



Case Studies in Healthcare Financing of Healthy Homes Services

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KEY FINDINGS AT A GLANCE

General Themes

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- *Workforce capacity and infrastructure concerns (page 5).*
- *The fight for sustainability doesn't end with securing coverage (page 5).*
- *There are differences in the challenges and opportunities associated with covering home-based asthma and lead follow-up services (page 6).*

Home-Based Asthma Services

- *Fee-for-service (FFS) Medicaid coverage does not include home-based asthma services (page 6).*
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- *Some services important to the mitigation of asthma triggers in the home are not covered by Medicaid, absent further legislative or regulatory change (page 12).*
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Lead Poisoning Follow-Up Services

- *State and local health departments are often the vehicle for delivering lead follow-up services (page 15).*
- *Healthcare reform's emphasis on reducing avoidable hospitalizations and other healthcare utilization is not as relevant for lead poisoning prevention efforts (page 15).*
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- *Eligibility criteria varies according to state and in many cases is not in line with the current reference value of 5 µg/dL (page 16).*
- *There may be a need for evaluation of the impact of providing lead follow-up services in partnership with the healthcare sector (page 16).*

About This Report

Reducing exposure to lead and asthma triggers in the home environment can significantly improve health outcomes, reduce healthcare utilization, improve educational outcomes for children, and improve quality of life for people of all ages. These types of services are a recommended component of care for people with asthma or children with lead exposure but are not widely available and often limited in scale. However, recent changes resulting from healthcare reform have increased opportunities for states to consider more sustainable and widespread implementation. Some states have already invested heavily in developing programs, policies, and funding to increase access to these critical public health services. Yet many states may be unsure about how to translate these evidence-based practices into policy.

This report is part of a multiyear project to document and demystify the landscape and opportunities surrounding healthcare financing for healthy homes services.¹ The findings described below are the result of 34 interviews conducted with Medicaid agencies, public health departments, and other stakeholders in 11 states to distill lessons learned about pursuing healthcare financing for healthy homes services at the state level.

Background

Housing-related illness and injury, including asthma and childhood lead poisoning, are significant problems for our healthcare system and society. For instance, over 24 million Americans have asthma, and an estimated 24 million homes have lead-based paint hazards that put children at risk for decreased cognitive function, development delays, behavioral problems, and other outcomes.^{2,3} The economic burden of these and other consequences of housing-related illness and injury in the U.S. is estimated at \$53 billion annually.⁴ Furthermore, this burden is not equally distributed, and many low-income communities are disproportionately impacted by housing-related illness. In many communities, disparities in health outcomes like asthma or lead poisoning are exacerbated by disparities in housing quality; this places additional strain on already stressed health, educational, and social service systems.

These disparities can be mitigated by a range of programs and services that have demonstrated improvements in health outcomes and provided a positive return on investment (ROI) by improving housing conditions and quality.^{5,6,7} For example, a large body of evidence suggests that home visiting programs that address indoor environmental triggers (e.g., cockroaches, mice, tobacco smoke, mold) can improve asthma control, reduce asthma-related hospitalizations and emergency department visits, and provide a positive return on investment.⁸ Similarly, the Advisory Committee on Childhood Lead Poisoning Prevention for the Centers for Disease Control and Prevention (CDC) recommends follow-up services for children with blood lead levels at or above the current reference value of 5 µg/dL, including continued monitoring of the blood lead level, nutritional intervention, environmental investigation of the home, and lead hazard control based on the results of the environmental investigation.⁹ Unfortunately, access to these evidence-based strategies has traditionally been limited in scale, but an increasing number of states are exploring opportunities to scale up existing programs and ensure sustainable financing for healthy homes services. Healthcare financing, including Medicaid coverage, can play a key role in ensuring access to these critical services. A wide range of healthcare payers, including state Medicaid agencies, managed care organizations, nonprofit hospitals, and others, are beginning to recognize that housing interventions are beneficial for improving both health outcomes and their bottom line. While some payers have already established limited coverage of services to identify and reduce or eliminate exposure to asthma triggers or lead hazards in the home environment, many others are actively trying to establish or expand coverage.¹⁰ These investments have the potential to dramatically reduce the burden of preventable housing-

related illness, reduce costs and disparities, and improve quality of life, but additional action is needed to pave the way for healthcare financing of preventive services in most states.

This report is part of a multiyear project to document and demystify the landscape and opportunities surrounding healthcare financing for healthy homes services.¹ In 2014, the National Center for Healthy Housing (NCHH) conducted a nationwide survey to identify states where healthcare financing for lead poisoning follow-up or home-based asthma services was already in place or pending.^{i,ii,11} In 2015 and 2016, NCHH and a project team led by the Milken Institute School of Public Health conducted a series of interviews in key states identified by the survey. An interview guide was developed to ask key informants in each state questions about the extent and nature of Medicaid-supported services within the state, details of services covered, barriers to implementation, next steps for expanding services and increasing access, and lessons learned. In each state, the project team conducted interviews with at least one representative from the state Medicaid agency, a program contact in the state health department and one to two additional stakeholders (e.g., advocates, local programs, payers, or providers). In total, the team conducted 34 interviews with stakeholders in 11 states. The interviews were used to develop detailed case studies to distill lessons learned in states with Medicaid reimbursement for healthy homes services, and ultimately to better equip other states in seeking reimbursement for these services.

While the states selected for inclusion (summarized in Table 1), are diverse in geography, political climate, size, and Medicaid expansion status and may have significant differences in the infrastructure for administering and delivering services through the state Medicaid program, several key themes emerged.

ⁱ The survey and case studies used the Community Guide to Preventive Services definition of home-based, multi-trigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits, and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation. Lead poisoning follow-up services were defined as services that go beyond blood lead screening to include one or more of the following components: service coordination, education, environmental assessments to identify sources of lead exposure in the home environment or remediation of the home environment to eliminate lead hazards. See Appendix A of the full survey report for a complete definition: www.nchh.org/Portals/0/Contents/Reimbursement%20Landscape_MAIN%20REPORT_FINAL%20%2818%20November%202014%29.pdf.

ⁱⁱ All 50 states were invited to participate. Forty-nine states responded to the lead survey and 46 to the asthma survey.

Table 1. Overview of states selected and the status of coverage for either home-based asthma services or lead poisoning follow-up services in each

State	Focus of case study	Status of coverage for services					
		Statewide	Limited coverage	Policy in place but not implemented	Policy or initiative pending	Previously had coverage	No coverage and no policy pending
CA	Home-based asthma services		X				
DE	Home-based asthma services					X	
DC	Home-based asthma services				X		
MO	Home-based asthma services			X			
NY	Home-based asthma services		X				
OH	Lead follow-up services	X					
RI	Lead follow-up services	X					
SC	Home-based asthma services						X
TX*	Lead follow-up services	X					
VT	Home-based asthma services						X
WA	Home-based asthma services				X		

*Completed the same year as the 2014 survey without the formal interview guide or process for identifying informants.

General Themes

Relationships matter.

Several interviewees highlighted the importance of individual relationships and strategic partnerships in securing coverage for home-based asthma or lead follow-up services. These included both long-term and opportunistic relationships, and interviewees noted that success often comes from knocking on multiple doors. For example, in the state of Missouri, interviewees credited the success of the legislative effort to partnerships developed during a June 2013 regional asthma summit sponsored by the Department of Housing and Urban Development (HUD), in collaboration with the U.S. Department of Health and Human Services (HHS) and the U.S. Environmental Protection Agency (EPA). Missouri’s successful efforts show the importance of bringing together stakeholders, the strength of multisector partnerships, and the power of coordinated advocacy and educational efforts. Similarly, interviewees in Ohio emphasized the importance of involving all stakeholders – including local health department staff, state Medicaid staff, the Center for Medicare and Medicaid Services, and interested community groups – in the planning of programs to reimburse for lead poisoning follow-up services. Finally, Medicaid-based interviewees also noted that their agencies and workforce have been strained by the demands of implementing healthcare

reform and cautioned that a slow response may be a result of these extra demands and not signify a lack of interest.

There isn’t a single solution.

The opportunities to pay for home-based asthma or lead follow-up services vary greatly between states. Depending on the state, Medicaid or other healthcare payers may be the primary path to providing services, offer a complementary set of services, or not provide any services at all.

- In places where coverage exists, interviewees described multiple pathways to securing that coverage, from waivers to use of individual managed care organization (MCO) administrative expenses to contracts with state public health departments and more. Sometimes multiple pathways exist within the same state. For example, in New York, some MCOs currently or previously have covered services through use of administrative fundsⁱⁱⁱ and the state is also launching a number of Medicaid-funded initiatives through the Delivery System Reform Incentive Payment Program. In Texas, the state health department relies on both reimbursement for direct services (environmental lead investigations) and Medicaid Administrative Claiming to help cover the costs of providing lead follow-up services to children with elevated blood lead levels.

- Regardless of coverage, interviewees noted that resources outside the healthcare sector are almost always needed to either serve as an alternative to healthcare coverage (where coverage doesn't exist) or as a complement to it so that the full range of services can be provided (e.g., structural remediation). For instance, in California, a wide variety of mechanisms are used to fund home-based asthma services, and in many cases a single program or initiative may rely on multiple funding sources (e.g., the assessment and education may be covered by an MCO, but the cost of supplies like mattress encasements may be funded through another source). Similarly, in New York, state-funded initiatives, ranging from quality incentive payments for MCOs to the state-funded Healthy Neighborhoods Program and regional asthma coalitions, have provided critical resources to spur innovation, provide services in high-risk communities, and generate evaluation data. In Ohio and Rhode Island, there is Medicaid-supported lead screening and follow-up home assessment and while RI also has a limited window replacement program, there are otherwise no dollars for structural remediation. However, when a violation is found and a notice of violation is issued, owners and families are automatically referred to local HUD-funded lead hazard control grant programs that may pay for structural remediation.

State-level changes need to allow for local innovation.

Interviewees in larger states noted that policies need to strike a balance between achieving state-level progress while maintaining flexibility to allow for local innovation. For instance, California is a diverse state with diverse health needs, and what works in one county may not achieve success in other counties across the state. Similarly, in New York, the Delivery System Reform Incentive Payment Program is allowing for simultaneous testing of multiple models that build on local resources.

ⁱⁱⁱ Medicaid MCO program costs can be classified as a medical service or administrative expense. Medical services are reimbursable by Medicaid and include the various clinical services offered by physicians and other practitioners in health centers, laboratories, and inpatient/outpatient hospital settings. Administrative expenses cover nonmedical activities important for MCO operations, such as enrollment, advertising, claims processing/billing, and patient grievances/appeals. These types of services are paid for from plan revenue. Administrative expenses also include medical management services and quality improvement activities such as coordinating and monitoring services for Medicaid recipients. Home-based asthma interventions often fit this category of plan spending. An MCO may be motivated to cover certain medical management services and quality improvement activities under its administrative budget (in other words, investing what would otherwise be profit back into patient care) if these services save it significant dollars elsewhere such as by reducing urgent care costs.

Workforce capacity and infrastructure concerns.

A key barrier for many healthcare payers interested in providing services may be a lack of turnkey infrastructure. Interviewees noted many challenges related to the infrastructure for delivering services including difficulty sharing information between systems and sectors, lack of mechanisms to bill for nontraditional workers and services, and an inadequate workforce infrastructure. The training, credentialing, and billing of a scalable and cost-effective workforce was noted by interviewees in several states. For instance, in South Carolina, interviewees described the limited workforce currently available to provide effective asthma services in home settings. Furthermore, the cost of becoming trained and certified as an asthma educator or home assessor is often prohibitive and there are few programs in the state that facilitate such training. Given this, interviewees expressed concern that MCOs or health systems that may want to incorporate home-based asthma services into their programs may be dissuaded from doing so given the lack of available workforce.

The fight for sustainability doesn't end with securing coverage.

Interviewees noted that while embedding home-based asthma and lead follow-up services in healthcare coverage is a step towards sustainability, leadership changes or changes in health plan priorities can undermine existing coverage. For instance, Aetna's Delaware Physician's Care, Inc. asthma management program previously partnered with home care agencies and community health workers (CHWs) to provide home environmental assessments, but this program ended in December 2014 when Aetna and Delaware Medicaid were unsuccessful in renegotiating their contract, leading Aetna to cease operation of the MCO in Delaware.

Additionally, provider education about existing services and programs is critical to ensuring that patients get connected to needed services. Interviewees in a few states described challenges that programs delivering home-based asthma services (both MCO-funded and public/private grant funded) currently face in getting physicians, nurses, and other licensed providers to routinely refer high-risk asthma patients to existing community-based programs. This is significant because without support from clinical staff in making referrals, patients remain unconnected to in-home services even if reimbursement is in place. Similarly, although services for lead follow-up services, and potentially even home-based asthma services, could be ordered as a medically necessary service under the Early and Periodic Screening, Diagnostic, and Treatment benefit for children, results from the original 2014 survey indicate that this mechanism remains widely underutilized.^{10, 12}

There are differences in the challenges and opportunities associated with covering home-based asthma and lead follow-up services.

Despite similarities across the case studies, there were some differences associated with the types of services being provided.

- Interviewees describing opportunities and challenges associated with covering home-based asthma services placed a much greater emphasis on costs and potential for savings. Interviewees describing coverage of lead follow-up services were more likely to point out that the payment for services didn't cover the actual costs of providing services but was still an important factor in helping them sustain access to critical public health services.
- In both the original survey results and case studies, there seemed to be a greater connection to the regulatory infrastructure in providing lead follow-up services but a greater integration with clinical services in places where coverage of home-based asthma services exists. For instance, all three lead case studies involved payments from the state Medicaid program to the state health or public health agency (or an entity certified by them), but none of the asthma case studies reflected this structure. However, there are exceptions to this pattern. For example, according to the Rhode Island Department of Human Services (RIDHS), written Medicaid standards require the lead centers to contact associated healthcare providers when providing lead follow-up services. The lead center identifies a specific case manager for each child or family who is responsible for all communication and coordination with the child's primary care provider or treating physician, all treatment providers and community support agencies and the child's health plan, when appropriate. Additionally, the lead center case manager works with RIDHS and the Department of Health as necessary. This individual serves as the single point of contact for the child, family, and all providers and agencies.
- The services described by the lead case study states have a bigger focus on structural interventions. These differences are also reflected in the workforce used. For instance, while CHWs and nurses can be trained to conduct basic environmental assessments and provide education and connection to resources to reduce exposure to asthma triggers, the nature of assessing and remediating lead hazards often requires the involvement of an environmental or housing professional. However, many important asthma triggers can also be addressed more permanently through structural remediation, and these examples from the lead case studies may be helpful to asthma programs as they grapple with how to handle

coverage of or payment for more intense assessment and remediation methods.

- Finally, interviewees for the lead case studies had difficulty identifying funding mechanisms available for providing services other than Medicaid or federal grants, but interviewees for the asthma case studies identified a wide range of other funding sources including grants from the state or private foundations, hospital community benefit initiatives, social impact financing, state-funded programs, state funding from tobacco tax revenues, state funding from settlements, and public-private partnerships.

Home-Based Asthma Services

While Medicaid coverage for asthma services is offered in clinical settings, fee-for-service (FFS) Medicaid coverage does not include home-based asthma services. As a result, while some Medicaid managed care plans use administrative dollars to provide these services, most do not.

Despite indication from the 2014 NCHH survey that states might have some Medicaid coverage for home-based asthma services in place, the case study analyses did not reveal any states with a benefit under FFS for home-based asthma interventions. In the states examined, FFS Medicaid covers only interventions for asthma in a clinical setting, with referral to a health department or grant-funded community agency for home assessment.

In general, MCOs are required to cover, at minimum, what is covered under FFS Medicaid. Without any FFS requirement for home-based asthma coverage, MCOs in these states are not obligated to provide such services. No instances were identified where state Medicaid offices required through the managed care contracting process that MCOs address asthma home-based management. While our analysis found isolated instances in which a state Medicaid office included asthma in MCO quality improvement initiatives, Medicaid offices tend to be hands-off, giving managed care plans flexibility to determine what interventions are appropriate for their patient populations above those required in the Medicaid FFS program. Flexibility appears to be a tenet of managed care arrangements, with states giving MCOs latitude to innovate, especially around managing beneficiaries with complicated chronic conditions.

It may seem logical then for advocates to focus attention on pushing state Medicaid offices to broaden FFS benefits or to be more prescriptive with MCOs through contract language around asthma management. However, current advocacy efforts in case study states center less around achieving change within the state Medicaid office and more around convincing MCO plans of the importance

of the business case for implementing comprehensive asthma management programs that include home-based services.

Given increases in Medicaid managed care, enhancing coverage for home-based asthma services through Medicaid MCOs is an important goal for advocates. Advocates are working to define the return on investment of home-based asthma services in ways that are compelling to Medicaid MCOs.

Because states do not cover or reimburse for home-based asthma services, most MCOs available in case study states cover only interventions for asthma in clinical settings. MCOs can, of course, elect to offer benefits beyond state Medicaid requirements. A number of case studies uncovered examples of managed care plans offering a comprehensive asthma management program for beneficiaries (including self-management education and home assessment to identify asthma triggers and discuss mitigation strategies). Unfortunately, these examples were outliers, and coverage was still limited or nonexistent in most states.

To make positive strides in accessing home-based asthma services under Medicaid, stakeholders are embracing the realities of this shift to managed care. Advocates are becoming more sophisticated when approaching individual MCOs to provide home-based asthma services, recognizing that this goal requires a strong emphasis on strategies that document cost-savings and return on investment. The case studies uncovered challenges in making the business case to MCOs.

Home-based asthma services are typically considered an administrative expense.

Where home-based asthma services have been offered by MCOs, these services have been considered an administrative expense, and, therefore, are not covered by the per capita payment an MCO receives from a state Medicaid agency. Per current federal guidelines, administrative expenses cover nonmedical activities important for MCO operations (e.g., enrollment, advertising and billing) and medical management services and quality improvement activities, such as coordinating and monitoring services for Medicaid recipients. Home-based asthma interventions often fit this category of plan spending. An MCO may be motivated to cover certain medical management services or quality improvement activities under their administrative budget (in other words, investing what would otherwise be profit back into patient care) if these services save them significant dollars elsewhere, such as by reducing urgent care costs. Because of this cost allocation, the business case for implementing an in-home asthma program has to be strong to compete against many other priorities for limited administrative budget dollars.^{iv}

Published data related to ROI of home-based asthma services may not be compelling enough to MCOs; funding for pilot programs is needed to incentivize MCOs to test in-home asthma interventions in their patient populations.

While studies show that asthma interventions provided in home settings have a strong ROI, the evidence base may not be convincing enough for many MCOs to invest in a comprehensive home-based asthma management program.^{8, 13-17} The problem is that some of the ROI associated with these interventions are indirect savings that accrue to the community (e.g., reduced school absenteeism and reduced missed work days by caregivers); these types of savings, while important for communities, do not amount to direct healthcare savings reflected in an MCO's bottom line. In addition, where health savings are possible (e.g., reduced emergency department visits and hospitalizations), these savings are coupled with increased expenditures for program implementation (e.g., training and hiring asthma educators or providing supplies to mitigate asthma triggers) and increased primary care and pharmaceutical costs (when high-risk patients are linked to needed health services). Additionally, MCO's may face "chicken and egg" problems where there are no existing home visiting programs or properly trained staff – this may serve as an insurmountable barrier to initiating a program, especially when there are perceived uncertainties about outcomes.

- Given these considerations, MCOs may want to pilot in-home asthma interventions in their own patient populations to better understand how such services

^{iv} A newly proposed Medicaid provision establishing a minimum medical loss ratio (MLR) for Medicaid MCOs of 85% may create incentives for MCOs to support quality improvement activities including in-home asthma services. The MLR is a ratio that has traditionally been used to reflect the percentage of an issuer's healthcare premium dollars spent on medical services. For example, an MCO with \$100 million in premium revenue that spends \$79 million on medical claims would have an MLR of 79%. The MLR is generally conceived of as a measure of "value" for the policyholder. While it is recognized that insurers must spend some portion of their revenue on administrative costs and profits, the presumption behind setting a minimum MLR is that a large proportion of the premiums that an insurer receives should be spent on enrollee health. The proposed rule re-categorizes certain quality improvement and health promotion activities as medical services, meaning that these types of services will no longer be considered an administrative expense. Should this change be implemented, advocates will still need to convince MCOs to focus on asthma over other priorities, but managed care plans will have more incentive to increase quality improvement activities, ties as a way of meeting the minimum medical loss ratio. See Centers for Medicare and Medicaid Services, "Medicaid and Children's Health Insurance Program (CHIP) Programs; Medicaid Managed Care, CHIP Delivered in Managed Care, Medicaid and CHIP Comprehensive Quality Strategies, and Revisions Related to Third Party Liability" (June 1, 2015).

impact health outcomes and cost-savings for their patient population. As an alternative to pilot testing, asthma programs may be able to provide specific data to convince MCOs to consider introducing in-home asthma services for their enrollees; in the District of Columbia (DC), the availability of DC-specific data from the region's prominent asthma clinic on the efficacy and cost-effectiveness of asthma services was compelling to MCOs.

Community health workers may be particularly valuable in reaching at-risk populations, especially when part of a larger healthcare team.

- While public or private grant funding for pilot testing is not necessary – MCOs can elect to cover and pay for home-based asthma services through their administrative budgets – such support may push MCOs to focus on asthma and give health plan leadership an opportunity to learn whether programs lead to a positive return on investment for their patient populations. In New York, foundation funding has been helpful in spurring MCOs to pilot test home-based asthma services. Managed care plans in other interviewed states have inquired as to whether the state health department can be a partner in funding pilot programs. Finally, as new delivery system reforms, such as accountable care organizations and other population health initiatives, are implemented, Medicaid managed care plans may invest in these initiatives more enthusiastically.

Forums are needed to facilitate information exchange related to best practices on asthma management among MCOs.

The Delaware case study provides a cautionary tale about the lack of information-sharing between MCOs. When Delaware Physicians Care, Inc. (an MCO offering in-home asthma services) closed down in December 2014, beneficiaries were transferred to a new MCO plan, but the award-winning asthma management program was not. Despite the success of this program, other MCOs in the state have not implemented similar initiatives, in part due to the lack of information- and data-sharing between organizations. Interviewees reported that competitiveness between MCO plans often prevents the sharing of best practices; this sentiment was echoed in other states.

Facilitating forums for Medicaid MCOs, other insurers, and healthcare providers to share best practices on chronic disease management, including asthma, is important so that innovations are diffused through the entire system,

not just for select populations. MCO collaborative forums in the District of Columbia led by the Medicaid office have been important for sharing best practices and data related to asthma management and have proven influential in getting MCOs to explore reimbursement for home-based asthma services formally. Healthcare system redesign efforts spurred by the Affordable Care Act (such as the State Innovation Models [SIM] Initiative) may be an opportunity to engage stakeholders in these types of discussions.

The range of health professionals offering in-home asthma services is diverse and includes nurses, social workers, respiratory therapists, and community health workers, among others. Community health workers may be particularly valuable in reaching at-risk populations, especially when part of a larger healthcare team.

Because MCOs have flexibility to design and provide services for beneficiaries beyond what is required by FFS, where MCO-supported home asthma programs are in place, they are employing a range of providers from nurses to licensed respiratory therapists to certified asthma educators. Often, services are provided under a team approach, where nurses or other licensed professionals either directly supervise or work in tandem with CHWs to deliver home-based asthma services. Other programs in case study states operated via public health departments or community-based organizations and employed an array of nonlicensed professionals, including CHWs, environmental health specialists, sanitarians, health educators, and other public health professionals.

The range of health professionals engaged speaks to the range of professionals that may be appropriate to provide in-home asthma services given appropriate training. We did not uncover efforts in any states to document the relative value of one provider type over another in terms of health outcomes or cost savings achieved. However, case studies did reveal the unique skillset CHWs can bring to programs, as these individuals are often better equipped to help overcome patient distrust. CHWs are trusted members of the community, and/or have an unusually close understanding of the community served, and can overcome the cultural barriers that may inhibit other providers. For example, an MCO in Delaware engaged CHWs in their program, because patients eligible for the program were often mistrustful of the healthy homes inspectors assigned to conduct home environmental assessments, uninformed of the benefit of such inspections, and fearful of consequences that could result after an inspection was completed. CHWs were able to deliver services in a culturally sensitive manner that better engaged patients and their families. Other public health and community-based programs across the case states similarly described the value of CHWs in home-based

asthma programs. CHWs may be particularly important for reaching rural or disenfranchised populations such as tribal communities.

However, one theme that emerged through a few case states was that CHWs, although trained to conduct home assessments or to educate patients on how to self-manage asthma symptoms, may not possess the full skillset required to conduct a comprehensive housing assessment or assist patients in managing complex asthma symptoms. Licensed health professionals (e.g., nurses or respiratory therapists) offer critical skills such as knowledge of medications and therapies to address asthma symptoms, that may be absent in programs that do not have linkages to such professionals. For this reason, many of the MCO-led models highlighted in the case studies rely on CHWs to perform home outreach and assessment but ensure that clinical providers (serving either as direct supervisors or as accepting referrals from CHWs) are available as needed to assist with complex issues. At the same time, linkages to housing and environmental professionals with the technical expertise to fully assess and resolve housing conditions, is also a critical but widely unaddressed need for MCO-led models.

State regulatory changes can enhance and expand the workforce used to provide home-based asthma services, yet there are several steps needed before these changes will impact the availability of home-based asthma services.

All case study states are engaging in discussions about how to adopt and implement a new federal Medicaid rule change that allows state Medicaid FFS to cover and pay for preventive services provided by professionals that may fall outside of a state's clinical licensure system (so long as the services have been initially recommended by a physician or other licensed practitioner). This rule change means that, for the first time, healthy home specialists and other CHWs with training and expertise in providing asthma services may seek FFS Medicaid reimbursement.

While directly applicable to FFS, this rule change is still important for managed care plans. Some interviewees viewed this movement – and the work that states will need to do to develop the State Plan Amendment (SPA) required to implement this rule change

ACRONYMS

ACA	Affordable Care Act
SIM	State Innovation Model
ACO	Accountable care organization
ARC	Asthma Regional Council of New England
CDC	Centers for Disease Control and Prevention
CDPH	California Department of Public Health
CHIP	Children's Health Insurance Program
CHW	Community health worker
CMS	Centers for Medicare and Medicaid Services
DHCS	Department of Health Care Services
DHHS	Department of Health and Senior Services
DSRIP	Delivery System Reform Incentive Payment Program
EPA	U.S. Environmental Protection Agency
FFS	Fee-for-service
HHS	U.S. Department of Health and Human Services
HUD	U.S. Department of Housing and Urban Development
MAC	Missouri Asthma Coalition
WAI	Washington Asthma Initiative
MAPCP	Missouri Asthma Prevention and Control Program
MCO	Managed care organization
MLR	Medical loss ratio
NACP	National Asthma Control Program
NCHH	National Center for Healthy Housing
NEAIC	New England Asthma Innovation Collaborative
RIDHS	Rhode Island Department of Human Services
ROI	Return on investment
RWJF	Robert Wood Johnson Foundation
SPA	State plan amendment
THHN	Tribal Healthy Homes Network

– as an integral step in legitimizing and sanctioning nontraditional providers as capable of providing home-based asthma services. Additionally, by allowing CHW-type providers to seek Medicaid reimbursement, this may increase the size of the workforce available to address asthma, especially in rural areas with clinical provider shortages.

However, a number of significant considerations must be addressed as states consider adopting this change and before this change will impact the availability of home-based asthma services in case states:

- *It is not simple to define CHW provider qualifications.*^v As with other aspects of the Medicaid program, it is for individual states to determine whether and how to offer reimbursement to different provider types and to determine what education/training criteria will be required for providers to become eligible to receive Medicaid reimbursement. As states move forward, they must strike a difficult balance between requirements for education/training to assure competence and quality in the delivery of preventive health

services and the availability of a robust workforce. A number of interviewees from case states expressed concern that costly or time-consuming education/training requirements may prohibit some CHWs from becoming Medicaid-qualified, especially for CHWs that serve rural or hard-to-reach populations that often have less access to training programs. All case states were in the midst of these discussions, without resolution as of the time of this paper.

- *Because the rule change impacts FFS Medicaid, it does not change MCO provider networks or programs.*

Assuming a case state were to develop a SPA to implement this rule change, this would only impact FFS Medicaid. Absent additional regulatory change, MCOs still have the flexibility they have always had to implement asthma programs and select appropriate provider networks. As noted above, a few MCOs across case states already employ or reimburse for the services of CHWs by using administrative dollars, so these provider types are participating in Medicaid to a limited degree already. Stakeholders in several case states are optimistic that such regulatory changes in FFS Medicaid may alleviate concerns held by some MCOs over whether nonlicensed CHWs are qualified providers. Advocacy is likely needed to compel additional MCOs to embrace new provider types and to recognize the value these providers bring to helping beneficiaries manage asthma symptoms.

- *Provider education is needed to enhance referrals to home-based asthma services.* Interviewees in a few states described challenges that programs delivering home-based asthma services (both MCO-funded and public/private grant-funded) currently face in getting physicians, nurses, and other licensed providers to refer high-risk asthma patients to existing community-based programs routinely. This is significant because, without support from clinical staff in making referrals, patients remain unconnected to in-home services even if reimbursement is in place. The new Medicaid reimbursement rule described above is unlikely to alter this scenario as the lack of consistency in referrals described in interviews is not due to Medicaid reimbursement concerns

but rather due to (1) providers not appreciating the value of services that can be provided by asthma educators, home assessors, or other CHWs, and (2) overtaxed administrative staff who are unable to take on the additional coordination and time required to link patients with home-based asthma services and/or to receive information back from home providers to coordinate community-based care with clinical services. In many states, there is a significant need to educate healthcare practitioners so that they will make appropriate referrals to home-based asthma services. In the case of lead, blood lead results are delivered directly to state health departments, which have defined standards for intervention. The focus of provider education, therefore, has been on increasing screening rates. Improvements in electronic medical records could facilitate development of reporting, referral, and response systems for in home asthma services.

