi-Cal benefit initiated in 2022 that covers clinic- and home-based asthma self-management education and in-home environmental trigger assessments provided by licensed individuals and non-licensed asthma preventive service providers. Other services for individuals with asthma may be provided by community health workers, promotoras, and other individuals meeting specified qualifications.
- **Asthma triggers:** Exposures or circumstances that can cause asthma symptoms, episodes, attacks, or make asthma worse. The most common triggers include allergies, air pollution and other airborne irritants, other health conditions including respiratory infections, exercise or physical activity, weather and air temperature, strong emotions, and some medicines.
- **California Advancing and Innovating Medi-Cal:** CalAIM is a long-term healthcare reform effort by the California Department of Health Care Services. The goal is to transform and strengthen Medi-Cal so it offers Californians a more equitable, coordinated, and person-centered approach to maximizing their health and life trajectory.
- **CalAIM Asthma Remediation:** Part of the CalAIM *Community Supports* program. In participating counties, Medi-Cal managed care plans can provide their members up to $7,500 in lifetime asthma remediation services and supplies, including physical modifications to the home environment. These services and supplies are designed to be cost-effective alternatives to traditional asthma treatment, to prevent acute asthma episodes.
- **Funded partners:** The 28 organizations that provided asthma home visiting, education, trigger assessments, and remediation services through AMP (see Exhibit 1).
- **Home remediation:** Specific actions to mitigate or control environmental exposures in the home. Examples include dust-proof mattress and pillow covers, low-cost products such as high-efficiency particulate air vacuums, asthma-friendly cleaning products, dehumidifiers and air filters, integrated pest management, and minor repairs to the home's structure, such as patching cracks and small holes through which pests can enter. Can be provided as part of the CalAIM *Asthma Remediation* services (described above).

THE ASTHMA MITIGATION PROJECT PROGRAM DESIGN

The goal of the Asthma Mitigation Project was to provide culturally and linguistically appropriate asthma home visiting services to individuals with poorly controlled asthma to:

- Improve asthma self-management and control
- Decrease exposure to common household triggers
- Improve asthma outcomes and quality of life
- Decrease asthma-related costs for payors

Over two rounds of funding, The Center selected 28 AMP funded partners based on their ability to reach Medi-Cal populations across California who could most benefit from asthma mitigation services.* These populations included both adults and children, with a focus on low-income communities and communities of color with disproportionate rates of asthma. While adhering to the activities, outputs, and outcomes described in the AMP logic model (see Exhibit 4), the program was intentional in allowing **each funded partner to design and implement its program** to reflect the needs of their communities' priority populations, align asthma control best practices with community culture and needs, and build on the organization's unique infrastructure and approach. Exhibit 2 summarizes the common elements that funded partner programs found key to their success.

Exhibit 2. Key Elements of the Asthma Mitigation Project Programs

Asthma in-person and virtual visits
Home visitors provided comprehensive asthma education through a series of in-person and virtual visits. AMP funds could be used for up to five visits for participants ages 0 to 21, and up to three visits for participants over 21. Many programs also offered interim texts and calls to support participants between visits.

Comprehensive asthma education
Home visitors covered topics such as asthma basics, common triggers, asthma mitigation strategies, proper use of medication, asthma action plans, patient advocacy, and strategies for addressing challenges to asthma management.

Mitigation supplies and resources
AMP programs had dedicated funds to provide participants with up to $1,000 in mitigation supplies, such as home air purifiers, cleaning supplies, mattress covers, or minor home repairs such as mold remediation or ventilation improvements.

A community health worker model
AMP asthma services were provided by home visitors, including promotores, community health workers, and health educators. Many programs hired home visitors from and/or representative of the communities served, enabling them to meet participants where they were and intentionally build rapport, trust, comfort, and connection.

Culturally and linguistically responsive services
Funded partners and their staff were positioned to provide culturally and linguistically appropriate services for the specific communities they served. Funded partners also offered services in the languages spoken by their communities.

A participant-centered and holistic approach
Many home visitors were trained to see participants holistically, actively listening to their experiences and partnering on actions to improve their overall health and well-being. Some programs offered wrap-around services or referrals that helped address other unmet needs such as housing, childcare, or other health concerns that may or may not be related to asthma.

*Funded partner organizations were 501(c)(3) nonprofit organizations, health departments, or community-based healthcare or Medi-Cal managed care plans that are located and provide services in California.

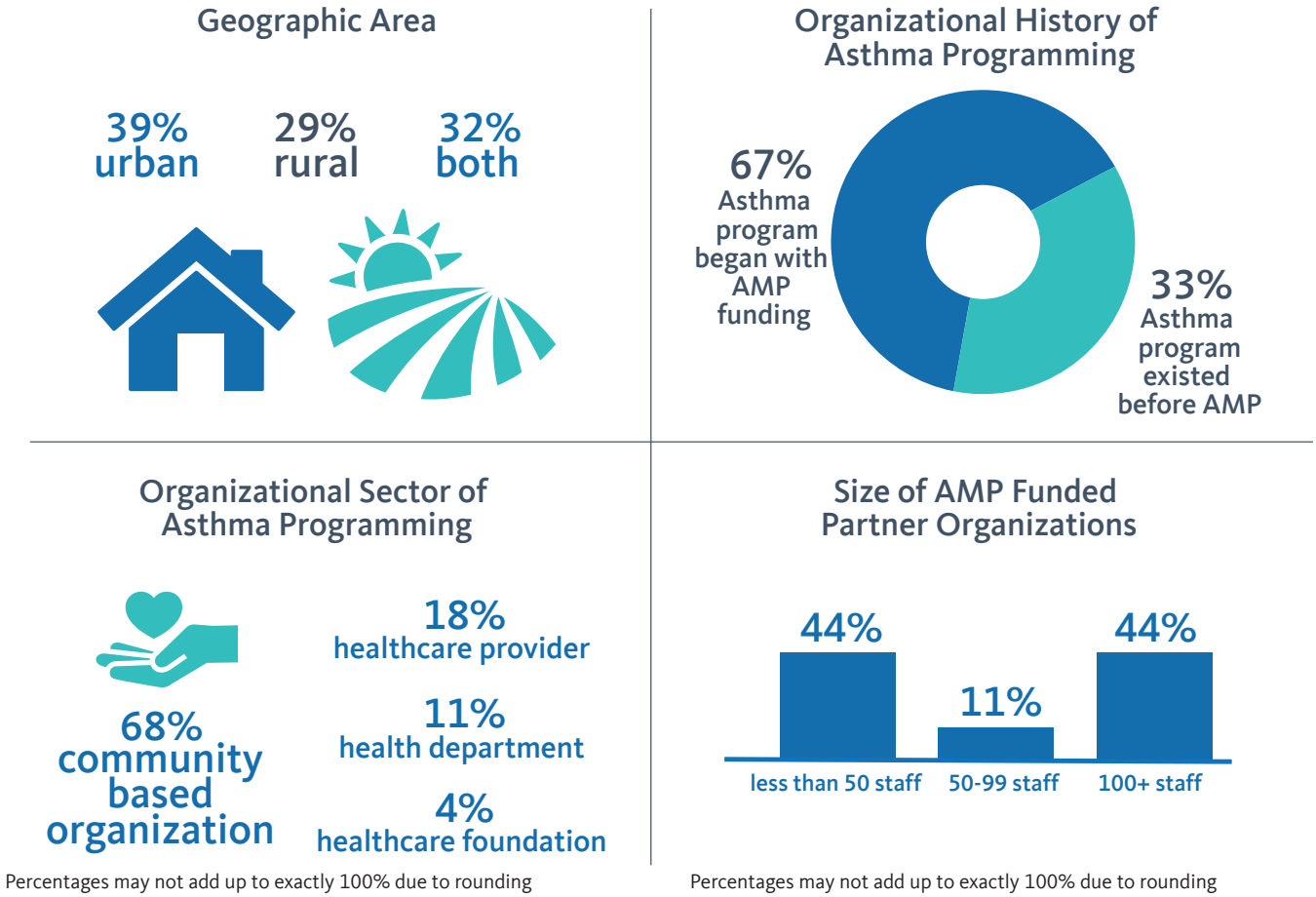
As part of the program, The Center and its technical assistance partners provided infrastructure to support funded partners, including:

- Accessing asthma home visiting training through the California Department of Public Health's California Breathing Asthma Management Academy.
- Training specifically for AMP funded partners, as well as connections to trainings offered by other organizations and partners.
- Convening partners regularly to build partnerships and share knowledge.
- Individualized technical assistance to provide tailored guidance and support, answer specific questions, and troubleshoot challenges.

AMP Funded Partners

The 28 AMP funded partners represented diverse organizations across California. The 22 funded partners from Round One and six from Round Two were intentionally selected for their ability to reach Medi-Cal populations throughout California who could benefit most from asthma mitigation services. Funded partners served myriad communities across 29 California counties, including immigrants, older adults, refugees, rural populations, and Tribal communities. According to a survey of funded partners, two-thirds of them (n=17) were starting new asthma home visiting programs with AMP funding. Key characteristics of funded partner organizations are summarized in Exhibit 3.

Exhibit 3. Size of AMP Funded Partner Organizations



Percentages may not add up to exactly 100% due to rounding

Percentages may not add up to exactly 100% due to rounding

AMP During the COVID-19 Pandemic

AMP implementation and findings from this evaluation must be understood within the context of the global SARS-CoV-2 coronavirus (COVID-19) pandemic. The program was launched in the early months of the pandemic, prior to the availability of vaccines. The changes it necessitated in work and daily life — as well as the over 102,000 deaths it caused in California[16] — placed a tremendous burden on healthcare and social service providers, including those involved in AMP.

The COVID-19 pandemic significantly affected funded partners' hiring and staffing capabilities, costs, and program delivery models. Community members eligible for AMP programs also found themselves navigating the health, economic, social, and emotional burdens of the pandemic as part of their decision to participate or continue participating in AMP services.

AMP continually evolved to address these challenges. Findings throughout this report discuss specific ways in which the COVID-19 pandemic influenced AMP operations, challenges, and lessons learned.

The COVID pandemic's influence on program participation and participant experiences

The COVID-19 pandemic had a complex influence on AMP participation and outcomes. From the beginning, the Public Health Emergency paused Medi-Cal eligibility checks, boosting Medi-Cal enrollment.[17] While this increased the number of people eligible for AMP, funded partners often had trouble enrolling participants due to restrictions on in-person outreach and the diversion of many program staff for COVID-19-related duties. There were also reduced referrals from clinicians, as COVID-19 decreased non-COVID-19 healthcare use (including asthma-related doctor's visits and emergency department use) due to decreased exposure to environmental triggers, better hygiene (such as mask wearing and handwashing), and emergency department avoidance.[18,19]

At the same time, some people who could have benefited from the program declined to enroll or to continue in the program because they were navigating personal challenges related to COVID-19. One funded partner shared, "Our community was one of the most affected during COVID-19. We had many deaths. So if something like a home visit is scheduled but then someone has COVID-19, there's illnesses, there's children at home...Those were the visits that we promised before this monumental pandemic."

AMP funded partners also needed to quickly pivot to offering virtual visits. Almost all (n=26) provided video and/or telephone visits at some point during AMP, and most (n=22) continued to offer at least some virtual visits through the end of the program. Outcomes did not appear to be influenced by the switch to virtual or hybrid visits, and respondents to the participant survey — who were primarily from organizations offering virtual visits — reported overwhelmingly high program satisfaction.

Although, as one funded partner stated, "virtual visits are better than no visits," they did pose unique challenges. There were technology barriers for both staff and participants, more effort needed to establish participant/home visitor connections across virtual platforms, and a more limited ability to understand the home environment details during virtual environmental assessments.

While some potential participants decided not to join the program because of these digital access barriers or lack of interest in virtual services, others found virtual visits more welcoming. As one funded partner shared, "We would sometimes encounter clients who declined services because they did not want to invite a stranger into their homes...Now that we are offering virtual visits, we encourage clients with those objections to try a virtual visit. Usually, after a positive experience during the virtual visit, they invite us into their homes."

Funded partners also found unexpected logistic benefits to virtual visits, including their ability to reach people in very

rural areas, reduce travel time when staffing was limited, and conduct more home visits in a single day.

