POLICY BRIEF

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REGIONAL ASTHMA MANAGEMENT & PREVENTION

# A Path Forward: Sustainable Financing for Asthma Education and Home Environmental Trigger Remediation in California

With rising asthma prevalence and numerous changes in the health care system, California faces a unique opportunity to be at the forefront of a national movement by providing much needed prevention-oriented services to its most vulnerable residents. This is a call to action for the California Department of Health Care Services, Medi-Cal managed care organizations, foundations, hospital community benefit programs, social impact investors, and others to seize these opportunities that will improve the lives of millions of people with asthma.

Our goal is to secure sustainable financing for asthma education and home environmental trigger remediation programs in California, based on the strong evidence that they improve health outcomes and reduce health care costs, particularly for those with poorly controlled asthma. We recommend the following to help achieve this goal:

## The California Department of Health Care Services should support asthma education and home environmental trigger remediation through the following actions:

- Expand the role of asthma educators, community health workers and others through implementation of the Centers for Medicare and Medicaid Services' Preventive Services Rule, which allows reimbursement for preventive services when provided by professionals that may fall outside of a state's clinical licensure system, so long as the services have been recommended by a physician or other licensed practitioner.
- Incorporate asthma best practices into the Health Homes Program.
- Incorporate asthma in-home visiting in the 1115 Waiver renewal.
- Update state contracts with Medi-Cal managed care organizations to expand asthma education and home environmental remediation services for high risk enrollees with asthma.
- Maintain the inclusion of asthma as a qualifying condition within the Accountable Communities for Health Initiative.

## Medi-Cal managed care organizations should support asthma education and home environmental trigger remediation through the following action:

- Ensure that high risk enrollees with asthma receive asthma education and home environmental trigger remediation services, either by directly providing these services or by reimbursing other providers, including non-licensed providers.

## Foundations, hospital community benefit programs, social impact investors, and others should actively support asthma prevention and other services through the following actions:

- Augment Medi-Cal-funded asthma services with additional funding where necessary.
- Support innovation in exploring other mechanisms of sustainable financing.
- Support efforts to address the social determinants of health that contribute to asthma and asthma disparities, along with an array of other public health problems.

# The Need

Asthma is a significant public health problem. Nearly 23 million people have asthma nationwide.[1] Over 5 million of those diagnosed with asthma live in California.[2] In California, nearly 1 in 7 people has been diagnosed with asthma.[3] Asthma is a leading cause of disability among children in the U.S.[4] and a leading cause of school absences due to chronic disease.[5] Despite advances in diagnosis and treatment and increased attention to prevention, asthma prevalence has been rising for several decades.[6]

In addition to the significant impact that asthma has on the individuals and families affected by the disease, it also places a substantial financial burden on the state. Total charges for all payers for asthma hospitalizations in 2010 were over $1 billion for California alone.[7] Among avoidable pediatric hospitalizations resulting from a variety of conditions, asthma is responsible for the highest costs nationally.[8]

Asthma is of particular concern for low-income Californians enrolled in Medi-Cal, the state's Medicaid program. Low-income populations have higher asthma severity, poorer asthma control, and higher rates of asthma emergency department visits and hospitalizations.[9] Over 1.1 million Medi-Cal beneficiaries have been diagnosed with asthma at some point in their lives.[10] This prevalence (16.2%) is higher than those not covered by Medi-Cal (13.6%).[11] In addition to higher prevalence, Medi-Cal beneficiaries have higher urgent health care utilization than Californians covered by other types of insurance. In 2010, Medi-Cal beneficiaries represented 50% of asthma hospitalizations and 42% of asthma emergency department visits, even though they represented only 30% of Californians.[12]

We do not yet know how to cure or prevent the onset of asthma, but costly hospitalizations, emergency department visits and sick days related to asthma are largely avoidable. Asthma can and should be controlled. The best practice guidelines developed by the National Asthma Education and Prevention Program (NAEPP)[i] describe four vital components of asthma management:

1. **Assessment of disease severity and control**
2. **Comprehensive pharmacologic therapy**
3. **Patient education**
4. **Environmental control measures to avoid or eliminate factors that contribute to asthma onset and severity**

Unfortunately, even with insurance coverage, many people suffering from asthma lack sufficient access to the latter two components—patient education and environmental control measures. As described by the Asthma Regional Council in *Investing in Best Practices for Asthma*, "An increasingly robust body of evidence shows that these two aspects of effective asthma management not only improve symptoms, but do so at a reasonable cost."[13]

Health care financing policy barriers impede access to patient education and home environmental trigger remediation for Californians with asthma—particularly those with poorly controlled asthma. In this paper, we propose ways to remove those barriers, improve health outcomes and reduce health care costs.