- *There is an insufficient workforce available to provide effective asthma services in home settings; training/certification programs are needed.* Where home-based asthma programs exist in case states (whether MCO-led or public/private grant-funded), a near universal requirement for providers serving high-risk asthma patients in their homes is some type of certification and/or training. In a few programs, this training happens on the job, but many programs described in our case studies depend on external healthy homes training programs, typically funded with public health or foundation funding. On the whole, there are few programs in case states that offer such training programs, and free training programs are very limited or nonexistent. Interviewees describe the cost of becoming trained and certified as an asthma educator or home assessor as largely prohibitive, and it may be that even where services are covered by the healthcare sector, reimbursement levels are too low to incentivize training. These factors mean that in most case states, there is a limited workforce available to provide effective asthma services in home settings.
- *There is concern among interviewees that an insufficient workforce infrastructure is a chief reason why MCOs in their states are currently unable/unwilling to implement home-based asthma initiatives.* Should states move forward with recognizing this workforce for Medicaid reimbursement, this does not necessarily mean that funding for training a robust workforce will be available. Advocacy is needed to either secure additional public health dollars for training efforts or to convince MCOs to invest resources toward training CHW-type providers internally. In both scenarios, it becomes important to make the business case to decision-makers as to why offering training to CHWs in asthma management (as

^v Per the American Public Health Association's CHW Section: "A community health worker is a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served. This trusting relationship enables the worker to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery. A community health worker also builds individual and community capacity by increasing health knowledge and self-sufficiency through a range of activities such as outreach, community education, informal counseling, social support and advocacy."

an asthma educator, home assessor, or both) is a good use of public health or MCO resources.

- *Lack of full-time employment opportunities contributes toward an insufficient workforce.* One hurdle in building the workforce infrastructure is a lack of full-time employment opportunities. Interviewees report that the asthma educators, home assessors, and other CHWs who are potentially eligible to receive reimbursement for providing home-based asthma services under Medicaid may not be able to rely on this as a sole occupation. For many of these providers, this may be a supplementary job given low pay or inconsistent referrals. Interviewees cautioned that this reality may mean that there are fewer dedicated professionals willing to become trained/certified or maintain training/certification. More work is needed to assess how to better integrate these professionals into health teams to provide full-time employment opportunities and career pathways. Alternately, integrating these services into the work of health department or other agency staff might provide sustained capacity to provide home assessments.

ACA-funded initiatives and other broader reforms provide opportunities for engaging multiple stakeholders to help design and innovate programs for patients with asthma.

A number of states and stakeholders are leveraging opportunities that result from the passage of the Affordable Care Act (ACA) and other state reforms. These initiatives are proving to be fertile ground for testing innovations and new delivery system reforms that could enhance the delivery of home-based asthma services. In some instances, these efforts allow for testing and analysis related to care coordination and return on investment. Importantly, these initiatives bring stakeholders together to focus on improving value and care delivery overall and provide opportunities for advocates and policy-makers to routinely exchange ideas in a meaningful manner. Specific examples are included below.

- Delaware: The Center for Medicare and Medicaid Innovation funds the State Innovation Models (SIM) Initiative that provides financial and technical support to states for the development and testing of state-led, multipayer healthcare payment and service delivery models. The Innovation Center awarded the state of Delaware grants to develop and implement its State Health Care Innovation Plan, called Choose Health Delaware.¹⁸ Choose Health Delaware is, itself, multifaceted in its approach to and goals surrounding health but includes several key areas relevant to home-based asthma services including: (1) support for community-based population health programs; (2) development of new payment systems including “pay-for-value” and “total-cost-of-care” models; and (3)

assisting integrated, team-based healthcare providers in transitioning to value-based payment systems.¹⁹

In 2012, Nemours/Alfred I. DuPont Hospital for Children received a Healthcare Innovation Award from the Innovation Center to “enhance family-centered medical homes by adding services for children with asthma and developing a population health initiative in the neighborhoods surrounding targeted primary care practices.”²⁰ The goal of this intervention was to reduce asthma-related emergency department and hospital visits among Medicaid-eligible children by 50% by 2015.²¹ The intervention emphasized creating healthcare linkages to the community and home. The program used CHWs to “serve as patient navigators and provide case management services to families with high needs.”²⁰

While Nemours’ innovation award ended on June 30, 2015, Nemours has secured funding to continue working with CHWs to test linkages to home-based services moving forward. In all, Nemours’ work has advanced the conversation regarding reimbursement for home-based asthma services in Delaware, and the state is now taking this issue into consideration in its SIM, described above.

Workgroups on healthy neighborhoods, workforce development, clinical outcomes, and payment reform borne out of the Delaware SIM are also taking asthma services into consideration in brainstorming healthcare innovation models. In particular, these workgroups are discussing the role of CHWs in providing home- and community-based services and how CHW services could be reimbursed within value-based payment systems.

- New York: The Delivery System Reform Incentive Payments (DSRIP) initiative is part of the broader Medicaid Section 1115 waiver program and provides states with significant funding that can be used to support hospitals and other providers in changing how they provide care to Medicaid beneficiaries. The purpose of NY’s DSRIP initiative is to restructure the healthcare delivery system fundamentally by reinvesting in the Medicaid program with the primary goal of reducing avoidable hospital use by 25% over five years. Up to \$6.42 billion dollars are allocated to this program with payouts based upon achieving predefined results in system transformation, clinical management, and population health. In part, New York’s current efforts to restructure the healthcare delivery system via the DSRIP initiative engages MCOs and healthcare providers in ensuring that home-based asthma services are available to the patients that need them most.

Under all DSRIP projects, Performing Provider

Systems (PPS) are expected to coordinate and communicate with MCOs, primary care providers, health home providers, and specialty providers to ensure continuity and coordination of care. PPS are currently forming many different types of payment arrangements with MCOs around chronic care models (bundling, per-member-per-month capitated payments et cetera), and experimentation around various approaches to funding asthma home-based services may lead to a successful payment model that will be of interest to MCOs across the state. In this way, the DSRIP process may yield adoption of home-based asthma initiatives by MCOs without regulatory changes or foundation support.

- New England (including case study state Vermont): The New England Asthma Innovations Collaborative (NEAIC) was a multistate project funded through the Innovation Center from 2012 to 2015.²² The project was directed by the Asthma Regional Council (ARC) of New England, which combined healthcare providers, payers, and policy-makers in an effort to provide high-quality, cost-effective care for children with severe asthma who were enrolled in Medicaid or CHIP.²² The collaborative—which also included Connecticut, Massachusetts, and Rhode Island—provided asthma self-management education and home environmental assessments through nonphysician providers such as CHWs and Certified Asthma Educators, who used moderate environmental interventions designed to reduce asthma triggers in the home.

The program consisted of four main components: (1) an asthma clinic to provide diagnostic and treatment services, (2) one-on-one educational counseling by a Certified Asthma Educator in a clinical setting, though home and school visits could occur if necessary, (3) promotion of a Universal Asthma Action Plan for all individuals with asthma, and (4) efforts to increase community awareness about asthma and asthma management.²³ For example, the NEAIC worked alongside the Blueprint for Health and the Rutland Regional Medical Center to help fund the initial stages of the In-Home Pediatric Asthma Program, a free program that uses home visits by an asthma nurse educator and a home environmental specialist, to help families identify asthma triggers, reduce contact with triggers, and manage their child's asthma symptoms.²⁴ After funding ended for the NEAIC, the Vermont Blueprint for Health and the local community health team absorbed the Rutland program.²⁵ While Innovation Center funding for the NEAIC ended in the spring of 2015, an economic evaluation of the initiative is currently being conducted.²⁵

Public health, foundation, and other sources of funding are critical for addressing workforce and

coverage gaps related to the delivery of home-based asthma services.

Several interviewees noted the need for programmatic funding to fully support initiatives designed to deliver home-based asthma services. Even in the instances in which MCOs may offer a special program to deliver home-based asthma services, interviewees emphasized the need to find additional funding to support some services such as replacement of carpet or air filters that may not be included in the MCO's program. Public health and foundation funding are also important resources for training providers in a state to conduct asthma health homes assessments. In addition, these sources of funding have supported Medicaid MCOs in offering comprehensive asthma services. Several interviewees explained the important role that these funding sources serve.

- For example, in Delaware, public health funding has been an important resource for training providers in the state to conduct asthma healthy homes assessments. In the past, the Delaware Office of Healthy Environments assisted in training providers in the state to do healthy homes assessments with tobacco settlement funding.²⁶ While this funding is no longer available, for several years it supported a vibrant healthy homes program, offering yearly training that included education on asthma home assessment. Trainings were offered free of charge to participants. These training programs provided education to the providers working in the Delaware Physicians Care program.
- New York offers another example. Funding from foundations has supported MCOs in the state to offer more comprehensive asthma services. In 2001, the Robert Wood Johnson Foundation (RWJF) supported five MCOs, including three in New York State, with three-year grants to collaborate with local health systems and community-based organizations to spur innovative asthma management practices, including those with healthy homes components.²⁷ Of the three MCOs funded in New York, two continue to focus on asthma based on lessons learned from these pilot programs.²⁸

Some services important to the mitigation of asthma triggers in the home are not covered by Medicaid, absent further legislative or regulatory change.

For example, interviews revealed no instances in which Medicaid has reimbursed for supplies needed to mitigate asthma triggers, such as providing dust-mite proof mattress covers, nor did we find any states that offered reimbursement for environmental mitigation services such as home remodeling. One interviewee noted that their state Medicaid program would not, for example, reimburse

an MCO to replace a carpet in an enrollee's home even when it was necessary to control environmental asthma triggers. While most Medicaid MCOs do not provide coverage for these types of services, if willing, MCOs are able to design plan coverage to provide these types of services by paying for them through their administrative budget line. Lead programs have addressed similar challenges by partnering with lead hazard control, state, foundation, and other grant programs that can provide home remediation. Expanded HUD healthy homes grants could provide similar resources for asthma interventions. Advocates and other stakeholders emphasized the need to continue working with public health or community programs to better assist patients in need.

Social impact financing models (including social impact bonds and Pay for Success contracts) are an emerging mechanism to fund home-based asthma services.

In its most basic form, private investors participating in these initiatives pay the upfront costs for providing social services (such as home visits and remediation to address asthma) and have the opportunity to share in any savings generated to the health sector (typically an insurer or hospital system) as a result of decreased healthcare expenditures.²⁹ Social impact financing models are underway in two case study states to support home-based asthma interventions. Positive outcomes from these initiatives may spur other private investors to take an interest in home-based asthma services and could serve as more data to enhance the business case to MCOs for why an investment in these services is cost-effective.

CDC's National Asthma Control Program (NACP) provides important funding for implementing evidence-based asthma services.

CDC's NACP funds states, cities, school programs, and nongovernmental organizations to help them improve surveillance of asthma, train health professionals, educate individuals with asthma and their families, and explain asthma to the public.³⁰ In its newest grant cycle, NACP awardees are asked, among other things, to strengthen and expand asthma control efforts in home settings and to work with healthcare organizations to promote coverage for and utilization of comprehensive asthma control services including home visits. The NACP asks health departments to work on expansion of home-based asthma strategies in the context of health reform and in partnership with health systems, health insurers, and other stakeholders.

A number of interviewees described how this key funding helps stakeholders organize, educate and deliver asthma control services. Interviewees in other states note the barriers that result when a state is not provided with this

important funding or when a state loses its existing CDC funding. Specific examples include the following:

Use of NACP funding:

- California: On September 1, 2014, the CDPH entered a five-year cooperative agreement with CDC to receive funding from the National Asthma Control Program (NACP). With NACP funding, the CDPH is embarking on a new effort to (i) better understand how Medi-Cal and MCOs in the state reimburse for asthma-related services generally, (ii) summarize the landscape of asthma reimbursement in California, and (iii) develop and disseminate a business case that would be convincing to MCOs to take on coverage of asthma in-home services. Part of building the business case is to learn from counties that have comprehensive coverage for asthma services under Medicaid managed care plans, such as in Alameda County, and to spread these innovative ideas to other counties in the state. Eventually, if funding permits, the department would like to fund some pilot projects in the state in partnership with MCOs. The effort underway at CDPH has great potential for addressing key barriers to implementation, including helping MCOs in the state to understand the return on investment for home-based asthma services. CDPH's stated goals for disseminating best practices statewide will also equip more MCOs to implement home-based asthma programs for plan enrollees.
- Missouri Asthma Prevention and Control Program (MAPCP): The Missouri Department of Health and Senior Services (DHSS) established the Missouri Asthma Prevention and Control Program (MAPCP) in 2001 with funding from the CDC's National Asthma Control Program.³¹ The CDC's \$3.4 million investment in MAPCP over the first decade of the program's existence has generated more than \$20 million in investments from other stakeholders to improve asthma care.³² In the latest grant cycle, beginning on September 1, 2014, the MAPCP's "enviro-clinical" approach acknowledges the dual fronts of asthma treatment in both clinical and home settings and informs MAPCP's mission to obtain reimbursement from public and private insurers for asthma education and trigger abatement.³³ The MAPCP has trained more than 1,000 individuals in the delivery of evidence-based asthma services to improve outcomes. Claims data suggest this evidence-based training has effectively reduced asthma-related healthcare costs.³³ Additionally, MAPCP works with the University of Missouri Asthma Ready® Communities Program to train school nurses in evidence-based asthma management through a program called Teaming Up for Asthma Control.³³ The MAPCP also established the Missouri Asthma Coalition (MAC), which partners with

hospital systems, healthcare providers, local health departments, community health centers, and state and local educational administrators to aid in providing comprehensive asthma management services.³⁴

Lack of NACP funding:

- Washington: As of September 2014, Washington State's asthma program, which was historically managed by the Department of Health, no longer exists due to the program losing funding from the CDC's NACP.³⁵ The loss of these federal dollars has meant that several basic asthma-related functions are no longer available in the state such as basic asthma surveillance, updating of educational resources, and training of clinical staff on EPR-3 guidelines. The loss of NACP funding has also resulted in the loss of financial and administrative support for the Washington Asthma Initiative (WAI). The WAI is a coalition of groups, healthcare providers, individuals, and government agencies from across the state working to improve asthma diagnosis, treatment, education, and management. Their efforts have largely centered on advocating for reimbursement for home-based asthma services and other key asthma care-related issues. Since NACP stopped funding asthma efforts in the state, the WAI has continued to exist, but solely on the dedication of volunteer members.
- South Carolina: Despite submitting applications over the years, South Carolina has never been awarded NACP funding. Without the influx in funding from CDC, the state public health department is not able to fund an in-home asthma program and other important initiatives such as workforce training, surveillance, and asthma education efforts. Interviewees suspected that one major reason the state was not selected as an NACP grantee is that the statewide prevalence of asthma is not as high as in other states. However, interviewees reported that there is an extremely high prevalence of asthma in certain regions of the state, but low population density in rural areas may distort the state's overall picture of asthma. The South Carolina Department of Health and Environmental Control has since attempted to demonstrate the prevalence of asthma by ZIP code in order to demonstrate a more accurate picture of asthma in South Carolina.³⁶

South Carolina is a state that has worked hard to bring asthma stakeholders together despite very limited state and federal resources. Although the state has never been a recipient of NACP funding, interviewees reported that the collaborative process of drafting and submitting applications to NACP over the years has helped build statewide consensus around the burden of asthma. For example, the South Carolina Asthma

Alliance was created as a statewide resource for the advancement of asthma care after stakeholders identified the need for such an organization during the NACP application process. Interviewees stated that future opportunities to apply for CDC funding through the NACP would serve to reinvigorate partnerships and collaborations, especially with Medicaid partners.

Advocates impact the availability of evidence-based asthma services through education and advocacy efforts.

Summits to focus on the delivery of home based asthma services served as important opportunities to build consensus and plan for future, coordinated activities to advance home based asthma services. Interviewees noted that coalition building was a particularly important strategy for coordinating activities. Examples include the following:

- Washington: Despite challenges posed by severe funding cuts, the Washington Asthma Initiative (WAI) has continued to attract a number of highly committed volunteers who continue to work towards establishing reimbursement for home-based asthma services. In September 2014, upon the loss of NACP funding, the WAI organized a day-long summit. The primary purpose of the summit was to invite attendees to join a newly established reimbursement task force. According to interviewees, summit attendees showed a lot of energy around keeping an asthma initiative in place to advocate around asthma in general, and specifically improving access to and Medicaid reimbursement for home-based asthma services. Task force members work on a volunteer basis and have focused recent efforts on making the business case for Medicaid reimbursement for asthma services in home settings to the governor and state legislature. The task force has also worked to push forward home-based asthma interventions within the Accountable Communities for Health projects underway in the state.

The Tribal Healthy Homes Network also held a summit in the fall of 2014, organizing asthma stakeholders on similar issues. Currently, WAI and the THHN are working together to advocate for better home-based asthma services in the state. Working collaboratively on these issues is important: Ultimately, if reimbursement for home-based asthma services is established, the mechanisms will look very similar in both tribal and nontribal areas, although the implementation issues may differ.

- Missouri: While unrelated legal challenges have recently stymied efforts to bring home-based asthma

services to Medicaid beneficiaries, Missouri's passage of a budget to specifically fund home-based asthma services is promising. Interviewees credited the success of this legislative effort to partnerships developed during a June 2013 regional asthma summit sponsored by HUD, HHS, and EPA.³⁷ This summit was designed to promote the value of home-based interventions in the homes of children with poorly controlled asthma and to accelerate the creation of reimbursement mechanisms by local/regional health insurance providers. Post-summit, a group of stakeholders led by the Asthma and Allergy Foundation, St. Louis chapter developed a plan to influence funding bills through the state's annual appropriations process, leading to the recent appropriation.

Missouri's successful budget advocacy efforts show the importance of bringing together stakeholders, the strength of multisector partnerships, the power of coordinated advocacy and educational efforts, and the compelling evidence-base showing the ROI of home-based asthma services. However, the recent setbacks toward accessing Medicaid funds appropriated for home-based asthma services is a reminder of the uncertainty of the budgetary process and the need for continued advocacy to push strong policy to advance reimbursement for home-based asthma services.

Lead Poisoning Follow-Up Services

As the project supported fewer lead case studies, themes for lead follow-up services are harder to identify. However, some emerging themes are described below.

Where Medicaid coverage for lead follow-up services exists, state and local health departments are often the vehicle for delivering services.

In both Texas and Ohio, the state Medicaid agency contracted directly with the state health department to provide payment for services. In Texas, this included reimbursement for direct services provided to children with elevated blood lead levels and Medicaid Administrative Claiming to support the Department of State Health Services's administrative activities related to providing lead follow-up services. In Ohio, the lump-sum annual payment is negotiated as part of an interagency agreement. In Rhode Island, lead follow-up services are provided through four "lead centers" that are certified through the state health department.

Because lead poisoning prevention efforts do not yield near-term healthcare cost savings, development of lead initiatives under ACA reforms has been less successful than those addressing asthma.

Through these lead centers, lead follow-up services are offered to all children identified in Rhode Island with elevated blood lead levels, regardless of where they live or what type of health insurance they have. The lead centers bill Medicaid for each service provided to Medicaid recipients and are reimbursed at different amounts for varying services.

Healthcare reform's emphasis on reducing avoidable hospitalizations and other healthcare utilization is not as relevant for lead poisoning prevention efforts.

The bulk of the savings associated with lead poisoning prevention efforts accrue to other nonhealthcare sectors and are often time-delayed. For instance, of the \$181-\$269 billion in projected net savings associated with lead hazard control programs, only \$11-\$53 billion is related to healthcare costs with the remainder attributed to lifetime earnings, tax revenue, special education, direct costs of crime, and other nonhealth outcomes.³⁸ Because lead poisoning prevention efforts do not yield near-term healthcare cost savings, development of lead initiatives under ACA reforms has been less successful than asthma and this probably also accounts for the finding from the original survey that a much greater proportion of states were actively exploring expanding services or putting new services in place for asthma compared to lead.

Medicaid funding or payments for lead follow-up services often do not cover the entire cost of providing services. However, even partial payment or coverage can still be an important factor in sustaining critical public health services.

Interviewees in Texas advised that programs evaluating partial payment or coverage of services should take a critical look at whether the level of reimbursement will be meaningful. For instance, the extra administrative work to process claims and appeals should be considered in assessing whether reimbursement will provide needed resources for a program. They also noted that reimbursement mechanisms that involve federal matching can make a proposal more attractive to a state

Medicaid agency. Similarly, according to interviewees in Ohio, actual services provided to children enrolled in Medicaid during a contract period usually exceeds the amount of funding available through the interagency agreement with the state Medicaid agency; excess costs are covered by other sources of funding within the Lead Poisoning Prevention Program such as other state funding and CDC grants.

Eligibility criteria for receiving services varies according to state and in many cases is not in line with the current

reference value of 5 µg/dL.

Efforts are underway in some states to explore lowering the level at which children are eligible for follow-up services. For instance, at the time of the interviews, the Rhode Island Department of Health was partnering with lead centers in the state to pilot a limited environmental investigation (soil testing only) for children with lower blood lead elevations (BLLs over 10 µg/dL).

There may be a need for more sustained efforts to evaluate the impact of providing lead follow-up services in partnership with the healthcare sector.

In both Rhode Island and Ohio, interviewees noted a lack of effort to systematically evaluate the impact of Medicaid funding on health outcomes and access to services. Interviewees in Ohio noted that the lack of compatibility between databases housed in different agencies complicated evaluation efforts. All interviewees noted the importance of data in making the case for services, both initially, to secure coverage and set payment amounts, but also over the long run, to ensure the sustainability of payments.

Conclusion

Housing provides a unique platform for improving the health and economic well-being of our nation. The costs associated with housing-related illness and injury can be reduced by closing critical gaps in the delivery of recommended services and ensuring that once policies are in place, they are translated into actual services for people who need them.

A wide range of healthcare payers, including state Medicaid agencies, managed care organizations, nonprofit hospitals, and others, are beginning to recognize that housing interventions are beneficial for improving both health outcomes and their bottom line. While some payers have already established limited coverage of services to identify and reduce or eliminate exposure to asthma triggers or lead hazards in the home environment, many others are actively trying to establish or expand coverage.

The case studies described here highlight that persistent barriers remain but, equally importantly, that there are real opportunities to overcome those barriers and either put new services in place or expand or improve existing services and policies.

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APPENDIX A

Interview Guide

ASTHMA/LEAD SURVEY FOLLOW-UP: DRAFT INTERVIEW GUIDE

Brief Project Overview: To increase understanding of the opportunities of healthcare financing for healthy homes services, the National Center for Healthy Housing (NCHH) conducted a nationwide survey in 2014 to identify states where home-based services for children with lead exposure or for patients with asthma are already in place or pending. Survey respondents were asked questions about Medicaid reimbursement and other healthcare financing, with an emphasis on services that included environmental assessment, education, or remediation to address either asthma triggers or lead hazards in the home environment. Researchers at the George Washington University Department of Health Policy (GWU) helped NCHH interpret survey results and issue two reports published in October 2014.

The 2014 survey provided the NCHH/GWU team with a detailed snapshot of current state reimbursement policies for lead and asthma. The second phase of this work is to further investigate policies in specific states where asthma and/or lead reimbursement is already in place. Through a series of interviews with state Medicaid officials, state health departments, and other key informants, the NCHH/GWU team is seeking to increase our understanding of the opportunities for healthcare financing of healthy homes interventions. We intend to use information gained in these interviews to develop detailed case studies of state experiences in implementing healthcare financing of home-based lead poisoning and asthma services. We hope that these case studies will be informative for other states considering implementing reimbursement for home-based asthma and/or childhood lead services.

Interview Roadmap: In today's interview, we will ask you to describe in detail the home-based asthma and/or childhood lead services covered by Medicaid in your state. Then we will ask you to describe the process of implementing these services in your state, followed by a discussion of how these policies on paper are being translated into services on the ground. Finally, we will ask you about lessons learned in implementing these policies.

I. **Please describe how home-based asthma and/or childhood lead services are covered by Medicaid in your state.**

(Note: Each question will be asked separately for lead and for asthma if an interviewee is knowledgeable about both.)

- (1) Are home-based asthma/childhood lead services required/optional in your state?
 - Statewide or in specific jurisdictions? Within FFS Medicaid, CHIP, Medicaid MCOs?
 - If only in specific locations, what is the justification/criteria for selection? (e.g., availability of services? Higher-risk areas? Lack of workforce/infrastructure?)
- (2) What services are covered and reimbursed?
 - Examples include assessment of the primary residence for asthma triggers/lead hazards; assessment of a second residence, daycare, or school; in-home education about how to eliminate or avoid exposure; phone-based education; low-cost supplies or services for asthma trigger reduction; structural remediation; lead hazard control activities; enforcement activities; education about asthma self-management; clinical or nursing case management; and service coordination.
- (3) What qualifying criteria are considered in determining who is eligible for these services?
 - For asthma: Children/adults? Medicaid, CHIP, health homes? Age, allergen testing, recent hospitalizations/emergency visits, referral, age, housing characteristics (location [ZIP code? City?], et cetera), et cetera.
 - For lead: Medicaid, CHIP, health homes? Blood lead level, referral, age, housing characteristics (location [ZIP code? City?]), et cetera.
- (4) Which kinds of providers are able to provide these services under Medicaid/CHIP?
 - Licensed/certified healthcare professionals? (e.g., nurses, asthma educators, respiratory therapists)
 - Nontraditional healthcare workers? (e.g., CHWs, social workers)
 - Nonhealthcare professionals? (e.g., lead inspectors, housing professionals, sanitarians, environmental health professionals, et cetera)
- (5) Describe which types of agencies/organizations are able to seek Medicaid reimbursement for home-based asthma and childhood lead services in your state (e.g., hospitals, clinics, state or local health department, housing agencies, health home providers, et cetera).
 - Which request or have requested reimbursement?

- Can you characterize the extent/amount of this?
 - Have you seen any changes/trends over time?
 - If not all who are eligible seek reimbursement, what do you think limits/prevents them from doing so?
- (6) Is information about the home visit and the patient's home environment shared with the patient's clinical care team (e.g., primary care physician, specialist, case manager)? If so, describe the process/mechanism for transferring this information between providers (e.g., EHR or other)?
- (7) Are there other ways (i.e. non-Medicaid) that these types of services are financed in your state?
- ACOs, hospital community benefit, social impact bonds, private/commercial plans, et cetera
 - Local/state health department?
 - Please describe (how prevalent, where, why, et cetera)

II. Describe how your state began reimbursement for home-based asthma and/or childhood lead services.

- (1) How long has this policy/these policies been in place?
- (2) What was the process of development?
- (3) Who initiated this process and why (policy goals)?
- Regulatory change? Legislative change? Both?
- (4) What were the major events leading up to the state enacting this policy?
- (5) What contributed to this policy change in your state?
- What were the important drivers to the process? (Primary proponents/opponents? Concerns?)
 - What types of groups/key stakeholders were influential in securing reimbursement or healthcare financing for home-based asthma and/or childhood lead services?
- (6) What barriers/obstacles did your state face in getting this policy passed?
- (7) Describe the interactions, if any, between your state Medicaid office and CMS in implementing these policies.
- Was CMS guidance helpful to this process? (e.g., State Medicaid Director Letter from CMS on lead – did that make a difference in getting state Medicaid office on board?)
 - Was anything at CMS level hindering this process?
 - If you didn't have any interaction with CMS, why not? Would it have been helpful?

III. How are home-based asthma and/or childhood lead services reimbursement policies being translated into services on the ground?

- (1) Overall, how successful do you think this policy has been?
- (2) Is there any information on how much reimbursement is happening in your state? (And of what type? Number of clients? Cost? Trends over time?)
- (3) What barriers has your state faced in implementation?
- Have patients struggled to receive coverage for these services?
 - Have providers struggled to seek reimbursement? What are their challenges?
 - i. Are specific types of providers struggling to get reimbursement (e.g., WIC providers? CHWs?)
- (4) Is there a process for monitoring the success of this policy?
- How do you define success?
 - Is any data collected/analyzed on the implementation of this policy (i.e., amount of reimbursements?)
 - Is your state engaging in any formal evaluation? Or measuring return on investment?
 - Has your state made subsequent policy changes to improve home-based asthma and/or childhood lead services based on evaluation data?

IV. Lessons learned/next steps

- (1) Is your state planning to expand home-based asthma and childhood lead services?
- For example, is your state considering expanding components covered (including other healthy homes services), eligibility criteria, and/or healthcare providers/organizations that can seek Medicaid reimbursement?
 - What would be useful in helping your state expand reimbursement for home-based asthma and/or childhood lead services?
- (2) Are you engaged in getting your state to adopt a State Plan Amendment to incorporate CHWs in Medicaid reimbursement?
- (3) What lessons learned do you have for other states considering implementing reimbursement for home-based asthma and/or childhood lead services?

APPENDIX B
Individual Case Studies



Case Studies in Healthcare Financing of Healthy Homes Services: Medicaid Reimbursement for Home-Based Asthma Services in California

A large body of evidence suggests that home visiting programs that address indoor environmental triggers (e.g., cockroaches, mice, tobacco smoke, mold) can improve asthma control, reduce asthma-related hospitalizations and emergency department visits, and provide a positive return on investment.¹ These types of services are recommended as a component of comprehensive asthma care for people with poorly controlled asthma but are not widely available and often limited in scale. However, recent changes resulting from healthcare reform have increased opportunities for states to consider more sustainable and widespread implementation. Some states have already invested heavily in developing programs, policies, and funding to increase access to these critical public health services.

Yet many states may be unsure about how to translate these evidence-based practices into policy. This case study summarizes the current healthcare financing landscape in California for home-based asthma services with an emphasis on public financing. The case study is based on survey findings² and interviews with the state Medicaid agency, the state health department, and other stakeholders. It describes the current healthcare landscape, other important funding mechanisms, key barriers, next steps, and lessons learned. This information may be useful to stakeholders in other states that are seeking healthcare financing for home-based asthma or other preventive services, or for stakeholders within the state of California interested in a summary of current and future opportunities within the state.



AT A GLANCE

Medicaid Reimbursement for Home-Based Asthma Services in CA

Medicaid in California

Medi-Cal is California's Medicaid program, which is financed equally by the state and federal government. Roughly 12 million California residents, about 30% of the state's population, receive healthcare services through Medi-Cal. About 80% of Medi-Cal members receive their care through a Medi-Cal managed care plan. Medi-Cal is overseen by the Department of Health Care Services (DHCS).

Medicaid Reimbursement for Home-Based Asthma Services^a

Reimbursement type (page 2): Home-based asthma services are covered by a select number of plans as an administrative expense, meaning that Medi-Cal does not reimburse MCOs directly for the services.

Geographic coverage (page 3): Limited. Interviewees were aware of three managed care plans that provide home-based asthma services to enrollees in California.

Eligibility for services (page 3): Adults and children. Generally targeted towards higher-risk members.

Types of services covered (page 3): Assessment of primary residence, self-management education, and referrals to community-based services and supports. Some low-cost supplies are provided through leveraging of other non-Medicaid funding sources.

Staffing (page 4): Nurses, respiratory therapists, certified asthma educators (AE-C), social workers, community health workers.