The COVID-19 pandemic's influence on funded partners

Many funded partners described the COVID-19 pandemic as the single most difficult challenge they faced in implementing their AMP programs. As previously described, the pandemic directly affected program enrollment and service delivery. In addition, funded partners faced:

- Difficulty hiring and retaining staff due to the pandemic's effects on the labor market
- Decreased staff capacity due to illness, family care, and staff reassignment to assist with pandemic response
- Few in-person staff trainings, with most trainings — including those offered by The Center and the California Department of Public Health's California Breathing program — switching to virtual platforms
- Ongoing program adjustments to reflect new safety guidelines and infection patterns
- Unpredictable expenses as inflation rose and supply chains faltered
- Organization-wide changes in policies, resources, and priorities.

These pandemic-related challenges required funded partners to be more flexible with their program implementation. Though each organization was able to navigate these unexpected conditions, these adaptations came with considerable costs, including additional administrative time, resources, and stressors for staff.

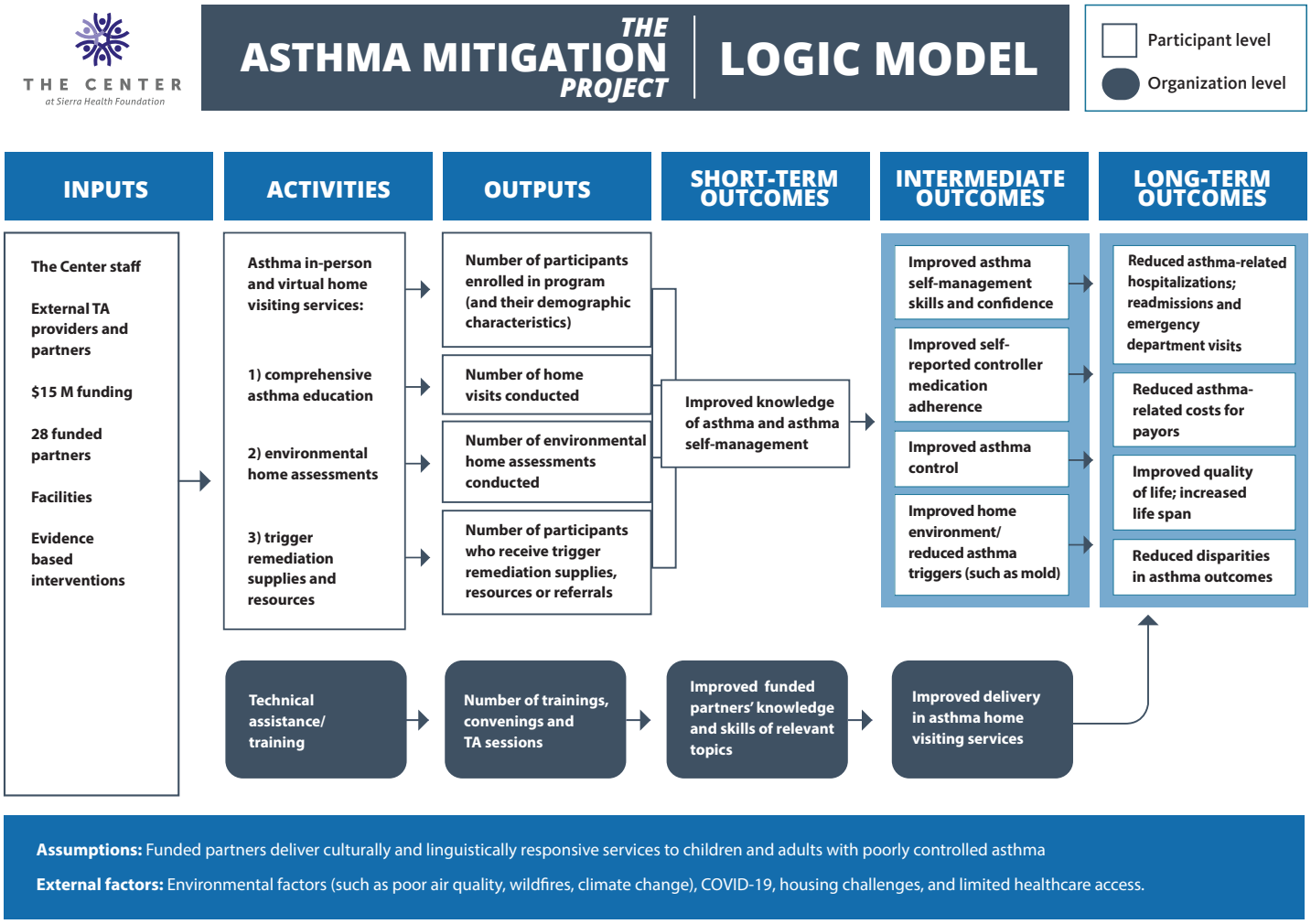
AMP partner Somali Family Service of San Diego demonstrates their work in asthma health education during a home visit.

ASTHMA MITIGATION PROJECT OUTCOMES: THE EXPERIENCE OF PARTICIPANTS

AMP funded partners conducted in-person and virtual visits that included comprehensive asthma education, trigger assessment, and referrals for remediation and social services to improve participants' health and well-being. AMP also offered each participant up to $1,000 in mitigation supplies such as home air purifiers, cleaning supplies, mattress covers, or home repairs like mold remediation or ventilation improvements. As illustrated in the AMP logic model (Exhibit 4), this approach combined education with mitigation supplies to catalyze education into action and reduce barriers to asthma management and control.

This chapter summarizes AMP results, including outputs (which are the direct results of activities) and participant outcomes or changes, organized by elements of the logic model.

Exhibit 4. AMP Logic Model



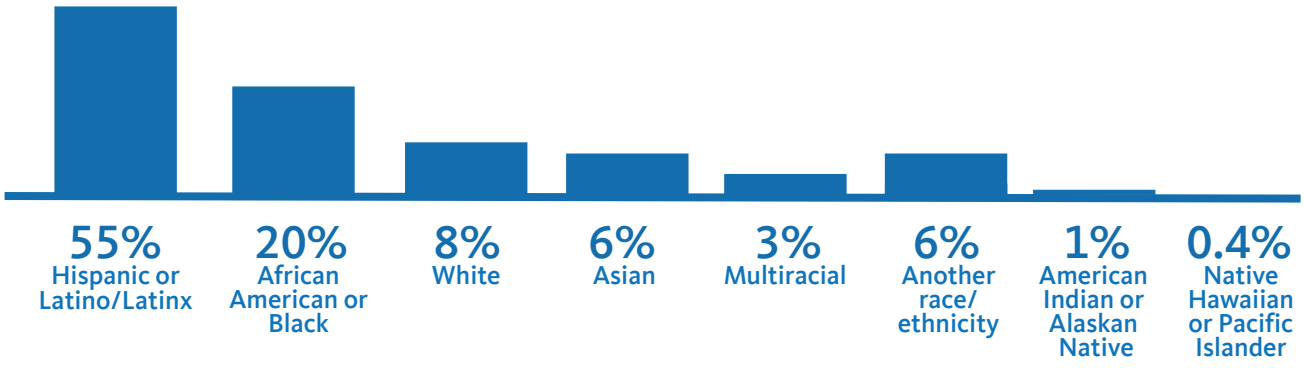
Program Outputs

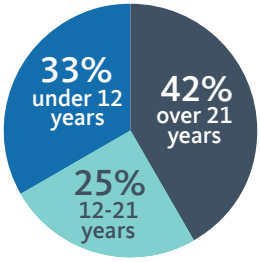
AMP reached, enrolled, and served priority populations.

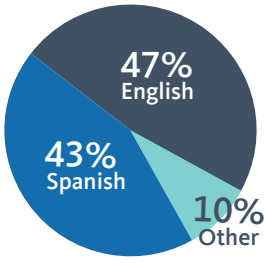
Funded partners enrolled 4,745 participants in AMP during the program period between August 2020 and May 2023. A total of 19,478 home visits were conducted, which included in-person visits, virtual visits, and environmental assessments.

Funded partners successfully reached AMP's priority Medi-Cal populations, including communities of color and other historically underserved or under-resourced communities with higher rates of poorly controlled asthma (Exhibit 5). Funded partners continued to expand their reach into additional racial/ethnic and linguistic communities over the course of the program.

Exhibit 5. Key characteristics of enrolled AMP participants







Within the Year Prior to Enrolling in the Program

71%

were insured only through medi-cal

11% had Medi-Cal and Medicare Coverage, while 7% were uninsured

36%

had visited urgent care or the emergency department or were hospitalized for asthma

65%

had poorly controlled asthma at enrollment

Approximately 65% of enrolled participants (n=3,097) completed the AMP program,* and funded partners estimated that an additional 675 participants would complete the program after the program ended in May 2023.^

Participants who completed the program were demographically similar to all of those who enrolled. Notably, those who identified as Hispanic or Latino/Latinx were more likely to complete the program (77%) compared to those of other race/ethnicity groups (50%), and those who spoke Spanish as their primary language were more likely to complete the program (79%) than those who spoke another language (55%).

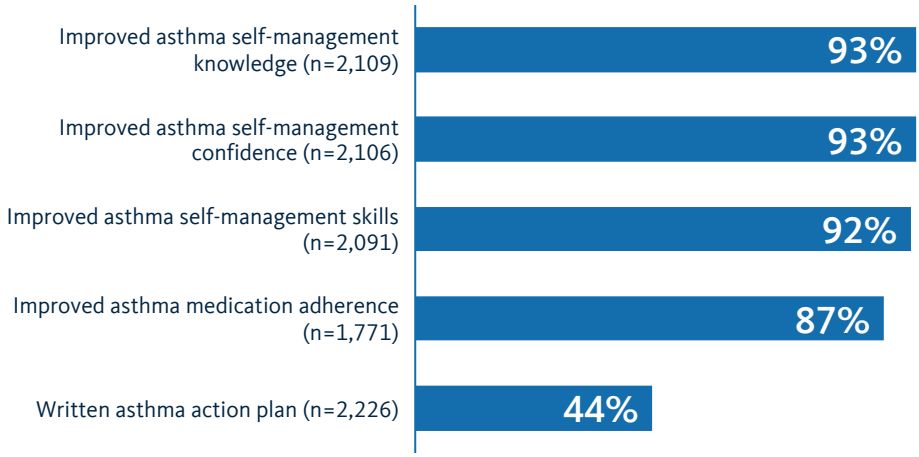
Short- and Intermediate-Term Program Outcomes

AMP met the short-term and intermediate outcomes delineated in the program logic model (Exhibit 4).

Building on the accomplished program outputs detailed above, AMP realized the program's intended short-term outcome, i.e., almost all participants (93%) improved their knowledge of asthma and asthma self-management (Exhibit 6). The program also realized the subsequent intermediate outcomes, improving participants' asthma self-management skills and confidence, medication adherence, and asthma control — an overwhelming majority of participants increased their asthma management knowledge, skills, and control after completing the program (Exhibit 6).+

Exhibit 6. Self-reported asthma outcomes at program follow-up

91%
of participants with poorly controlled asthma at enrollment
improved asthma control
after the program



* To be considered complete, participants between 0-21 years of age needed to participate in at least three visits and adults over 21 years of age needed to participate in at least two visits.

^ A "no-cost extension" was granted to 18 funded partners that had not used all of their grant funds by the May 2023 program end date, to give them an opportunity to continue providing asthma service to their communities. In the final progress report, submitted in May 2023, funded partners were asked to estimate the number of participants who would complete the program during this extension time. As these numbers were estimates and these participants were being served after the end of AMP, the data was not included in this final report.

+ Funded partners collected follow-up data after each participant's final visit and reported a summary of this data in biannual progress reports to The Center (see appendix Exhibit A2 for more details about the progress report methods). Follow-up data could include re-administration of asthma control tests and/or participant self-reported asthma outcomes.

*"I was constantly missing work about one to two times per week. Now that doesn't happen. **It's because of the changes we made,** and the information I received has helped me. I changed, and economically, things are different too."*

– AMP participant

Participants who started the program with poorly controlled asthma reported improved asthma control at follow-up and over 90% reported improved asthma self-management knowledge, skills, and confidence. One participant shared that their "asthma was a very frustrating thing for [them] and sometimes [they] felt like [they were] going to die [during] an asthma attack"; after the program, they "feel more equipped, more secure, confident, and...less nervous."