# What should asthma education and home environmental trigger remediation look like in California?

When we refer to ***asthma education***, we are utilizing the definition provided by the National Asthma Education and Prevention Program (NAEPP). **Delivered by a variety of professionals in a variety of settings, asthma education includes information about: basic facts about asthma; proper use of medications; self-management techniques/self-monitoring skills; and actions to mitigate or control environmental exposures that exacerbate symptoms.** In the development of the best practice guidelines, the NAEPP concluded that self-management

i The best practice guidelines, called the EPR 3 Guidelines on Asthma, were developed by an expert panel commissioned by the National Asthma Education and Prevention Program (NAEPP) Coordinating Committee, coordinated by the National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health. http://www.nhlbi.nih.gov/health-pro/guidelines/current/asthma-guidelines/expert-panel-members

education improves patient outcomes and can reduce costs. The NAEPP explains, "Asthma self-management education should be integrated into all aspects of asthma care, and it requires repetition and reinforcement."[14]

When we refer to ***home environmental trigger remediation***, we are utilizing the definition of home-based multi-trigger, multicomponent asthma interventions aimed at reducing exposure to multiple indoor asthma triggers (allergens and irritants), as described by the Community Preventive Services Task Force in their systematic scientific review process.[ii] **Home environmental trigger remediation interventions involve home visits by trained personnel to conduct two or more activities, including: assessment of the home environment; changing the indoor home environment to reduce exposure to asthma triggers; and education about the home environment.** Most programs also include one or more of the following additional non-environmental activities: training and education to improve asthma self-management; general asthma education; social services and support; and coordinated care for the asthma client. The Community Preventive Services Task Force recommends the use of home-based multi-trigger, multicomponent interventions with an environmental focus for children and adolescents with asthma based on strong evidence of effectiveness in improving overall quality of life and productivity.[15]

The changes made to the home environment through these programs vary. Minor remediation efforts at minimum provide advice on recommended environmental changes to be performed by the members of the household and often provide low-cost items such as allergen impermeable mattress and pillow covers. Moderate remediation includes the provision of multiple low-cost materials, and the active involvement of the trained home visitor. Activities in this category include the provision and fitting of mattress and pillow allergen impermeable covers, small air filters and dehumidifiers, integrated pest management, professional cleaning services or equipment, and minor repairs of structural integrity (e.g. patching holes through which pests can enter). Major remediation efforts involve structural improvements to the home including carpet removal, replacement of ventilation systems, or extensive repairs of structural integrity (e.g. roof, walls, and floors). The Community Preventive Services Task Force found that minor to moderate remediation interventions provide good value for the money invested.[16] We encourage more demonstration projects to determine the cost-benefit and cost-effectiveness of major remediation interventions.

## The Evidence Base and Economic Impact

The health benefits of asthma education and environmental trigger remediation are well established; those benefits are why the strategies are included in the national best practice guidelines. Simply put, the strategies reduce emergency department visits and hospitalizations, improve asthma control, decrease the frequency of symptoms, decrease work and school absenteeism, and improve quality of life.[17]

Asthma education and environmental trigger remediation have significant economic benefits. The National Governors Association recently summarized the evidence: "Leading experts in asthma policy and research have asserted that to improve health outcomes and reduce asthma-related health care costs, it is important to augment high-quality medical management with asthma self-management education and home visiting programs. Studies indicate that when those three evidence-based public health interventions are provided for children in a stepwise manner, they have the potential to yield a positive return on investment (ROI)."[18]

It is long established that asthma education programs generate a positive ROI – especially for the highest utilizers of urgent health care services.[19] Take just two examples: One education program targeting high risk children demonstrated an ROI of $11.22 for every $1 spent,[20] while another program targeting children demonstrated an ROI of $7.69-$11.67 for every $1 spent.[21]

ii The Community Preventive Services Task Force is an independent, nonfederal, unpaid panel of public health and prevention experts that provides evidence-based findings and recommendations about community preventive services, programs, and policies to improve health. Its members represent a broad range of research, practice, and policy expertise in community preventive services, public health, health promotion, and disease prevention. http://www.thecommunityguide.org/about/task-force-members.html.