Barriers and Next Steps for California (pages 5-7)

Interviewees described a range of barriers to increasing the number of MCOs that provide home-based asthma services, including a lack of funding for pilot projects, confusion over Medicaid billing codes, workforce concerns, MCO contracts with Medicaid Groups, and insufficient infrastructure. Moving forward, California is working on several opportunities to improve and increase access to home-based asthma services, including through the state's 1115 waiver renewal, discussions about expanding the role of nontraditional workers (e.g., community health workers), initiatives funded by the CDC National Asthma Control Program, and the state's plan for implementing Health Homes for Patients with Complex Needs.

Other Funding Mechanisms in California (page 4)

A wide variety of mechanisms are used to fund home-based asthma services in California, and in many cases a single program or initiative may rely on multiple funding sources. Funding sources in California include grants from the state or private foundations, hospital community benefit initiatives, social impact financing, and state funding from tobacco tax revenues and a 2005 settlement with BP. Interviewees were not aware of accountable care organizations or patient centered medical homes supporting these services.

Key Insights from California (page 8)

As Medi-Cal moves toward a managed care model, convincing MCOs to adopt these services requires strategies that emphasize cost-savings and return on investment. Additionally, California is a diverse state with diverse health needs: What works in one county may not achieve success in other counties across the state. Policies may need to strike a balance between achieving state-level progress while maintaining flexibility to allow for local innovation.

Medicaid in California

Medi-Cal is California's Medicaid program, which is financed equally by the state and federal government and overseen by the California Department of Health Care Services (DHCS). Roughly 12 million California residents, about 30% of the state's population, receive healthcare services through Medi-Cal, making Medi-Cal the largest healthcare purchaser in the state. About 80% of Medi-Cal members receive their care through a Medi-Cal managed care plan that contracts with the state program. Medi-Cal services are delivered by over 20 local plans and programs, each of which has substantial autonomy and diversity in designing and implementing approaches to patient care.

Medicaid-Supported Reimbursement for Home-Based Asthma Services^b

As reported in a 2014 survey conducted by the National Center for Healthy Housing and Milken Institute School of Public Health, Medicaid-supported coverage of home-based asthma services exists in California, but is limited in scale.² While home-based asthma services are provided in many innovative programs throughout the state, Medicaid currently plays a small role in supporting these services.

According to interviewees, there is no provider who is currently receiving fee-for-service Medicaid reimbursement from Medicaid for home-based asthma

^a Information based on responses to both the interview questions and responses to the original 2014 survey (www.nchh.org/Resources/HealthcareFinancing/Snapshot.aspx).

^b For the purpose of the original survey and the follow-up interviews and case studies, home-based asthma services were defined according to the Community Guide to Preventive Services definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits, and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation.

services, and there is no health plan with a Medicaid contract in place to claim reimbursement for these services directly. As reported by representatives from Medi-Cal, a recent survey of Medi-Cal Medicaid managed care organizations (MCOs) in the state revealed that several MCO plans have member or physician incentive programs related to asthma (e.g., incentivizing physicians to perform an asthma risk assessment),³ but Medi-Cal has not conducted a specific survey of MCOs around home-based asthma services. However, interviewees are aware of three MCOs in the state that either currently offer or have recently offered home-based asthma services to plan enrollees:^c

- Alameda Alliance for Health, Asthma Start Program (a program run in concert with the county public health department; see box on page 5)^{4,5}
- Inland Empire Health Plan, Health Navigator Program⁶
- L.A. Care Health Plan, LA Cares About Asthma⁷

Home-based asthma services are covered by the plans as an administrative expense – in other words, Medi-Cal does not currently reimburse MCOs directly for these services.^d

Medicaid-supported coverage of home-based asthma services in California is quite limited geographically. The three MCOs described above cover home-based asthma services for plan enrollees living in the three counties in which the plans operate. However, there are many vulnerable residents in the state's remaining 55 counties that have no Medicaid-supported access to home-based asthma services.

Interviewees were aware of a couple of instances where a county public health department has used Medicaid Targeted Case Management (TCM) dollars⁸ to secure Medicaid financing for some asthma home-based services. While asthma education is not a TCM-reimbursable service, some case management and assessments provided during in-home visits may qualify for TCM funding.⁹ In these instances, the county public health department is using TCM dollars to supplement either an internal asthma program or a program supported through collaboration with one of the above MCO plans. Other than these instances, there is no direct Medicaid reimbursement for asthma

home-based services in California. Medi-Cal managed care has always reimbursed for some aspects of the programs, but traditional fee-for-service has not. The managed care Medi-Cal programs do not reimburse as part of their capitated rate; instead, they pay from their education or administrative fund at a 15-minute rate that is not to exceed two hours on the initial visit and then one and a half hours for later visits.

What home-based asthma services are provided?

The services supported through the mechanisms described above are focused largely on education and referrals. The type of home-based asthma services offered to MCO enrollees tends to focus on asthma self-management education, development of an individualized asthma action plan, home environmental assessment to identify asthma triggers, and referrals to specialists or other community-based services and supports (for example, assisting families with advocating to landlords to improve housing).

Reimbursement for supplies needed for patients with asthma is limited. The Alameda County Public Health Department's Asthma Start Program does offer some basic supplies as part of their in-home asthma program, such as mattress covers to reduce dust mite exposure and HEPA vacuum cleaners. However, these supplies are purchased by the county health department using grant funding and are not specifically a Medicaid-supported expense. Interviewees were not aware of Medicaid dollars being used for structural remediation of homes or services like integrated pest management.

Where county public health departments are using TCM dollars to supplement asthma programs, these dollars are used to fund needs assessments, care plan development, and referrals and linkages to services provided during in-home visits.

What patient populations are eligible to receive home-based asthma services through Medicaid?

Home-based asthma services offered by MCOs in CA are generally targeted toward high-risk members with asthma, determined by recent emergency room visits or hospitalizations. For example, Inland Empire Health Plan sets participation at an enrollee having had two or more avoidable ED visits in the preceding 12 months and not being current with well-child visits. These

^cA fourth MCO possibly offering home-based asthma services was surfaced by interviewees during follow-up discussions - Kern Family Health Care, Bakersfield City School District Asthma Program.¹⁰ However, at publication time, interviewees were not aware of sufficient information to include this program in detail throughout this case study.

^dMedicaid program costs can be classified as service or administrative. Administrative costs cover activities like enrolling individuals and coordinating and monitoring services for Medicaid recipients. The MCOs listed here are paying for home-based asthma services as an administrative expense.

MCOs have linkages to local hospitals and make efforts to engage high-risk patients upon discharge. Where county public health departments are using TCM dollars to supplement asthma programs, these programs also target high-utilizers.

Two of the three MCOs offering home-based asthma services in California also connect with community-based providers to enhance their reach to patients in need prior to hospitalization. For example, the Asthma Start Program offered by the Alameda County Health Department accepts referrals from community and county health clinics. These referrals usually happen as a result of a patient describing potential asthma triggers in their home. The Asthma Start Program also receives referrals from school truancy officers for children who are missing a significant amount of school because of their asthma (truancy itself is not a qualifying criteria for services, but this connection to schools helps the program better connect to high-risk children with asthma). In addition, MCOs refer their high-risk asthma enrollees to Asthma Start services.

Two of the three MCOs focus their in-home asthma services on children aged 0-18 years. The other MCO provides services to both children and adults.

What types of providers are eligible to provide home-based asthma services?

The three MCOs offering home-based asthma services utilize a range of providers, employed through a variety of mechanisms, to deliver in-home asthma services to eligible plan enrollees:

- In one program, a team of licensed social workers employed by the county health department conducts asthma-related home visits.
- Another MCO directly employs a team of community health workers, called “patient navigators,” to provide these services.
- In the third, the MCO contracts out to community organizations and providers that are already delivering asthma home-based services to the community.

According to CA’s original survey response, nurses, respiratory therapists, and certified asthma educators may also be providing some of these services. Interviewees had the impression that because the MCOs are not receiving direct reimbursement from Medicaid for these services (the funding comes from their administrative budget line), the MCOs have a lot of flexibility to broaden the types of providers who can offer these services to plan enrollees.

How well is information shared between these providers and the larger healthcare team?

Interviewees report that the Alameda Alliance for Health is very committed to sharing information collected from Asthma Start home visits with the larger team of health providers interacting with the patient. Interviewees were not aware of whether and how information flows from the other home-based programs to other patient providers.

Are these services improving outcomes for individuals with asthma? What evidence is there for a return on investment?

Interviewees were not aware of any state surveys of the effectiveness of home-based asthma services. Medi-Cal reported that there are no current efforts in place at the state level to quantify the value of home-based asthma services. However, individual programs are tracking their success. Evaluations of the Asthma Start Program in Alameda County show that the program has greatly reduced emergency department visits and hospitalizations among participants, and 95% of children in the program have maintained or reduced their symptoms. These outcomes have led to an estimated return of \$5.00-\$7.00 for each dollar invested (see text box for additional details about this program). The Asthma Start Program is also part of a new pilot project with the University of California-Berkeley, Impact4Health, and Alameda County Healthy Homes; this pilot will further describe the return on investment for Asthma Start services.

Other Mechanisms for Funding Home-Based Asthma Services, Outside of Medicaid

As Medicaid support for home-based asthma services is very limited, programs that deliver these services for Medicaid-eligible patients rely on other public and private funding streams or innovative partnerships to ensure program sustainability.

According to CDPH, most programs across the state that perform home-based asthma work are funded, or have been funded in the past, by state- or private foundation-sponsored grants. Some programs are funded with hospital community benefit dollars,¹¹ but most hospital initiatives to address asthma provide only patient education and not in-home services. Other programs are supported with funding from a 2005 settlement between the State of California and BP.¹² In some cases, “First 5 California” tobacco tax dollars go towards funding these types of services.¹³ For example, the California Asthma Initiative, established with First 5 funding dollars, helped launch efforts to address asthma in Alameda County, forming the Asthma Start

Program within the Alameda County Public Health Department. Over time, the Alameda County Public Health Department engaged the Alameda Alliance for Health (the county's MCO plan), which today offers these services to enrollees.

Many programs piece together a patchwork of Medicaid and non-Medicaid funding for home-based asthma services. In the Alameda example described above, home-based asthma services are funded through a mix of state-sponsored grants, countywide tax measures, Medicaid Targeted Case Management reimbursements, and support from the county MCO plan.

Another innovative way that home-based asthma services can be funded in California is through social impact financing. Social impact financing models can support evidence-based interventions, such as home visits and remediation, that are not traditionally covered

by Medicaid or other health insurers. Interviewees are aware of two promising social financing models being explored or already underway in California, one in Fresno and one in Alameda County.¹⁴ Interviewees are not aware of accountable care organizations (ACOs) or patient centered medical homes currently supporting these services.

Do commercial or private insurers in the state provide or cover home-based asthma services?

Interviewees were not aware of private or commercial insurers who cover or provide home-based asthma services to enrollees.

Barriers to Implementing Home-Based Asthma Services within Medicaid

According to the California Department of Health Care Services (DHCS), as of 2015, over 80% of Medicaid beneficiaries—over nine million individuals—in



THE ASTHMA START PROGRAM ALAMEDA COUNTY, CA

www.acphd.org/asthma.aspx

The Alameda County Public Health Department's Asthma Start Program (Asthma Start) kicked off in 2001 with funding from Every Child Counts/First Five and a focus on delivering in-home case management services related to asthma. Since the founding of the program, various sources of funding have been secured to continue program support.

Asthma Start sends social workers to meet with individuals (infant to 18 years of age) and families affected by asthma in their homes to determine a baseline of understanding about asthma in the household and assess the culture and environment of the home. Initial questions during the home visit may include the following: *Is there asthma medication on hand? Is the medication in the home up to date? Is the medication easily accessible?* Additionally, during the home visit, the social worker will provide an overview of asthma triggers and how to eliminate or reduce them in the home environment. Social workers will then determine what supplies the Asthma Start program can provide for the family to reduce asthma triggers in the home, ranging from vacuums to non-bleach-based mold cleaners. If social workers identify that a program participant requires additional interventions that are beyond the scope of the Asthma Start Program (such as housing, food, and employment), referrals are made to various community-based services, including the Alameda County Healthy Homes program. While each child's progression through Asthma Start is different, depending on their circumstances and needs, a child usually finishes the program in two to three home visits over a three- to six-month timeframe.

Many program participants first come in contact with Asthma Start after a referral from community and county health clinics; these referrals usually happen as a result of patient describing potential asthma triggers in their home. Asthma Start also receives referrals from school truancy officers for children who are missing a significant amount of school because of their asthma. Finally, MCOs refer their high-risk asthma enrollees to Asthma Start services, typically after a child has visited a hospital for an asthma-related emergency. As approximately 40 to 50 referrals are sent to the Asthma Start program each week, conversations regarding program expansion are becoming a necessity.

Asthma Start is currently involved in several efforts to evaluate program impact. Asthma Start social workers collect data on several measures to assess their efforts. For example, social workers administer a pre- and post-test to record asthma symptoms at the beginning and end of the program intervention. Evaluations of the Asthma Start Program in Alameda County show that the program has greatly reduced emergency department visits and hospitalizations among participants, and 95% of children in the program have maintained or reduced their symptoms. These outcomes have led to an estimated return of \$5.00-\$7.00 for each dollar invested. The Asthma Start Program is also part of a new pilot project with the University of California-Berkeley, Impact4Health, and Alameda County Healthy Homes; this pilot will further describe the return on investment for Asthma Start services.

California are enrolled in an MCO plan.¹⁵ Medi-Cal beneficiaries in all 58 California counties receive care through an MCO, although some counties in the state have higher levels of MCO penetration. The state is increasingly looking to expand its Medicaid managed care program to cover more of their existing high-cost populations and services, particularly those beneficiaries with one or more chronic illnesses. California is implementing a new initiative under which more than one million aged and disabled beneficiaries will be required to enroll in Medicaid managed care.¹⁶

Given trends toward managed care, enhancing coverage for asthma services through MCO plans is an important next step for asthma advocates in the state. As evidenced by the three plans in California offering home-based asthma services to plan enrollees, MCO plans can already offer these services as part of their administrative expense budget line. Even though they are not directly reimbursed by Medi-Cal and have to count expenses against their administrative budget, these plans have been motivated to offer such services because of the well-established return on investment of providing asthma management services in the home. Providing preventive services to plan enrollees saves the MCOs money on avoided hospitalizations and emergency department visits. Yet, despite the ability to provide these evidence-based and cost-effective services, MCO plans in only three of 58 counties offer home-based asthma services of any kind. Thus, there may be opportunities for Medi-Cal to encourage or incentivize more MCOs across the state to provide these evidence-based services.

Interviewees described frustration with understanding the reasons why there is not wider implementation of home-based asthma services by MCOs given the strong track record of these services reducing morbidity and reducing costs. Interviewees felt that the business case for these services should entice MCOs to take on comprehensive asthma management programs even without direct reimbursement from Medi-Cal.

Interviewees described several barriers to more MCOs in California implementing home-based asthma programs for enrollees with asthma:

- *Lack of funding for pilot projects.* In many cases, despite the strong evidence for the return on investment for home-based asthma services, MCOs want to do a pilot of their own patient population to be certain that these services will bring improved outcomes and cost savings. Most plans in the state have not put up the resources to implement a pilot, and some have asked whether such pilots can be funded by the state health department, which does not currently have

resources to support such projects. In other cases, MCOs do not seem to be aware of the business case for home-based asthma services.

- *Confusion over Medicaid billing codes.* Some MCOs are concerned about billing codes and whether there are opportunities within existing Medicaid billing codes for reimbursement. The complexity of the Medicaid billing codes and lack of information from Medi-Cal on this issue has served to stymie some MCOs from looking into other opportunities for providing the services, such as through their administrative budget.
- *Workforce concerns.* Another reported factor is concern from MCOs about the type of healthcare workforce appropriate to deliver home-based asthma services. In many instances, it may be appropriate or cost-effective for an asthma educator or healthy home specialist or other similar nonlicensed health professionals/community health workers to provide in-home asthma education and assessments. Reportedly, some health plans conceptually support the idea of nonlicensed health professionals delivering home-based asthma services but have two major concerns: (i) if providers are not licensed, how can the MCO assure service quality; and (ii) in the event that Medi-Cal starts reimbursing for certain home-based asthma services under a Medicaid health home or the 1115 waiver (both described below), would Medi-Cal accept for reimbursement services offered by non-licensed professionals?
- *MCO contracts with medical groups.* It is often difficult to know where decisions about providing services, like home-based asthma services, are made. Reportedly, many MCOs in the state enter into contracts with medical groups to coordinate and provide patient care. Under these scenarios, while the MCO requires the medical groups to meet quality measures, plan administrators do not dictate how quality measures should be met and what types of services are required. Therefore, it may be medical providers who need education on the potential role and impact of home-based asthma services and not the MCOs themselves.
- *Insufficient infrastructure.* Finally, in some regions of the state, there is not sufficient infrastructure in place for an MCO to implement a home-based asthma program for plan enrollees. MCOs have given feedback to the state health department that they cannot implement home-based asthma initiatives without being able to partner with existing programs that have community connections and expertise in providing evidence-based asthma services to high-risk populations.

According to advocates interviewed, it would be helpful for Medi-Cal to take on a leadership role in educating MCOs about the effectiveness of home-based asthma services for Medicaid-eligible populations, both in terms of patient outcomes and cost savings. Medi-Cal could also serve a role in assuring plans that a broad range of providers are appropriate to offer these services to beneficiaries. As of the time of the interviews, Medi-Cal has not taken on this type of education and outreach as a priority, especially given the significant task of enrolling new populations per the Affordable Care Act's Medicaid expansion.

There has been some discussion among advocates in the state as to whether it would be helpful for advocates to go directly to MCOs to make a pitch for home-based asthma services. State health department representatives interviewed also reported an interest in approaching MCOs on asthma services. Currently, the state health department is working to structure a streamlined and coordinated effort to approach MCOs in coordination with other parts of the health department who have similar requests, such as for MCOs offering more comprehensive behavioral health or diabetes management programs.

Future of Medicaid Reimbursement for Home-Based Asthma Services: How Is the State Working to Expand Coverage and Reimbursement?

Moving forward, California is working on several opportunities to improve and increase access to home-based asthma services, including through the state's 1115 waiver renewal, discussions about expanding the role of nontraditional workers, initiatives funded by the CDC National Asthma Control Program, and the state's plan for implementing Health Homes for Patients with Complex Needs:

- *1115 waiver renewal.* California is currently in the process of renewing its Medicaid Section 1115 waiver, which expires October 31, 2015. On March 16, 2015, Medi-Cal released a concept paper explaining the agency's proposed approach to redesigning their waiver.¹⁷ In an effort to capitalize on the Affordable Care Act and to bring forward new delivery system and financing innovation, the concept paper proposes several programs aimed at delivery system transformation and alignment. For example, the waiver's proposed "Whole Person Pilot Program" opens the door to interventions focused on social and environmental factors. Home environmental services may fit into the program. This could represent an opportunity to test out payment models that include the provision of low-cost services and supplies, such as integrated pest management services or mattress encasements.

- *Expanding the role of asthma educators, healthy homes specialists, and other community health workers in the provision of asthma services in California.* California, like many states, is engaging in discussions about how to adopt and implement a new federal Medicaid rule change allowing state Medicaid programs to cover and pay for preventive services provided by professionals that may fall outside of a state's clinical licensure system, so long as the services have been initially recommended by a physician or other licensed practitioner. This rule change means that, for the first time, asthma educators, healthy home specialists, and other community health workers with training and expertise in providing asthma services may seek Medicaid reimbursement.

Interviewees explained that these discussions are ongoing in the state. While the state has submitted a state plan amendment (SPA) related to behavioral health treatments and associated providers, no specific progress toward developing the SPA that would be needed for Medi-Cal to start offering reimbursement for services provided by asthma or other disease-area professionals has been made. Reportedly, the advocacy community is determining whether to put forward a draft of a SPA to help stimulate discussions. While the rule change impacts more than just asthma services, asthma has been front and center in discussions among advocates. Should the state submit a SPA to enable reimbursement for community health workers and other professionals important to asthma care delivery, this could alleviate concerns that some MCOs in the state have over whether these types of professionals are appropriate providers of in-home asthma services.

- *CDC National Asthma Control Program funding.* On September 1, 2014, the CDPH entered a five-year cooperative agreement with CDC to receive funding from the National Asthma Control Program (NACP). In this newest grant cycle with CDC, NACP awardees are asked, among other things, to strengthen and expand asthma control efforts in home settings and to work with health care organizations to promote coverage for and utilization of

California is a diverse state with diverse health needs. What works in one county may not achieve success in other counties across the state. Policies must be flexible enough to allow for local innovation.

comprehensive asthma control services, including home visits. The NACP asks health departments to work on expansion of home-based asthma strategies in the context of health reform and in partnership with health systems, health insurers, and other stakeholders.

With NACP funding, the CDPH is embarking on a new effort to (i) better understand how Medi-Cal and MCOs in the state reimburse for asthma-related services generally; (ii) summarize the landscape of asthma reimbursement in California; and (iii) develop and disseminate a business case that would be convincing to MCOs to take on coverage of asthma in-home services. Part of building the business case is to learn from counties that have comprehensive coverage for asthma services under Medicaid managed care plans, such as in Alameda County, and to spread these innovative ideas to other counties in the state. Eventually, if funding permits, the health department would like to fund some pilot projects in the state in partnership with MCOs.

The effort underway at CDPH has great potential for addressing key barriers to implementation described above, including helping MCOs in the state to understand the return on investment for home-based asthma services. CDPH's stated goals of disseminating best practices statewide will also equip more MCOs to implement home-based asthma programs for plan enrollees.

- *Medicaid Health Home for Patients with Complex Needs.* Medi-Cal is in the process of designing a SPA to adopt the Medicaid Health Home provisions of the Affordable Care Act.¹⁸ In November 2014, DHCS proposed the Health Homes for Patients with Complex Needs (HHPCN) model, which lists asthma as an eligible chronic condition that may ultimately be selected for inclusion in the program.

The HHPCN model was initially developed under the California State Innovation Model (CalSIM) initiative, which did not secure a State Innovation Model Award from the Centers for Medicare and Medicaid Innovation (CMMI). Despite a failure to receive CMMI funding, the State has determined it will proceed to implement elements of the CalSIM plan, including the HHPCN model. Medi-Cal intends to submit a Section 2703 state plan amendment (SPA) application in summer/fall of 2015.

Medi-Cal intends to include many services under the health home umbrella that are important for persons with asthma, including comprehensive care management, care coordination and health promotion, individual and family support, and

referral to community and social support services. At this stage of the planning, Medi-Cal does not specifically include in-home services for patients with asthma under the HHPCN model design, but certainly a focus on asthma within the state's health home would be a positive step toward Medi-Cal supporting asthma services in the state more comprehensively and holistically.

Lessons Learned

Interviewees describe two major lessons learned from recent efforts in securing additional home-based asthma services in the state. First, Medi-Cal is increasingly moving toward a managed care model. To make positive strides in access to home-based asthma services under Medicaid, stakeholders have to embrace the realities of this shift to managed care. If the state were still under a fee-for-service model, arguments about the need to address asthma disparities or improve quality of care might persuade decision-makers to broaden asthma services for Medi-Cal beneficiaries. However, convincing individual MCOs to adopt these services requires a stronger emphasis on strategies that speak to cost-savings and return on investment.

Second, pushing for statewide policies is not the only approach worth considering. California is a diverse state with diverse needs: what works in one county may not achieve success in other counties across the state. For example, part of the success of the Asthma Start Program in Alameda County is in working with truancy officers in the school system to get additional program referrals for high-risk asthma patients. This type of communication between the health department and school system may not be possible in other counties where the health department and school districts have fewer resources to invest in tracking students with asthma. Policies may need to strike a balance between achieving state-level progress while maintaining flexibility to allow for local innovation.

ACRONYMS

ACO	<i>Accountable care organization</i>
CaISIM	<i>California State Innovation Model</i>
CDPH	<i>California Department of Public Health</i>
CHW	<i>Community health worker</i>
CMMI	<i>Centers for Medicare and Medicaid Innovation</i>
DHCS	<i>Department of Health Care Services</i>
HHPCN	<i>Health Homes for Patients with Complex Needs</i>
MCO	<i>Managed care organization (also MCP, managed care plan)</i>
NACP	<i>National Asthma Control Program</i>
SPA	<i>State plan amendment</i>
TCM	<i>Targeted Case Management</i>

DEFINITION OF SERVICES

Home-based asthma services

The original survey that formed the basis for these follow-up case studies used the *Community Guide to Preventive Services* definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation. See Appendix A of *Healthcare Financing of Healthy Homes: Findings from a 2014 Nationwide Survey of State Reimbursement Policies*² for the full definition.

About the Project

This multiyear project is working to document and demystify the landscape and opportunities surrounding healthcare financing for healthy homes services. In year one of the project, the National Center for Healthy Housing (NCHH) conducted a nationwide survey to identify states where healthcare financing for lead poisoning follow-up or home-based asthma services was already in place or pending. In year two of the project, NCHH and a project team led by the Milken Institute School of Public Health conducted a series of interviews in key states identified by the survey. An interview guide was developed to ask key informants in each state questions about the extent and nature of Medicaid-supported services within the state, details of services covered, barriers to implementation, next steps for expanding services and increasing access, and lessons learned. In each state, the project team conducted interviews with at least one representative from the state Medicaid agency, a program contact in the state health department, and one to two additional stakeholders (e.g., advocates, local programs, payers, or providers). The interviews were used to develop detailed case studies to distill lessons learned in states with Medicaid reimbursement for healthy homes services and ultimately to better equip other states in seeking reimbursement for these services. In California, the project team conducted interviews with representatives from the Alameda County Health Department, California Department of Health Care Services, California Department of Public Health, and Regional Asthma Management and Prevention.

For more information: www.nchh.org/Program/DemystifyingHealthcareFinancing.aspx.

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Asthma Case Study #1 Healthcare Financing for Healthy Homes

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For additional resources, including many of the sources cited in this document, visit www.nchh.org/resources/healthcarefinancing.aspx

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Case Studies in Healthcare Financing of Healthy Homes Services: Medicaid Reimbursement for Home-Based Asthma Services in the District of Columbia

A large body of evidence suggests that home visiting programs that address indoor environmental triggers (e.g., cockroaches, mice, tobacco smoke, and mold) can improve asthma control, reduce asthma-related hospitalizations and emergency department visits, and provide a positive return on investment.¹ These types of services are recommended as a component of comprehensive asthma care for people with poorly controlled asthma but are not widely available and often limited in scale. However, recent changes resulting from healthcare reform have increased opportunities to consider more sustainable and widespread implementation. Some states have already invested heavily in developing programs, policies, and funding to increase access to these critical public health services.

Yet many may be unsure about how to translate these evidence-based practices into policy. This case study summarizes the current healthcare financing landscape in the District of Columbia for home-based asthma services with an emphasis on public financing. The case study is based on interviews with the local Medicaid agency, health department, and other stakeholders (survey findings² were not available for the District). It describes the current healthcare landscape, other important funding mechanisms, key barriers, next steps, and lessons learned. This information may be useful to stakeholders across the U.S. that are seeking healthcare financing for home-based asthma or other preventive services, or for stakeholders within the District of Columbia interested in a summary of current and future opportunities.



AT A GLANCE

Medicaid Reimbursement for Home-Based Asthma Services in the District of Columbia

Medicaid in the District of Columbia

The DC Department of Health Care Finance provides Medicaid coverage for approximately 39% of DC residents through its Medicaid and CHIP programs. Sixty-five percent of DC Medicaid beneficiaries are enrolled with one of the District's four Medicaid managed care organizations (MCOs).

Medicaid and MCO Coverage for Home-Based Asthma Services^{a,b}

Reimbursement type (page 3): Historically, Medicaid-supported coverage of home-based asthma interventions in the District of Columbia has not been available. Recent collaborative efforts between MCOs in DC have begun to change this coverage landscape. Today, all MCOs in the District are in the process of contracting with Breathe DC's Breathe Easy Asthma Home Visiting Program to offer in-home asthma management services to children with high-risk asthma. Upon execution of these contracts, all MCO-enrolled residents who meet eligibility criteria will have access to in-home asthma management services provided by Breathe DC and covered through managed care.

Eligibility for services (page 4): Children and adults who have recently been to the emergency department, were hospitalized for asthma, or who were referred to the IMPACT DC Asthma Clinic by a provider.

Types of services covered (page 3-4): Initial assessment of the home environment for asthma triggers, dust mite covers, pest management, HEPA vacuums, asthma counseling and educational materials, and tobacco cessation services for household members interested in quitting smoking. Typically, families referred to Breathe DC receive two to three home visits.

Staffing (page 4): Master's-level public health workers trained as healthy homes practitioners.

Barriers and Next Steps for the District of Columbia (pages 6-7)

Interviewees described a number of challenges and barriers to improving in-home asthma management, including lack of funding to conduct asthma surveillance due to National Asthma Control Program funding cessation. One solution that the DC Department of Health is pursuing is data-sharing agreements with Medicaid MCOs in the District. Interviewees also reported difficulty linking improvements in healthcare utilization among high-risk asthma patients to home-based asthma services specifically, because patients receive other asthma management services as well. Funding is needed to research and analyze multicomponent asthma interventions to isolate the value of various elements.

Other Funding Mechanisms in the District of Columbia (page 4-6)

The District of Columbia Department of Energy and the Environment's (DOEE) DC Partnership for Healthy Homes is a program aimed at identifying and mitigating environmental health and safety threats for DC residents. Case managers working for DOEE conduct a comprehensive home environmental assessment; identify and document issues (e.g., holes in the walls that allow pests to enter the home); and assist landlords through the process of making necessary home repairs to mitigate asthma triggers.

Key Insights from the District of Columbia (page 7)

Interviewees credit the Chronic Condition Collaborative for providing a forum for MCOs, the DC Medicaid office, and other stakeholders to discuss best practices in asthma management. This forum enabled MCOs in DC to look at their data holistically, in order to better understand the problem of asthma among their beneficiaries, and facilitated partnerships between MCOs and community-based organizations to work together on solutions. The availability of DC-specific data on the efficacy and cost-effectiveness of asthma services was also compelling to MCOs. Another lesson learned in DC is the continued importance of public health dollars to launch community-

Medicaid in the District of Columbia

Approximately 39% of DC residents (261,237 as of November 2015)^{3,4} are enrolled in the Medicaid and CHIP programs administered by the DC Department of Health Care Finance (DHCF). The District is one of 32 states/municipalities that have expanded Medicaid to all individuals with household incomes at or below 138% of the federal poverty line (FPL) under the Affordable Care Act (ACA).⁵ Moreover, DC has some of the most expansive Medicaid coverage in the country⁶; childless adults with incomes up to 210% of the FPL are eligible for Medicaid while pregnant women and children are eligible up to 319%.⁷

Like many other states, the District of Columbia relies on a combination of managed care plans and fee-for-service (FFS) providers to deliver services to Medicaid beneficiaries. The District has been promoting managed care since 1994 and established the Office of Managed Care to ensure participating health plans provide "appropriate, timely, and quality care to managed care eligible persons" from Medicaid and other public programs.⁸ Sixty-five percent of DC Medicaid beneficiaries are enrolled with one of the District's four Medicaid managed care organizations (MCOs)⁹: AmeriHealth District of Columbia, Health Services for Children with Special Needs (HSCSN), MedStar Family Choice, and Trusted Health Plan.¹⁰

^a NCHH and the Milken Institute School of Public Health conducted a survey of state Medicaid reimbursement policies in 2014. The District of Columbia was not surveyed along with other states in 2014, so this information is based on interview responses only.¹¹

^b For the purpose of the original survey and the follow-up interviews and case studies, home-based asthma services were defined according to the Community Guide to Preventive Services definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits, and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation.