Among those who used asthma medication, 87% reported improved adherence. Over 40% also reported having a written asthma action plan at follow-up, a substantial improvement from the 14% with a plan at enrollment. These outcomes did not vary significantly by the type, size, or prior asthma home visiting experience of the funded partner providing services.

AMP participants experienced improved home environments and reduced asthma triggers.

Mitigation supplies improved participants' asthma; more substantial remediation, however, was sometimes challenging.

Approximately 66% of participants received asthma mitigation supplies and services through their AMP programs, and were most likely to receive cleaning supplies, pillow and mattress covers, and portable air purifiers or new filters for their HVAC systems (Exhibit 7). These asthma mitigation supplies had immediate benefits for program participants. One funded partner shared that they had a participant who was a young woman with a baby, and that both were, "so sick with asthma; providing a pillow cover, the mattress cover, the air purifier...improved her [and her] child's asthma instantly."

Almost all participants who responded to the participant satisfaction survey (98%) said mitigation supplies were helpful or very helpful. Funded partners reported that these supplies — combined with asthma education — helped 82% of participants to address some or most asthma triggers in their homes. They commonly cited air filters, air purifiers, and HEPA vacuums as the most helpful supplies for families. One funded partner described their reaction to seeing the influence of these supplies: providing mitigation supplies "is not something we normally do as a primary care clinic, but maybe it should be part of what we normally do — provide holistic care for the family...That it's part of what we do just feels so normal and natural."

*"[Our organization] can never take away [participants' asthma] burden but **we can reduce the impact of those burdens on them.** [One parent] said, 'For the first time, I can actually work full-time. I've never been able to work full-time - ever. I can go to work without having my phone all the time and feeling that somebody's going to call me that [my child] is having an episode or something.'"*

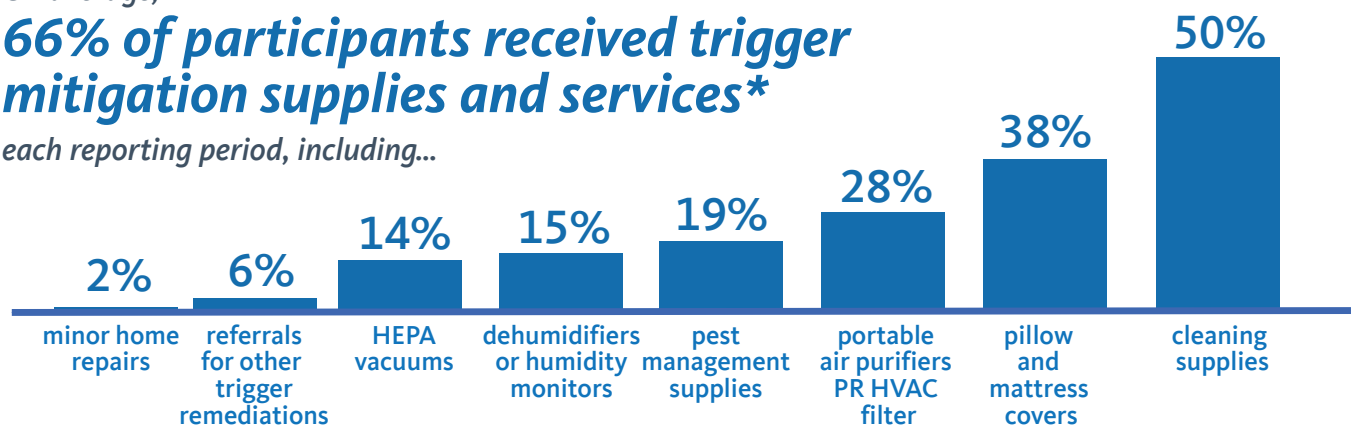
– AMP participant

Exhibit 7. Provision of asthma trigger mitigation services and supplies

On average,

*66% of participants received trigger mitigation supplies and services**

each reporting period, including...



* Average percentage of all participants during a six-month reporting period — including new and continuing participants — who received any supplies or services. Participants could receive more than one type of service or supply and could receive services in more than one reporting period.

Despite the immediate benefits of these supplies, funded partners and participants both expressed concerns about participants' ability to sustain changes if they could not afford to continually replenish supplies after finishing the program. As one participant shared, AMP "gave me these awesome air filters for my AC unit, but I won't be able to buy them myself, as I am extremely low-income,...which means that, once the program is over, some of the major things that helped me control my asthma attacks won't be able to be continued and will cause them to come back."

In some cases, participants' home environments required other mitigation efforts, such as carpet removal, installation of ventilation systems, or mold remediation. On average, only 2% of participants received home repairs during each of the project's reporting period, and only 6% received referrals to other organizations for additional trigger remediation. Funded partners reported considerable challenges — many of which may require policy-level solutions — facilitating these more substantial remediation efforts, including:

"[One client] knew that smoking was a big trigger for her and she went from smoking a pack of cigarettes a day to two cigarettes a day."

– AMP funded partner

"The items that they provided us with... the filters and everything, I wasn't buying them on a regular basis...The incentives that they [provided] definitely help[ed] out and we wouldn't have them without the program."

– AMP participant

- **Cost.** Most funded partners reported that remediation services and home repairs typically exceeded the $1,000 budget, and that inflation had exacerbated this issue.
- **Contracting challenges.** Some funded partners had trouble finding vendors who could provide remediation services in their area and contract with their organizations. These challenges primarily occurred for larger organizations or government agencies that had more complex contracting requirements and processes or that could take longer to pay remediation vendors.

- **Property owner/landlord reluctance.** Two-thirds of AMP participants lived in rental properties, and funded partners worked with participants to learn about — and act on — their tenant rights. Despite these efforts, many funded partners indicated that property owners were resistant to remediation, denying or sometimes ignoring requests to make home repairs. A funded partner reported that one landlord was reluctant to allow remediation services, given that, "once they pull a permit, everything in the house needs to come up to code."

- **Participant reluctance to involve property owner.** Some participants were reluctant to have home visitors engage with their property owners, stemming from a desire to avoid unnecessary attention that they feared could lead to increased rent, questions about immigration status or sublet/occupant situations, eviction, or job loss. "We have to be very careful when we tread around housing issues [to try] to prevent additional burden to our participants," said one funded partner.

Other funded partners had difficulty spending the full $1,000, either because families had minimal triggers in their home or because other partner organizations were covering the cost of some services or supplies.

"One of our clients [was experiencing]... really uncontrolled asthma...We were able to get them started in our program and provide education and home remediation supplies and just to see the difference between the first visit as opposed to the third visit was really great because we could see improvements in their health and their asthma management."

"We didn't know our home could have triggers that affect us. This helps me a lot because now I can check the windows for mold. [The home visitor]...showed us that cleaning products could harm us and... helped us identify the asthma triggers."

– AMP participant

"The Asthma Coordinator helped [a] mother get all the reasonable accommodation paperwork completed to have the carpet removed in the home...and patch up a bullet hole in their wall [that had] been there for years. They helped her navigate the process of getting the paperwork that will allow her child to have his rescue asthma inhaler at his preschool...His asthma symptoms have decreased since he started the program and she feels more confident in caring for her child."

– AMP funded partner

CONSIDER THIS

Considerations for Mitigation Supplies

High-quality mitigation supplies can lead to immediate improvement of asthma symptoms and sustain those improvements, particularly for low-income individuals who may not be able to replace the mitigation supplies in the short-term. The following considerations can inform future asthma mitigation supply and service provision, including those offered through the Asthma Remediation component of the CalAIM Community Supports program:

- **Programs should focus on high-quality asthma mitigation supplies.** Funded partners recommended investing in high-quality mitigation supplies — even when they cost more than other options — because they are more likely to last longer and reduce the need for low-income families to continually replace lower-quality options. Funded partners also encouraged implementing organizations to use existing resource guides on the best asthma-friendly, cost-effective, and high-quality supplies, such as the Building Systems to Sustain Home-Based Asthma Services e-learning platform from the National Center for Healthy Housing (NCHH) and RAMP.
- **Programs should consider providing low-cost and low-barrier home remediation.** Funder partners shared the difficulties of facilitating larger-scale remediation. Some funded partners specifically expressed that it would have been useful to receive support around existing resources for lower-cost or lower-barrier home repairs that could improve asthma. This included examples of remediation for different circumstances, as well as strategies for finding and working with remediation contractors.
- **Programs not participating in the Asthma Remediation component of CalAIM Community Supports should partner with other organizations to offer trigger remediation supplies.** The Asthma Remediation component of the CalAIM Community Supports program offers a lifetime maximum of $7,500 in asthma mitigation supplies and remediation to Medi-Cal members. Programs should pursue funding or partnerships that would allow them to continue offering trigger mitigation supplies if they do not participate in this program. This could include pursuing funding specifically for supplies or soliciting donated supplies. Funded partners also cited the benefits of partnering with other organizations — including existing weatherization or healthy housing programs — to offer complementary services.
- **Programs and health plans should work together to address barriers to working with remediation vendors.** Although the Asthma Remediation option under CalAIM Community Supports significantly increases the budget for remediation services, cost was just one challenge to offering these services to AMP participants. Programs and health plans will need to coordinate closely to develop internal practices that allow them to identify, contract with, and promptly pay remediation vendors. This may include identifying strategies for navigating organizational policies that make it difficult to contract or pay small businesses.

External Factors: Systemic inequities posed barriers to improving asthma and reducing disparities in asthma outcomes.

As noted in the logic model (Exhibit 4), there are factors external to AMP that influenced the program's ability to effect participants' asthma outcomes. Even with AMP services, some participants were more likely to face structural and systemic inequities that made it more difficult to improve asthma control. These factors included:

- **Housing.** Funded partners repeatedly underscored the extreme challenges posed by the quality, availability, and stability of safe and affordable housing. Many worked with participants living in substandard housing with unaddressed mold, outdated heating and air systems, and poor insulation. Other participants lived in multi-unit housing that did not have or enforce non-smoking policies. As previously described, these housing issues were difficult to address, even with AMP's resources for minor home repairs. These challenges were compounded by limited financial resources to find alternative housing — if it was even available. As one funded partner said, "affordable housing is getting harder to find and families are feeling fearful about doing anything to jeopardize their housing." This points to the need for broader policy solutions that address housing affordability and tenant protections, in addition to housing quality.
- **Unequal exposure to environmental triggers.** Participants' exposures to asthma triggers outside the home — including air pollution, pesticides, and the effects of climate change — also varied based on socioeconomic factors such as income, neighborhood, and occupation. There is a well-documented history (summarized by the Environmental Protection Agency, here) of policy decisions that have led to low-income communities and communities of color facing inequitable air pollution and substandard housing; as such, the solutions must also be rooted in policy and systems change.
- **Healthcare access.** Although 82% of participants had Medi-Cal coverage, they still had difficulty accessing care due to a shortage of Medi-Cal providers, particularly those with linguistic and cultural competence. Participants also described challenges getting appoint-

"El Concilio Preschool located directly under Stockton's crosstown freeway. The combination of brutalist columns and childish, yet eerie, imagery mark the shortcomings of city planning with the concern of the people in mind, especially in regards to the respiratory health of our youngest generations."

– Julian Leal, D.A.W.N. Youth Advocate

ments, navigating those appointments, and advocating for appropriate asthma care. One funded partner highlighted their organization's experience with "doctors not explaining the [asthma] services to [participants as] in-depth as they should" due to brief and rushed appointments. Another said, "Our healthcare system has failed us. In [our county] we have 5,000 patients per doctor. When will they have time to make a referral if they don't even have time to speak with the client?" Finally, despite expansion of full-scope Medi-Cal to more undocumented adults in May 2022, some participants expressed reluctance to apply for or use Medi-Cal coverage due to distrust or fear of government agencies' treatment of undocumented immigrants.

- **Poverty.** As previously noted, participants expressed concerns about sustaining asthma control improvements once the AMP-funded remediation supplies ran out. In addition, economic pressures meant that asthma care often was put on the backburner. One funded partner stated that, "My community is still in survival mode. If they have to choose between going to their appointment to go see a doctor or going to go find food or to a job, they will do that." Another noted that the parents of children in their program were "really trying, but the fact of the matter is that there's no money. There's no money to move on, to buy a house, to move to a different area."