There is also robust evidence on the economic benefits of home environmental trigger remediation. As the national Task Force on Community Preventive Services notes for children and adolescents with asthma, "The combination of minor to moderate environmental remediation with an educational component provides good value for the money invested based on improvements in symptom-free days, savings from averted costs of asthma care, and improvement in productivity." The Task Force found evidence of a return on investment ranging from $5.30 to $14.00 for every dollar invested.[22] While the cost-benefit evidence is stronger for interventions targeting children, adults may also benefit from such interventions.

**The bottom line:** The evidence of economic impact suggests the Medi-Cal system has the potential to save millions of dollars annually while improving the health of some of the most vulnerable Californians with asthma. Take, for example, the 6,077 Medi-Cal beneficiaries under the age of 18 hospitalized with asthma in 2010. While in-home asthma education with minor to moderate environmental remediation for these high utilizers could cost Medi-Cal up to $10.4 million per year,[iii] **Medi-Cal could save as much as $146.3 million per year**.[iv] Additional savings could be realized if the services were extended to include children visiting the emergency department. While the focus of this example is on communities most impacted by asthma—which includes low-income Californians within the Medi-Cal system—the financial benefit grows if other insurers covered much needed services for their high utilizers.

## *Multiple Types of Professionals Can Implement Asthma Services*

Reimbursement for asthma services such as education and home environmental trigger remediation should extend to a range of qualified professionals, even if they are not included in the state's licensure system. Published literature and program-level information about asthma interventions support this approach, describing improved health outcomes and cost savings when interventions are conducted by a variety of professionals.[23] Examples include, but are not limited to, community health workers, *promotoras*, certified asthma educators, lay asthma educators, social workers, respiratory therapists, healthy homes specialists, nurses and other non-licensed, qualified professionals.

The Community Preventive Services Task Force specifically cites the value of community health workers (CHWs): "[I]t is beneficial to hire and train CHWs to implement [asthma education and home environmental trigger remediation] for the purpose of reaching out to primarily low-income, ethnic minority populations. CHWs play an essential role in the implementation of interventions, bridging the gaps between underserved populations and researchers. Because they are usually from the same community, CHWs can connect culturally with local populations and build trusting relationships with clients and their families."[24] While important questions still need to be answered regarding standardization of CHW training and qualifications, the core value CHWs bring to the health care landscape is clear. CHWs not only bridge gaps, but can keep intervention costs down while allowing licensed health care professionals to work "at the top of their license." This may be particularly important for workforce planning as the demand for health care expands with the implementation of the Affordable Care Act.

iii The cost range would be $1.4 million to $10.4 million. This calculation is based on the program cost of $231-$1,720 per person, per Nurmagambetov TA, Barnett SBL, Jacob V, Chattopadhyay SK, Hopkins DP, Crocker DD, Dumitru GG, Kinyota S, Task Force on Community Preventive Services. Economic value of home-based, multi-trigger, multicomponent interventions with an environmental focus for reducing asthma morbidity: A Community Guide systematic review Adobe PDF File [PDF - 873 kB]. Am J Prev Med 2011;41(2S1):S33-47.

iv The savings range would be $7.4 million to $146.3 million. This calculation is based on the ROI range of 5.3-14, per Nurmagambetov TA, Barnett SBL, Jacob V, Chattopadhyay SK, Hopkins DP, Crocker DD, Dumitru GG, Kinyota S, Task Force on Community Preventive Services. Economic value of home-based, multi-trigger, multicomponent interventions with an environmental focus for reducing asthma morbidity: A Community Guide systematic review Adobe PDF File [PDF - 873 kB]. Am J Prev Med 2011;41(2S1):S33-47.