Medicaid and MCO Coverage for Home-Based Asthma Services^b

Historically, Medicaid-supported coverage of home-based asthma interventions in the District of Columbia has not been available. Until recent efforts to expand access through managed care, as described in this case study, District residents did not have access to coverage for home-based asthma services under FFS Medicaid or through a Medicaid MCO.

Chronic Condition Collaborative.

Recent collaborative efforts between MCOs in DC have begun to change this coverage landscape. In 2008, MCOs operating in DC joined together in a multiyear Chronic Condition Collaborative (Collaborative) with an initial focus on asthma, diabetes, congestive heart failure, and hypertension.¹² The Collaborative was convened by DC's Medicaid Office, specifically, the DHCF Division of Quality and Health Outcomes. All four Medicaid MCOs in DC participate voluntarily in the Collaborative, along with representatives from DHCF, the DC Department of Health (DOH), and other relevant community stakeholders. Through the Collaborative, MCOs in DC work together to measure chronic disease health outcomes among District residents to help inform decision-making about investments in programs that target chronic conditions.

MCO data reported through the Collaborative found high rates of emergency department (ED) visits among plan members with asthma; because this high rate of asthma-related ED visits did not come with a corresponding high rate of hospitalization, this indicated to the Collaborative that “there is potential to decrease ED visits by focusing on medication compliance, coordination of care, and better access to primary care physicians for members with asthma.”¹³ This data compelled the DHCF to propose that MCOs in the Collaborative focus their continued efforts on asthma.

Since 2014, the Collaborative has set a goal “to reduce emergency department utilization and inpatient hospital admissions for children and young adults with asthma,” aged 2-20.¹⁴ Initially, the Collaborative set out to study whether improved medication compliance would result in better asthma control in this population through performance improvement plan (PIP) initiatives conducted within each participating MCO. Over time, the Collaborative has turned its attention to home

environmental asthma triggers. Interviewees reported that a March 2015 presentation by IMPACT DC, a pediatric asthma program operated by the Children's National Health System (see text box for program description), to the Collaborative was particularly impactful in getting MCOs to understand, among other things, (i) the link between asthma management programs and positive outcomes for DC residents and (ii) strategies for coordinating clinic- and community-based asthma management. Interviewees stated that MCOs found IMPACT DC's detailed data on clinical outcomes and figures on the return on investment for these services to be compelling.

Against this backdrop, Breathe DC's Breathe Easy Asthma Home Visiting Program (described below) was looking for ways to make their program sustainable in preparation for losing DC Department of Health funding in September 2015. Prior to funding cessation, Breathe DC had been able to offer home-based asthma services to certain children with high-risk asthma free of charge. Interviewees reported that all four MCOs in DC have expressed interest to provide reimbursement to Breathe DC to continue these services; Breathe DC is currently in various stages of contracting with MCOs for providing in-home asthma management services to plan members.

Upon execution of these contracts, all MCO-enrolled residents who meet eligibility criteria will have access to in-home asthma management services provided by Breathe DC and covered through managed care. It should be noted that Medicaid coverage regulations themselves have not changed: Because home-based asthma services are beyond what is required by DC Medicaid under Medicaid FFS, these services are considered an “administrative” expense, and are therefore not covered by the per-capita payment MCOs receive from DC's Medicaid agency.^c

What home-based asthma services are provided?

Breathe DC began offering its distinctive home-based asthma services program – Breathe Easy Asthma Home Visiting Program¹⁵ – in the District with funding from the Health Resources and Services Administration's (HRSA) Maternal and Child Health Program, administered to them by way of the DOH. This funding ran from October 1, 2013 until September 30, 2015. At present, Breathe DC is contracting with

^c Medicaid MCO program costs can be classified as a medical service or administrative expense. Medical services are reimbursable by Medicaid and include the various clinical services offered by physicians and other practitioners in health centers, laboratories, and in inpatient/outpatient hospital settings. Administrative expenses cover nonmedical activities important for MCO operations, such as enrollment, advertising, claims processing/billing, and patient grievances/appeals. These types of services are paid for from plan revenue. Administrative expenses also include medical management services and quality improvement activities, such as coordinating and monitoring services for Medicaid recipients. Home-based asthma interventions often fit this category of plan spending. An MCO may be motivated to cover certain medical management services and quality improvement activities under its administrative budget (in other words, investing what would otherwise be profit back into patient care) if these services save it significant dollars elsewhere, such as by reducing urgent care costs.

MCOs in DC to receive reimbursement on a per-visit basis for in-home asthma services rendered. Interviewees report that the services that will be available to patients through these MCO contracts will be essentially the same services that Breathe DC has historically provided to District residents, including:

- Initial assessment of the home environment for asthma triggers;
- Dust mite covers;
- Pest management;
- High-efficiency particulate air (HEPA) vacuums;
- Asthma counselling and educational materials; and
- Tobacco cessation services for household members interested in quitting smoking.

Typically, families referred to Breathe DC receive two to three home visits. The first visit consists of a home assessment where a provider conducts an interview with the family, completes a walkthrough of the child's home, identifies any asthma triggers, and assigns a provider for a follow-up visit. The number of additional visits varies depending on each family's identified needs. Breathe DC has not previously tracked costs per visit for these services.

What patient populations are eligible to receive home-based asthma services through Medicaid?

Historically, Breathe DC's program offered services to children with high-risk asthma who were referred to the program by the IMPACT DC Asthma Clinic (see text box for program description). These patients include children who have recently been to the emergency department, were hospitalized for asthma, or who were referred to IMPACT DC by a provider. While patients are occasionally referred to Breathe DC through other mechanisms, the partnership between Breathe DC and IMPACT DC has been the primary mechanism for identifying children in need of Breathe DC services.

As Breathe DC enters into contracts with MCOs, the program will continue to focus services on such high-risk pediatric populations. However, Breathe DC is also contracting with an MCO in the District that serves an adult population, so the program is working to adjust its services to meet the needs of adults with high-risk asthma.

What types of providers are eligible to provide home-based asthma services? How are these professionals trained to address asthma triggers in the home?

Breathe DC employs master's-level public health workers to provide home-based asthma services. Employees receive training as healthy homes practitioners through a course offered by the National Center for Healthy Housing and approved by the Environmental Protection Agency (EPA) and

Department of Housing and Urban Development (HUD). Breathe DC personnel have also received smoking cessation training through the Certified Tobacco Treatment Specialist training program offered by Rutgers University. Additionally, one MCO contracting with Breathe DC is offering to provide potential home-based asthma service recipients with an initial home assessment before referring them to Breathe DC. Breathe DC has trained case managers employed by this MCO to provide this initial assessment.

The trained public health workers working for Breathe DC do not have official asthma education certification or clinical licensure. Since Breathe DC's emphasis is on mitigation of home environmental triggers and general asthma education and self-management, not on medication and medical device usage, the organization has determined that its public health workers can provide safe and effective services without official certification or medical licensure. Furthermore, Breathe DC's relationship with organizations that do have a workforce with this expertise (e.g., IMPACT DC, discussed in the text box below) provides a safety net for any patients who need additional medical intervention or instruction. Nevertheless, Breathe DC is exploring a relationship with an asthma educator certifying organization and may gain certification for its workforce in the near future.

Other Important Initiatives Related to In-Home Asthma Management

The DC Asthma Coalition. The DC Asthma Coalition is comprised of over eighty organizations and agencies dedicated to improving the system of care and outcomes for children and adults with asthma.²⁰ The Coalition is focused on education and raising awareness about asthma in the District. For example, the coalition is engaged in a strategic planning exercise that is making recommendations for asthma programs in many domains, including home-based asthma services. The Coalition also conducted an asthma training program for managed care personnel in May 2015 that utilized a trainer provided by the National Center for Healthy Housing and a curriculum approved by the EPA and HUD.

DC Partnership for Healthy Homes. The District of Columbia Department of Energy and the Environment's (DOEE) Lead and Healthy Housing Division spearheads the DC Partnership for Healthy Homes, a program aimed at identifying and mitigating environmental health and safety threats for DC residents.²¹ This program has served as an important resource for children with asthma who access services from Breathe DC. Where Breathe DC

IMPACT DC Asthma Clinic



IMPACT DC is a pediatric asthma program operated by the Children's National Health System.¹⁶ While it does not provide home-based asthma services as understood in this case study, its contributions to asthma care lend those that do provide these services much-needed support.

The IMPACT DC Asthma Clinic sees children who have recently been to the emergency department (ED), were hospitalized for asthma, or who generally have trouble controlling their asthma. Clinical staff provide individualized asthma education to patients and their families, including education on how to identify and reduce exposure to asthma triggers.¹⁷ The 90-minute asthma clinic visit is provided by an asthma educator and physician or nurse practitioner. In most cases, these services are provided within two weeks of an asthma-related ED visit or hospitalization. Physicians can also refer their high-risk asthma patients to the program.¹⁸

Beyond the clinical setting, IMPACT DC also provides a number of community-based asthma programs. These include asthma education programs in schools and day care centers and education sessions with area healthcare providers on high-quality asthma management for their patients.¹⁹

IMPACT DC serves an important role in the services provided by Breathe DC by assessing patients' home exposures and triggers and referring those patients to Breathe DC's program, and by serving as clinical resource to Breathe DC participants requiring additional assistance with asthma management services beyond the scope of Breathe DC's services (e.g., medication assistance). IMPACT DC receives a written report for every home visit Breathe DC conducts and follows up with patients who may need additional services. Written reports are also sent to each participant's primary care provider in order to strengthen the continuum of care in the primary care environment.

Additionally, the Chronic Conditions Collaborative selected the IMPACT DC Asthma Clinic as a system-wide intervention, meaning that MCO beneficiaries in DC who meet certain criteria for high-risk asthma (ED visits or hospital admissions for asthma, multiple bursts of oral steroids, or high rates of albuterol refills) are referred directly to IMPACT DC for asthma care services. For each patient referred, IMPACT DC conducts extensive outreach to schedule and confirm appointments with the IMPACT DC Asthma Clinic. For all patients that attended an initial visit, the following services are provided:

1. A comprehensive assessment of the patient's asthma;
2. Medical management, including assessment of severity and control and concurrent or alternative diagnoses;
3. Development of an asthma action plan;
4. Individualized education on the appropriate use of medications, trigger avoidance, and the importance of longitudinal care in the primary care medical home; and
5. Identification of barriers to ongoing asthma care; and scheduling of follow-up appointments as needed.

IMPACT DC has been able to accommodate this increased volume of patients due to novel contracts with each of the MCOs that both acknowledge the comprehensive nature of the program and provide IMPACT DC with a share of the savings resulting from fewer emergency department visits for asthma. While IMPACT DC doesn't specifically provide in-home services, patients are provided with extensive education about the importance of managing home triggers and are referred for additional services to partners, including Breathe DC, DC DOEE, and the Healthy Together medical-legal partnership.

providers discover code violations when conducting a home environmental assessment, they report these violations to DOEE. Subsequently, DOEE conducts a comprehensive home environmental assessment, identifies and documents issues (e.g., holes in the walls that allow pests to enter the home), and creates a detailed technical assistance report that serves as a time-sensitive action plan for the correction of identified hazards. DOEE submits this report to the DC Department of Consumer and Regulatory Affairs (DCRA), the family, and the landlord if applicable. The formality of the report is usually enough to compel landlords to make the necessary changes to address unsafe housing conditions.

Case managers working for DOEE assist landlords through the process of making necessary home repairs to mitigate asthma triggers. For families who

own their own home, case managers provide free consultation on how to remediate asthma triggers and connect income-qualified families to programs that assist in home repairs (however, significant gaps in funding for these types of programs have been reported). Case managers at DOEE are public health analysts with backgrounds in nursing, public health, social work, communications, and clinical care. They are trained experts in healthy homes interventions and credentialed as Healthy Homes Specialists by the National Environmental Health Association. Some are also board-certified Asthma Educators.

DC Department of Health's Bureau of Cancer and Chronic Disease Prevention. This bureau exists within the Department's Community Health Administration and focuses on addressing cancer and chronic disease, including asthma, across the whole disease

life cycle. Among other initiatives, the bureau is currently working to identify existing home visitation programs in the District that could potentially provide linkages to asthma care. For example, would it be appropriate and feasible for providers who offer home visits through maternal and child visitation programs to assess asthma triggers in addition to the other services they provide (given that they may be encountering children with high-risk asthma)? The bureau is considering co-training opportunities where providers who currently offer home-based services in other focus areas can learn about asthma triggers so that they have the knowledge to refer families to appropriate support services, such as Breathe DC. The bureau is in the discovery phase of identifying appropriate home visiting organizations.

In the past, the Bureau received funding from the CDC's National Asthma Control Program to undertake prevention activities related to asthma, including partnership building, strategic planning, intervention, evaluation, and surveillance epidemiology. Much of this work has involved helping community members make connections with other stakeholders, drawing attention to areas of concern in chronic disease healthcare, facilitating partnerships among community partners, and providing recommendations as to where the city should allocate resources to address asthma. As of September 2014, the CDC no longer funds the bureau's asthma control activities. Consequently, the scope and nature of its asthma prevention programs have had to change. Nevertheless, the bureau has been able to maintain some asthma surveillance activities related to the Behavioral Risk Factor Surveillance System (BRFSS). These surveillance activities have been useful to track trends in asthma in the District, and have been used to bolster some of the data used by MCOs to become interested in reimbursing for in-home asthma services.

Barriers to Implementing Home-Based Asthma Services within Medicaid

Lack of funding to conduct asthma surveillance.

As described above, because the DC Department of Health (DOH) no longer receives funding from CDC's National Asthma Control Program, they have had to reduce asthma surveillance activities. While the department has been able to maintain some BRFSS data collection, interviewees caution that funding levels may not enable the District to continue tracking this data. One solution that the DOH is pursuing is

data-sharing agreements with Medicaid MCOs in the District. Currently, Medicaid MCOs provide DOH with some level of data on services like emergency department visits, hospitalizations, pharmacy records, and medical equipment records, but data collection is cumbersome because data are collected and disseminated differently across the four MCOs. The proposed data sharing agreement would make data collection more comprehensive and consistent. This proposal impacts all Medicaid MCO data and is not specific to asthma surveillance, however interviewees hope that this arrangement will help make up for current gaps in data collection as a result of reduced CDC funding. In the meantime, data collected through the Chronic Condition Collaborative has substituted for gaps in public health data related to asthma.

Difficulty differentiating the impact of home-based asthma services from other asthma services.

Interviewees report that it is often difficult to link improvements in healthcare utilization among high-risk asthma patients to the home-based asthma services they receive because so many of these patients receive other asthma services as well. For example, in addition to receiving services in the home from Breathe DC, many high-risk patients also access the IMPACT DC Asthma Clinic or are enrolled in an MCO with a clinical asthma management program. It can be hard to isolate the impact of Breathe DC apart from these other services. In addition, the Breathe DC intervention itself has several components, from asthma self-management education to environmental assessment to the provision of asthma supplies. Breathe DC has not had the capacity to validate individual components of its approach. This can be problematic because providers and payers, in an effort to understand where to spend limited resources, often want to know which asthma interventions (or combination of interventions) are the most cost-effective or yield the best patient outcomes. Funding is needed to research and analyze multicomponent asthma interventions to isolate the value of various elements.

Difficulty addressing substandard housing conditions.

Interviewees describe the challenge of addressing asthma triggers in individual apartments that are located in substandard multiunit buildings. For example, spraying for pests in one unit of a pest-infested building may be fruitless if structural deficiencies will continue to allow pests entry to the home. There are a multitude of systemic problems in low-income, multiunit residences that need to be

addressed comprehensively before the District can really get a handle on asthma in these populations. Interviewees describe stakeholder efforts to work with the DC city council on solutions to substandard housing and its impact on asthma.

The current process for improving housing is fairly informal. For example, as described above, Breathe DC has formed a relationship with DOEE to report code violations documented during in-home visits. While reporting on code violations does lead many landlords to address deficiencies, this informal process does nothing to actively prevent asthma exacerbations in other populations living in substandard housing. More could be done to institute a formal process to improve housing in the District. Interviewees report that discussions with the DC city council have been promising, but they are unsure if these discussions will continue to move forward. Aggressively addressing substandard housing will require coordination between several different government agencies, not all of which are on the same page or have sufficient resources to institute change.

Future of Medicaid Reimbursement for Home-Based Asthma Services: How Is the District Working to Expand Coverage and Reimbursement?

As described throughout this case study, stakeholders in DC are working hard to ensure that all MCO-enrolled residents who meet eligibility criteria will have access to in-home asthma management services provided by Breathe DC and covered through managed care.

As Breathe DC looks to expand its reach to meet demand, the District is working on developing a State Plan Amendment (SPA) to submit to the Centers for Medicare and Medicaid Services (CMS) that would permit direct billing of DC Medicaid for services by non-licensed providers, such as community health workers. Whether this mechanism will be applicable to the lay public health workers employed by Breathe DC's program remains to be seen. The preliminary SPA has defined community health workers in a manner would include Breathe DC's personnel, but this definition is subject to change before submission and approval by CMS. Additionally, each CHW eligible for Medicaid reimbursement would likely need to have a formal relationship with a licensed medical professional who could bill Medicaid on his or her behalf; Breathe DC's providers currently lack this formal relationship.

Lessons Learned

The Chronic Condition Collaborative has provided an invaluable forum for MCOs, the DC Medicaid office, and other stakeholders to discuss best practices in asthma management and learn from clinical and community providers. This forum enabled MCOs in

the District to look at their data holistically to better understand the problem of asthma among their beneficiaries, and facilitated partnerships between MCOs and community-based organizations to work together on solutions. Without this inclusive effort, it is likely that DC would find itself in a position similar to other states where community organizations that work on asthma management struggle to reach decision-makers at MCOs. Interviewees note that DC's smaller size is a factor in making collaboration possible, so this type of model may be most appropriate for cities or regions rather than for large states.

The availability of DC-specific data from IMPACT DC on the efficacy and cost-effectiveness of asthma services has also been important. This data was compelling to MCOs because it was based on the very population they serve, as opposed to data coming from pilot programs in other states. Interviewees report that having such comprehensive data available made all the difference in convincing MCOs in the District to consider introducing in-home asthma services for their enrollees.

Another lesson learned in DC is the continued importance of public health dollars to launch community-based initiatives that might eventually attract the attention of payers. In other states, health plans that might be interested to work with community-based organizations on asthma management have been deterred by a lack of available programs that provide a sufficient workforce and turnkey infrastructure to bring MCO-supported asthma management programs to fruition. In DC, HRSA dollars issued to both Breathe DC and IMPACT DC via the DC Department of Health helped implement and expand impressive programs that can now collaborate with MCOs and continue to grow to reach populations in need.

The Chronic Condition Collaborative has provided an invaluable forum for MCOs, the DC Medicaid office, and other stakeholders to discuss best practices in asthma management and learn from clinical and community providers.

ACRONYMS

ACA	<i>Affordable Care Act</i>
BRFSS	<i>Behavioral Risk Factor Surveillance System</i>
CHIP	<i>Children’s Health Insurance Program</i>
CHW	<i>Community health worker</i>
CMS	<i>Centers for Medicare and Medicaid Services</i>
DCRA	<i>DC Department of Consumer and Regulatory Affairs</i>
DHCF	<i>DC Department of Health Care Finance</i>
DOEE	<i>DC Department of Energy and the Environment</i>
DOH	<i>DC Department of Health</i>
ED	<i>Emergency department</i>
FFS	<i>Fee-for-service</i>
FPL	<i>Federal poverty level</i>
HRSA	<i>Health Resources and Services Administration</i>
HSCSN	<i>Health Services for Children with Special Needs</i>
MCO	<i>Managed care organization</i>
PIP	<i>Performance improvement plan</i>
SPA	<i>State Plan Amendment</i>

DEFINITION OF SERVICES

Home-based asthma services

The original survey that formed the basis for these follow-up case studies used the *Community Guide to Preventive Services* definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation. See Appendix A of *Healthcare Financing of Healthy Homes: Findings from a 2014 Nationwide Survey of State Reimbursement Policies*² for the full definition.

About the Project

This multiyear project is working to document and demystify the landscape and opportunities surrounding healthcare financing for healthy homes services. In year one of the project, the National Center for Healthy Housing (NCHH) conducted a nationwide survey to identify states where healthcare financing for lead poisoning follow-up or home-based asthma services was already in place or pending. In years two and three of the project, NCHH and a project team led by the Milken Institute School of Public Health conducted a series of interviews in key states identified by the survey. An interview guide was developed to ask key informants in each state questions about the extent and nature of Medicaid-supported services within the state, details of services covered, barriers to implementation, next steps for expanding services and increasing access, and lessons learned. In each state, the project team conducted interviews with at least one representative from the state Medicaid agency, a program contact in the state health department, and one to two additional stakeholders (e.g., advocates, local programs, payers, or providers). The interviews were used to develop detailed case studies to distill lessons learned in states with Medicaid reimbursement for healthy homes services and ultimately to better equip other states in seeking reimbursement for these services.

For more information: www.nchh.org/Program/DemystifyingHealthcareFinancing.aspx.

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Asthma Case Study #8 Healthcare Financing for Healthy Homes

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For additional resources, including many of the sources cited in this document, visit
www.nchh.org/resources/healthcarefinancing.aspx

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Case Studies in Healthcare Financing of Healthy Homes Services: Medicaid Reimbursement for Home-Based Asthma Services in Delaware

A large body of evidence suggests that home visiting programs addressing indoor environmental triggers (e.g., cockroaches, mice, tobacco smoke, mold) can improve asthma control, reduce asthma-related hospitalizations and emergency department visits, and provide a positive return on investment.¹ These types of services are recommended as a component of comprehensive asthma care for people with poorly controlled asthma but are not widely available and often limited in scale. However, recent changes resulting from healthcare reform have increased opportunities for states to consider more sustainable and widespread implementation. Some states have already invested heavily in developing programs, policies, and funding to increase access to these critical public health services. Yet many

states may be unsure about how to translate these evidence-based practices into policy. This case study summarizes the current healthcare financing landscape in Delaware for home-based asthma services with an emphasis on public financing. The case study is based on survey findings² and interviews with the state Medicaid agency, the state health department, and other stakeholders. It describes the current healthcare landscape, other important funding mechanisms, key barriers, next steps, and lesson learned. This information may be useful to stakeholders in other states that are seeking healthcare financing for home-based asthma or other preventing services, or for stakeholders within the state of Delaware interested in a summary of current and future opportunities within the state.



AT A GLANCE

Medicaid Reimbursement for Home-Based Asthma Services in DE

Medicaid in Delaware

Approximately 26% of Delaware residents (239,426 people as of May 2015) are enrolled in Delaware's Medicaid program, and the vast majority of Medicaid beneficiaries are now enrolled in one of two managed care organizations (MCO). Most Medicaid benefits are covered through managed care; very few services are still covered through fee-for-service. All asthma-related services available to Delaware Medicaid beneficiaries are offered through managed care.

Medicaid Reimbursement for Home-Based Asthma Services^a

Reimbursement type (page 3): At this time, Medicaid beneficiaries in Delaware do not have access to home-based asthma interventions. Future coverage of home-based asthma interventions by MCOs will likely be financed through administrative budgets. There is no fee-for-service Medicaid reimbursement in Delaware for asthma interventions.

Geographic coverage (page 3): Statewide.

Eligibility for services (page 4): Both adults and children are eligible, though services are generally targeted towards higher-risk members, as determined by recent emergency department visits or hospitalizations.

Types of services covered (page 4): Services previously supported were focused on asthma self-management education, home environmental assessment to identify asthma triggers, and referrals to specialists or other community-based services and supports.

Staffing (page 4): Services were previously conducted by trained investigators from area home health agencies; community health workers.

Barriers and Next Steps for Delaware (pages 5-6)

Interviewees described challenges and barriers both previously faced in implementing asthma management programs in the state as well as related to implementing future home-based asthma management programs including: a distrust of healthy homes inspectors, difficulty engaging landlords, lack of information and data sharing between stakeholders, lack of funding for workforce training, lack of a reimbursement payment system mechanism, and a need for dedicated state-level leadership.

Other Funding Mechanisms in Delaware (page 5)

According to interviews, many programs across the state that perform home-based asthma work are or were previously funded by state- or private foundation-sponsored grants.

Key Insights from Delaware (page 7)

As Delaware implements and tests its State Innovation Models (SIM) Initiative, *Choose Health Delaware*, it should use this as an opportunity to open communication between MCOs, other insurers, and healthcare systems so that innovations in asthma disease management can be shared across institutions. Doing so may prevent disruptions in patient care when effective programs close down, as in the case of Delaware Physicians Care's asthma disease management program.

Medicaid in Delaware

Approximately 26% of Delaware residents (239,426 people as of May 2015) are enrolled in the Medicaid and CHIP program administered by the Delaware Division of Medicaid and Medical Assistance.³ Starting in 1996, Delaware began converting much of its Medicaid program into managed care. The managed care program is called the Diamond State Health Plan (DSHP), which covers acute, primary, and behavioral healthcare services for low-income children, families, and adults; children and adults with disabilities; and foster care children.⁴ Traditionally, Delaware has maintained a small fee-for-service (FFS) model, but since 2012, the state has transitioned additional populations to managed care, including elderly beneficiaries and persons with physical disabilities.⁵ However, a very small population remains in FFS, including those with intellectual disabilities.

Medicaid beneficiaries are currently enrolled in one of two managed care organizations (MCOs): (i) UnitedHealthcare Community Plan and (ii) Highmark Health Options, which replaced Delaware Physicians Care, Inc. (DPCI) on January 1, 2015. DPCI was an Aetna-operated MCO that provided healthcare services for Medicaid patients in the state for a decade.⁶ Delaware is one of the 31 states (including the District of Columbia)⁷ to expand Medicaid under the Affordable Care Act (ACA) to include all adults with incomes at

^a Information based on responses to both the interview questions and responses to the original 2014 survey (www.nchh.org/Resources/HealthcareFinancing/Snapshot.aspx).

^b For the purpose of the original survey and the follow-up interviews and case studies, home-based asthma services were defined according to the Community Guide to Preventive Services definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation.

or below 133% of the federal poverty level (FPL).⁸ Persons eligible for Medicaid through the expansion are enrolled in managed care.⁹

Most Medicaid benefits are covered through managed care, but a few services in Delaware are still covered through FFS, including pharmacy, non-emergency transportation, extended mental health and substance abuse benefits, and some specialized services for children.¹⁰ All asthma-related services are offered through managed care.

Medicaid-Supported Reimbursement for Home-Based Asthma Services^b

As reported in a 2014 survey conducted by the National Center for Healthy Housing and Milken Institute School of Public Health, Medicaid-supported coverage of home-based asthma services exists in Delaware but is limited in scale. Given that almost all Medicaid beneficiaries are enrolled in managed care, MCOs in Delaware are the primary providers of asthma services and have been innovative in their design of asthma management programs involving home-based asthma interventions. There is no fee-for-service Medicaid reimbursement in Delaware for asthma interventions.

The Delaware Division of Medicaid and Medical Assistance does not specifically require through the managed care contracting process that MCOs address asthma management.^c Interviewees describe the relationship between MCOs and state Medicaid officials to be somewhat hands-off: MCO plans are given flexibility to determine what interventions are appropriate for their patient populations. However, in contracts with MCOs, Delaware mandates that plans conduct five Performance Improvement Projects (PIPs) as a means of improving quality in Medicaid.¹¹

In the past, the state had mandated that one such PIP address “Inappropriate Emergency Department Utilization.” Under this requirement, DPCI, the former Aetna MCO operating in the state, selected “Lowering Asthma-Related ED [Emergency Department] and Inpatient Utilization” as a quality improvement focus in 2011¹²; DPCI introduced this asthma intervention program to combat the high emergency department utilization of its African-American and Hispanic

^c The Delaware Division of Medicaid and Medical Assistance does specifically cover home environmental assessments for certain medically frail Medicaid beneficiaries who are homebound; this population could include home assessments for persons with asthma, but this is likely to be a very small population. For the general Medicaid-eligible population, the state does not set any requirements for home-based asthma services.

populations. In addition to clinical interventions, DPCI partnered with home care agencies in Delaware to address asthma triggers and provide education to reinforce asthma trigger mitigation strategies by performing home environmental assessments (see text box for further information).

DPCI’s asthma program ended December 31, 2014, when Aetna and the Delaware Division of Medicaid and Medical Assistance were unsuccessful in renegotiating their contract, leading Aetna to cease MCO operation in Delaware.¹³ The other two MCOs in the state, UnitedHealthcare Community Plan and Highmark Health Options, do not currently offer home-based asthma interventions for plan enrollees, which means that Medicaid beneficiaries in Delaware have no access to home-based asthma interventions at this time.

However, according to interviews, UnitedHealthcare Community Plan is beginning work within their patient-centered medical home (PCMH) model to incorporate coordination of healthcare, including asthma care, into the home. Highmark Health Options is also establishing services, such as health risk assessments, that could improve asthma management, but they do not yet have a home intervention model. Interviewees are hopeful that these emerging efforts will serve to fill the void in home-based asthma services left by DPCI’s departure.

According to interviewees, DPCI was initially motivated to take on the issue of asthma because of high prevalence in the state and because of requirements to report health effectiveness data to the National Center for Quality Assurance (NCQA), which includes asthma outcomes. UnitedHealthcare and Highmark should now be further motivated to address home-based asthma services given the positive return on investment seen by DPCI’s intervention (see text box).

Whatever the future design of home-based asthma interventions assumed by MCOs, these services will likely be financed through the plan’s administrative

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budget.^d The Delaware Division of Medicaid and Medical Assistance does not currently reimburse MCOs directly for asthma services in the home.

What home-based asthma services are provided?