As one funded partner stated, there are "layers of injustice related to systemic racism and how our neighborhoods were designed, and how that leads to the disparities of health that are preventable for our communities of color in particular." Another funded partner underscored the limits that these realities placed on AMP's ability to affect change: "There are a lot of socioeconomic factors that our program obviously cannot address directly...Being an advocate for the client and trying to identify resources that could help mitigate some of those challenges has also been an ongoing challenge." These challenges speak to the importance of policies that integrate racial equity, social determinants of health, community advocacy, and conventional medical approaches to asthma management and care.

AMP partner Little Manila Rising's D.A.W.N. Youth Advocate, Julian Leal, highlights the juxtaposition of a children's preschool beneath a freeway. They reveal how vehicular emissions in this area contribute significantly to environmental pollutants and exacerbate asthma symptoms.

INSIGHTS INTO IMPLEMENTATION: THE EXPERIENCE OF FUNDED PARTNERS

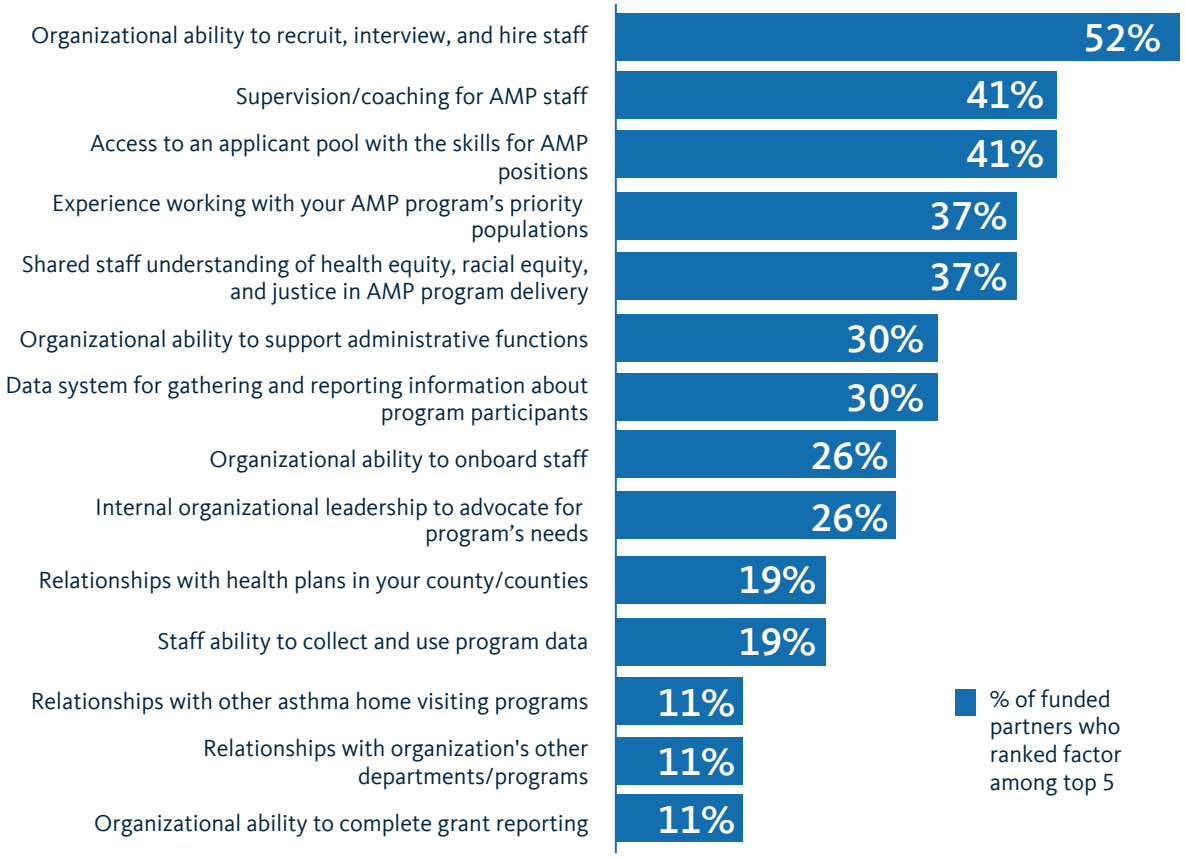
Funded partners successfully delivered AMP services and realized the short- and intermediate-term outcomes described in the logic model (Exhibit 4). This chapter describes the key implementation factors that facilitated this success and offers strategies for other programs to consider if they want to replicate this success.

Funded partners identified key factors for successful implementation.

Funded partners identified the factors most important for successfully implementing their asthma home visiting programs. Over half of funded partners (52%) ranked their ability to recruit, interview, and hire staff for AMP positions as a top five factor to deliver quality AMP services (Exhibit 8).

When combined with qualitative data collected from funded partners — including interviews, focus groups, and grant reporting — five priority areas for successful implementation of AMP programs emerged: **staffing, organizational infrastructure and funding, supportive internal leadership, partnerships, and The Center's AMP supports.** The following sections dive into these priority areas, offering insights into how each contributed to successful program implementation, lessons learned for navigating challenges, and considerations for the future.

Exhibit 8. Top factors contributing to funded partners' AMP program implementation*



* AMP funded partner survey; conducted January-March 2023 (n=27)

AMP funded partners delivered culturally responsive asthma home visiting services.

Funded partners and participants agreed that a culturally responsive and patient-centered approach to home visiting was critical to the improved delivery in asthma home visiting services that are outlined in the AMP logic model (Exhibit 4). Components of this approach, described in Exhibit 9, were among the most important factors in AMP implementation, with 96% of funded partners describing them as very important.

Participants felt comfortable with their home visitor and reported that the home visitor respected their family and culture. This culturally responsive and collaborative approach yielded high levels of participant satisfaction (Exhibit 10).

Exhibit 9. Components of culturally responsive asthma home visiting

Organizations with roots and prior experience working in the community	*"When you already have leadership in the community, recognition, and they know you, the [organization's] name has a lot of prestige…It is easier for us to enter the community when they already know us, when there is already trust."* - AMP funded partner
Home visitors from the community	*"We all come from the same backgrounds as our clients. Having that is definitely an advantage, because, once you're going into someone's home, you're exposed to their culture, religion. You have to be mindful of that while also providing the best care."* - AMP funded partner
Communicating in participants' language	*"As far as language, we realized, oh my goodness, this Spanish-speaking patient, the clinician thought they understood what the asthma action plan was, but there was no understanding because it wasn't communicated in the patient's language. We realized there could be inequity if we didn't teach in people's language."* - AMP funded partner *"The home visitation team spoke different languages [and] we were able to tap into people who spoke Spanish and Afghan and Pashto and Dari…This really opened the avenue a little bit wider and we were able to reach more people."* - AMP funded partner
Collaborative, culturally appropriate, and patient-centered education on asthma triggers and medication use	*"Sometimes, it's not the things in a program that makes it successful but the people. I am glad I got to work with my home visitor. Not only did she provide information on asthma, she found resources that also helped improve the health of my family as a whole. Her patience and understanding made me feel at ease and not shamed for not knowing everything."* - AMP funded participant

*Exhibit 10. Participants' experience with asthma home visitors**

95% of participants were satisfied with the program services (n=353)

93% of participants felt comfortable with their asthma home visitor (n=353)

98% would recommend the services to a friend or relative (n=357)

95% of participants felt their asthma home visitor respected their family's cultural, racial, or ethnic beliefs and values (n=345)

* Data source: AMP participant survey. Total number of responses varied by question.

Staffing

In interviews and focus groups, funded partners elaborated on the importance of recruiting applicants with the unique combination of skills and traits needed to provide culturally responsive home visits. These traits, described in Exhibit 11, aligned with existing literature about the unique role of community health workers, and enabled home visitors to build the trust necessary to deliver responsive asthma education and resources to participants.

Exhibit 11. Key traits of AMP home visitors

Passionate about working with community	*"You have to hire dedicated community…Maybe they've never had experience, but they're interested in serving their community. They want to be engaged."*
Reflects the community served	*"You're looking for someone who comes from the community, who looks like the community, who represents our community as well, or comes from a community that mirrors [the program's priority population]."*
Flexible and responsive	*"We try to operate without as many limitations as possible and operate from the standpoint of what can we do to make the lives of our patients easier. What can we do to not create barriers? Let's eliminate barriers."*
Acknowledges all aspects of a participant's lived experience	*"[The participant] has asthma, but they have more than that — not just physical, but familial, emotional. We aren't talking about a sheet of paper or a thing, [the participant] is a person…And it's not just them, you're charged with a family."*
Able to connect with participants	*"Teaching each person is very different, and you have to have an awesome attitude and an energy to take that on, because if you don't have that, then your client is not going to listen to you."*
Non-judgmental and respectful of participants' expertise	*"It's really important to me that I don't feel like I'm going into the home as an authority of any kind, and I'm able to help empower the folks that I'm with on how they're experiencing asthma and let them know they are the experts in their own asthma and how I can just help fill in the blanks."*
Ability to contribute to administrative duties	*"You really do need somebody who is able to do a lot of different things because you need someone who's able to have relationships across agencies and understand systems and be good at service delivery and working directly with clients and good at data management. It just is a really unique skill set."*

Once hired, funded partners pointed to the importance of robust onboarding, training, and supervision of staff. The majority (89%) cited adequate training on asthma and asthma home visiting as "very important" for staffing their program, particularly since many were hired without asthma-specific knowledge or experience. Funded partners also described the benefit of having staff take enough time to learn about the program and help tailor it to the communities served before starting to conduct home visits. One funded partner stated that, "it was probably at least a good six months before we were ready to implement the actual program...If we had to just start teaching about asthma on day one without having that time to plan, I would not have been as happy with the program that we're implementing." Another noted the value of not just onboarding to the program, but taking the time "to understand the organization, the values, and what's happening in the community. That took...about three to four months...That crucial time really allowed for more flexibility and creativity down the line, whereas if we just...put [staff] out in the field right away, that creates distrust among our community."

Almost all funded partners reported staffing shortages and turnover during AMP that led to higher workloads for remaining staff, interruptions in service for program participants, and changes in partnerships with other organizations. In addition to the staffing challenges posed by the COVID-19 pandemic (see COVID-19 callout), funded partners described:

- Difficulty finding applicants with the combination of skills needed to be successful home visitors, with even more limited hiring pools in smaller or more rural communities
- Lengthy and/or complicated hiring processes
- Workload imbalances, with either too little or too much work for staff
- Repeated staff turnover that increased time spent on hiring and training, and, in some cases, affected knowledge transfer and program capacity

Funded partners offered strategies and lessons learned for addressing these staffing challenges:

- **Develop a realistic timeline for hiring and training.** "No matter how much you plan in the beginning, there's always some hiccup [with staffing]...It's just bringing the staff onboard and the training that takes the most amount of time."
- **Be persistent and creative in staff recruitment.** "In our community, it's a very small pool of people that we have access to. We're putting job postings out. We're talking to people that we know, putting it out on social media;...just talking about it all the time."
- **Adjust organizational hiring practices where possible.** "[These hiring challenges are] absolutely an organization-wide thing. Actually, I've been finding out this is really like a city/countywide thing. It's sometimes easy to feel like it's just us. We're working on different hiring practices. We're trying to make sure we're interviewing quickly."
- **Be flexible.** "If I find talent, [as a program director], I'm going to make it work, whether that's talking to my board [or] figuring out how to draw from our general fund to fill up any gaps."
- **Be clear about the staff skills and traits necessary for each program role.** "In the beginning [the emphasis] is really putting the effort and the time

into getting the right staff. Making sure that they have the right training to be able to do the job...The supervisors have to be the right one[s] as well for the position to be able to lead the new employees to get them to really buy into the program."

- **Invest time and resources in training and onboarding.** "We're trying to make sure we have really good training because the staff turnover of folks in the program like asthma educators directly affects the program...We're trying to get really good training because that's such a retention thing."
- **Account for administrative time in staff workloads.** "You can't expect people to either be meeting with clients or recruiting clients or entering data 40 hours a week. There are other things that happen. Figuring out what a reasonable workload is versus what's billable to sustain it is tougher."

Budgeting for the asthma home visiting workforce

Budgeting for the right number of home visitors, competitive salaries, and staff support systems was crucial for recruiting and retaining qualified AMP staff.