# A Path Forward

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## The California Department of Health Care Services (DHCS) should support asthma education and home environmental trigger remediation through the following actions:

### Expand the role of asthma educators, community health workers and others through implementation of the Centers for Medicare and Medicaid Services' (CMS) Preventive Services Rule, which allows reimbursement for preventive services when provided by professionals that may fall outside of a state's clinical licensure system, so long as the services have been recommended by a physician or other licensed practitioner.[25]

Asthma-related preventive services such as self-management education improve health outcomes while reducing health care costs. The Preventive Services Rule provides an opportunity to address a gap in patients' access to asthma education by allowing Medi-Cal reimbursement for education provided by community health workers and other non-licensed asthma educators. To adopt this rule, DHCS needs to submit a State Plan Amendment to CMS that defines the scope of practice for non-licensed professionals and establishes baseline qualifications.

While the rule applies to fee-for-service payments, adopting the rule would make it clear to Medi-Cal managed care organizations that paying for services provided by community health workers and other non-licensed professionals is not only allowable, but encouraged by the state. Asthma shouldn't be the only chronic disease to benefit from the rule: a broad array of health issues (e.g., diabetes, infant health, etc.) can benefit from the assistance of qualified non-licensed professionals.

### Incorporate asthma best practices into DHCS' Health Homes Program (HHP).

The Medicaid Health Home State Plan Option, authorized under Affordable Care Act Section 2703, allows states to create Medicaid health homes to provide supplemental services that coordinate the full range of physical health, behavioral health, and community-based long term services and supports needed by beneficiaries with selected chronic conditions. CMS will provide a time-limited enhanced federal match of 90% for two years for services such as: comprehensive care management; care coordination and health promotion; and referral to community and support services. DHCS has the authority from the California legislature to submit a plan for an HHP, and is in the process of developing that plan.

Asthma is an ideal condition for inclusion in the HHP given: the significant need; the alignment with the types of services that would be provided (e.g. individual and family support services); and the ability to realize improved health outcomes and cost savings during the time-limited period of an enhanced federal match.

Drawing upon the extensive evidence base of effective interventions, DHCS should include asthma services in the HHP. If asthma is ultimately included in program implementation, the HHP could provide many services essential to effective asthma management, such as care coordination, individual and family support services, and referral to community support services.

### Incorporate asthma in-home visiting in the 1115 Waiver renewal.

CMS allows states to request that certain Medicaid program rules be waived in order to experiment with health care financing and delivery. California's current "1115 Waiver" expires October 31, 2015, and DHCS is in the process of applying for a new waiver.[26] DHCS's most recent Waiver Concept Paper points to some opportunities to expand asthma education and home environmental trigger remediation services. Specifically, the Concept Paper includes Whole-Person Care Pilots where "managed care plans, counties, and local partners would provide Whole-Person Care for target high need patients through collaborative leadership and systematic coordination with other public and private entities identified by the county."[27] These Pilots offer an opportunity to provide Medi-Cal

members with poorly controlled asthma in-home education and environmental trigger remediation services to better manage their condition. The Pilots also may offer the potential for statewide impact while still allowing for local innovation.

The Waiver's Managed Care Systems Transformation & Improvement Program proposes shared savings incentives with managed care organizations. The cost savings potential associated with education and environmental trigger remediation make asthma a natural fit for this program. We encourage DHCS to identify asthma patients for this strategy and encourage health plans and provider partners to consider in-home asthma education and environmental trigger remediation as effective tools.

### Update state contracts with Medi-Cal managed care organizations (MCOs) to expand asthma education and home environmental remediation services for high risk enrollees with asthma.

As noted by the national Childhood Asthma Leadership Coalition, "States can require MCO plans, through contractual agreements, to offer community-based asthma interventions to plan enrollees."[28] With the understanding of how significantly asthma education and home environmental remediation can improve health and reduce costs, DHCS should require MCOs to include these services or alternatively, provide incentives for the implementation of these activities by MCOs.

### Maintain the inclusion of asthma as a qualifying condition within the Accountable Communities for Health (ACH) Initiative.

ACH, a core initiative within the California State Health Care Innovation Plan, is designed to "test a new population health model that would link the health care system with community resources to address a chronic condition on a community-wide basis."[29] While DHCS did not receive federal funding to implement ACH, a workgroup developed a set of recommendations as a foundation for future efforts. Key among them was the inclusion of asthma as one of three eligible chronic conditions. The state has expressed interest in finding alternative sources of revenues to pursue ACH and related activities.[30] As any ACH activities move forward, asthma should continue to be one of the eligible conditions.