Where MCO coverage of home-based asthma interventions has been in place, the services supported have been focused on asthma self-management education, home environmental assessment to identify asthma triggers, and referrals to specialists or other community-based services and supports.

Interviewees are not aware of instances where MCOs have covered or Medicaid has otherwise reimbursed for supplies needed to mitigate asthma triggers. Delaware, like many states and the federal Centers for Medicaid and Medicare Services, does not consider all types of evidence-based asthma services “medical services” for purposes of Medicaid reimbursement. For example, according to interviews with Medicaid officials, the state program would not reimburse an MCO to replace a carpet in an enrollee’s home even if replacement were necessary to control environmental asthma triggers. However, MCOs in the state are able to design plan coverage to provide these types of services if paid for through their administrative budget line.

What patient populations are eligible to receive home-based asthma services through Medicaid?

Where home-based asthma services have previously been offered by MCOs in Delaware, these services have been targeted toward high-risk members with asthma, determined by recent emergency department visits or hospitalizations. DPCI extended their home-based asthma management program to children, adolescents, and adults who met inclusion criteria (see text box on page 5 for further details).

^d Medicaid MCO program costs can be classified as a medical service or administrative expense. Medical services are reimbursable by Medicaid and include the various clinical services offered by physicians and other practitioners in health centers, laboratories, and in inpatient/outpatient hospital settings. Administrative expenses cover non-medical activities important for MCO operations, such as enrollment, advertising, claims processing/billing, and patient grievances/appeals. These types of services are paid for from plan revenue. Administrative expenses also include medical management services and quality improvement activities, such as coordinating and monitoring services for Medicaid recipients. Home-based asthma interventions often fit this category of plan spending. An MCO may be motivated to cover certain medical management services and quality improvement activities under their administrative budget (in other words, investing what would otherwise be profit back into patient care) if these services save them significant dollars elsewhere, such as by reducing urgent care costs.

What types of providers are eligible to provide home-based asthma services?

The asthma management program formerly offered by DPCI engaged trained investigators from area home health agencies to conduct home-based asthma assessments and other interventions as described in the text box below. DPCI also designed a model for using community health workers (CHWs) to conduct home assessments.

Other Mechanisms for Funding Home-Based Asthma Services, Outside of Medicaid

As Medicaid support for home-based asthma services is very limited, programs that deliver these services for Medicaid-eligible patients rely on other public and private funding streams or innovative partnerships to ensure program sustainability. According to interviews, many programs across the state that do home-based asthma work are funded, or have been funded in the past, by state- or private foundation-sponsored grants.

Public health funding for healthy homes training.

Public health funding has been an important resource for training providers in the state to conduct asthma health homes assessments. In the past, the Delaware Division of Public Health Office of Healthy Environments has assisted in training providers in the state to do healthy homes assessments. Funding for these efforts came from tobacco settlement funding distributed by the Delaware Cancer Consortium’s Environment Committee.²⁰ This funding is no longer available for such purposes, but for several years it was used to raise awareness of indoor health hazards that are cancer causing. The Office of Healthy Environments was also able to use this funding to address indoor health hazards affecting conditions like asthma. Through this funding, Delaware was able to put on a vibrant healthy homes program, offering yearly training that included education on asthma home assessment. Trainings were offered free of charge to participants. These training programs provided education to the providers working in the DPCI program.

Health Care Innovation Award funding.

One recent significant source of funding for asthma services in Delaware has been through the Centers for Medicare and Medicaid Innovation (Innovation Center). In 2012, Nemours/Alfred I. duPont Hospital for Children received a Health Care Innovation Award from the Innovation Center to “enhance family-centered medical homes by adding services for children with asthma and developing a population health initiative in the neighborhoods surrounding

targeted primary care practices.”²¹ The goal of this intervention was to reduce asthma-related emergency department and hospital visits among Medicaid-eligible children by 50% by 2015.²² The intervention emphasized creating healthcare linkages to the community and home. This included integration of community support services and local government programs with healthcare to encourage healthier environments for children with asthma in schools, child care facilities, and homes.²³ It also sought to utilize CHWs to “serve as patient navigators and provide case management services to families with high needs.”²⁴

Nemours’ innovation award ended on June 30, 2015, but the health system will continue to evaluate the program through the end of 2015. Nemours has also secured funding to continue working with CHWs to test linkages to home-based services moving forward. In all, Nemours’ work has advanced the conversation

regarding reimbursement for home-based asthma services in Delaware, and the state is now taking this issue into consideration in its State Innovation Model (SIM), described in further detail below.

Barriers to Implementing Home-Based Asthma Services within Medicaid

Interviewees described challenges faced by DPCI in implementing their respective asthma management programs in the state:

- *Distrust of healthy homes inspectors.* In the effort by DPCI to run an asthma disease management program through their MCO (see text box), patients eligible for the program were often mistrustful of the healthy homes inspectors assigned to conduct home environmental assessments. DPCI worked to overcome these concerns by (i) engaging CHWs to conduct home assessments in place of investigators from home



DELAWARE PHYSICIANS CARE

From 2011 to 2014, Aetna’s Delaware Physicians Care, Inc. (DPCI) operated an asthma management program for its MCO enrollees. DPCI introduced this asthma intervention program to combat the high emergency department utilization of its African American and Hispanic populations, and to meet Medicaid quality improvement expectations set by the state (as described elsewhere in this case study).

This asthma intervention was designed to be a culturally appropriate, evidence-based asthma management program targeting high-risk populations.¹⁴ The disease management program consisted of targeted patient outreach and one-on-one education conducted by clinical nurses. Using age- and culturally-appropriate educational materials, nurses worked with children, teens, and adults with asthma to develop new skills to manage their chronic condition, engaging them in other social support services where appropriate.

In addition, DPCI partnered with several home care agencies in Delaware to perform home environmental assessments to address asthma triggers and provide education to reinforce asthma trigger mitigation strategies through subsequent visits.¹⁵ The DPCI asthma program did not provide services or supplies to patients to abate asthma triggers and irritants. As required by DPCI, participating home care agencies used the U.S. Environmental Protection Agency (EPA) Asthma Home Environment Checklist and attended training on the use of this tool. Public health officials from the Delaware Office of Healthy Environments assisted in these trainings.

During the first year of implementation, DPCI experienced low uptake of these home-based asthma services because many enrollees were mistrustful of investigators from home care agencies coming into their homes. In 2012, the MCO made community health workers (known and trusted advisors in their community) available for patients that were uncomfortable with home health investigators. DPCI developed standardized asthma training for community health workers using the EPA home assessment tool as a guide (these trainings were facilitated by the Delaware Office of Healthy Environments).¹⁶ DPCI also engaged the faith community to build trust among members with high-risk asthma; leaders in the faith community encouraged their parishioners to allow home health investigators to conduct assessments in their homes.

Despite these challenges, an evaluation of this intervention showed that within one year, emergency department visits dropped by 24%, and hospital stays dropped by 37%.¹⁷ Given the tremendous impact of this program, Aetna received the *2013 Award for Innovation in Reducing Health Care Disparities from the National Business Group on Health*.¹⁸

DPCI’s asthma program ended in December 31, 2014, when Aetna and Delaware Medicaid were unsuccessful in renegotiating their contract, leading Aetna to cease operation of the DPCI MCO.¹⁹

health agencies; and (ii) by partnering with the Delaware Office of Healthy Environments to train CHWs to conduct home assessments in a culturally sensitive manner that best engages patients and their families.

- *Difficulty engaging landlords where patients are not homeowners.* Another challenge encountered by DPCI was that most patients were not homeowners. As renters, they were often not able to make changes recommended by home inspectors to address asthma triggers and many patients had difficulty convincing their landlords (both public and private) to make necessary home improvements. In some instances, home investigators were able to contact landlords to voice concerns, but ultimately, the DPCI program was not designed to mitigate landlord-tenant disputes. If other MCOs in the state implement an asthma disease management program in home-based settings, it will be important to design the program in a way that builds trust among residents and their landlords alike so that recommendations from home assessments are taken seriously.

Interviews also uncovered barriers to implementation of future home-based asthma management programs in the state:

- *Lack of information sharing between MCOs.* When asked why the other MCOs operating in Delaware have not picked up on the asthma management program designed and implemented by DPCI, interviewees explained that competitiveness between MCO plans often prevents the sharing of best practices. While the other MCOs in the state are likely to be aware of the positive return on investment seen by the DPCI model, there is no forum for the defunct program to share lessons learned with the other MCOs that might implement a similar model.
- *Difficulty sharing data between Medicaid, MCOs, and health systems.* Interviews described difficulty that health systems like Nemours have had in accessing Medicaid data and data from MCOs on home-based asthma services. Lack of mechanisms for data-sharing has made it challenging for the health system to learn from previous implementation efforts.
- *Lack of funding for training a healthy homes workforce.* As described above, past funding enabled the Delaware Office of Healthy Environments to offer healthy homes training for professionals to conduct asthma home environmental assessments. This funding

has diminished recently, and the public health department has not been able to sustain these training programs. There is some concern among interviewees that it will be difficult to maintain a qualified workforce to perform home-based asthma interventions without this comprehensive training program in place.

- *Lack of payment system mechanisms to reimburse nontraditional providers for services.* Much of the innovation required to provide home-based asthma services (e.g., utilizing CHWs and/or PCMHs) may require a restructure of existing payment systems to pay for these services.²⁵ Although Delaware and other states have had success securing temporary funding to provide home-based asthma services, ongoing funding is necessary to secure access to these services moving forward. Interviewees cautioned that healthcare providers should not assume traditional payers like Medicaid will take on coverage for home-based services. Interviewees suggested that commitment to value-based payment systems will help to ensure that nontraditional providers, such as CHWs, can be compensated for providing home-based asthma services.
- *State leadership to undertake new healthcare initiatives.* As a whole, Medicaid has historically been a driver of healthcare innovation and providing multiple avenues for states and organizations to experiment with new healthcare delivery systems in their state, including the Nemours' Health Care Innovation Award. Nonetheless, it is equally important that Medicaid has willing partners at the state level with whom they can collaborate to undertake new healthcare initiatives. Without state-level leadership willing to take advantage of these opportunities, interviewees worry diffusion of the innovations gained from the Nemours Innovation Center project will stall.

Future of Medicaid Reimbursement for Home-Based Asthma Services: How Is the State Working to Expand Coverage and Reimbursement?

Moving forward, Delaware is working on several opportunities to improve and increase access to home-based asthma services:

- *Expanding the role of asthma educators, healthy homes specialists, and other community health workers in the provision of asthma services in Delaware.* Delaware, like many states, is engaging in discussions about how to adopt and

implement a new federal Medicaid rule change that allows state Medicaid programs to cover and pay for preventive services provided by professionals that may fall outside of a state's clinical licensure system, so long as the services have been initially recommended by a physician or other licensed practitioner. This rule change means that asthma educators, healthy home specialists, and other CHWs with training and expertise in providing asthma services may now seek fee-for-service Medicaid reimbursement.

- *Delaware SIM Initiative.* The SIM Initiative provides states with both financial and technical support for the development and testing of state-led, multipayer healthcare payment and service delivery models that will lower costs and improve health system performance and quality of care for all residents of participating states, including Medicare, Medicaid, and CHIP beneficiaries.²⁶

The Innovation Center awarded Delaware a design grant in February 2013 to develop its State Health Care Innovation Plan, called Choose Health Delaware.²⁷ In December 2014, Delaware received an additional \$35 million in SIM funding to support the implementation and testing of this plan.²⁸ Choose Health Delaware is multifaceted in its approach to and goals surrounding health but includes several key areas relevant to home-based asthma services, including (i) support for community-based population health programs; (ii) development of new payment systems, including “pay for value” and “total cost of care” models; and (iii) assisting integrated, team-based healthcare providers in transitioning to value-based payment systems.²⁹

Additionally, the Delaware Department of Health and Social Services (DHSS) used Nemours' Innovation Center-funded home-based asthma services work to inform goals in Health Care Delivery System transformation with new payment models that “focus on value and outcomes, rather than simply fee-for-service.”³⁰ Workgroups on healthy neighborhoods, workforce development, clinical outcomes, and payment reform borne out of the Delaware SIM are also taking asthma services into consideration in brainstorming healthcare innovation models. In particular, these workgroups are discussing the role of CHWs in providing home- and community-based services and how CHW services could be reimbursed within value-based payment systems.

Interviewees highlighted the importance of the SIM process in engaging multiple stakeholders to

help design and innovate programs for patients with asthma.

- *Leveraging Telemedicine Using Traditional and Nontraditional Healthcare Providers.* Telemedicine technologies are enhancing the ability of healthcare providers to treat patients who have historically struggled with obtaining access to healthcare. Interviewees report that one of the options under consideration for home-based asthma services is implementing a program similar to Grand Aides,³¹ where “nurse extenders [like CHWs] mak[e] home visits... using portable telemedicine with established protocols connecting the patient and care team quickly and cost-effectively.” Such an arrangement would blend the strengths of CHWs, namely their cultural competency and access as members of affected communities, with the medical expertise of physicians to improve care for patients with asthma.

Lessons Learned

An important lesson learned in Delaware is that even insurer-supported programs are vulnerable to instability and cessation. When DPCI closed down in December 2014, beneficiaries were transferred to a new MCO plan, but the asthma management program was not. Despite the success of this program, other MCOs in the state have not implemented similar initiatives, in part due to the lack of information and best practice sharing between organizations.

Delaware's current efforts to implement and test its SIM Initiative, *Choose Health Delaware*, are an opportunity to engage multiple stakeholders to help design programs for patients with asthma across the state. An important goal of this work should be to facilitate forums for MCOs, other insurers, and healthcare systems to share best practices on chronic disease management, including asthma, so that innovations are diffused through the entire system, not just for select populations. Facilitating such information exchange may avoid disruptions in patient care when effective programs cease operations.

A best practice that should be shared among stakeholders is the importance of training providers to deliver home-based asthma services in a culturally appropriate manner so as to best engage patients and their families in the management of asthma in the home.

ACRONYMS

ACA	<i>Affordable Care Act</i>
CHW	<i>Community health worker</i>
DHSS	<i>Delaware Department of Health and Human Services</i>
DPCI	<i>Delaware Physicians Care, Inc.</i>
DSHP	<i>Diamond State Health Plan</i>
FFS	<i>Fee-for-service</i>
FPL	<i>Federal poverty level</i>
MCO	<i>Managed care organization</i>
NCQA	<i>National Center for Quality Assurance</i>
PCMH	<i>Patient-centered medical home</i>
PIPs	<i>Performance Improvement Projects</i>
SIM	<i>State Innovation Model</i>

DEFINITION OF SERVICES

Home-based asthma services

The original survey that formed the basis for these follow-up case studies used the *Community Guide to Preventive Services* definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation. See Appendix A of *Healthcare Financing of Healthy Homes: Findings from a 2014 Nationwide Survey of State Reimbursement Policies*² for the full definition.

About the Project

This multiyear project is working to document and demystify the landscape and opportunities surrounding healthcare financing for healthy homes services. In Year One of the project, the National Center for Healthy Housing (NCHH) conducted a nationwide survey to identify states where healthcare financing for lead poisoning follow-up or home-based asthma services was already in place or pending. In Year Two of the project, NCHH and a project team led by the Milken Institute School of Public Health conducted a series of interviews in key states identified by the survey. An interview guide was developed to ask key informants in each state questions about the extent and nature of Medicaid-supported services within the state, details of services covered, barriers to implementation, next steps for expanding services and increasing access, and lessons learned. In each state, the project team conducted interviews with at least one representative from the state Medicaid agency, a program contact in the state health department, and one to two additional stakeholders (e.g., advocates, local programs, payers, or providers). The interviews were used to develop detailed case studies to distill lessons learned in states with Medicaid reimbursement for healthy homes services, and ultimately to better equip other states in seeking reimbursement for these services.

For more information: www.nchh.org/Program/DemystifyingHealthcareFinancing.aspx.

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Asthma Case Study #2 Healthcare Financing for Healthy Homes

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For additional resources, including many of the sources cited in this document, visit www.nchh.org/resources/healthcarefinancing.aspx

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Case Studies in Healthcare Financing of Healthy Homes Services: Medicaid Reimbursement for Home-Based Asthma Services in Missouri

A large body of evidence suggests that home visiting programs addressing indoor environmental triggers (e.g., cockroaches, mice, tobacco smoke, mold) can improve asthma control, reduce asthma-related hospitalizations and emergency department visits, and provide a positive return on investment.¹ These types of services are recommended as a component of comprehensive asthma care for people with poorly controlled asthma but are not widely available and often limited in scale. However, recent changes resulting from healthcare reform have increased opportunities for states to consider more sustainable and widespread implementation. Some states have already invested heavily in developing programs, policies, and funding to increase access to these critical public health services. Yet many states may be

unsure about how to translate these evidence-based practices into policy. This case study summarizes the current healthcare financing landscape in Missouri for home-based asthma services with an emphasis on public financing. The case study is based on survey findings² and interviews with the state Medicaid agency, the state health department, and other stakeholders. It describes the current healthcare landscape, other important funding mechanisms, key barriers, and lessons learned. This information may be useful to stakeholders in other states that are seeking healthcare financing for home-based asthma or other preventing services, or for stakeholders within Missouri interested in a summary of current and future opportunities within the state.



AT A GLANCE

Medicaid Reimbursement for Home-Based Asthma Services in MO

Medicaid in Missouri

Missouri's MO HealthNet Division (MHD) provides healthcare coverage for approximately 15% of Missouri residents (926,289 people as of June 2015) through its Medicaid and CHIP programs. About 50% of Medicaid beneficiaries in Missouri receive their care through a MO HealthNet managed care plan. MO HealthNet is overseen by the Missouri Department of Social Services.

Medicaid and MCO Coverage for Home-Based Asthma Services^{a,b}

Reimbursement type (page 3): The Missouri state legislature appropriated \$400,000 for Medicaid reimbursement for home-based asthma services (asthma education and in-home environmental assessment) in the 2016 fiscal year state budget. An unexpected budgetary shortfall prevented the state from spending these funds, but the MO HealthNet Division anticipates it will be able to provide reimbursement for these services beginning July 2016.

Eligibility for services (page 3): Children with a primary diagnosis of asthma who meet the MHD definition of a youth participant with uncontrolled asthma or are at risk for an asthma attack are expected to be eligible.

Types of services covered (page 3): Services anticipated to be supported include asthma education and in-home environmental assessments.

Staffing (page 3): Services are anticipated to be provided by licensed health practitioners (e.g., physicians and nurses) who have become certified as asthma educators or home assessors.

Barriers and Next Steps for Missouri (pages 6-7)

Interviewees described a number of challenges and barriers moving forward with the proposed home-based asthma services reimbursement program, including ensuring managed care organizations network with providers to offer these services; enabling nonlicensed providers to deliver home-based asthma services, provided they have certification; lack of funding to train and certify a robust workforce of asthma educators and home assessors; lack of full-time employment opportunities for home-based asthma services providers; and uncertainty in the continuation of appropriations in the future.

Other Funding Mechanisms in Missouri (page 4-5)

A number of organizations, outside of Medicaid, have filled in gaps in home-based asthma care coverage in Missouri. These organizations rely on a variety of different funding streams to provide home-based asthma services, including private and public (both state and federal) grants.

Key Insights from Missouri (page 7)

Interviewees credit the success of the legislative effort to partnerships developed during a June 2013 regional asthma summit sponsored by the Department of Housing and Urban Development (HUD), in collaboration with the U.S. Department of Health and Human Services (HHS) and the U.S. Environmental Protection Agency (EPA). Missouri's successful efforts show the importance of bringing together stakeholders, the strength of multisector partnerships, and the power of coordinated advocacy and educational efforts.

Medicaid in Missouri

Approximately 15% of Missouri residents (926,289 people as of June 2015)³ are enrolled in the Medicaid and CHIP programs administered by the Missouri Department of Social Services' MO HealthNet Division (MHD). Missouri is one of 19 states that has not expanded Medicaid to all individuals with household incomes at or below 138% federal poverty level (FPL) under the Affordable Care Act (ACA).⁴ However, low-income individuals who do not qualify for Medicaid under current eligibility requirements may still receive MO HealthNet coverage under one of the state's Medicaid 1115 waivers.⁵

Like many other states, Missouri relies on a combination of managed care plans and fee-for-service (FFS) providers to deliver services to Medicaid beneficiaries. As of June 2015, approximately 50% of Medicaid beneficiaries in Missouri were enrolled in MO HealthNet Managed Care, the state's managed care program.⁶ Participation in managed care is mandatory for certain eligibility groups (e.g., parents/caretakers, children, and pregnant women)⁷ and regions (e.g., along the I-70 corridor)⁸ within the state.^{9, 10, 11, 12}

The state is currently exploring shifting an additional 200,000 FFS Medicaid beneficiaries to managed care.^{13, 14, 15} Although the state legislature originally set a target of June 1, 2016, to begin the managed care transition, the transition may happen more gradually

^a Information in this case study is based on responses to both the interview questions and responses to a 2014 survey (www.nchh.org/Resources/HealthcareFinancing/Snapshot.aspx). Information from the state legislature appropriations process was not available at the time of the original survey.

^b For the purpose of the original survey and the follow-up interviews and case studies, home-based asthma services were defined according to the Community Guide to Preventive Services definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation.

due to various budgetary and political factors. The state has convened a task force to determine the most effective transition plan and whether this transition remains the most appropriate course of action to provide care for state Medicaid beneficiaries.^{16, 17}

Medicaid and MCO Coverage for Home-Based Asthma Services^b

In Missouri, asthma is the most commonly diagnosed chronic condition among children hospitalized, with more than 304,000 children treated for it in 2014.¹⁸ These children visit the emergency department for asthma-related distress at a rate three times higher than their alternatively insured counterparts¹⁹ and cost MO HealthNet approximately \$6,069,000 in 2010.²⁰ Despite this burden, Medicaid-supported coverage of home-based asthma interventions has not been available. Interviewees report that, historically, there has been no coverage under FFS Medicaid for these types of services and that none of the three Medicaid managed care organizations (MCOs) currently operating in the state offer beneficiaries access to home-based asthma services. Interviewees are aware of only one MCO in the state that had provided some level of coverage for home-based asthma services in the past (see *Children's Mercy* description below). These reports echo results from a 2014 survey conducted by the National Center for Healthy Housing and the Milken Institute School of Public Health.²¹

Missouri has recently made great strides toward ensuring that vulnerable populations have access to asthma services in their homes. In the spring of 2014, the Missouri legislature passed an appropriations bill for FY 2015 that budgeted \$524,033 for MO HealthNet to provide reimbursement for asthma services, including asthma education and in-home environmental assessment.²² This funding was ultimately cut when Missouri's governor reduced the state's FY 2015 budget by \$275.7 million in the setting of budgetary constraints.²³ Despite this setback, stakeholders continued to advocate for Medicaid reimbursement of home-based asthma services. As a result, the state legislature appropriated \$400,000 in the state's FY 2016 budget (beginning July 1, 2015) for MO HealthNet to provide specific reimbursement for asthma services, including services in home settings.²⁴ Reportedly, MO HealthNet is in the process of developing the necessary administrative tools and infrastructure needed, and asthma education and in-home environmental assessment services are expected to be available under the MO HealthNet program beginning July 2016.

What home-based asthma services will be provided under the new law?

The MO HealthNet Division anticipates it will have the ability to cover asthma education and in-home environmental assessments for youth participants that qualify for these services. These services may take the form of in-home preventive medicine counseling for risk reduction, in-home self-management education sessions, in-home inhalation instructions for medical devices, and home environmental visits for asthma trigger abatement.

These services are not specifically outlined in the appropriations bill or otherwise by Medicaid, and it remains to be seen what will be covered if and when the budget stream is in effect.

What patient populations will be eligible to receive home-based asthma services through Medicaid?

The appropriations bill does not specifically define who would become eligible for receiving asthma services once the budget dollars become available. According to interviewees, in order to qualify for and receive the anticipated home-based asthma services, the participant would need meet the following conditions:

- A primary diagnosis of asthma; and
- MHD definition of a youth participant with uncontrolled asthma or at risk for an asthma attack.

MHD plans to look at emergency department utilization, hospital utilization, urgent care utilization, and medication adherence and possession ratios to define this population further. Interviewees estimate that 4,000 children in Missouri would meet these eligibility requirements.

What types of providers will be eligible to provide home-based asthma services? How will these professionals be trained to address asthma triggers in the home?

The MO HealthNet Division anticipates that licensed health practitioners (e.g., physicians and nurses) who have become certified as asthma educators or home assessors will be considered qualified to seek reimbursement from Medicaid to provide home-based asthma services. The state plans to define *asthma educators* as licensed health practitioners with a state certification from an accredited Missouri training program in asthma education or a current and active National Asthma Educator Certification (AE). The state plans to define *home assessors* as licensed health practitioners with a state certification from an

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accredited Missouri training program or a national certification such as the National Environmental Health Association's (NEHA) Healthy Home Specialist.

The proposed FY 2016 state budget does not explicitly limit eligible providers to licensed health practitioners. This flexibility in the budget potentially means that community health workers or other nonlicensed providers who have certification as a home assessor and/or asthma educator could seek Medicaid reimbursement for providing these services to eligible patient populations. MHD is currently piloting the utilization of community health workers (CHWs) in its Primary Care Health Home Program.²⁵ Additionally, MHD is working with sister agencies on CHW initiatives and looking into the benefits of utilizing CHWs more broadly in the MO HealthNet program with the possibility of reimbursing them for their services in the future. However, other regulatory changes would need to happen at the state level for these types of providers to participate in the provision of home-based asthma services (further discussion on this issue in the "Barriers" section, page 6).

Several organizations that have participated in MHD's work group on home-based asthma services have had their own certification processes in place for a number of years. Specifically, the Institute for Environmental Health Assessment and Patient Centered Outcomes has a certification process for home assessment, and the University of Missouri's *Asthma Ready® Communities* has its own certification process for asthma education (both are discussed in more detail below). Both organizations plan to formalize these certification processes into institutional certifications to meet the criteria for state-level training certification. MHD is currently outlining criteria for partner institutions to provide administrative support to new asthma education and home assessment programs and both organizations plan to work to meet these criteria. Furthermore, MHD anticipates the Institute for Environmental Health Assessment and Patient Centered Outcomes and the University of Missouri's *Asthma Ready® Communities* Program will be responsible for maintaining a database of all of those certified to help physicians and other providers in the state make appropriate referrals for home-based asthma services.

Other Mechanisms for Funding Home-Based Asthma Services, Outside of Medicaid

As Medicaid support for home-based asthma services is currently very limited, programs that deliver these services for Medicaid-eligible patients rely on other public and private funding streams or innovative partnerships to ensure program sustainability.

PLANNED DEFINITIONS:

asthma educators - licensed health practitioners with a state certification from an accredited Missouri training program in asthma education or a current and active National Asthma Educator Certification (AE).

home assessors - licensed health practitioners with a state certification from an accredited Missouri training program or a national certification such as the National Environmental Health Association's (NEHA) Healthy Home Specialist.

According to interviews, many programs across the state that perform home-based asthma work are funded, or have been funded in the past, by state- or private foundation-sponsored grants. Programs and initiatives currently in place include:

Children's Mercy Hospital: Children's Mercy Hospital in Kansas City, Missouri, runs the Healthy Home Program, which helps to identify and reduce environmental exposures in the home that may cause or worsen respiratory health problems, including asthma. The program provides a number of services, including:

- General indoor air quality checkup;
- Moisture assessment;
- Dust and allergens assessment;
- Safety and injury prevention checkup;
- Household product use and storage; and
- Recommendations for improving home environment and health.

The Healthy Home Program has been a leader in providing home-based asthma services in Missouri since 1995. The program receives approximately 25 referrals for home-based asthma services each month from hospital physicians and practitioners at specialty asthma/allergy clinics in the region. The Healthy Home Program has also developed best practices for providers interested in helping patients reduce exposure to asthma and allergy triggers in their homes.^{27, 28, 29}

Children's Mercy has relied on grant funding from a number of sources – including the Robert Wood Johnson Foundation, the Centers for Disease Control and Prevention (CDC), and the Department of Housing and Urban Development (HUD) – to cover the costs of home-based interventions.³⁰ Interviewees report that Children's Mercy was occasionally able to secure reimbursement from Family Health Partners, a Medicaid MCO that Children's Mercy owned and operated between 1996 and 2011,³¹ by recognizing

that these services could benefit the patient and reduce ER/hospital utilization. However, Family Health Partners' commitment to paying for asthma services in the home was never consistent, and the program has not been successful in engaging other MCOs in the state in reimbursement discussions.

The Institute for Environmental Health Assessment and Patient Centered Outcomes: The Institute for Environmental Health Assessment and Patient Centered Outcomes, part of the Center for Environmental Analysis at Southeast Missouri State University, is a program that conducts home environmental assessments for high-risk asthma patients. The Institute targets its services toward those patients frequently utilizing healthcare services for their asthma (as evidenced by factors such as ER visits), but will serve any patient who is referred. Approximately 100 individuals receive the program's services each year. Program participants are eligible for a two-hour home assessment that includes interviews with the family, home allergen assessment, and air quality testing. Each home assessment costs approximately \$204, the costs are covered with state and federal public health funding.

Preliminary data show the success of the Institute's program. According to interviewees, individuals who go to the hospital for asthma-related distress are readmitted to the hospital at a rate of 92 per 100, whereas program participants are readmitted at a rate of just 13 per 100. At \$408 per emergency department admission, the return on investment for the Institute's home assessment program is substantial.

Based on this success, the Institute is in talks with MHD to formalize its certification process for environmental home assessors and maintain a database of those certified (regardless of whether an individual was certified by the Institute, another state certification program, or a national program). This database is intended to help physicians in the state make appropriate referrals for home-based asthma services.

Missouri Foundation for Health: The Missouri Foundation for Health (MFH) is the largest healthcare foundation in the state of Missouri.³² Among its many activities, the foundation provides grants to supplement the activities of governmental and nongovernmental health organizations to make improvements in health among underserved populations throughout Missouri.³³ The foundation has provided grants to the St. Louis Health Department to perform approximately 30 home environment assessments by city employees each year.³⁴ Patients are typically referred to the program by a federally qualified health center.