- **The right number of home visitors.** The majority of funded partners had fewer home visiting professionals than would have been ideal for their caseload. In particular, almost all funded partners that were new to asthma home visiting (93%) wanted more home visiting staff, compared to 50% among established programs. Funded partners attributed this to the difficulty of assessing the appropriate number of staff to support their caseload prior to starting their programs; in hindsight, they wanted more home visitors to allow everyone to carry sustainable caseloads and manage administrative tasks. Some funded partners also indicated that having home visitors work in pairs allowed them to be more culturally responsive (e.g., in communities where participants were more comfortable with someone of the same gender), helped better meet participants' language preferences, and supported participant and home visitor safety. While the "right" number of home visitors — and the ideal caseload — varied, 30% of all funded partners wanted one more home visitor and 28% wanted two more.
- **Full-time vs. part-time home visitors.** Multiple funded partners described the challenges of having part-time vs. full-time home visitors. When home visiting staff supported multiple programs, some found it was more likely for their time to be inadvertently pulled in other directions. Others found that more limited availability made scheduling home visits more difficult.
- **Competitive salaries.** Three-quarters of funded partners (74%) identified staff compensation as one of the three most important factors for AMP staffing, and 40% wished they had had more funding to attract and retain staff. Factors affecting the ability to offer higher compensation varied across funded partners, and included both external conditions (such as inflation and higher-paying employers in their region) and internal limitations (such as organizational guidelines on pay or the amount of AMP funding received).
- **Staff support systems.** Investments in other infrastructure — like technology, administrative support, training and professional development, staff supervision, and staff wellness opportunities — also supported home visitors to focus on their primary responsibilities and do their jobs effectively.

CONSIDER THIS

Considerations for Staffing

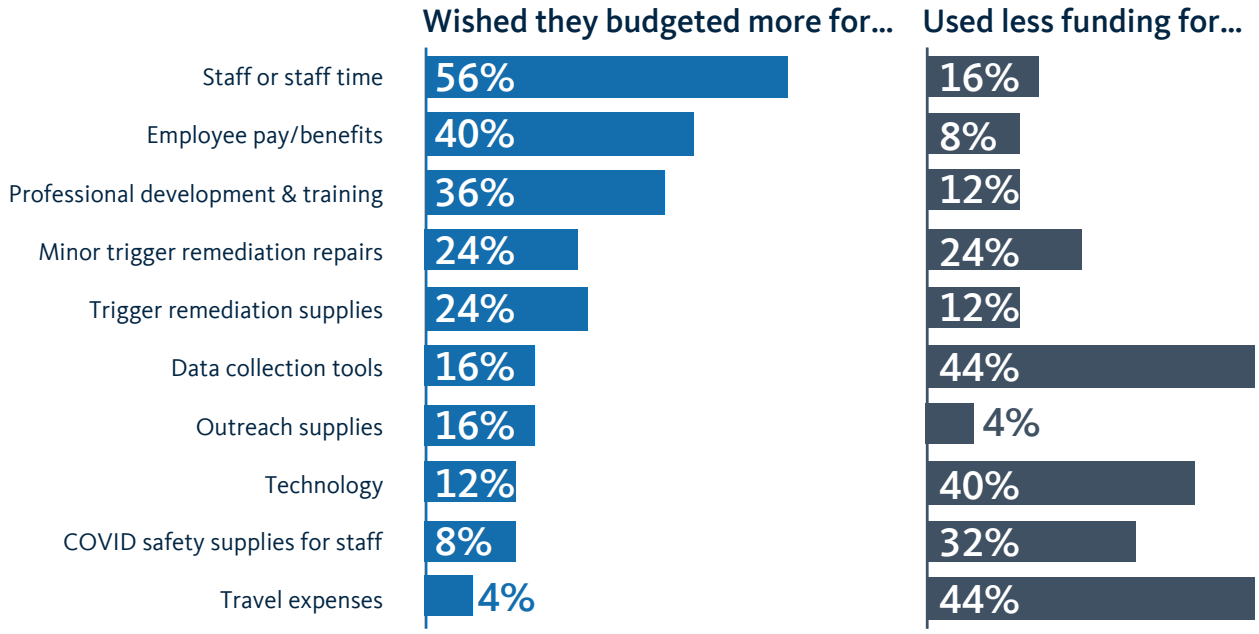
In addition to funded partners' strategies for navigating staffing challenges, the following considerations can inform hiring and staffing efforts for asthma home visiting programs:

- **All partners should account for hiring and training ramp-up periods.** When budgeting for and building out program plans, organizations should allow sufficient time to hire and train staff before providing home visits. Though the amount of time will vary, these adjustments may include reduced personnel budgets and reduced caseload expectations during the first year. Funders and technical assistance providers who are supporting new asthma home visiting programs may also want to consider reviewing budgets and scopes of work carefully to help new organizations make these adjustments.
- **All partners should be prepared for staff turnover.** Implementing organizations may want to prepare for staff turnover by planning for more training time, documenting program procedures to support knowledge transfer and program fidelity, and identifying ways to establish continuity with participants who may be affected by staffing changes. In addition, funders, managed care programs, and Medi-Cal should anticipate longer ramp-up periods for programs, as well as periods of transition when staff leave and new people are hired.
- **New and innovative payment models/mechanisms should be sought after to ensure salaries that value home visitors' unique skills.** There is a need for stable funding to maintain adequate payment for community health workers. For the most part, CHW programs rely heavily on short-term (3 years or less) and/or condition-specific grants and contracts. The limited stability and reliance on funder or agency interest can result in CHW job loss, undermine the evolution of the CHW workforce, and limit or end programs that employ CHWs. Policymakers can explore and advocate for sustainable CHW financing mechanisms. It might be necessary for funders and funded partners to think innovatively about reimbursement and payment models (e.g., having a diversified funding portfolio) to fit with the work that CHWs do. Funders should allocate or allow for flexible spending to ensure that programs pay their employees living wages. This support from funders could include descriptions of compensation values/expectations in funding opportunity announcements, initial budget feedback, technical assistance on staff compensation, and ongoing budget review. Technical assistance could also be offered by funders to help organizations determine a wage that fairly compensates home visitors in their community.

Organizational Infrastructure and Funding

Most funded partners (70%) agreed that they had enough overall funding for their programs, with little variation in this opinion for funded partners of different organizational types, sizes, or prior asthma home visiting experience. Over half (56%) wished that they had budgeted more for staff and staff time (Exhibit 12).

Exhibit 12. Funded partners' perspectives on budgeting for key program components*



* AMP funded partner survey; conducted January-March 2023 (n=27)

AMP partner Little Manila Rising's image showcases their team attending an educational event for Asthma Advocacy Day.

Some funded partners leveraged their AMP funds with in-kind contributions or other sources of funding to improve program operations, including these examples:

- **Outside funding sources for staff time.** "When we [wrote] the AMP grant, my salary wasn't included in there, but [the organization] provided a block of funds to support our program in general...Even when this grant [comes] to an end, we will still have access to that funding to continue services."
- **Additional administrative staff.** "We now have a larger administrative team...We see that there's a whole administrative team piece in processing referrals, entering them into the database, monitoring the database, spitting out reports...Historically, [one staff member was] doing everything...It's really important for a funder to know that, historically, this program was absorbing multiple roles [and] multiple classifications within the roles."
- **Data management systems.** "We had to create our own [AMP] database. Luckily, we were working on that before we got this grant and had the foundation to build the database and we made changes as we went along."

Funded partners repeatedly stressed the value of "knowing the resources that the organization has, knowing the capacity the organization has," and building programs around that capacity. A funded partner shared, "Really consider having someone in business consult the work that you're doing. I think we got very lucky that we have [leadership] who have had businesses, so they understand that business aspect and they see things from that business perspective...It's required in order to make sure that things are running."

At the same time, AMP intentionally included small (or new) organizations experienced in serving communities with a high need for asthma home visiting services. These organizations were less likely to have the programmatic/business experience to assess whether their programs were appropriately structured around existing resources. Of the 17 funded partners starting new asthma home visiting programs, 13 relied on AMP as their sole source of asthma home visiting funding. Some of these small organizations also had limited grant management experience; as one funded partner indicated, "this was our first multi-year grant...We didn't know how to project the work necessarily. We did have it on paper, but to implement is a whole different process."

Some funded partners expressed concerns that, in an effort to serve as many community members as possible, they took on too many clients to maintain a sustainable program. These funded partners pointed out that, even though The Center made sure not to pressure them to meet any specific target number of participants, relying on grant funding generally creates anxieties about providing (and sometimes necessitated proving of) a high return on investment, which can lead organizations to underbudget their programs.

As AMP entered its final year, funded partners began seeking additional funding to support their asthma home visiting program or began contracting with managed care plans to offer asthma home visiting services through the Asthma Remediation component of the CalAIM Community Supports program or the new Medi-Cal Asthma Preventive Services benefit. AMP offered technical assistance to help funded partners navigate these new Medi-Cal elements, apply for additional funding, or enter into sustainable contracts with managed care plans. Even with this technical

assistance and a better understanding of the resources it took to implement their programs, some funded partners still felt unsure about their program's "full costs" or how to clearly present those costs to potential funders. One funded partner shared that they were trying "not to underbid ourselves [or] undersell ourselves," but also that "we don't necessarily have a price on our home visits...All across the state that number changes, and those negotiations get...weird-looking to me." Several expressed similar feelings of stress and anxiety about funding and contract negotiations with managed care plans.

Insights on budgeting for asthma home visiting programs

Funded partners identified areas where they wanted more funding or wished they had budgeted more, as well as areas where they spent less than anticipated (Exhibit 12). Some areas for cost savings (such as COVID-19 safety supplies, technology, and travel expenses) reflect uncertainties during the early months of the COVID-19 pandemic when funded partners were crafting their budgets. The Center worked closely with funded partners to modify their budgets throughout the grant period to better align with program implementation.

CONSIDER THIS

Considerations for Organizational Infrastructure and Funding

The following consideration can help to inform and strengthen the approach to funding and implementing asthma home visiting programs:

- **Funders and technical assistance providers should continue to support programs to understand the comprehensive cost of their programs.** Technical assistance providers should provide programs with tools to project and track the full cost of their programs. Implementing organizations, particularly those launching new programs, can benefit from the wealth of existing resources on budgeting for a successful asthma home visiting program. These include courses from the National Center for Health Housing (NCHH) on Financing Healthy Homes Services, as well as an interactive tool developed by NCHH and RAMP for building a sustainable asthma home visiting program. These resources can also help implementing organizations think about the internal resources and infrastructure needed to help their programs succeed. Technical assistance that specifically focuses on making the financial case for asthma home visiting — including resource guides as well as one-on-one support — can help implementing organizations build confidence to be transparent about their costs. Funders can also continue to support this by working closely with implementing organizations to review budgets, ask intentional questions about infrastructure that tends to be the most consequential or budget line items that tend to be more difficult to predict, and work to mitigate power and resource imbalances that can affect these conversations.

Supportive Internal Leadership

Over 90% of funded partners reported that their organization's leadership was very important for their program. Supportive internal leaders and champions gave program staff the flexibility and resources to implement and adapt their programs to meet communities' needs. Leaders included:

- **Senior organizational leadership.** Funded partners valued the ability of senior leadership to create buy-in among other staff within an organization. One funded partner, for example, said "Having our Chief Medical Officer involved...is a big deal. She was all about [AMP] and then she would bring it to the clinicians every month and we would talk about what this program is and how to refer...Having that upper leadership really makes a big difference." Another funded partner shared that "I do have a lot of support from the executives. Whether it's a conversation that I need to have [or] something that I need to do, they don't stop me from it. They let me have a lot of freedom and be creative. I'm able to give myself tools in order to get certain goals met."
- **Program managers/coordinators.** Funded partners described the skills that helped them to manage day-to-day program operations, including prior experience with program launch and management, community engagement/outreach, relationship-building and networking, and staff supervision. As one funded partner noted, this experience did not necessarily have to come from prior health services or social services experience: "I come from a customer service and sales background. That gives me all the qualities of networking, reporting, reaching out to clients, going door-to-door, setting up events, coordinating. I think all of those skills are what ended up helping us, and then for me to be able to have my team have those skills as well."