## Medi-Cal managed care organizations (MCOs) should support asthma education and home environmental trigger remediation through the following action:

### Ensure that high risk enrollees with asthma receive asthma education and home environmental trigger remediation services, either by directly providing these services or by reimbursing other providers, including non-licensed providers.

There are different ways in which some MCOs across the country are already ensuring access to education and home environmental trigger remediation services. Some MCOs employ their own asthma educators and in-home visitors. As another approach, a few Medi-Cal managed care organizations in California currently provide reimbursement to other organizations—whether public health departments, community-based organizations or governmental or non-profit organizations—to provide these essential services. For example, the Alameda Alliance for Health (one of Alameda County's MCOs) provides reimbursement to the Asthma Start in-home asthma program out of its administrative budget. They refer 40–50 patients to the Asthma Start program each week and found that emergency department visits decreased from 65% to 14% and hospitalizations decreased from 45% to 5%.[31] This directly equates to cost savings.

One way that MCOs can expand their asthma services is to utilize all qualified professionals, including those outside the state's licensure system, given the clear track record of these professionals' ability to improve health outcomes and reduce health care costs.[32] According to a case study from the National Center for Healthy Housing, "MCOs have a lot of flexibility to broaden the types of providers who can offer these services to plan enrollees."[33] Currently, this flexibility relies upon MCOs using funds from their smaller administrative budgets rather than their larger medical budgets. If DHCS adopts the Preventive Services Rule and/or requires these services as part of their contract with MCOs, plans would have even more support to provide these services by being able to utilize funds from the medical services portion of their budget.

**Foundations, hospital community benefit programs, social impact investors, and others should actively support asthma prevention and other services through the following actions:**

- **Augment Medi-Cal-funded asthma services with additional funding where necessary.**

  Even if DHCS and Medi-Cal managed care organizations implement all of the above recommendations, there will likely still be a need to augment services such as supporting more intense environmental remediation. There also needs to be funding to continue to build the evidence base where needed, such as further exploring the effectiveness of home environmental trigger remediation for adults.

- **Support innovation in exploring other mechanisms of sustainable financing.**

  Social impact bond demonstration projects are underway in California and other parts of the country to explore these tools as a financing mechanism for asthma services. Supporting and encouraging this type of innovation could open up important opportunities for new financing mechanisms.

- **Support efforts to address the social determinants of health that contribute to asthma and asthma disparities, along with an array of other public health problems.**

  Even if a full range of asthma services were provided to all who needed them, some poor asthma outcomes as well as disease disparities would persist. Funders should continue to support ongoing advocacy efforts to reduce exposure, particularly inequitable exposure, to environmental asthma triggers in all environments including schools, child care settings, work places, homes, and the outdoor environment. Funders should also continue to address other conditions that shape health outcomes, including environmental inequities such as land use, transportation, housing, air quality, and residential segregation, as well as social inequities such as racism, poverty, social cohesion, social capital, employment, and income.

## Leading the Nation through Policy Change and Partnerships

Asthma in California remains a major public health concern. But the good news is that we know a great deal about reducing the asthma burden. Through innovative policy and financing strategies, we can ensure that Californians with asthma receive services proven to improve health outcomes while reducing health care costs. Additionally, through the ongoing commitment of diverse funders and investors, we can continue to explore ways to reduce the burden of asthma by addressing the environmental and social inequities that create and perpetuate the problem.

Change won't necessarily be easy or happen right away. The above set of policy approaches is ambitious in scope. Fortunately, implementing one approach may help to leverage another. Partners also stand at the ready. Policymakers and institutional leaders can call upon a network of providers, advocates and other stakeholders with the expertise and enthusiasm necessary to work in partnership on effective planning and implementation, including answering questions about practitioner training and qualifications, reimbursement codes, and service eligibility, among other things.

Together, utilizing a multitude of options available, we can reduce the burden of asthma in California. Doing so will improve the lives of people with asthma, help reduce health care costs, and continue the state's tradition of leading the way for health and financing innovation.

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REGIONAL ASTHMA MANAGEMENT & PREVENTION

**Regional Asthma Management & Prevention,** a project of the Public Health Institute, aims to reduce the burden of asthma through a comprehensive approach, ranging from clinical management to environmental protection. We collaborate, coordinate, share resources, advocate, and promote policy change in order to reduce inequities, strengthen asthma prevention efforts, and improve management for all communities. For more information, visit: **www.rampasthma.org**