Childhood Asthma Linkages in Missouri (CALM) is an ongoing MFH project that began in 2007. The program seeks to expand evidence-based services available to school-age children with asthma in 14 different urban and rural sites across Missouri.³⁵ CALM supports hospitals, school districts, and university-based health centers in developing and implementing community-based approaches to building linkages among those responsible for childhood asthma treatment and care.³⁶ While some grantees have opted to implement home visits and environmental assessments to identify asthma triggers, other interventions include those targeting students (whether through general education or targeted student education), community and media outreach, and training and education for providers including nurses, physicians, and school faculty.³⁷

Overall, the program has been successful at improving coordination of care for children with asthma, increasing awareness about asthma, and improving access to resources like medications and devices to help mitigate asthma.³⁸ Additionally, while only 54% of children participating in CALM interventions reported having well-controlled asthma at the start of the intervention, this rate increased to 77% 12 months after completing the program.³⁹ This improved control has real-world implications. Students who participated in CALM interventions:

- missed fewer days of school overall and fewer days due to asthma after the intervention,
- decreased emergency room and urgent care visits post-intervention, and also
- decreased use of certain types of asthma medication decreased.⁴⁰

Missouri Asthma Prevention and Control Program (MAPCP): The Missouri Department of Health and Senior Services (DHSS) established MAPCP in 2001 with funding from the CDC's National Asthma Control Program (NACP).⁴¹ The CDC's \$3.4 million investment in MAPCP over the first decade of the program's existence has generated more than \$20 million in investments from other stakeholders in pursuance of improving asthma care.⁴² In the latest grant cycle, which began September 1, 2014, NACP awardees were asked, among other things, to strengthen and expand asthma control efforts in home settings and to work with healthcare organizations to promote coverage for and utilization of comprehensive asthma control services including home visits. NACP asks health departments to work on expansion of home-based asthma strategies in the context of health reform, and in partnership with health systems, health insurers, and other stakeholders.

The MAPCP's "enviro-clinical" approach acknowledges

the dual fronts of asthma treatment in both clinical and home settings and informs MAPCP's mission to obtain reimbursement from public and private insurers for asthma education and trigger abatement.⁴³ The MAPCP has trained more than 1,000 individuals in the delivery of evidence-based asthma services to improve outcomes. Claims data suggest this evidence-based training has effectively reduced asthma-related healthcare costs.⁴⁴ Additionally, MAPCP works with the University of Missouri Asthma Ready® Communities Program (described below) to train school nurses in evidence-based asthma management through a program called Teaming Up for Asthma Control.⁴⁵

The MAPCP also established the *Missouri Asthma Coalition (MAC)*, which partners with hospital systems, healthcare providers, local health departments, community health centers, and state and local educational administrators to aid in providing comprehensive asthma management services.⁴⁶

Asthma Ready® Communities: Asthma Ready® Communities (ARC) is a program run by the division of Pulmonary Medicine and Allergy in the Department of Child Health at the University of Missouri's School of Medicine that seeks to prepare healthcare professionals and facilities to provide care consistent with the *Guidelines for the Diagnosis and Management of Asthma: Expert Panel Report 3* for pediatric asthma patients and their families. These guidelines encourage healthcare providers to provide patients with asthma self-management education both in clinical and nonclinical settings, as well as education on environmental control and trigger abatement.⁴⁷ ARC offers a number of training programs including *Teaming Up for Asthma Control*, a 2.5-hour online training for school nurses in asthma management.⁴⁸ Moving forward, ARC is preparing to take on certifying asthma educators so that they may receive reimbursement for provision of home-based asthma services, specifically for asthma education, from MO HealthNet.

BREATH: The Asthma and Allergy Foundation, St. Louis Chapter's flagship program called *Bridging Resources to Encourage Asthma Treatment and Health (BREATH)* provides prescription assistance, durable medical equipment (such as nebulizer machines and peak flow meters), bed casings, self-management education, and support to eligible children who have been diagnosed with asthma. Children must be under 22 years of age with a family income below 200% of the FPL (\$48,500 for a family of four)⁴⁹ and live in one of the participating Missouri counties. Assistance is provided on a first-come, first-served basis contingent on available funding. The Asthma and Allergy Foundation, St. Louis Chapter

works closely with pediatric hospitals in St. Louis to deliver these services.

Barriers to Implementing Home-Based Asthma Services within Medicaid

Ensuring MCO Engagement. Managed care is already an important source of coverage for beneficiaries in Missouri, and if the state moves forward with plans to transition additional populations into managed care, MCOs stand to become the primary providers of asthma services for Medicaid-enrolled individuals. Interviewees describe the continued advocacy work that needs to be done to encourage MCOs to offer home-based asthma services. MO HealthNet anticipates that the services will be available in both the managed care and FFS programs. By providing a dedicated funding stream, proponents of the appropriations measure hope that the budget will give MCOs an incentive to address asthma more effectively. However, interviewees expressed concern that MCOs may overlook this opportunity given other priorities.

Interviewees also recognize the advocacy work needed to get MCOs to include certified home assessors and certified asthma educators within their provider networks. MCOs have the flexibility to network with providers trained through one of Missouri's certification programs, but MCOs may train their own providers to deliver home-based asthma services. All providers will be required to meet anticipated state requirements as part of the MO HealthNet program. Interviewees describe the advocacy efforts underway to ensure that MCOs accept the certifications offered in the state, rather than designing their own training programs, which may not be evidence-based.

Home Assessors and Asthma Educators Not Currently Eligible for Medicaid Reimbursement. Despite flexibility under the FY 2016 appropriations language for nonlicensed health professionals (i.e., community health workers or other nonlicensed providers certified as home assessors or asthma educators) to provide asthma services, existing state law does not allow for these nonlicensed professionals to seek Medicaid reimbursement. However, Missouri, like many states, is engaging in discussions about how to adopt and implement a new federal Medicaid rule change that allows state Medicaid programs to cover and pay for preventive services provided by professionals that may fall outside of a state's clinical licensure system, so long as the services have been initially recommended by a physician or other licensed practitioner. This federal rule change means that, for the first time, asthma educators and home assessors may seek FFS Medicaid reimbursement.

Interviewees viewed this movement to use nonlicensed health professionals – and the work the state will need to do to develop the State Plan Amendment (SPA) required to implement this rule change – as an integral step in legitimizing and sanctioning asthma educators and home assessors as qualified to provide patients with home-based asthma services. However, it remains unclear if the state will pursue a SPA, especially given the state’s general lack of commitment to system changes spurred by the Affordable Care Act.

Education Needed for Physicians and Other Licensed Health Practitioners. Under the recent federal Medicaid rule change, nonlicensed health professionals (including home assessors and asthma educators) cannot seek Medicaid reimbursement for providing preventive services unless a physician or other licensed practitioner makes an initial patient referral for such services. Interviewees expressed concern that physicians, nurses, and other licensed health practitioners (1) may not understand the value of services that can be provided by certified home assessors and certified asthma educators; and/or (2) may not know how to access the state databases that exist to help licensed health practitioners identify these professionals. There may be a significant need to educate healthcare practitioners so that they make appropriate referrals to home-based asthma services.

Lack of Funding for Training and Certifying a Healthy Homes Workforce. As described above, funding for asthma services appropriated under the state’s budget requires providers to hold a clinical license or a certification as a home assessor or asthma educator. There is some concern among interviewees that there is not currently a sufficient workforce trained and certified to provide such services should funding become available. The new law does not appropriate funding for training and certification, so there may be gaps in patient access to care, especially in regions of the state that do not already have asthma programs in place.

Lack of Full-Time Employment Opportunities. The asthma educators and home assessors potentially eligible to receive funding for providing home-based asthma services under Medicaid may not be able to rely on this as a sole occupation; for many providers, this may be a supplementary job given low pay or inconsistent referrals. Interviewees cautioned that this reality may mean that there are fewer dedicated professionals willing to become certified or maintain certification.

Uncertainty of Continued Appropriations Going Forward. Even if Missouri’s governor were to release the funding for asthma services currently withheld due to the ongoing tobacco litigation, the continued

availability of this funding is not guaranteed beyond FY 2016. Those at the MO HealthNet Division plan to continue reimbursement for home-based asthma services if and when the program launches, but other interviewees described the advocacy that will be required to maintain this budget line year after year. An additional concern is that there is no way of knowing how many eligible patients will need – or have access to – the asthma services envisioned by the law in a given year. Should fewer than \$400,000 worth of services be reimbursed in a fiscal year, it is not clear how this would affect the funding amount for subsequent years.

Thus, the public health impact of Medicaid funding for home-based asthma services will rely heavily on two major issues: (1) whether MCOs in the state elect to offer these services to their plan enrollees and (2) how frequently physicians and other licensed practitioners can identify and connect eligible patients to home-based asthma service providers.

Lessons Learned

While unrelated legal challenges have recently stymied efforts to bring home-based asthma services to Medicaid beneficiaries, Missouri’s passage of a budget to specifically fund home-based asthma services is a success story. Interviewees credit the success of this legislative effort to partnerships developed during a June 2013 regional asthma summit sponsored by the Department of Housing and Urban Development (HUD), in collaboration with the U.S. Department of Health and Human Services (HHS) and the U.S. Environmental Protection Agency (EPA).⁵⁰ This summit was designed to promote the value of home-based interventions in the homes of children with poorly controlled asthma and to accelerate the creation of reimbursement mechanisms by local/regional health insurance providers. Post-summit, a group of stakeholders led by the Asthma and

Missouri’s successful efforts show the importance of bringing together stakeholders, the strength of multisector partnerships, the power of coordinated advocacy and educational efforts, and the compelling evidence base showing the return on investment of home-based asthma services.

Allergy Foundation, St. Louis Chapter developed a plan to influence funding bills through the state's annual appropriations process, leading to the recent appropriation.

Missouri's successful efforts show the importance of bringing together stakeholders, the strength of multisector partnerships, the power of coordinated advocacy and educational efforts, and the compelling evidence base showing the return on investment of home-based asthma services. However, the recent setbacks toward accessing Medicaid funds appropriated for home-based asthma services is a reminder of the uncertainty of the budgetary process and the need for continued advocacy to push Medicaid and MCOs to invest in asthma management.

ACRONYMS

ACA	<i>Affordable Care Act</i>
ARC	<i>Asthma Ready Communities®</i>
BREATH	<i>Bridging Resources to Encourage Asthma Treatment and Health</i>
CALM	<i>Childhood Asthma Linkages in Missouri</i>
CHW	<i>Community health worker</i>
DHSS	<i>Missouri Department of Health and Senior Services</i>
FFS	<i>Fee-for-service</i>
FPL	<i>Federal poverty level</i>
MAC	<i>Missouri Asthma Coalition</i>
MAPCP	<i>Missouri Asthma Prevention and Control Program</i>
MCO	<i>Managed care organization</i>
MFH	<i>Missouri Foundation for Health</i>
MHD	<i>Missouri Department of Social Services' MO HealthNet Division</i>
NACP	<i>CDC's National Asthma Control Program</i>
SPA	<i>State Plan Amendment</i>

DEFINITION OF SERVICES

Home-based asthma services

The original survey that formed the basis for these follow-up case studies used the *Community Guide to Preventive Services* definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation. See Appendix A of *Healthcare Financing of Healthy Homes: Findings from a 2014 Nationwide Survey of State Reimbursement Policies*² for the full definition.

About the Project

This multiyear project is working to document and demystify the landscape and opportunities surrounding healthcare financing for healthy homes services. In year one of the project, the National Center for Healthy Housing (NCHH) conducted a nationwide survey to identify states where healthcare financing for lead poisoning follow-up or home-based asthma services was already in place or pending. In year two of the project, NCHH and a project team led by the Milken Institute School of Public Health conducted a series of interviews in key states identified by the survey. An interview guide was developed to ask key informants in each state questions about the extent and nature of Medicaid-supported services within the state, details of services covered, barriers to implementation, next steps for expanding services and increasing access, and lessons learned. In each state, the project team conducted interviews with at least one representative from the state Medicaid agency, a program contact in the state health department, and one to two additional stakeholders (e.g., advocates, local programs, payers, or providers). The interviews were used to develop detailed case studies to distill lessons learned in states with Medicaid reimbursement for healthy homes services, and ultimately to better equip other states in seeking reimbursement for these services.

For more information: www.nchh.org/Program/DemystifyingHealthcareFinancing.aspx.

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Asthma Case Study #5 Healthcare Financing for Healthy Homes

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For additional resources, including many of the sources cited in this document, visit www.nchh.org/resources/healthcarefinancing.aspx

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Case Studies in Healthcare Financing of Healthy Homes Services: Medicaid Reimbursement for Home-Based Asthma Services in New York

A large body of evidence suggests that home visiting programs that address indoor environmental triggers (e.g., cockroaches, mice, tobacco smoke, and mold) can improve asthma control, reduce asthma-related hospitalizations and emergency department visits, and provide a positive return on investment.¹ These types of services are recommended as a component of comprehensive asthma care for people with poorly controlled asthma but are not widely available and often limited in scale. However, recent changes resulting from healthcare reform have increased opportunities for states to consider more sustainable and widespread implementation. Some states have already invested heavily in developing programs, policies, and funding to increase access to these critical public health services.

Yet many states may be unsure about how to translate these evidence-based practices into policy. This case study summarizes the current healthcare financing landscape in New York for home-based asthma services with an emphasis on public financing. The case study is based on survey findings² and interviews with the state Medicaid agency, the state health department, and other stakeholders. It describes the current healthcare landscape, other important funding mechanisms, key barriers, next steps, and lessons learned. This information may be useful to stakeholders in other states that are seeking healthcare financing for home-based asthma or other preventive services, or for stakeholders within New York State interested in a summary of current and future opportunities within the state.



AT A GLANCE

Medicaid Reimbursement for Home-Based Asthma Services in NY

Medicaid in New York

The New York State Department of Health's (NYSDOH) Medicaid program, the nation's largest by expenditure, began enrolling certain Medicaid-eligible populations in managed care in 1997. Over time, the state has transitioned additional populations to managed care. All 62 counties in New York have implemented a mandatory managed care program for certain beneficiary populations. Approximately 72% of beneficiaries are enrolled in a managed care plan as are over 92% of children and nondisabled adults.

Medicaid and MCO Coverage for Home-Based Asthma Services^{a,b}

Reimbursement type (page X): While some MCOs report providing home-based asthma services, there is no statewide Medicaid benefit for these interventions. The state's Medicaid program only explicitly covers *clinical* interventions for asthma under its fee-for-service (FFS) benefits and does not require that MCOs provide these services. However, interviewees noted that managed care plans can still elect to cover and provide home-based asthma services, and multiple MCOs in the state currently or have previously done so. At least one MCO covered these services as an administrative expense; most have provided them through partnerships or referrals to local health departments or community agencies or organizations, meaning that NYSDOH Medicaid does not reimburse MCOs directly for these services. Finally, through an 1115 Medicaid waiver approved in 2014, the state is reinvesting savings generated by healthcare reform into a Delivery System Reform Incentive Payment (DSRIP) program, which is funding seven projects across the state to provide home-based asthma services.

Geographic coverage (page X): Limited: Only a few MCOs cover or have previously covered some home-based asthma services.

Eligibility for services (page X): Adults and children, generally targeted towards higher-risk members.

Types of services covered (page X): Generally limited to self-management education, education about triggers in the home environment, visual assessments, and referrals to specialists or other community-based services and supports.

Staffing (page X): Nurses, respiratory therapists, other licensed professionals certified as asthma educators, and non-licensed outreach workers. Many of the pending DSRIP initiatives have proposed using community health workers (CHWs) to deliver services.

Barriers and Next Steps for New York (pages 6-8)

Interviewees described a range of barriers to increasing the number of MCOs that provide home-based asthma services, including a need for economic evaluations that use a payer perspective, lack of infrastructure for delivering services, inconsistencies in provider referrals, restrictions on payments for asthma educators, Medicaid policy restrictions, and nonstandardized training for providers. Moving forward, seven DSRIP-funded projects have designed projects to address home-based asthma services that, if successful, could become part of broader implementation across the state.

Other Funding Mechanisms in New York (page 5-6)

As Medicaid support for home-based asthma services is limited, many programs across the state rely on other public and private funding streams (such as state or private foundation grants) or innovative partnerships to ensure program sustainability.

Key Insights from New York (page 8-9)

Foundation dollars have been valuable in spurring MCOs in New York to invest in asthma management initiatives; these resources have pushed MCOs to focus on asthma and provide an opportunity to learn whether home-based asthma programs lead to a positive return on investment. State-funded initiatives, ranging from quality incentive payments for managed care organizations to the state-funded Healthy Neighborhoods Program and regional asthma coalitions, have also provided critical resources. To spur innovation, provide services in high-risk communities, and generate evaluation data. Finally, the DSRIP process is encouraging the development of innovative collaborations which may lead to successful payment models of interest to MCOs across the state.

Medicaid in New York

In New York State, the Medicaid program is administered by the Office of Health Insurance Programs, within the New York State Department of Health (NYSDOH). The state's Medicaid program, the nation's largest by expenditure, began enrolling certain Medicaid-eligible populations in managed care in 1997. Over time, the state has transitioned additional populations to managed care. All 62 counties in New York, including the five counties that make up New York City, have implemented a mandatory managed care program for certain beneficiary populations. Populations covered by managed care vary from county to county, but the majority (approximately 72%) of beneficiaries in the state are enrolled in a managed care plan (as of August 2015, just over 4.6 million individuals were enrolled in an MCO out of approximately 6.4 million total Medicaid/CHIP beneficiaries).^{3,4} Over 92% of children and nondisabled adults are enrolled in an MCO plan.⁵

^a Information based on responses to both the interview questions and responses to the original 2014 survey (www.nchh.org/Resources/HealthcareFinancing/Snapshot.aspx).

^b For the purpose of the original survey and the follow-up interviews and case studies, home-based asthma services were defined according to the Community Guide to Preventive Services definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits, and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation.

While one-third of beneficiaries – more commonly referred to as “members” in New York State – currently receive services through fee-for-service (FFS) arrangements, the trend in New York is toward managed care. As the state implements the recommendations of the NY State Medicaid Redesign Team (MRT; described in further detail below) more Medicaid-eligible populations in the state will be transitioned into specialized managed care arrangements with the goal of “care management for all.”^{6, 7} By eliminating exemptions and exclusions for special populations not previously subject to mandatory managed care enrollment and by shifting services that have remained outside of managed care benefit packages (such as pharmacy benefits) into the capitated plan rates, the state will move most Medicaid beneficiaries and services remaining in FFS into some form of managed care.^{8, 9} Ultimately, New York aims to enroll 95% of the Medicaid population in managed care by 2018, with certain very limited populations remaining in FFS.¹⁰

Medicaid and MCO Coverage for Home-Based Asthma Services^b

As reported in a 2014 survey conducted by the National Center for Healthy Housing and the Milken Institute School of Public Health, Medicaid-supported coverage of home-based asthma services exists in New York but is limited in scale.

Given that almost all Medicaid beneficiaries are enrolled in managed care, or will be by 2018, MCOs in New York are the primary providers of asthma services. At minimum MCOs in New York are required to cover that which is covered under FFS Medicaid. There is no benefit under FFS for home-based asthma interventions; Medicaid only covers *clinical* interventions for asthma, with referral to a health department or community agency for home assessment, in accordance with guidelines developed by the *NYS Consensus Asthma Guideline Expert Panel*.^{11, 12}

Without any FFS requirement for home-based asthma coverage, MCOs in the state are not obligated to provide these services, and NYSDOH does not otherwise require, through the managed care contracting process, that MCOs address management of home-based asthma triggers. MCOs can offer

benefits beyond FFS requirements, but these benefits are counted as an administrative expense.^c While a few MCOs partner with home care agencies that provide in-home asthma management services for high-risk patients, interviewees were able to provide detail about only one MCO – *YourCare Health Plan run by Monroe Plan for Medical Care* (see text box) – that covers comprehensive home-based asthma services (i.e., those that include home environmental assessments). One interviewee noted an awareness of MCOs that reported having a policy to cover home-based asthma services but lacked an infrastructure to deliver services or refer patients to established programs. However, covering services through administrative expenses or referrals and partnerships with community-based organizations means that, although there is some coverage of home-based asthma services in New York, Medicaid does not directly reimburse for these expenses.

Although NYSDOH does not promote home-based asthma interventions under managed care, it has previously supported asthma quality improvement initiatives. All MCOs are required to conduct one Performance Improvement Project (PIP) annually in a priority topic area. In the past, NYSDOH has encouraged plans to focus on reducing disparities in asthma care and preventing avoidable hospital readmissions.¹³ At least one MCO used quality incentive support to expand the geographic scope of their home-based asthma services.¹⁴ While these types of projects have not focused exclusively on services in the home, NYSDOH has held conferences on asthma to present data from this work facilitating the sharing of best practices among MCOs on successful quality improvement initiatives related to asthma, including home-based asthma services.¹⁵

What home-based asthma services are provided?

According to interviewees, most MCOs in the state do not provide services for asthma management beyond clinical asthma education and referrals to community-based organizations for additional community-based care.¹⁶ A few MCOs partner with home care agencies to provide members with high-risk asthma access to asthma management services in their homes, but these programs do not always include environmental assessment of asthma triggers. For example, in 2014,

^c Medicaid MCO program costs can be classified as a medical service or administrative expense. Medical services are reimbursable by Medicaid and include the various clinical services offered by physicians and other practitioners in health centers, laboratories, and in inpatient/outpatient hospital settings. Administrative expenses cover nonmedical activities important for MCO operations, such as enrollment, advertising, claims processing/billing, and patient grievances/appeals. These types of services are paid for from plan revenue. Administrative expenses also include medical management services and quality improvement activities, such as coordinating and monitoring services for Medicaid recipients. Home-based asthma interventions often fit this category of plan spending. An MCO may be motivated to cover certain medical management services and quality improvement activities under its administrative budget (in other words, investing what would otherwise be profit back into patient care) if these services save it significant dollars elsewhere, such as by reducing urgent care costs.

Affinity Health Plan started a pilot asthma initiative in partnership with a home care agency to offer two in-home asthma visits to high-risk asthma patients; these visits are limited to education on medication and asthma action plan adherence, and the pilot does not include home environmental assessment.¹⁷

Under the original Monroe Plan for Medical Care's/YourCare Health Plan's (Monroe/YourCare) asthma management program, more comprehensive coverage for home-based asthma interventions is part of the model, including home environmental assessment. The services supported by this model focuses on asthma self-management education, home assessment to identify asthma triggers and discuss mitigation strategies, and referrals to specialists or other community-based services and supports.

Interviewees were not aware of instances in which MCOs have covered, or Medicaid has otherwise reimbursed for, supplies or remediation services needed to mitigate asthma triggers in the home. While the Monroe/YourCare model does not offer environmental mitigation services, the plan will be providing some of those services through its social financing project (see text box), but this effort is funded through private foundation dollars and not with Medicaid funding.

What patient populations are eligible to receive home-based asthma services through Medicaid?

According to interviewees, where asthma disease management services are available, most MCOs in New York require pre-authorization with a clearly defined need, for example hospitalization or re-hospitalization for poorly controlled asthma, and/or non-compliance with an asthma action plan. For example, members are identified for participation in Affinity Health Plan's pilot asthma initiative (described above) if they have paid claims associated with an asthma diagnosis and have had at least one asthma-related emergency department or inpatient admission in the last two years.

What types of providers are eligible to provide home-based asthma services? How are these professionals trained to address asthma triggers in the home?

In New York, nursing professionals are the frontline of home-based asthma services. Where MCOs partner with home care agencies for home-based asthma management, services are provided by a licensed registered nurse (RN), a nurse with bachelor's degree (BSN), or a licensed respiratory therapist. Where hospitals work to address asthma under community benefit obligations (see further description below), hospital systems deploy nurses into home settings. Interviewees are only aware of at least one

circumstance (Monroe Plan for Medical Care, see text box) where nurses team with nonlicensed outreach workers to deliver home-based asthma services to Medicaid recipients. Other non-Medicaid programs that offer home-based asthma services (see further descriptions below) employ an array of nonlicensed professionals, including environmental health specialists, sanitarians, health educators, community health workers, and other public health professionals, and most of the pending DSRIP initiatives include community health workers (CHWs) as part of the proposed care team.

For some MCOs, nurses and other licensed professionals providing asthma management services may be required to become Certified Asthma Educators (AE-Cs), and/or they may receive training on home-based asthma management through a program led by a NYS-funded regional asthma coalition or a public health department.¹⁸ New York was the first state to enact payment for AE-Cs to provide asthma education. However, only nurses, respiratory therapists, or other New York State-licensed professionals (such as pharmacists or physicians) are eligible for reimbursement in the state and education must be provided in the clinical setting.¹⁹

Other Mechanisms for Funding Home-Based Asthma Services, Outside of Medicaid

As Medicaid support for home-based asthma services is limited, programs that deliver these services for Medicaid-eligible patients rely on other public and private funding streams or innovative partnerships to ensure program sustainability. According to interviews, many programs across the state that perform home-based asthma work are funded or have been funded in the past by state or private foundation-sponsored grants. Selected examples include:

- *Little Sisters of the Assumption Family Health Service (LSA)* operates a home-visiting program to combat high-risk asthma in East Harlem, New York. In the 12-month program, CHWs conduct home environmental assessments, providing families in need with equipment (e.g., HEPA filters and safe cleaning products) and some remediation services, including mold abatement and integrated pest management services.²⁶ Like other similar programs in the state, LSA is funded with a combination of federal and private grant funding.
- *Foundation dollars* have also supported MCOs in the state to offer more comprehensive asthma services. In 2001, the Robert Wood Johnson Foundation (RWJF) supported five MCOs, including three in New York State (Affinity Health Plan, HealthNow NY, and Monroe Plan/YourCare), with three-year grants to collaborate with local health



MONROE PLAN FOR MEDICAL CARE'S YOURCARE HEALTH PLAN: Improving Asthma Care for Children

Interviewees cite the Monroe Plan for Medical Care/YourCare Health Plan (Monroe Plan/YourCare) as demonstrating best practices in asthma management programs. The program targets members with moderate-to-severe asthma and offers comprehensive education and home assessment for patients: Culturally competent outreach workers visit children and adults in their homes to conduct an assessment to identify asthma triggers and discuss mitigation strategies, and nurses provide follow-up education with patients as needed to reinforce clinical recommendations.²⁰ The program also offers asthma management education to healthcare providers and gives assistance to providers in creating asthma action plans for patients.

Before implementing their disease management program, Monroe Plan/YourCare participated first in *Improving Asthma Care for Children*, a program sponsored by the Robert Wood Johnson Foundation (RWJF) in 2001,²¹ and then in the *Business Case for Quality*, a demonstration project developed by the Center for Health Care Strategies and funded by RWJF and The Commonwealth Fund in 2004.²² Using quality incentive support from the NYSDOH Medicaid program, Monroe/YourCare was able to take lessons learned from these pilot projects to develop a comprehensive asthma management strategy and expand the geographic scope of their home-based asthma service. Monroe/YourCare's intervention has successfully reduced asthma-related acute care among members with pediatric asthma: Over the first three years of the program, ER visits decreased from 1.1 visits per person to .95 visits per person; inpatient admissions decreased from 98.3 admissions per thousand to 84.15 per thousand.²³ In 2008, the U.S. Environmental Protection Agency recognized the Monroe Plan with the National Environmental Leadership in Asthma Management Award.²⁴

Monroe Plan has recently undergone administrative changes that impact its program's reach. For 27 years, Monroe Plan, an independent practice association, partnered with Excellus BlueCross BlueShield to administer Excellus' Medicaid managed care and Child Health Plus programs to enrollees in Rochester and the Finger Lakes and Southern Tier regions in upstate New York. As of August 1, 2015, Monroe Plan and Excellus BCBS ended their relationship, and Monroe no longer administers Excellus' plans.²⁵ Currently, the plan Monroe Plan offers its asthma care program as YourCare Health Plan, a prepaid health services plan that provides Medicaid managed care and Child Health Plus programs to approximately 55,000 enrollees in Buffalo and the Western New York region.

With the coming implementation of New York State's Health Homes Designated to Serve Children program, Monroe/YourCare's model will be undergoing some modification to enhance the coordination of outreach activities with the children's health homes and other community agencies in order to minimize member confusion and the redundancy of services. Through the change, the Monroe Plan/YourCare has continued its asthma initiative and intends to distinguish itself again as a large and robust program. Monroe is currently participating in a feasibility study in the Buffalo region to determine whether and how to implement a social impact financing model for asthma that would offer home assessment as well as trigger remediation (see description below).

systems and community-based organizations to spur innovative asthma management practices, including healthy homes components.²⁷ Affinity Health Plan and Monroe Plan participated in a second round of RWJF funding in 2004 (the *Business Case for Quality*, see text box). Affinity Health Plan and Monroe Plan/YourCare have both continued to focus on lessons learned from these pilot programs (with Monroe's approach being much more comprehensive than the current approach by Affinity, as described elsewhere in this case study), but HealthNow NY has not maintained their asthma program beyond providing clinical education.²⁸

- **New York State Healthy Neighborhoods Program.** Interviewees discussed many sources of private funding, but only one major source of state funding. The New York Department of Health's Center for Environmental Health runs the New York State Healthy Neighborhoods Program. The Healthy Neighborhoods Program focuses on improving

housing conditions for the state's most vulnerable communities through a holistic, healthy homes approach.^{29, 30} While centrally managed at the state level and funded through the NYS General Fund, services are delivered through grant-funded local health departments.

The Healthy Neighborhoods Program offers home assessments to residents and targets high-risk communities (identified using housing, health, and socioeconomic indicators from census and surveillance data), using a combination of door-to-door canvassing and referrals to reach residents. Home assessments are conducted by environmental health specialists – sanitarians, health educators, public health nurses, or other public health professionals with training in healthy homes interventions – and address a host of healthy homes issues, including tobacco control, lead poisoning prevention, indoor air quality, injury prevention, and asthma. One-quarter of the homes assessed receive

an optional three- to six-month reassessment to identify any new or ongoing problems and to work with residents on remediation strategies.

The program does not pay for home remediation or pest management services to address asthma triggers, but residents are provided educational materials and referrals to other community resources following the home assessment. Interviewees were aware of at least one county Healthy Neighborhoods Program wherein environmental health specialists double as housing code enforcement officers; in these cases, when home assessments are conducted for families that are not homeowners, code enforcement officers have jurisdiction to force landlords to abate unsafe housing conditions, including those that contribute to poorly controlled asthma.

The Healthy Neighborhoods Program is not a case management program, and it relies heavily on community-based partners to help remediate asthma triggers and on clinical partners to incorporate home environmental management into usual medical care for asthma. To engage these partners, funded health departments employ a number of strategies, including but not limited to:

Collaborations with managed care plans. Between 2007-2010, the Healthy Neighborhoods Program in Erie County forged a unique relationship with the state Medicaid program and four regional managed care plans to develop and implement a pilot program to integrate management of environmental triggers into routine asthma care. Here, participating health plans used hospitalization, emergency department utilization, and medication usage data to identify patients with poorly controlled asthma, referring these patients to the Healthy Neighborhoods Program services.³¹ This program was known as the Healthy Home Environments for New Yorkers with Asthma (HHENYA) Program. While state funding supported the local Healthy Neighborhoods Program, the HHENYA pilot was created, coordinated, and evaluated using funding from the CDC National Asthma Control Program. Notably, findings from the HHENYA pilot formed the basis for the NYSDOH's incorporation of home-based asthma services into the state's Medicaid waiver, described elsewhere in this document.