At the same time, some organizations wished leadership had been more flexible or responsive, particularly related to hiring and financial resources. One funded partner noted that "our administrative leaders could have been more flexible to approve [program] incentives to make sure patients received theirs on time." Another concurred, noting that

CONSIDER THIS

Considerations for Supportive Internal Leadership

The following considerations can help engage internal leaders in program implementation:

- **Lean on internal expertise.** Funded partners leveraged the experience of their program staff and senior leadership to set reasonable program expectations, manage the myriad parts of program implementation, and troubleshoot challenges. Implementing organizations should lean into that internal expertise to help staff manage and adapt their programs.
- **Engage other internal departments/organizations.** Internal referrals played a key role in boosting caseloads for AMP funded partners. Given the importance of internal referrals for program enrollment, implementing organizations should get buy-in from these other departments/programs, including communicating the specific value-add for each of these internal partners.

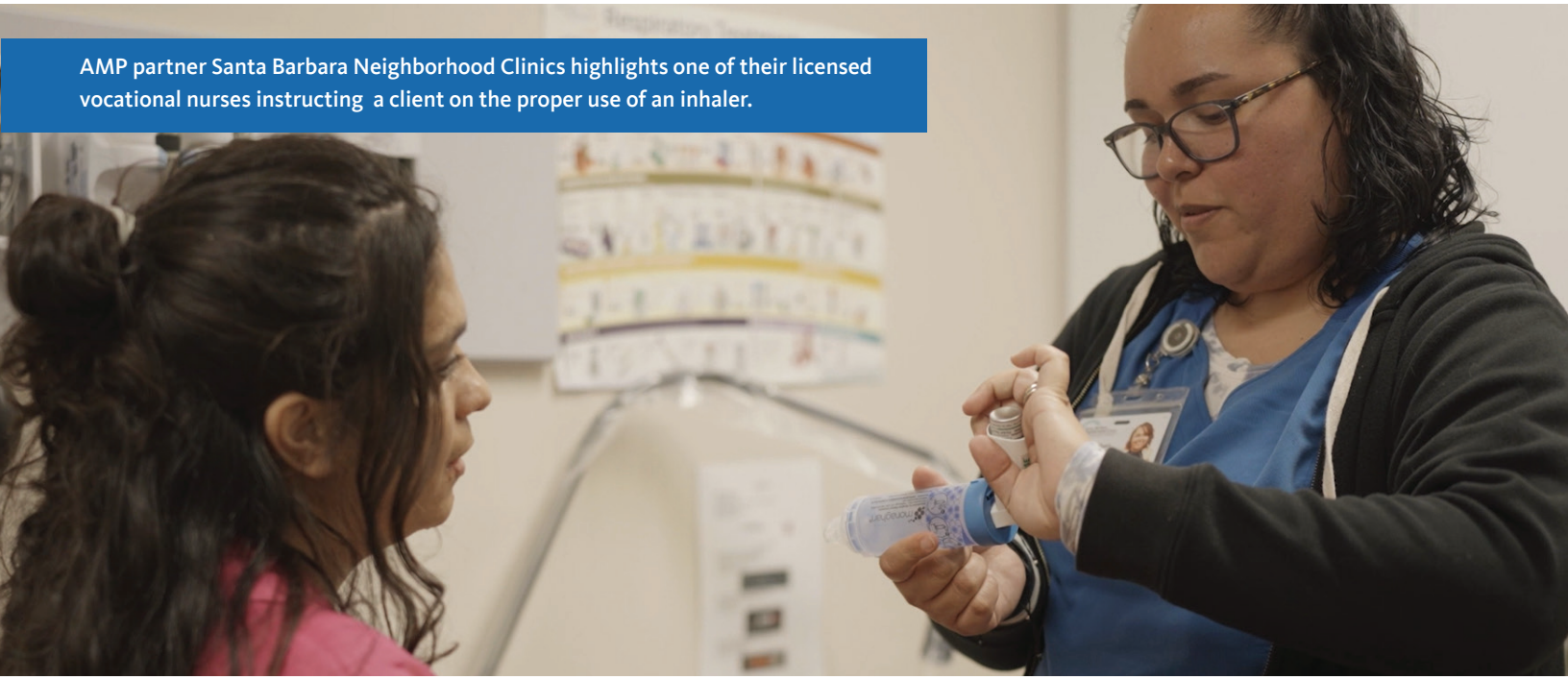
organizational leadership was generally supportive but that "hiring practices and financial support were difficult to navigate."

In addition to leaders directly involved in AMP program implementation, over 90% of funded partners said that relationships with other departments/programs within their organization were "very important" for their program. These connections were particularly helpful for outreach, enrollment, and additional resource connections for AMP participants. This was evident in data about how participants enrolled in AMP: one-third of participants were referred from other programs within the funded partner's organization.

Partnerships

Partnerships with community-based organizations, public agencies, health plans, and medical providers facilitated outreach, referral, enrollment, and service delivery. Funded partners shared myriad examples of how these partnerships helped to:

- **Connect with eligible participants.** "After a few months of intentional relationship building, we began to receive referrals directly from the FQHC's providers. We were also able to work with [the county's health plan] so that new plan participants received asthma home visiting information during enrollment and information was included in the quarterly member packets."
- **Lend credibility to their programs.** "A lot of people don't know about our organization...If the health plan backs us up and refers clients, they are much more likely to trust us and our services."
- **Share asthma education information in the community.** "We established partnerships with healthcare centers and clinics to improve patient engagement and recruitment. Outreach was conducted in over 10 languages spoken by staff and in various modalities such as social media, text messaging, in-person community forums, and events."



AMP partner Santa Barbara Neighborhood Clinics highlights one of their licensed vocational nurses instructing a client on the proper use of an inhaler.

- **Increase the number of program participants.** "We partnered with a local community health clinic and [another organization] and they have been successful in deploying text messages...which has helped increase the number of patients."
- **Offer more comprehensive care to families.** "We started to refer patients to [AMP] because we understand that providers are limited in how to support asthma patients. For instance, they can prescribe medication, but if they don't address at least some of the factors that are affecting them in their home environment, we're not solving the problem."
- **Provide additional services and support.** "The [local] Air Quality Management District gave us air purifiers for all of our AMP clients...Before that, we hardly gave anyone air purifiers because they were an expensive item."
- **Strengthen existing partnerships.** "We started to talk [with a partner organization] about the value each of us can bring and how we're going to help our common community...If we're not able to provide a service and they are, then the client can get their remediation services from us and maybe rental assistance from the other organization."
- **Build local advocacy networks.** "Our collaborative efforts led to a highly impactful Asthma Advocacy Day where community members, environmental justice youth advocates, other youth advocates, and our staff joined forces to amplify our policy priorities and share stories centering asthma with legislators."

These partnerships also came with unique challenges, particularly around **navigating relationships with health plans and medical providers.** Both served as primary — and effective — partners for connecting with eligible participants (i.e., approximately 10% of AMP participants were referred by health plans and another 10% by medical providers), and funded partners credited AMP with strengthening relationships with health plans in the run-up to CalAIM. At the same time, these partnerships were new for many funded partners, especially for smaller, nonprofit organizations. As one such funded partner illustrated, "The process of gaining contracts with managed care plans is complex and challenging for smaller organizations with limited resources and experience. The intricate requirements, extensive documentation, and competitive nature of the contracting process posed significant obstacles." Strategic collaboration and shared investment is needed to ensure alignment in referral and case management platforms.

Similarly, funded partners identified challenges with the systems within which they and medical providers each operate. For example, they often do not use the same data systems or have to abide by the same data privacy laws. One funded partner also shared that, "It takes effort to convince providers to make adjustments to workflow so that referrals are not seen as just one more thing providers have to do." A provider champion shared a similar challenge from the other side of the partnership: "Oftentimes, programs like AMP come and go so quickly based on grant funding, making it difficult for clinicians to make a referral because they often do not know what programs still exist."

Finally, funded partners expressed frustrations that participants had difficulty getting providers to help create, review, and sign asthma action plans. Some participants were charged for the time required to review and sign the plans or had providers who were hesitant to sign off if they were not familiar with AMP.

CONSIDER THIS

Considerations for Partnerships

The following considerations can be used to continue building the network of partnerships among funders, healthcare providers, and advocates that support asthma care:

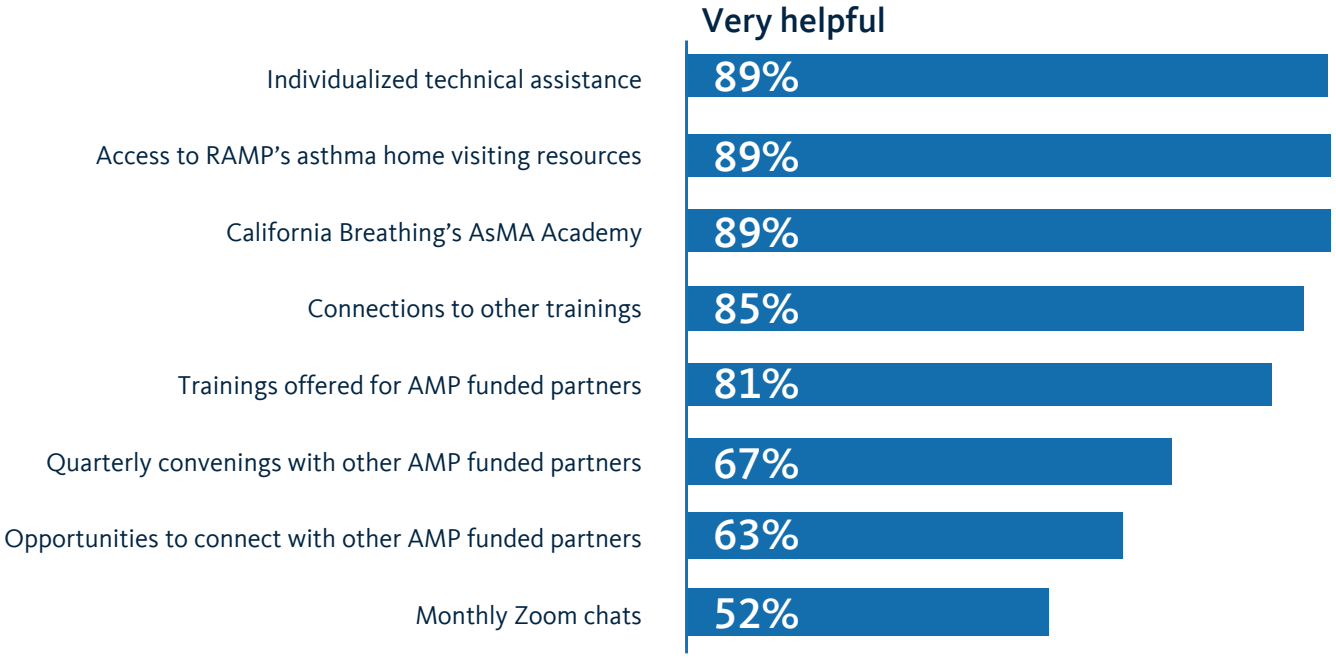
- **Funders, both private and public, should continue to support organizations — especially nonprofits — to build relationships with health plans.** Active involvement in making connections, even in small ways such as email introductions, can facilitate and connect CBOs with health plans. Future asthma home visiting initiatives could benefit from investing time and resources in establishing these partnerships as part of program design and implementation. Also, longer term, funders should consider developing resources like toolkits, manuals, or trainings on how nonprofits can initiate and sustain these partnerships.
- **Funders, both private and public, should outreach to clinicians on what Medi-Cal benefits are available.**
- **Health plans should pursue partnerships with organizations offering culturally responsive asthma home visiting services.** Especially for smaller and newer CBOs with more limited infrastructure, health plans have needed clout and capacity. They can outreach to their eligible enrollees and work with partner organizations to share needed information. In recognizing the value of working with CBOs, health plans must also be mindful of and patient with their limited infrastructure such as providing more support and time to CBOs during contracting. For example, it takes significant effort to agree on governance, navigating service integration, and aligning data systems. In addition, the short-term payoff can be hard to measure; relationship-building takes time; and payor level contract reform is complex.
- **Advocates and health plans should continuously communicate the benefit of asthma home visiting and remediation to medical providers; medical providers should continuously communicate the benefit of asthma home visiting to other medical providers.** RAMP, CPEHN, and Children Now are at the forefront of educating providers about the value of partnering with asthma remediation programs and should continue these efforts in partnership with health plans. This could take the form of an advocacy campaign directed to medical providers that elevates the direct services and patient benefits of the program. As such, it is important for programs to get comfortable articulating the benefits of culturally responsive asthma home visiting so that providers see them as strategic partners to improve asthma health.

AMP Technical Assistance Supports

As part of their participation in AMP and as delineated in the program logic model (Exhibit 4), funded partners were supported by a wide array of organizational resources, including technical assistance, trainings, and facilitated convening sessions. This support and infrastructure allowed funded partners to improve their knowledge and skills and ultimately their delivery of asthma home visiting services. Funded partners were able to quickly adapt to challenges (including the COVID-19 pandemic) and improve their programs. They shared high levels of gratitude and satisfaction with these resources, noting the particular value of the individualized technical assistance, access to RAMP's asthma home visiting resources, and the California Breathing AsMA Academy (Exhibit 13). One funded partner explained that The Center "gave our organization so much trust and autonomy [and] allowed us to give our clients that. That is part of why we had such good outcomes. Then, bringing us back together to look at the data, and look at what's effective, and connect with other communities about what's working and get some peer support, was also helpful."

Funded partners also benefited from AMP's peer network. Connecting with other funded partners through quarterly

Exhibit 13. Helpfulness of key components of The Center's AMP supports*



* Funded partner survey; conducted January-March 2023 (n=27)

convenings and monthly Zoom chats helped them share ideas for program improvements, talk about experiences serving different populations, and troubleshoot implementation together. A funded partner stated, "Our team is always attending webinars and trainings that are hosted by RAMP, or other Asthma Mitigation Project [funded partners]... Sometimes we're finding resources, sometimes we're connecting with other individuals in different programs within California, and just kind of [exchanging] ideas. What can we do better? This is our first time being a funded partner and oftentimes we're connecting with second year funded partners. We're just gaining a lot of insight."

Funded partners described changes in their overall organizational capacity as a result of their participation in AMP, including:

- More knowledge of the healthcare system and capacity/confidence to work within it
- Stronger relationships with community partners, including partnerships to address broader health-related issues
- Increased organizational profile and visibility in the community
- Greater capacity to deliver all types of hands-on, in-home services
- Improved organizational understanding of community needs (and greater ability to meet those needs)
- Increased program management capacity and ability to think about sustainability
- Ability to pursue other grants by leveraging AMP experience
- Feeling better prepared to partner with Medi-Cal on CalAIM and other new benefits

Photovoice

To spotlight the experience of AMP participants, ten funded partners applied for and received additional funding to participate in AMP's Photovoice Project between December 2022 and April 2023. Photovoice is a community-based participatory research method that uses photography and personal stories to reflect the lives, understanding, and actions of community members themselves. This storytelling method can be used to promote positive social change. Harder+Company trained funded partners on what Photovoice is, why it is useful, and how to use it. Through this opportunity, funded partners were able to highlight participants' experiences with their asthma and AMP services. The Photovoice Project also gave funded partners the opportunity to build their organizational capacity for storytelling, evaluation, and advocacy. Funded partners also received Photovoice training materials and other resources to support their continued use of Photovoice in the future. Select projects were showcased at The Center's San Joaquin Valley Health Fund Equity on the Mall event in April 2023 and have been used throughout this report. All Photovoice projects can be accessed on The Center's website, here.

CONSIDER THIS

Considerations for Technical Assistance

While the AMP infrastructure will no longer be available, the following considerations can inform future technical assistance for asthma home visiting programs.

- **Funders should consider technical assistance costs and allocate funds for continued learning and technical assistance.**
- **Technical assistance providers should continue to offer trainings, resources, and a space for organizations to connect with each other.** Topics for future gatherings hosted by RAMP include additional services (such as housing programs) to improve asthma management, special populations like children and migrants, environmental exposures, self-care and professional boundaries for home visitors, and navigating Medi-Cal and CalAIM.
- **Programs would continue to benefit from a "hub" for asthma home visiting resources** that is easily accessible, such as the Roadmap to Sustainable Home Visiting developed by RAMP and the National Center for Healthy Housing. Programs should continue to ask questions and seek support from other asthma home visiting programs or technical assistance providers. These peer sharing opportunities strengthen AMP programs within and across participating organizations.

AMP partner Visión y Compromiso features two images of children properly using a peak flow meter device (right) which measures the ability to push air out of your lungs and a spacer (left) which works to make breathing in medicine easier.

LOOKING TO THE FUTURE

Funded partners are charting different courses to a post-AMP future. In the final progress report submitted in June 2023, 16 funded partners (57%) had already secured additional funding, and three (11%) planned to continue their programs but lacked funding. Five funded partners (18%), including some with previous asthma home visiting experience and some new to this work, decided not to continue with their asthma home visiting programs after the end of AMP funding. The remaining four (14%) were unsure or did not respond to this inquiry (Exhibit 14).

Exhibit 14. Planned continuation of asthma home visiting programs after AMP*

AMP Funded Partners' programs future	N (%)
Plan to continue their program	**19 (68%)**
Already secured additional funding	16 (57%)
Lacked funding	3 (11%)
Do not plan to continue program	**5 (18%)**
Unsure/unknown	**4 (14%)**

** June 2023 Progress Report submission*

Among those who did not plan to continue, four were nonprofit organizations and one was a healthcare provider. Two of these organizations (both nonprofits) had existing asthma home visiting programs before AMP. One had applied for outside grant funding to continue their program but did not receive that grant. Others described decisions informed by their organization's ability to sustain the program; for example, one partner cited the difficulty of retaining the bilingual staff needed to serve their primarily Spanish-speaking community.

Some also indicated concerns about their capacity to participate in CalAIM. One partner stated that "the overwhelmingly complex healthcare system, system barriers, and time-consuming billing [of CalAIM] was a deterrent." Another partner shared that "the billable rates for [CalAIM] Asthma Remediation Services are insufficient to sustain our staffing needs for the continuation of this project." As organizations continue to explore participation in CalAIM, a combination of individual negotiation and collective advocacy may be necessary to ensure that reimbursement rates can sustain organizations needs to carry out this work.

Seven funded partners planned to use at least two different funding streams. While beneficial for continuing their programs, funded partners had mixed feelings about the ease of managing multiple funding sources. In a survey of funded partners, 38% said it was difficult and 31% said it was easy to manage multiple funding streams. Some cited the challenges of juggling funding sources of different sizes and lengths that did not necessarily guarantee long-term sustainability of their programs. Others talked about the difficulty of using siloed funding sources to serve the same population. For example, one funded partner had recently received additional funding for their asthma home visiting program from a state agency that was not aware of the AMP program and pointed out that "you have community-based organizations like us having to piece the puzzles together [and] that takes a lot more time away from the community in that process." A national policy expert interviewed by the evaluation team echoed this sentiment at both the state and federal level, noting that many federal and state Medicaid policies have service and funding restrictions that makes it difficult to serve families' needs holistically.

Funded partners see the potential — and the challenges — of Medi-Cal's expanded asthma-related services and benefits.

Among the funded partners planning to continue their programs, 12 had already established contracts with managed care organizations to offer asthma-related services through Medi-Cal, with the majority indicating participation in the Asthma Remediation component of the CalAIM Community Supports program, and a smaller number describing participation Medi-Cal's Asthma Preventive Services benefit or Medi-Cal's Targeted Case Management program. Another four were either exploring or waiting to hear back about their participation in Medi-Cal's expanded asthma-related services and benefits.

Organizations recognized the importance and potential of these expanded asthma home visiting supports. However, many expressed concerns during this time of transition, including:

- Understanding how to participate
- Navigating relationships and contracting processes with health plans
- Adapting programs to meet new requirements
- Managing new billing and reimbursement structures
- Supporting the full cost of programs at current reimbursement rates

Although these new Medi-Cal services and benefits have been rolling out since 2022 (with the Asthma Remediation component of the CalAIM Community Supports program starting in January 2022 and the Medi-Cal Asthma Preventive Services benefit beginning in July 2022), many AMP funded partners were still in the early phases of participation. Seven new organizations secured contracts with Medi-Cal managed care plans between January and June 2023.

Funded partners that had already started to participate were still working to understand Medi-Cal policies and contract terms. Some early challenges had also started to emerge by June 2023. Many anticipated that the reimbursement rates would not cover all service delivery or personnel costs. Additionally, the volume of referrals has been limited for some organizations; others who had been receiving a steady stream of referrals were still optimizing staffing and resources to ensure a successful and sustainable workflow.

One funded partner also signaled challenges obtaining the documentation from providers that was required to be reimbursed for services. Due to the busy nature of providers' work, this information could be challenging to obtain, making it even more difficult for organizations to cover the costs of delivering the program.

As these new Medi-Cal policies unfold, RAMP has been a crucial partner offering support to participating partners and providing individualized technical assistance to programs engaging with this policy. During this time, RAMP has also been convening groups for peer learning and to identify collective challenges, including challenges with misinterpretation of the policy, and policy limitations. To address some of these issues, RAMP has worked with DHCS to provide clarification to the field and to Medi-Cal Managed Care plans. At other times, the implementation process has uncovered a need for policy improvements and RAMP has guided advocacy for these improvements. Such supports will continue to be a pivotal source of support for participating programs.

* Several funded partners indicated contracts with managed care organizations but did not specify what aspect of Medi-Cal they would participate in. Previously collected responses that provided more specificity on planned Medi-Cal participation were no longer up-to-date by the time of this report.

CONSIDER THIS

Considerations for organizations continuing services through Medi-Cal's CalAIM implementation

- **DHCS, technical assistance providers, and health plans should continue supporting small organizations to build the infrastructure needed to effectively run their programs** including through initiatives like CalAIM Providing Access and Transforming Health (PATH). It is especially important to support grassroots organizations that have deep community connections and trust with community members who need services but may be hesitant to directly engage with healthcare systems and government agencies.
- **DHCS, technical assistance providers, and health plans should continue to monitor implementation** and advocate as needed for policy improvements.
- **Funders, both private and public, should continue to build or support existing networks of asthma home visiting providers** to support ongoing learning and connection between providers.
- **All organizations involved should collaborate to ensure that reimbursement rates or payment arrangements are equitable and sufficient to sustain programs, and should reassess as needed.** This includes roles for funders, both private and public, County Medi-Cal Managed Care Plans, asthma home visiting programs, home visitors, and advocates. Home visitors and home visiting advocates should continue to champion higher reimbursement rates for home visits to ensure that organizations recoup the full cost of implementing these services. Similarly, county health plans and funders should continue to ensure reimbursement rates are equitable and sustainable based on services offered.
- **DHCS, Medi-Cal Managed Care Plans, and asthma home visiting programs should continue to leverage existing resources.** For example, the RAMP Home Visiting Directory can connect health plans to local community based organizations that could help to deliver CalAIM Community Supports or Medi-Cal Asthma Preventative Services. Health Plans could share RAMP's Roadmap to Sustainable Asthma Home Visiting to support new programs in their development. Asthma home visiting programs can request ongoing technical assistance from RAMP through the Technical Assistance Marketplace.

Organizations continuing without Medi-Cal are changing their programs and looking for funding.

Funded partners continuing without Medi-Cal funding have outlined potential adjustments to their programs, noting a variety of program components that may be encompassed in their new programs, including:

- Continued asthma home visiting and education
- Increased focus on home weatherization and indoor air quality
- Decreased ability to distribute remediation supplies
- Increased emphasis on asthma community education

Each organization's services and program focus will largely depend on their current funding source, as well as additional funding they may obtain in the future. Organizations are seeking or have received funding from a variety of sources including philanthropic healthcare funders, nonprofit health-care funders, regional air pollution control districts, and managed care plans.

Recommendations to Sustain and Scale Asthma Home Visiting

Regardless of funding stream, asthma home visiting is a proven strategy for improving asthma control and continues to be a needed service for communities. Over the past three years, the Asthma Mitigation Project's funded partners have had significant success supporting individuals with asthma in communities across California by offering the following (Exhibit 2).

Asthma in-person and virtual visits

Comprehensive asthma education

Mitigation supplies and resources,

A community health worker model

Culturally and linguistically responsive services

A participant centered and holistic approach

CONSIDER THIS

Considerations for organizations continuing services through alternative funding sources

- **Non-governmental funders are encouraged to continue supporting asthma home visiting services in California,** by funding direct service and technical assistance providers, and by supporting ongoing network building. This support is crucial to reach people who are uninsured or undocumented as well as those served by organizations that choose not to participate in CalAIM.
- **Funders are encouraged to continue supporting programs' trigger remediation.** This is in recognition of the significant role that even low-cost trigger remediation can have on asthma outcomes, and to prevent these costs from falling on participants.