Collaboration with providers. Some programs partner with hospital programs that work to address asthma under community benefit obligations.³² Funding from the CDC's National Asthma Control Program has provided support to two Healthy Neighborhoods Program locations to

expand the asthma component of the home visit and to build bidirectional referral systems, further linking and integrating community-based asthma programs with clinical care.

Collaboration with regional asthma coalitions. Interviewees also described the importance of collaboration between the Healthy Neighborhoods Program and the eight regional asthma coalitions in the state. These coalitions work to mobilize local resources to support healthy homes efforts.

Interviewees cited the Healthy Neighborhoods Program as the most important program in the state for addressing asthma among vulnerable residents. The New York State Healthy Neighborhoods Program has operated since 1985 and reaches nearly 7,000 homes every year, making it a significant provider of services in both its stability and reach within high-risk communities. However, the program is still not available statewide, funding only 18 of 62 counties in the state. Despite its limited reach, evaluations of the program show successful reductions in asthma-related hospitalizations and emergency department visits among program participants, and corresponding savings in healthcare utilization, based on a soon-to-be-released cost-benefit analysis of the program.^{33, 34}

Barriers to Implementing Home-Based Asthma Services within Medicaid

ROIs that monetize societal benefits may not be compelling to MCOs. While home-based, multitrigger, multicomponent asthma interventions have been recognized by the Task Force on Community Preventive Services as providing a strong return on investment (ROI),³⁵ interviewees explained that for many MCOs in New York, the evidence base may not be convincing enough for investing in a comprehensive home-based asthma management program. The problem is that much of the ROI associated with the studies evaluated by the Community Guide depends on indirect savings that accrue to the community (e.g., reduced school absenteeism and reduced missed work days by caregivers); these types of savings, while important for communities, do not amount to direct healthcare savings reflected on an MCO's bottom line. In addition, where health savings are possible (e.g., reduced emergency department visits and hospitalizations), these are coupled with increased expenditures for program implementation (e.g., training and hiring asthma educators) and increased primary care and pharmaceutical costs (when high-risk patients are linked to needed health services). Given these considerations, for-profit plans that have a responsibility to shareholders may not have the

incentive to embrace asthma home-based management interventions despite the potential for ROI. Interviewees opined that nonprofit health plans (such as Monroe Plan for Medical Care/YourCare Health Plan) may be more willing to adopt such interventions for the benefit of the community. In 2010, the Asthma Regional Council of New England reported that among multiple MCOs reporting a positive ROI for home-based asthma services, the Monroe Plan realized a modest ROI of \$1.48 saved in direct medical costs for every dollar invested in their asthma management program.³⁶ This suggests that a heavier emphasis on ROIs with a payer perspective, those that do not monetize societal benefits, may be more compelling to payers within the state.

Lack of infrastructure to provide services and inconsistencies in provider referrals. Interviewees described challenges that home-based asthma programs (both MCO-funded and public/private grant-funded) have faced in getting patients connected to available services. One interviewee noted awareness of multiple MCOs that claimed to have a policy “on the books” to provide home-based asthma services but failed to provide services to any patients due to a lack of established vendors to provide services in the home. Likewise, other programs reported challenges getting some hospitals in the state to routinely refer high-risk asthma patients to existing community-based services. This is significant because even where home-based asthma services are technically available, patients remain unconnected to these critical supports to help improve control of their asthma. Interviewees anticipate that with further implementation of the Affordable Care Act and emphasis on asthma through the Delivery System Reform Incentive Payment (DSRIP) program (described below), hospitals and MCOs will be more encouraged to connect patients to community-based resources.

Restrictions on Asthma Certification: Impact on Rural Areas. While any qualified person can become a certified asthma educator (AE-C) in the state, only nurses, respiratory therapists, or other licensed professionals (such as pharmacists or physicians assistants) with the AE-C designation may register with Medicaid as a provider of asthma self-management training (ASMT). This restriction may disincentivize nonlicensed health professionals, such as community health workers (CHWs), from attaining the AE-C designation; and, according to interviewees, this restriction may impact the availability of a trained

workforce to address asthma in rural areas. There are very few AE-Cs registered with NYS Medicaid, and most such professionals are concentrated in urban areas of the state.³⁷ While one interviewee stated that it would benefit patients in rural and underserved areas to allow CHWs who attain an AE-C designation to become Medicaid-registered, other interviewees stated concern that CHWs are not the most appropriate workforce to address the myriad of complex issues patients with high-risk asthma face. However, all interviewees described the importance of the CHW workforce in serving communities in need, and were supportive of New York developing models of asthma training for CHWs generally.

Medicaid Reimbursement Policy.

Although AE-Cs are qualified to provide services to patients in any setting, state Medicaid rules require AE-Cs to be associated with a healthcare clinic/hospital to receive Medicaid reimbursement. While an AE-C could be associated with a clinic/hospital and still practice in a home or other community setting, interviewees report that this reimbursement restriction tends to limit the services of AE-Cs to clinical settings in most circumstances.

Training for Home-Based Asthma Services Is Not Standardized. Across the state, training for providers that conduct home-based asthma services is not standardized. Some providers are designated as AE-Cs and registered with Medicaid, but CHWs and other providers working in many community-based programs (supported through public health dollars or private funding) receive training on home-based asthma management through a program led by a regional asthma coalition, hospital partner, or a public health department. Interviewees described the wide variety across the state in these training programs and lack of uniformity in the profession of providers that conduct home-based asthma services. Moving forward, stakeholders may have to decide whether there should be some standards for CHWs and other providers who offer home-based asthma management services, and, if so, what standardization should look like.

Future of Medicaid Reimbursement for Home-Based Asthma Services: How Is the State Working to Expand Coverage and Reimbursement?

Delivery System Reform Incentive Payment (DSRIP) Program. In January 2011, Governor Cuomo issued an executive order to establish the NY State Medicaid Redesign Team (MRT), a team of stakeholders

representing diverse sectors within the healthcare delivery system, responsible for proposing a multiyear reform plan to lower healthcare spending and improve the quality of health services delivered in the state.³⁸ By implementing recommendations made by the MRT (including imposing a global spending cap and moving more beneficiaries into managed care), NY produced \$17.1 billion in federal Medicaid savings. An 1115 Medicaid waiver approved in 2014 allows the state to reinvest, over a five-year period, \$8 billion of the federal savings generated by MRT reforms.³⁹ Of this funding, \$6.42 billion is allocated to the Delivery System Reform Incentive Payment (DSRIP) program.

The purpose of DSRIP is to fundamentally restructure the healthcare delivery system in New York by reinvesting in the Medicaid program and promoting community-level collaborations, with the primary goal of reducing avoidable hospital use by 25% over five years. The state has approved 25 Performing Provider Systems (PPSs)^d to implement DSRIP projects in every county in the state. PPSs developed DSRIP project plans by conducting a community assessment of need, and then selecting between five and 11 project focus areas from a pre-approved list of over 40 potential projects.⁴⁰ As asthma is a driver of avoidable hospital and urgent care use, DSRIP promotes three different asthma-specific projects that can be implemented by PPSs.⁴¹

Two of the asthma-specific project areas focus on improving evidence-based asthma care in clinical settings, the first promoting medication adherence programs, and the second promoting the implementation of evidence-based medicine guidelines for asthma management. The third asthma-specific project approved for DSRIP implementation promotes asthma management services in home settings; according to interviewees, the inclusion of this home-based self-management program was driven, at least in part, by the HHENYA pilot project referenced earlier in this case study.

3.d.ii: Expansion of asthma home-based self-management program. The objective of this project is to “ensure implementation of asthma self-management skills including home environmental trigger reduction, self-monitoring, medication use and medical follow-up to reduce avoidable ED and hospital care.”⁴² PPSs that select this project area must partner with home care or other community-based organizations

^d PPSs are groups of providers required to collaborate to implement innovative projects focusing on system transformation, clinical improvement, and population health improvement. PPSs can include both major public hospitals and certain “safety net providers,” which includes health homes, clinics, federally qualified health centers, community based organizations, and others.

to develop a comprehensive home-based asthma management program that includes self-management education, home assessment, and remediation of asthma triggers.

Seven PPSs designed DSRIP projects to address asthma home-based self-management. Many of these projects support using nontraditional providers to deliver home-based asthma care. For example, Stony Brook University Hospital has designed a project to incorporate community health workers (CHWs) into their patient-centered medical home team to offer four or five home visits over six months to children with high-risk asthma.⁴³ Under this project, CHWs will offer asthma home assessment services and self-management education, and will link patients to resources for trigger reduction interventions (such as mold abatement or integrated pest management). Other projects propose using CHWs to conduct a similar scope of services. Most of the projects proposed under this domain do not support trigger remediation services beyond making referrals to external (non-DSRIP-funded) programs. However, according to interviewees, several PPSs specifically propose to use DSRIP funding to engage a community-based organization to offer a culturally competent, home-based assessment program that includes trigger reduction interventions.⁴⁴ DSRIP encourages PPSs to engage and collaborate with ongoing projects in their region, and all of the PPS projects under this domain propose to coordinate efforts with NYS regional asthma coalitions.

Although only seven of the 25 PPSs chose to focus DSRIP funding on home-based asthma services, interviewees noted that the PPSs implementing these projects are large and represent a broad catchment area. Interviewees are hopeful that these projects will be far-reaching and will fill gaps in asthma care across the state. One interviewee noted that the ability of DSRIP projects to create service models that build on local resources and capacity could be essential to overcoming the challenge of MCOs or other providers who are willing to provide a home-based asthma service benefit but lack a ready-made infrastructure.

DSRIP projects are still in their infancy stages – reportedly, the Stony Brook project mentioned above is in the process of training CHWs to perform home environmental assessments – but eventually, DSRIP payments to PPSs will be based on performance linked to achievement of project milestones. Along with collecting data on performance measurement, the state is planning a formal evaluation of all initiatives funded through DSRIP, in effort to learn where there are opportunities to drive down costs and improve care quality. Where projects are successful, they could

become part of broader implementation across the state, including within the Medicaid program.

Social Impact Financing. Social impact financing models (including Social Impact Bonds and Pay for Success contracts) are an emerging mechanism to fund home-based asthma services.⁴⁵ In its most basic form, private investors participating in these initiatives pay the upfront costs for providing social services (such as home visits and remediation to address asthma) and have the opportunity to share in any savings generated to the health sector (typically an insurer or hospital system) as a result of decreased healthcare expenditures. Social impact financing models have been used in other states to support home-based asthma interventions, and a feasibility study is underway in Buffalo, NY, to determine whether such a financing model would be appropriate for implementation in this region.⁴⁶ The Green and Healthy Homes Initiative and the Calvert Foundation are spearheading this effort, partnering with the Community Foundation for Greater Buffalo and the YourCare Health Plan (Monroe Plan).

According to interviews, if the feasibility study goes well, this project should start in mid-2016. The project intends to target high-risk children with asthma enrolled in the YourCare Health Plan (allowing remediation services to occur more readily). It is still to be determined how this project will interact with Monroe/YourCare's asthma management program; interviewees explained that there is a desire to integrate all of this work, but the details have not been finalized.

Expanding the Role of Asthma Educators, Healthy Homes Specialists, and Other Community Health Workers in the Provision of Asthma Services in New York. Many states are engaging in discussions about how to adopt and implement a new federal Medicaid rule change that allows state Medicaid programs to cover and pay for preventive services provided by professionals that may fall outside of a state's clinical licensure system – such as asthma educators,

healthy home specialists, and other CHWs – so long as the services have been initially recommended by a physician or other licensed practitioner. Interviewees reported that New York has engaged in some discussion around implementing this rule change but that the state has moved in the direction of DSRIP and through this mechanism is testing models of care using a nontraditional workforce (such as the community health workers effort underway at Stony Brook University Hospital, as described above). Given DSRIP efforts, the state is unlikely at this time to pursue changes to the state Medicaid plan to incorporate the federal rule change.

The Centers for Disease Control and Prevention's 6|18 Initiative. CDC is spearheading an initiative to align evidence-based preventive practices with emerging value-based payment and delivery models.⁴⁷ Asthma has been identified as one of six common and costly health conditions and home-based asthma services as one of 18 proven interventions to improve health and control healthcare costs. New York is participating in this initiative, which provides state Medicaid programs with technical assistance to help implement priority interventions.

Lessons Learned

Foundation dollars have been valuable in spurring MCOs in New York to invest in asthma management initiatives. In the case of Monroe Plan/YourCare, the plan was able to take lessons learned from an RWJF-funded pilot project to develop a comprehensive home-based asthma management program. While foundation support is not necessary – MCOs can elect to cover and pay for home-based asthma services through their administrative budgets – foundation dollars (or support from other state/federal resources) may push MCOs to focus on asthma and give health plan leadership an opportunity to learn whether such programs lead to a positive return on investment. Helping MCOs better understand how in-home asthma services impact their specific patient population may help plans overcome concerns about return on investment for asthma programs.

State-funded initiatives have also provided crucial support in at least three ways. The state Medicaid quality incentive payments and forums for sharing best practices have supported at least one MCO in expanding their offerings of home-based asthma services. Additionally, state-funded healthy home and asthma intervention programs provide access to services in high-risk communities. The New York State Healthy Neighborhoods Program has operated since 1985 and reaches nearly 7,000 homes every year, making it a significant provider of services in both its stability and

The DSRIP initiative in New York is an opportunity to further engage MCOs and healthcare providers in ensuring that home-based asthma services are available to the patients that need them most.

reach within high-risk communities. State-funded programs have also provided an opportunity to pilot delivery models and evaluate specific questions about the viability and promise of home-based asthma services to improve health and provide healthcare savings.

Finally, New York's current efforts to restructure the healthcare delivery system via the DSRIP initiative is an opportunity to engage MCOs and healthcare providers further in ensuring that home-based asthma services are available to the patients who need them most. However, the DSRIP initiative does not change Medicaid regulations requiring many asthma services to be delivered by licensed professionals. This may present a challenge for broader implementation of the DSRIP projects that are testing home-based asthma services. Should the projects that are integrating CHWs into the management of asthma prove successful (e.g., that these programs reduce hospitalizations and ED visits while delivering quality care to patients with asthma), current Medicaid

regulations could be re-evaluated for their further adoption. Absent regulatory change, these efforts may not be sustainable when DSRIP funding ends.

However, under all DSRIP projects, PPSs are expected to coordinate and communicate with MCOs, primary care providers, health home providers, and specialty providers to ensure continuity and coordination of care. PPSs are currently exploring different types of value-based payment arrangements with MCOs around chronic care models (bundling, per-member per-month capitated payments, et cetera), and exploration of various approaches to funding asthma home-based services may lead to a successful payment model that will be of interest to MCOs across the state. In an ACO model, asthma home-based services could be included among the covered benefits to reduce avoidable emergency department and hospital utilization. In this way, the DSRIP process may yield adoption of home-based asthma initiatives by MCOs without regulatory changes or foundation support.

ACRONYMS

AE-C	<i>Certified Asthma Educator</i>
CHW	<i>Community Health Worker</i>
DSRIP	<i>Delivery System Reform Incentive Payment</i>
HHENYA	<i>Healthy Home Environments for New Yorkers with Asthma</i>
LSAFHS	<i>Little Sisters of the Assumption Family Health Service</i>
MCO	<i>Managed Care Organization</i>
MRT	<i>New York State Medicaid Redesign Team</i>
NYSDOH	<i>New York State Department of Health</i>
PPS	<i>Performing Provider System</i>
RWJF	<i>Robert Wood Johnson Foundation</i>

DEFINITION OF SERVICES

Home-based asthma services

The original survey that formed the basis for these follow-up case studies used the *Community Guide to Preventive Services* definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation. See Appendix A of *Healthcare Financing of Healthy Homes: Findings from a 2014 Nationwide Survey of State Reimbursement Policies*² for the full definition.

About the Project

This multiyear project is working to document and demystify the landscape and opportunities surrounding healthcare financing for healthy homes services. In year one of the project, the National Center for Healthy Housing (NCHH) conducted a nationwide survey to identify states where healthcare financing for lead poisoning follow-up or home-based asthma services was already in place or pending. In years two and three of the project, NCHH and a project team led by the Milken Institute School of Public Health conducted a series of interviews in key states identified by the survey. An interview guide was developed to ask key informants in each state questions about the extent and nature of Medicaid-supported services within the state, details of services covered, barriers to implementation, next steps for expanding services and increasing access, and lessons learned. In each state, the project team conducted interviews with at least one representative from the state Medicaid agency, a program contact in the state health department, and one to two additional stakeholders (e.g., advocates, local programs, payers, or providers). The interviews were used to develop detailed case studies to distill lessons learned in states with Medicaid reimbursement for healthy homes services and ultimately to better equip other states in seeking reimbursement for these services.

For more information: www.nchh.org/Program/DemystifyingHealthcareFinancing.aspx.

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Asthma Case Study #3 Healthcare Financing for Healthy Homes

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For additional resources, including many of the sources cited in this document, visit www.nchh.org/resources/healthcarefinancing.aspx

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Case Studies in Healthcare Financing of Healthy Homes Services: Medicaid Reimbursement for Home-Based Asthma Services in South Carolina

A large body of evidence suggests that home visiting programs addressing indoor environmental triggers (e.g., cockroaches, mice, tobacco smoke, mold) can improve asthma control, reduce asthma-related hospitalizations and emergency department visits, and provide a positive return on investment.¹ These types of services are recommended as a component of comprehensive asthma care for people with poorly controlled asthma but are not widely available and often limited in scale. However, recent changes resulting from healthcare reform have increased opportunities for states to consider more sustainable and widespread implementation. Some states have already invested heavily in developing programs, policies, and funding to increase access to these critical public health services. Yet many

states may be unsure about how to translate these evidence-based practices into policy. This case study summarizes the current healthcare financing landscape in South Carolina for home-based asthma services with an emphasis on public financing. The case study is based on survey findings² and interviews with the state Medicaid agency, the state health department, and other stakeholders. It describes the current healthcare landscape, other important funding mechanisms, key barriers, next steps, and lesson learned. This information may be useful to stakeholders in other states that are seeking healthcare financing for home-based asthma or other preventing services, or for stakeholders within South Carolina interested in a summary of current and future opportunities within the state.



AT A GLANCE

Medicaid Reimbursement for Home-Based Asthma Services in SC

Medicaid in South Carolina (page 1)

Approximately 20% of South Carolina residents (981,145 individuals) are enrolled in South Carolina's Medicaid program, and about 75% are enrolled in Medicaid managed care organizations. The Medicaid program, which is overseen by the South Carolina Department of Health and Human Services (SCDHHS), relies on a combination of managed care plans and fee-for-service (FFS) providers to deliver services to Medicaid beneficiaries. Approximately 75% (726,810) of the state's Medicaid population is enrolled in a Medicaid managed care organization (MCO) and 25% remains in FFS.

Medicaid and MCO Coverage for Home-Based Asthma Services^a (page 3)

There is currently no specific benefit under fee-for-service (FFS) Medicaid for home-based asthma interventions. Without any FFS requirement for home-based asthma coverage, MCOs in the state are not obligated to provide these services. SCDHHS does not otherwise require through the managed care contracting process that MCOs provide coverage for home-based asthma services. MCOs can elect to offer services beyond what is required under FFS, but, according to interviewees, none of the MCOs currently operating in the state offer services for asthma management beyond clinical asthma services. In a 2014 survey, respondents from South Carolina reported that home-based asthma services were a reimbursable service under the state's Medicaid program. However, interviews and additional research have not uncovered any existing or prior Medicaid-supported coverage of home-based asthma services in the state.

Barriers and Next Steps for South Carolina (pages 4-5)

Interviewees described a range of barriers to reimbursement for home-based asthma services including Medicaid's focus on other chronic diseases, confusion over MCO capitation structure, lack of funding for training a healthy homes workforce, and lack of funding from the National Asthma Control Program. Moving forward, South Carolina is working on expanding the role of community health workers (CHWs) under Medicaid.

Other Funding Mechanisms in South Carolina (page 3)

As Medicaid support for home-based asthma services is currently nonexistent, programs that deliver these services for Medicaid-eligible patients rely on other public and private funding streams. Programs and initiatives currently in place include funding from private foundations and hospital community benefit initiatives. Programs and initiatives include the South Carolina Asthma Alliance (SCAA), Family Connection, and Greenville Health System's Asthma Action Team.

Key Insights from South Carolina (page 5)

Although South Carolina has never been a recipient of NACP funding, interviewees reported that the collaborative process of drafting and submitting applications to NACP over the years has helped to build statewide consensus of the burden of asthma. Future opportunities to apply for CDC funding through the NACP would serve to reinvigorate partnerships and collaborations, especially with Medicaid partners. While MCOs have focused quality improvement initiatives on asthma in the past, this was not enough incentive to get managed care organizations to expand asthma services to home settings. The state may need to be more prescriptive in future MCO contract language to nudge plans to focus on asthma services outside of clinical settings.

Medicaid in South Carolina

Approximately 981,145 individuals (20%) are enrolled in the South Carolina Medicaid and CHIP program, which is overseen by the South Carolina Department of Health and Human Services (SCDHHS).^{3,4} South Carolina is one of 19 states that has not expanded Medicaid under the Affordable Care Act to adults with incomes up to 133% (138%) federal poverty level (FPL).⁴ Therefore, low-income childless adults who do not meet demographic or health status criteria do not qualify for Medicaid. Pregnant women below 195% FPL, parents and caretakers below 62% FPL, and children below 208% FPL qualify based on income level.⁴

Like many other states, South Carolina relies on a combination of managed care plans and fee-for-service (FFS) providers to deliver services to Medicaid beneficiaries. Approximately 75% (726,810) of the state's Medicaid population is enrolled in a Medicaid managed care organization (MCO) and 25% remains in FFS, including certain beneficiaries with disabilities and dual-eligible populations.^{5, 6, 7}

Medicaid and MCO Coverage for Home-Based Asthma Services^b

In a 2014 survey conducted by the National Center for Healthy Housing and Milken Institute School of Public Health, survey respondents from South Carolina reported that there was some level of Medicaid reimbursement available in the state for asthma

^a Information based on responses to both the interview questions and responses to the original 2014 survey (www.nchh.org/Resources/HealthcareFinancing/Snapshot.aspx).

^b For the purpose of the original survey and the follow-up interviews and case studies, home-based asthma services were defined according to the Community Guide to Preventive Services definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation.

services in the home.⁸ However, interviews and additional research have not uncovered any existing or prior Medicaid-supported coverage of home-based asthma services in South Carolina.

Currently, there is no specific benefit under FFS Medicaid for home-based asthma interventions.⁹ Without any FFS requirement for home-based asthma coverage, MCOs in the state are not obligated to provide these services. SCDHHS does not otherwise require through the managed care contracting process that MCOs provide coverage for home-based asthma services.¹⁰ MCOs can, of course, elect to offer services beyond what is required under FFS,¹¹ but, according to interviewees, none of the MCOs currently operating in the state offer services for asthma management beyond clinical asthma services (e.g., self-management education and development of an asthma action plan).

SCDHHS does require in contracts with MCOs that MCOs conduct certain Performance Improvement Projects (PIPs), as a means of improving quality in Medicaid. In the 2012-2013 reporting cycle, the state mandated that all MCOs implement PIPs focused on asthma, among other priority health areas.¹² According to interviewees, the SCDHHS set a goal for each MCO to reduce asthma-related emergency department visits among children with high-risk asthma by 20% but gave MCO plans flexibility to determine the type of asthma-related interventions appropriate for meeting this goal. Reportedly, no MCOs elected to cover asthma services in home settings as part of a PIP. While asthma is no longer a priority health issue in the current PIP reporting cycle, a few MCO plans in South Carolina have continued to support projects focused on asthma for their patient populations, having been successful in reducing asthma-related emergency department visits. However, interviewees were not aware of any current MCO-led quality improvement efforts that address asthma in home settings.

Other Mechanisms for Funding Home-Based Asthma Services, Outside of Medicaid

As Medicaid support for home-based asthma services is currently nonexistent, programs that deliver these services for Medicaid-eligible patients rely on other public and private funding streams. Programs and initiatives currently in place include:

South Carolina Asthma Alliance (SCAA). The SCAA is a partnership of local and state government agencies, academic institutions, nonprofit organizations, health insurers, and medical professionals working together to address asthma. SCAA's mission is to strengthen the links between health and environmental programs, bring together public and private organizations addressing asthma, and to develop coordinated strategies to address asthma in South Carolina. SCAA regularly conducts outreach and education activities with schools and community organizations (for example, an annual Back-to-School Preparedness Campaign). The SCAA also hosts regional asthma summits that bring together stakeholders to discuss current issues impacting asthma care in the state, learn best practices in asthma management, and create awareness about community resources. While SCAA has not focused previous summits on coverage for home-based asthma services specifically, summit organizers have worked diligently to cultivate relationships with many stakeholders – including Medicaid administrators and MCOs – to bring forward ideas for better addressing the burden of asthma in the state.

Interviewees also reported that SCAA is in the process of developing a grant program that would cover the costs of training and certification exams for physicians and other providers to become certified as asthma educators. According to interviews, the focus of this effort is on improving knowledge of asthma management among clinical staff, but interviewees stated that training more clinical staff is a step in the right direction toward better identifying patients with high-risk asthma who may benefit from a referral to community-based resources.

Family Connection. Family Connection is a nonprofit that links families of children with special healthcare needs with resources, support, and education. Family Connection runs Project Breathe Easy (PBE), a program that provides education and emotional support to parents of children with asthma in several counties in the state.¹³ PBE matches parent participants with trained community parents who conduct home visits to discuss parental concerns and environmental triggers in the home environment. Families are given a free allergy-proof mattress and pillow encasements, as well as an asthma

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Visit: www.nchh.org/Program/DemystifyingHealthcareFinancing/CaseStudies.aspx

management notebook that discusses ways to gain control of asthma through daily management. Participants also attend support groups led by asthma education specialists (i.e., asthma educators, nurses, or respiratory care practitioners); support group topics center on asthma management education. A 2007 program evaluation showed that children in participating families experienced an 87% decrease in emergency department visits and a 56% reduction in missed school days.¹⁴ The program also increased the number of children connected to a medical home and the number of families with a written asthma management plan.

Greenville Health System's Asthma Action Team. The Asthma Action Team (AAT) is a multidisciplinary, multilingual case management program for children with asthma that strives to ensure patients and families receive consistent asthma education and support services in the clinic and at home, school, and daycare.¹⁵ AAT is run by the Center for Pediatric Medicine (CPM) of the Greenville Health System and is staffed by a large team of providers, including pediatricians, certified asthma educators, respiratory therapists, case managers, nurses, social workers, and community home visitors. The AAT coordinates with payers, local schools, community-based organizations and others to identify patients in need and to provide case management for children and adolescents with hard to control asthma. Under the program, certified asthma educators act as case managers and conduct asthma education, home visits, office visit coordination, and school visits. AAT patients also receive asthma action plans written in their primary language that are shared with providers in the Greenville Health System network. The AAT also maintains a registry and alert system to track outcomes in real time for 4,338 pediatric patients with asthma.

AAT's impact is shown by trends in decreased healthcare utilization for asthma. While the prevalence of children with asthma in the CPM system increased annually by 63%, emergency department visits for asthma has decreased.¹⁶ Among those also enrolled in Project Breathe Easy,¹⁷ there was a 71% decrease in urgent healthcare utilization, a 21% decrease in unscheduled clinical care visits, a 51% in missed school days, and a 41% decrease in missed work days for parents.¹⁸ In 2013, the program won a National Environmental Leadership Award in Asthma Management from the Environmental Protection Agency (EPA) for delivering excellent environmental asthma management as part of their comprehensive asthma care services.¹⁹ In 2014, the program was

one of five hospitals awarded the American Hospital Association NOVA Award for hospital-led collaborative efforts that improve community health.²⁰

Barriers to Implementing Home-Based Asthma Services within Medicaid

Medicaid's Focus on Other Chronic Diseases.

Interviewees reported that the state Medicaid office has recently focused on expanding autism services in response to a 2014 clarification released by the Centers for Medicare and Medicaid Services (CMS), which reminds states of their authority and responsibility under Medicaid to address autism spectrum disorders comprehensively.²¹ South Carolina has issued guidance on autism services and has worked to raise the overall level of services available to beneficiaries in the state who meet this diagnosis.²² In addition, interviewees reported that the state is currently prioritizing expanding cardiovascular disease and diabetes services, as these chronic conditions represent the greatest burden in the state. While addressing these health conditions is important, the strong focus on cardiovascular disease, diabetes, and autism reduces capacity for South Carolina to expand asthma services.

Confusion Over MCO Capitation Structure.

Interviewees reported that, due to the complexity of the MCO capitation structure, there is confusion among providers in the state regarding reimbursement for home-based asthma services. The MCO capitation rate is a per-member/per-month charge paid by the state Medicaid program to each MCO for medical services provided to MCO enrollees. Capitation rates are a projection of future costs based on a set of assumptions, and payment is made regardless of whether enrollees receive services during the period covered by the payment. In South Carolina, MCO capitation rates include an administrative cost component, designed to provide for the MCO being able to cover its administrative overhead costs (nonmedical costs associated with the expense of operating a MCO).²³ Home-based asthma services, like other care coordination and quality improvement activities, are often considered an administrative expense. Reportedly, there is confusion in the state as to whether the current capitation rate would already adequately cover home-based asthma services.

Lack of Funding for Training a Healthy Homes Workforce.

Interviewees described the limited workforce currently available to provide effective asthma services in home settings. The cost of becoming trained and certified as an asthma

educator or home assessor is often prohibitive and there are few programs in the state that facilitate such training. The SCAA grant program underway (described above) is a good first step, but without more dedicated public or private dollars put toward workforce training, South Carolina will continue to have difficulty maintaining a qualified workforce to conduct home-based asthma interventions. Interviewees expressed concern that MCOs or health systems that may want to incorporate home-based asthma services into their programs may be dissuaded from doing so given the lack of available workforce.

Lack of Funding from the National Asthma Control Program. CDC's National Asthma Control Program (NACP) funds states, cities, school programs, and nongovernment organizations to help them improve surveillance of asthma, train health professionals, educate individuals with asthma and their families, and explain asthma to the public.²⁴ Despite submitting applications over the years, South Carolina has never been awarded NACP funding. Without the influx in funding from CDC, the state public health department is not able to fund an in-home asthma program and other important initiatives, such as workforce training, surveillance and asthma education efforts.