Recommendations for Asthma Home Visiting Programs

As funded partners — along with others involved in asthma home visiting services, including CBOs, funders, and state agencies — continue to engage in this work, the following recommendations are proposed, emerging from the lessons learned delivering AMP services:

- **Design programs that include the six core elements proven to be successful in asthma mitigation work including:** in-person and virtual visits, comprehensive asthma education, mitigation supplies and resources, a community health worker model, culturally and linguistically responsive services, and a participant centered and holistic approach. These core components of AMP facilitated successful implementation and led to improved asthma outcomes for participants.
- **Public and private funding should build technical assistance into asthma mitigation work that supports the administrative, organizational, and service delivery needs of organizations implementing this work.** Technical assistance has proven to be a successful and necessary resource for organizations offering asthma services, especially those who are newer to asthma home visiting. Launching new programs and refining approaches takes time and experimentation, especially given systemic barriers such as complex healthcare systems and billing structures that may pose additional challenges for smaller grassroots organizations. Programs thrived with the technical support that helped adjust and adapt their models.
- **Funders, both private and public, should continue to support a diverse range of agency types, including small and large organizations, government and community-based organizations (CBOs), and health and social service providers.** Recognizing that all communities have unique needs, this approach ensures that a variety of organizational structures are available to address those needs effectively. Program data demonstrated that participant outcomes did not vary by organization type, thus reinforcing the importance of allowing communities to be served by the funded partners that best align with their needs.
- **Funders, both private and public, should offer flexible budgets and collaborate to connect funding resources.** Acknowledging funding siloes, technical assistance providers and funders should collaborate to connect the funding dots at the state and funder level to support smaller organizations' access to the financial resources necessary to sustain their programs. Additionally, to accommodate start-up time, staffing fluctuations, changing program needs, and unanticipated challenges, supporting budget flexibility allows programs to adapt to real-time learning and evolving circumstances.
- **Partnerships between programs, health plans, providers, and funders should be encouraged to support resource sharing and best practices.** As the program concludes, AMP funded partners should continue to take advantage of the emerging communities of practice centered around asthma home visitation. By sharing experiences, best practices, and challenges, these programs can continue to improve their services. This could build on RAMP's ongoing capacity building workshops,

including the California Asthma Financing Workgroup, a network of diverse stakeholders committed to improving the financial sustainability of home-based asthma education and environmental trigger reduction, and the California Healthy Housing Network. Many AMP funded partners already participate in these networks; all would benefit from joining and continuing participation. The Center should consider continuing to support this community of practice by sharing contact information, connecting partners, and, if resources allow, hosting ongoing touch points through newsletters or virtual meetings.

These recommendations aim to create an environment of collaboration, flexibility, and learning among all partners involved in asthma home visiting services. By fostering connections, aligning funding processes, supporting diverse agency types, allowing budget flexibility, and providing time for program development, all partners can work together to build the quality and accomplishments of their programs, leading to improved health and quality of life for individuals, families, and communities affected by asthma.

AMP partner Visión y Compromiso presents an image depicting a mother and child in Kern County observing an environmental factor contributing to their asthma.

APPENDIX

Exhibit A1. AMP Funded Partners

- Description (from The Center's press release) for Round One (August 2020) and Round Two (August 2021) Funded Partners

Round One Funded Partners

- Alameda County Public Health Department
- Breathe California of the Bay Area, Golden Gate, and Central Coast
- Central California Asthma Collaborative
- Comite Civico del Valle
- Community Action Partnership of Kern
- Contra Costa Health Services
- El Concilio California
- El Sol Neighborhood Educational Center
- Esperanza Community Housing Corporation
- Judahh Project
- La Maestra Family Clinic
- LifeLong Medical Care
- Little Manila Foundation
- Mercy Foundation – Bakersfield
- Mutual Assistance Network of Del Paso Heights
- Roots Community Health Center
- San Mateo County Family Health Services
- Santa Barbara Neighborhood Clinics
- Santa Rosa Community Health Centers
- Sigma Beta Xi
- Visión y Compromiso
- Watts Healthcare

Round Two Funded Partners

- Asian Pacific Self-Development and Residential Association
- International Rescue Committee
- Jakara Movement
- McKinleyville Community Collaborative
- Nexus Youth and Family Services
- Somali Family Service of San Diego

Exhibit A2. Detailed Methods

The design and execution of the AMP evaluation spans two distinct but overlapping components. The *formative evaluation* explored program delivery, including variations in populations served, organizational structure, and program activities. This component was guided by principles of implementation science and designed to support AMP's ongoing planning and program improvement efforts by assessing implementation strengths and challenges. The formative evaluation set the stage for the *summative evaluation*, which focused on AMP outcomes for participants and an exploration of the relationship between program implementation and these outcomes.

The AMP evaluation used a mixed-methods approach, incorporating both quantitative and qualitative data to ensure that quantitative data on AMP's reach, services, and outcomes were contextualized with factors influencing implementation. Methods are described in detail below.

Document review. To understand variations in planned program implementation, documents (including program applications, budgets, AMP scopes of work; organization websites, and information from technical assistance calls) were systematically abstracted for all AMP funded partners. Document review for the 22 Round One funded partners occurred in October 2020; the process was repeated for the six Round Two funded partners in January 2022. Data were abstracted for a defined set of key implementation variables, including the geographic focus, priority populations, implementation stage at the time of AMP application, and details about the asthma home visitation model. The evaluation team reviewed and discussed all data for insights into variability of implementation across AMP programs.

Focus group with The Center and technical assistance partners. The evaluation team conducted a focus group with key staff at The Center and RAMP technical assistance partners in January 2021. The purpose was to obtain baseline insights about the context in which AMP was implemented, their capacity to support funded partners, anticipated challenges and successes during AMP implementation, and AMP's intended outcomes.

Program lead interviews (Round One funded partners). The evaluation team conducted in-depth, semi-structured video interviews with program leads from all funded partner organizations in February 2021. This helped build an understanding of their work, population served, program model, and implementation barriers and successes. These interviews also shed light on implementation and program delivery changes given the COVID-19 pandemic.

Home visitor interviews (Round One funded partners). Harder+Company conducted in-depth, semi-structured video interviews with home visiting staff from 19 of the funded partner organizations in May 2021. These interviews helped to shed light on early implementation successes and challenges. Interview questions asked about implementation drivers, including training and supervision, staff communication, outreach strategies, and perceived participant experience with home visiting and asthma mitigation services.

Program lead and home visitor interviews (Round Two funded partners). Baseline interviews with five out of six Round Two funded partners in May 2022. Topics addressed were similar to baseline interviews with program leads and home visitors for Round One funded partners (including priority populations, program model, and early insights into

program delivery); however, Round Two staff across both roles (i.e., program leader and home visitor) were invited to participate in a group interview.

Participant surveys. In April 2021, a participant survey was launched to gain insights into participants' experiences and satisfaction with their AMP program. Home visitors invite participants to complete the survey at their final visit using a flyer that contains a link/QR code to complete the survey online, or a phone number to complete the survey by phone. Both the survey and outreach flyer are available in Spanish and English. Between April 2021 and April 2022, survey respondents were entered into a quarterly raffle for a $100 gift card. To boost response rate, incentives were changed in April 2022 to allow all respondents to receive a $15 gift card. All previous respondents who did not win the gift card raffle were also given a $15 gift card. This report includes analysis of 357 survey responses received between April 2021 and May 31, 2023; total number of responses varied for each survey question.

Participant focus groups. Participant focus groups were conducted to understand participant perspectives on program implementation, satisfaction, and outcomes. The focus group protocol was developed in partnership with AMP and piloted in early April 2022 with a small group of AMP participants. After receiving feedback from the pilot focus group, the protocol was finalized, adapted for use with three different audiences (adult participants, parents/caregivers of youth participants, and youth participants ages 14 to 18), and translated into Spanish. Funded partners conducted outreach directly with current and former AMP participants, inviting them to register online to express their interest in participation. Participants were then selected from among registrants to ensure that a variety of AMP funded partners were represented in the focus groups. Participants received individualized text, email or phone support to ensure they could participate in the video focus groups. All outreach and participation support was available in English and Spanish. Six focus groups (including two in Spanish) were completed in April and May 2022. Seventy people expressed interest in participation, 36 people completed focus group registration, and 17 people (including adult AMP participants and parents/caregivers of AMP participants) joined the focus groups. These focus group participants represented seven different funded programs (including new and established programs, programs from both Rounds One and Two, and programs across Northern, Central and Southern California). Only three youth participants expressed interest in focus group participation; ultimately, they were not available or able to gain parent consent to participate in the focus groups. All participants received a $50 gift card as an incentive and thank-you for their time.

Funded partner survey and interview. To address evaluation questions added in March 2021, a one-time online survey of funded partners was added to the evaluation activities for 2022-2023. This funded partner survey complemented final interviews with funded partners that were already part of the planned evaluation. The funded partner survey and interview guide were designed in tandem in November 2022. Key questions in the funded partner survey focus on self-reported readiness of key implementation drivers, changes in organizational infrastructure and capacity, program staffing and costs, technical assistance experience, and future plans for each AMP program. While the interview guide focused on similar topics, it had an explicit focus on further understanding survey responses and exploring each funded partners' story over the course of their

AMP participation. Both tools were reviewed by The Center and RAMP; the survey was also shared with some funded partners for feedback prior to launch. The funded partner survey was launched in December 2022 and closed in March 2023. As funded partners completed their interviews, the external evaluation team scheduled group interviews with 1-3 staff from each funded partner organization. Interviews began in late January 2023 and continued through April 2023. This wide data collection window allowed for maximum flexibility to funded partners' availability and competing priorities.

Funded partner learning sessions. To hear directly from the funded partners about the successes, challenges, and lessons learned of AMP implementation, the evaluation team hosted a series of three funded partner learning sessions. The first, conducted in October 2022, described the shift in the evaluation's focus and solicited funded partners' input about the types of information they wanted to share with policy makers and other stakeholders. These insights were used to co-create a discussion guide for focus groups that took place in March 2023, with the goal of elevating lessons that could inform the rollout of CalAIM and other Medi-Cal asthma preventive services. The final session was in April 2023 and engaged funded partners in sensemaking about the focus group findings and additional data from throughout the AMP evaluation. While funded partners were already included in interviews and surveys about their individual programs, this series offered a participatory opportunity to share — and build upon each other's — collective knowledge about AMP implementation and outcomes.

Interviews with external partners. Numerous external parties — including managed care plans, healthcare providers, other policy experts, and other local partner organizations — contribute to the environment within which AMP services were delivered, as well as program participants' ability to benefit from those services. The Center, RAMP, Children Now, and CPEHN provided initial insights on potential audiences for these interviews at a planning session in May 2022. Six interviews were completed between March and May 2023 representatives from a managed care plan, provider champions, partner organizations, and policy makers. These purposive interviews were not intended to be representative of these audiences; instead, they were used to better understand the landscape surrounding asthma preventive services.

Photovoice. In September 2022, The Center released a mini-grant application for interested AMP funded partners to participate in a Photovoice project. By November 2022, 10 organizations were awarded funds to participate in this work. Funded partners received training and ongoing technical assistance to conduct their own Photovoice projects. This included a Photovoice 101 training, a sense-making session to help funded partners design their final Photovoice projects, and individual project support. Trainings were designed as train-the-trainer sessions, allowing funded partners to replicate and share key learnings with their project teams as needed. Training material — including slides, talking points, and other resources — were shared with funded partners in English and Spanish.

Progress Report Data. As part of their grant requirements, funded partners capture and submit data about their AMP programs in a biannual progress report. These

reports allow The Center to monitor program progress and identify opportunities to support implementation, while also providing ongoing insights into AMP's overall reach, interventions, and early outcomes. The form was developed to reflect key outputs and outcomes in the AMP logic model (Exhibit 4), guidance set forth in AB74 regarding AMP funding, input from funded partners, data collection required by the California Department of Public Health's California Breathing program, and discussion with The Center and RAMP. This report includes data — including both quantitative data and narrative responses — from all six progress reports submitted between January 2021 and May 2023.

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