Interviewees suspected that one major reason the state was not selected as an NACP grantee is that the statewide prevalence of asthma is not as high as in other states. However, interviewees reported that there is an extremely high prevalence of asthma in certain regions of the state, but low population density in rural areas may distort the state's overall picture of asthma. The South Carolina Department of Health and Environmental Control has since attempted to demonstrate the prevalence of asthma by ZIP code in order to demonstrate a more accurate picture of asthma in South Carolina.²⁵

Future of Medicaid Reimbursement for Home-Based Asthma Services: How Is the State Working to Expand Coverage and Reimbursement?

Expanding the Role of Community Health Workers in the Provision of Asthma Services in South Carolina. South Carolina, like many states, is engaging in discussions about how to adopt and implement a new federal Medicaid rule change that allows state Medicaid programs to cover and pay for preventive services provided by professionals that may fall outside of a state's clinical licensure system, so long as the services have been initially recommended by a physician or other licensed practitioner. This federal rule change means that, for the first time, community

health workers (CHWs) – including asthma educators and home assessors who do not have a clinical license – may seek fee-for-service Medicaid reimbursement.

Interviewees reported that stakeholders remain skeptical that the state will pursue a Medicaid State Plan Amendment to allow CHWs to seek reimbursement given the state's general lack of commitment to system changes spurred by the Affordable Care Act. However, reportedly, there are ongoing efforts in the state to create a CHW association to build on state programs to train/certify CHWs and to better incorporate CHWs into the healthcare system.^{26, 27} Interviewees hope that these types of efforts will facilitate relationships between CHW-led initiatives (such as Project Breathe Easy) and healthcare systems and payers.

Lessons Learned

South Carolina is a state that has worked arduously to bring asthma stakeholders together despite very limited state and federal resources. Although the state has never been a recipient of NACP funding, interviewees reported that the collaborative process of drafting and submitting applications to NACP over the years has helped to build statewide consensus of the burden of asthma. For example, the South Carolina Asthma Alliance was created as a statewide resource for the advancement of asthma care after stakeholders identified the need for such an organization during the NACP application process. Interviewees stated that future opportunities to apply for CDC funding through the NACP would serve to reinvigorate partnerships and collaborations, especially with Medicaid partners.

Another lesson learned in South Carolina is that naming asthma among the priority health areas for quality improvement initiatives is not incentive enough to get managed care organizations to expand asthma services to home settings. As described above, no MCO plan in the state elected to cover home-based asthma services as part of their Performance Improvement Plan (PIP), despite flexibility from the state Medicaid office to design a project focused on reducing asthma-related emergency department visits. While it is an important function of managed care to afford flexibility to MCO plans to design benefit packages for their patient populations, in cases like asthma, the state may need to be more prescriptive in future MCO contract language to nudge plans to focus on asthma services outside of clinical settings.

ACRONYMS

AAT	<i>Asthma Action Team</i>
CHW	<i>Community health worker</i>
CMS	<i>Centers for Medicare and Medicaid Services</i>
CPM	<i>Center for Pediatric Medicine of the Greenville Health System</i>
FFS	<i>Fee-for-service</i>
MCO	<i>Managed care organization</i>
NACP	<i>National Asthma Control Program</i>
PBE	<i>Project Breathe Easy</i>
PIPs	<i>Performance Improvement Projects</i>
SCAA	<i>South Carolina Asthma Alliance</i>
SCDHSS	<i>South Carolina Department of Health and Human Services</i>

DEFINITION OF SERVICES

Home-based asthma services

The original survey that formed the basis for these follow-up case studies used the *Community Guide to Preventive Services* definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation. See Appendix A of *Healthcare Financing of Healthy Homes: Findings from a 2014 Nationwide Survey of State Reimbursement Policies*² for the full definition.

About the Project

This multiyear project is working to document and demystify the landscape and opportunities surrounding healthcare financing for healthy homes services. In year one of the project, the National Center for Healthy Housing (NCHH) conducted a nationwide survey to identify states where healthcare financing for lead poisoning follow-up or home-based asthma services was already in place or pending. In year two of the project, NCHH and a project team led by the Milken Institute School of Public Health conducted a series of interviews in key states identified by the survey. An interview guide was developed to ask key informants in each state questions about the extent and nature of Medicaid-supported services within the state, details of services covered, barriers to implementation, next steps for expanding services and increasing access, and lessons learned. In each state, the project team conducted interviews with at least one representative from the state Medicaid agency, a program contact in the state health department, and one to two additional stakeholders (e.g., advocates, local programs, payers, or providers). The interviews were used to develop detailed case studies to distill lessons learned in states with Medicaid reimbursement for healthy homes services, and ultimately to better equip other states in seeking reimbursement for these services.

For more information: www.nchh.org/Program/DemystifyingHealthcareFinancing.aspx.

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**Asthma Case
Study #6**
Healthcare
Financing for
Healthy Homes

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For additional resources, including many of the sources cited in this document, visit
www.nchh.org/resources/healthcarefinancing.aspx

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Case Studies in Healthcare Financing of Healthy Homes Services: Medicaid Reimbursement for Home-Based Asthma Services in Vermont

A large body of evidence suggests that home visiting programs addressing indoor environmental triggers (e.g., cockroaches, mice, tobacco smoke, mold) can improve asthma control, reduce asthma-related hospitalizations and emergency department visits, and provide a positive return on investment.¹ These types of services are recommended as a component of comprehensive asthma care for people with poorly controlled asthma but are not widely available and often limited in scale. However, recent changes resulting from healthcare reform have increased opportunities for states to consider more sustainable and widespread implementation. Some states have already invested heavily in developing programs, policies, and funding to increase access to these critical public health services. Yet many states may be

unsure about how to translate these evidence-based practices into policy. This case study summarizes the current healthcare financing landscape in Vermont for home-based asthma services with an emphasis on public financing. The case study is based on survey findings² and interviews with the state Medicaid agency, the state health department, and other stakeholders. It describes the current healthcare landscape, other important funding mechanisms, key barriers, next steps, and lessons learned. This information may be useful to stakeholders in other states that are seeking healthcare financing for home-based asthma or other preventing services, or for stakeholders within the state of Vermont interested in a summary of current and future opportunities within the state.



AT A GLANCE

Medicaid Reimbursement for Home-Based Asthma Services in VT

Medicaid in Vermont

Approximately 30% of Vermont residents (186,536 individuals as of August 2015) are enrolled in the state's Medicaid or CHIP programs. The majority of Medicaid beneficiaries are enrolled in Vermont's state-run managed care organization (MCO), Green Mountain Care. For most beneficiaries, enrollment in the MCO is mandatory and beneficiaries in both fee-for-service (FFS) Medicaid and the MCO are eligible for the same range of medically necessary services.

Medicaid and MCO Coverage for Home-Based Asthma Services^{a,b}

Neither fee-for-service Medicaid nor the state's MCO currently provide reimbursement for any home-based asthma services in Vermont, despite the extensive amount of control the state has over the benefits delivered to its Medicaid MCO population and the high financial cost of asthma to the state and its residents. Interviewees revealed that Vermont is currently reviewing ways to expand Medicaid coverage for home-based asthma services.

Barriers and Next Steps for Vermont (pages 5-6)

Interviewees described challenges and barriers Vermont will face if and when the state implements reimbursement for home-based asthma services, including provider eligibility, workforce infrastructure, billing codes, and complying with federal Medicaid requirements.

Other Funding Mechanisms in Vermont (page 4)

Vermont has multiple public-private initiatives designed to promote asthma self-management in the state, a number of which involve Medicaid beneficiaries. For example, the Blueprint for Health (a statewide public-private partnership designed to improve care delivery and health) currently funds the In-Home Pediatric Asthma Program. Program participants are eligible to receive three home visits from a certified asthma educator (AE-C), who provides individualized asthma instruction and education, while a community health worker (CHW) provides an environmental assessment to identify and mitigate asthma triggers in the home.

Key Insights from Vermont (page 6)

While Vermont does not currently provide home-based asthma services through Medicaid, it has successfully spearheaded a number of innovative pilot programs to provide asthma self-management counseling and other services in nonclinical settings. Going forward, Vermont could offer an interesting case study for how a state can transition from implementing innovative pilot programs and initiatives designed to reduce the burden of asthma to Medicaid reimbursement.

Medicaid in Vermont

Approximately 30% of Vermont residents (186,536 individuals as of August 2015) are enrolled in the state's Medicaid or CHIP programs,³ which are both administered by the Department of Vermont Health Access (DVHA) under the general authority of the State of Vermont's Agency for Human Services (AHS). In 1995, Vermont first began enrolling low-income uninsured adults into managed care plans.⁴ The State of Vermont also initiated a "public managed care" network designed to provide behavioral health services to individuals with serious mental health issues that same year.

In 2005, building partially on this framework, CMS approved Vermont's Global Commitment to Health Demonstration Waiver (also known as Green Mountain Care), which sought to improve affordability, access to primary care, and healthcare delivery for individuals with chronic care needs, while containing cost.⁵ The waiver implemented a public managed care delivery system designed to reduce the uninsured rate in the state, increase access to quality care, provide public health approaches to improve health outcomes and the quality of life for Medicaid eligible individuals in Vermont, and encourage the formation of public-private partnerships.

Vermont's managed care model is distinct because the DVHA serves as the managed care entity, using a series of intergovernmental agreements with other subdepartments of the AHS to provide administrative and service

^a Information based on responses to both the interview questions and responses to the original 2014 survey (www.nchh.org/Resources/HealthcareFinancing/Snapshot.aspx).

^b For the purpose of the original survey and the follow-up interviews and case studies, home-based asthma services were defined according to the Community Guide to Preventive Services definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation.

management functions that would typically be carried out by a managed care organization.⁶ Vermont does not contract directly with health plans to manage care for Medicaid beneficiaries. Instead, AHS pays DVHA a capitated per-member/per-month rate, similar to the way other state Medicaid agencies pay managed care organizations. The DVHA then contracts with providers for nearly all Medicaid benefits, using other state agencies mainly to provide specialty services.⁷

In 2013, CMS approved the renewal of Vermont's state-administered Medicaid MCO model. Green Mountain Care is now mandatory for most Medicaid beneficiaries in Vermont and covers most Medicaid services, except certain long-term services and supports, which remain in fee-for-service (FFS). Some beneficiaries are exempt from enrollment in the managed care delivery system and receive covered services through a FFS delivery system.⁸ Beneficiaries in both FFS Medicaid and the MCO are eligible for the same range of medically necessary services.⁹ As of 2013, 56.5% of all Medicaid beneficiaries (102,816 individuals) were enrolled in Medicaid managed care in Vermont.¹⁰

Medicaid and MCO Coverage for Home-Based Asthma Services^b

In a 2014 survey conducted by the National Center for Healthy Housing and Milken Institute School of Public Health, survey respondents from Vermont reported that home-based asthma services were optionally or potentially reimbursable under the state's Medicaid program.¹¹ However, interviews and additional research have not uncovered any existing or prior Medicaid-supported coverage of home-based asthma services in Vermont.

Neither FFS Medicaid nor the state's MCO currently provides reimbursement for any home-based asthma services in Vermont,¹² despite the fact that the burden of asthma on the state and its residents is high.¹³ The prevalence of asthma in Vermont for all adults in 2012 was 11%, the third highest in the U.S., while the prevalence for those living under 125% of the federal poverty level (FPL) was 22%.¹⁴ Among those with asthma and household income less than 125% FPL, 70% report that their asthma is uncontrolled.¹⁵ The financial costs of uncontrolled asthma are significant: In 2009, the state spent \$7 million covering 2,500 emergency department (ED) visits and upwards of 400 hospitalizations related to asthma.¹⁶ While the state focuses on asthma management for the highest-risk and highest-cost Medicaid enrollees through the Vermont Chronic Care Initiative (a statewide program that provides care coordination and intensive case management services to certain Medicaid beneficiaries with one or more chronic conditions),¹⁷

these services do not extend to home settings.

There does not appear to be a unique or singular reason for why Medicaid does not yet reimburse for home-based asthma services in Vermont. As noted above, the financial costs associated with uncontrolled asthma are high, which is certainly an incentive for Vermont to explore nonclinical services designed to reduce asthma-related ED visits and hospitalizations. Vermont also has direct administrative control over its Medicaid program because of its unique state-run public managed care network. Most states contract with external plans to administer services for their Medicaid MCO population, and these plans often have substantial autonomy in designing and implementing patient care; Vermont does not have to undergo these types of hurdles to institute benefit changes.

Practically speaking, however, Vermont has been occupied in the last few years with implementing the Affordable Care Act (ACA) while simultaneously administering a number of both new and existing healthcare programs, including some of the programs detailed below. In 2011, Vermont also passed legislation to implement the country's first statewide, publicly funded single-payer healthcare system, which had originally been set to begin in 2017. Despite having to contend with all these complicated administrative obligations, Vermont is still taking steps towards establishing Medicaid reimbursement for home-based services. An official for the DVHA revealed in an interview that Vermont is currently reviewing ways to expand coverage for home-based asthma services. The ongoing process to expand coverage for these services is detailed in the penultimate section of this case study.

Other Mechanisms for Funding Home-Based Asthma Services, Outside of Medicaid

Similar to most states, Medicaid support for home-based asthma services is nonexistent in Vermont. However, there are a number of public-private initiatives designed to address asthma in the state that involve Medicaid beneficiaries.

Public Health Funding

The *Vermont Asthma Program (VAP)*¹⁸ is run by the Vermont Department of Health (VDH) and funded by the Centers for Disease Control (CDC). One of the primary goals of the VAP is to expand access to comprehensive asthma control services through home-based strategies, which VDH has sought to accomplish by establishing strategic partnerships with other state agencies, healthcare providers and payers, and community- and school-based partners. Within VDH, the partnership includes the divisions

THE BURDEN OF ASTHMA IN VERMONT:

The prevalence of asthma in Vermont for all adults in 2012 was 11%, the third highest in the U.S., while the prevalence for those living under 125% of the federal poverty level (FPL) was 22%.¹⁴

In 2009, the state spent \$7 million covering 2,500 emergency department (ED) visits and upwards of 400 hospitalizations related to asthma.¹⁶

of Environmental Health, Maternal and Child Health, Health Surveillance, and Health Promotion and Disease Prevention; the Agency of Education; and the Department for Children and Families. The partnership also includes the Vermont Department of Labor, the University of Vermont Medical Center, the Rutland Regional Medical Center and Community Health Team, and the Vermont Blueprint for Health.

The VAP targets all individuals with asthma, with a focus on those who are either Medicaid-eligible, live in areas where the prevalence of asthma is disproportionately high, or who have asthma but also smoke. The VAP provides funding and technical assistance to facilitate the integration of self-management education with home visits and other community-based services. The VAP also works with schools to increase their capacity in asthma management and coordinates with health systems to establish information-sharing agreements for patients with chronic diseases.

Another important initiative is the *Blueprint for Health*, a statewide public-private partnership designed to improve care delivery and health outcomes to enable seamless, well-coordinated care.¹⁹ The program, launched in 2003 and codified into law in 2006,²⁰ is built on medical homes that are supported by community health teams.²¹ These medical homes provide advanced primary care services and receive comprehensive support from the locally staffed community health teams, which are often composed of nurse coordinators, behavioral health counselors, and social workers.²²

One initiative supported by the Blueprint is the *In-Home Pediatric Asthma Program*, a regional program affiliated with the Rutland Regional Medical Center.

Program participants are eligible to receive three home visits from a certified asthma educator (AE-C), who provides individualized asthma instruction and education, while a community health worker (CHW) provides an environmental assessment to identify asthma triggers such as allergens and irritants in the home and develops ways to reduce contact with these triggers and mitigate asthma symptoms.^{23,24} Families are eligible for the program if they have children between the ages of two and 17 with an active diagnosis of asthma, are located in the Rutland Regional Medical Center service area, and have uncontrolled asthma demonstrated by a number of potential factors. For example, a child who meets all of the above criteria but also had one or more unscheduled visits for emergency or urgent care due to asthma, or who has missed more than two days of school (or other activities), is eligible for enrollment in the program.²⁵

While the Rutland program is the only known asthma initiative in the state that is currently employing home visits specifically, there are elements for improving asthma management that are being carried out by *North Country Hospital* in Newport, Vermont.²⁶ North Country Hospital has established an Asthma Management Service (AMS) to provide diagnosis, treatment, and educational support for adolescents and adults in the area.²⁷ The AMS employs a team of specially trained healthcare professionals, led by a board-certified pulmonologist and composed of primary care providers, some of whom are AE-Cs, to work alongside asthma patients and their families to “assure optimal lung functional activity level.”²⁸

Finally, the *American Lung Association of New England* provides AE-C training sessions throughout Vermont. Vermont does not require AE-C certification for individuals who provide asthma services, but AE-Cs have mainly been used by state initiatives and pilot programs to educate individuals and families about asthma management, working in coordination with CHWs and licensed providers to establish comprehensive asthma self-management support.²⁹

Health Care Innovation Award Funding

The *New England Asthma Innovations Collaborative* (NEAIC)³⁰ was a multistate project funded through the Centers for Medicare and Medicaid Innovation (Innovation Center) from 2012 to 2015. The project was directed by the Asthma Regional Council (ARC) of New England, a program of Health Resources in Action, which combined healthcare providers, payers, and policy makers in an effort to provide high-quality, cost-effective care for children with severe asthma who were enrolled in Medicaid or CHIP.³¹ The collaborative—which also included Connecticut,

Massachusetts, and Rhode Island—provided asthma self-management education and home environmental assessments through nonphysician providers such as CHWs and AE-Cs, who used moderate environmental interventions designed to reduce asthma triggers in the home.

Along with participating state Medicaid programs, the collaborative also comprised nine clinical partners that provided asthma home visits to more than 1,100 pediatric patients over the demonstration period. In Vermont, NEAIC funded the Rutland Regional Medical Center’s In-Home Pediatric Asthma Program detailed above.³² The Vermont Blueprint for Health and the local community health team absorbed the Rutland program when Innovation Center funding for NEAIC ended in early 2015.³³ An economic evaluation of the initiative is underway.³⁴

Barriers to Implementing Home-Based Asthma Services within Medicaid

Provider Eligibility Restrictions. Existing state law does not allow for nonlicensed health professionals to seek Medicaid reimbursement (e.g., community health workers or other nonlicensed providers certified as home assessors). Vermont, like many states, is engaging in discussions about whether, and how, to adopt and implement a new federal Medicaid rule change that allows state Medicaid programs to cover and pay for preventive services provided by professionals that may fall outside of a state’s clinical licensure system – such as asthma educators, healthy home specialists, and other CHWs – so long as the services have been initially recommended by a physician or other licensed practitioner.^{35,36} Interviewees report that discussions are ongoing in the state regarding what certification or qualifications will be required of nonlicensed professionals who would potentially become eligible for Medicaid reimbursement should the state move forward with implementing the federal rule change. Interviewees describe the difficult balance that the state will need to strike between requirements for education/training to assure competence and quality in the delivery of preventive health services versus the availability of a robust workforce.

Inadequate Workforce Infrastructure. Interviewees stated concern about whether the current workforce available to provide effective asthma services in home settings is large enough to provide an adequate volume of necessary home-based asthma care for the population. Nonlicensed providers cannot currently bill Medicaid for services delivered.³⁷ While Vermont does allow certain licensed providers to bill for services delivered by nonlicensed practitioners under their supervision, AE-Cs are not included on

the list of nonlicensed providers whose services can receive reimbursement outside of clinical settings.³⁸ It is unclear whether, or even how many, AE-Cs in the state are licensed healthcare professionals. Depending on the makeup of the AE-C workforce in Vermont, developing a larger workforce could require the state to define AE-Cs specifically and include them on the list of nonlicensed providers whose services can be reimbursed.³⁹

Billing Codes for Home-Based Asthma Services.

Currently, Vermont lacks specific self-management codes for home-based asthma services. While there are billing codes for preventive counseling, the codes require reimbursed care to be delivered in a clinical setting.⁴⁰ This administrative restriction needs to be addressed so that providers of any kind (licensed or otherwise) can offer services in home settings.

Future of Medicaid Reimbursement for Home-Based Asthma Services: How Is the State Working to Expand Coverage and Reimbursement?

Despite the fact that there is currently no coverage for home-based asthma services through Medicaid in Vermont, a DVHA official interviewed noted that there are ongoing discussions in the state to expand reimbursement for these services.⁴¹

While internal discussions about expanding coverage are in the preliminary stages, Vermont does appear to be in the process of formulating a state plan amendment (SPA) for submission to CMS that would include the development of codes for asthma self-management, determine the workforce that would be eligible for reimbursement, and determine the appropriate frequency that providers can deliver and be reimbursed for asthma self-management education using (NHLBI) clinical guidelines.⁴² At this time, it is unclear how Vermont’s numerous non-Medicaid asthma initiatives will influence or interact with

The fact that Vermont administers its own MCO theoretically gives state officials more control over the services ultimately offered to beneficiaries. It will be informative to examine how Vermont’s unique public managed care delivery system affects possible reimbursement for home-based services.

potential expansions in Medicaid coverage for home-based asthma services. Initiatives such as Rutland's In-Home Pediatric Asthma Program could potentially act as models that the DVHA can expand on or mimic.

Lessons Learned

Vermont is in many ways well poised to explore Medicaid reimbursement for home-based asthma services. The state certainly has a financial incentive to explore non-clinical services designed to reduce the cost of its high burden of asthma. While Vermont does not currently provide home-based asthma services through Medicaid, the fact that the state administers its own MCO also theoretically gives state officials more control over the services offered to beneficiaries. However, whether this control actually streamlines the process of setting up reimbursement is unclear because the decision-making process within the state, as well as the autonomy subagencies have in administering the MCO, is unknown. Nonetheless, it will be informative to examine how Vermont's unique public managed

care delivery system affects possible reimbursement for home-based services.

Absent Medicaid reimbursement, Vermont has successfully spearheaded a number of innovative pilot programs to provide asthma counseling and other services in nonclinical settings. These initiatives clearly demonstrate Vermont's interest in providing comprehensive asthma services for its population, and the fact that there are currently internal discussions about expanding Medicaid coverage for home-based asthma services is promising. However, Vermont must first overcome some structural barriers before it can expand coverage, and the state is only in the most preliminary stages of determining what programs and coverage are feasible. Going forward, Vermont could offer an interesting case study for how a state can transition from implementing innovative pilot programs and initiatives designed to reduce the burden of asthma from using nontraditional providers in nonclinical settings, to Medicaid reimbursing for home-based and other nonclinical asthma services.

Looking for case studies featuring experiences in other states?

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ACRONYMS

ACA	<i>Affordable Care Act</i>
AE-C	<i>Certified asthma educator</i>
AHS	<i>State of Vermont Agency for Human Services</i>
AMS	<i>Asthma Management Service</i>
ARC	<i>Asthma Regional Council</i>
CDC	<i>U.S. Centers for Disease Control and Prevention</i>
CHW	<i>Community health worker</i>
CMS	<i>Centers for Medicare and Medicaid Services</i>
CHIP	<i>Children's Health Insurance Program</i>
DHVA	<i>Department of Vermont Health Access</i>
ED	<i>Emergency department</i>
FFS	<i>Fee-for-service</i>
FPL	<i>Federal poverty level</i>
MCO	<i>Managed care organization</i>
NEAIC	<i>New England Asthma Innovations Collaborative</i>
NHLBI	<i>National Heart, Lung, and Blood Institute</i>
SPA	<i>State plan amendment</i>
VAP	<i>Vermont Asthma Program</i>
VDH	<i>Vermont Department of Health</i>

DEFINITION OF SERVICES

Home-based asthma services

The original survey that formed the basis for these follow-up case studies used the *Community Guide to Preventive Services* definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation. See Appendix A of *Healthcare Financing of Healthy Homes: Findings from a 2014 Nationwide Survey of State Reimbursement Policies*² for the full definition.

About the Project

This multiyear project is working to document and demystify the landscape and opportunities surrounding healthcare financing for healthy homes services. In year one of the project, the National Center for Healthy Housing (NCHH) conducted a nationwide survey to identify states where healthcare financing for lead poisoning follow-up or home-based asthma services was already in place or pending. In year two of the project, NCHH and a project team led by the Milken Institute School of Public Health conducted a series of interviews in key states identified by the survey. An interview guide was developed to ask key informants in each state questions about the extent and nature of Medicaid-supported services within the state, details of services covered, barriers to implementation, next steps for expanding services and increasing access, and lessons learned. In each state, the project team conducted interviews with at least one representative from the state Medicaid agency, a program contact in the state health department, and one to two additional stakeholders (e.g., advocates, local programs, payers, or providers). The interviews were used to develop detailed case studies to distill lessons learned in states with Medicaid reimbursement for healthy homes services, and ultimately to better equip other states in seeking reimbursement for these services.

For more information: www.nchh.org/Program/DemystifyingHealthcareFinancing.aspx.

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**Asthma Case
Study #4**
Healthcare
Financing for
Healthy Homes

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For additional resources, including many of the sources cited in this document, visit
www.nchh.org/resources/healthcarefinancing.aspx

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Case Studies in Healthcare Financing of Healthy Homes Services: Medicaid Reimbursement for Home-Based Asthma Services in Washington

A large body of evidence suggests that home visiting programs addressing indoor environmental triggers (e.g., cockroaches, mice, tobacco smoke, mold) can improve asthma control, reduce asthma-related hospitalizations and emergency department visits, and provide a positive return on investment.¹ These types of services are recommended as a component of comprehensive asthma care for people with poorly controlled asthma but are not widely available and often limited in scale. However, recent changes resulting from healthcare reform have increased opportunities for states to consider more sustainable and widespread implementation. Some states have already invested heavily in developing programs, policies, and funding to increase access to these critical public health services. Yet many states may be unsure about how to translate these evidence-based

practices into policy. This case study summarizes the current healthcare financing landscape in Washington State for home-based asthma services with an emphasis on public financing. The case study is based on survey findings² and interviews with public health agencies, local asthma advocates, and other stakeholders. It describes the current healthcare landscape, other important funding mechanisms, key barriers, next steps, and lessons learned. For this case study, we focus special attention on tribal communities living in the state of Washington. This information may be useful to stakeholders in other states that are seeking healthcare financing for home-based asthma or other preventing services, or for stakeholders within Washington interested in a summary of current and future opportunities within the state.



AT A GLANCE

Medicaid Reimbursement for Home-Based Asthma Services in WA

Medicaid and Indian Health Services in Washington State

Approximately 1.8 million individuals are enrolled in the Washington State Medicaid program. Medicaid is an important source of health insurance for American Indian/Alaska Native (AI/AN) populations in the state, with 29% of this population enrolled in Medicaid. While AI/AN populations have access to the tribal and urban Indian health facilities funded through the Indian Health Service (IHS), because there is no IHS hospital in Washington, all inpatient care and a large majority of specialty care (including asthma care) is provided outside of the IHS system. Additionally, as 45% of the AI/AN population lives in urban areas, usual healthcare services are likely accessed outside of IHS or tribal facilities. Therefore, Medicaid-participating hospitals and providers outside of the IHS system are important sources of care for tribal communities. In addition, when Medicaid-enrolled AI/AN populations access healthcare through an IHS or tribal facility, Medicaid reimburses for the cost of all Medicaid-eligible services rendered.

Medicaid and MCO Coverage for Home-Based Asthma Services^{a, b}

In a 2014 survey conducted by the National Center for Healthy Housing and Milken Institute School of Public Health, survey respondents reported that there was no Medicaid reimbursement available in Washington State for asthma services in the home. Interviews and additional research have not uncovered any existing or prior Medicaid-supported coverage of home-based asthma services in Washington State either through FFS Medicaid or through a managed care organization.

Other Funding Mechanisms in Washington State (page 4)

As Medicaid support for home-based asthma services is currently nonexistent, programs that deliver these services for Medicaid-eligible patients rely on other public and private funding streams. A couple of tribal communities in Washington operate asthma programs specific to AI/AN populations. Other asthma programs in the state are not specific to tribes but may be accessible to some tribal populations, depending on geographic barriers.

Barriers and Next Steps for Washington State (pages 5-6)

Washington State faces a range of challenges in improving home-based asthma services; chief among these is loss of CDC funding for state asthma control efforts. Interviewees described specific barriers related to tribal communities, including asthma being a low-priority issue, distrust of home visitors, and difficulty engaging families to address asthma given their myriad health and other concerns. Confusion over the interaction between Medicaid and IHS Coverage is another major challenge. Interviewees describe new delivery system reforms – such as the Accountable Communities for Health and Medicaid Health Homes – as opportunities for better-integrating home-based asthma services within Medicaid.

Key Insights from Washington State (page 7)

In each interview, the most salient theme was that asthma was not perceived as a priority issue by key decision makers in Washington State. The lack of urgency on the part of decision makers to address asthma continues to pose several barriers to reimbursement in Washington. Ambiguity over which federal entity (Medicaid or IHS) has financial responsibility for healthy homes services when provided to AI/AN populations may contribute to the lack of prioritization of healthy homes interventions within the healthcare system.

Medicaid in Washington

Approximately 1.8 million individuals are enrolled in the Washington State Medicaid and CHIP program, which the Washington State Health Care Authority (HCA) oversees.³ Washington has expanded Medicaid under the Affordable Care Act, which has increased Medicaid enrollment in the state by 55% since 2013.^{4, 5} Adults with incomes up to 138% federal poverty level (FPL) and pregnant women with incomes up to 185% FPL are now eligible for Medicaid.⁶

Nearly 70% of Medicaid enrollees in Washington are enrolled in a managed care arrangement through Apple Health, which is mandatory for most children and families.⁷ Certain populations are exempted from mandatory enrollment, including disabled populations, individuals who are also enrolled in Medicare (dual eligibles), and individuals living in a county that does not have at least two Apple Health managed care health plans with adequate networks.⁸ Additionally, members of tribal populations can choose whether to enroll in managed care or remain in fee-for-service (FFS).⁹

Indian Health System and Medicaid Coverage for Tribal Communities

In Washington, approximately 2.9% of the total population (almost 192,000 individuals) identifies as American Indian/Alaska Native (AI/AN).¹⁰ There are 29 federally recognized Indian Tribes in the state,¹¹ and members of these tribal communities and other people of AI/AN descent can access

^a Information based on responses to both the interview questions and responses to the original 2014 survey (www.nchh.org/Resources/HealthcareFinancing/Snapshot.aspx).

^b For the purpose of the original survey and the follow-up interviews and case studies, home-based asthma services were defined according to the Community Guide to Preventive Services definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation.

health coverage through a number of means:

Coverage through the Indian Health Service. The Indian Health Service (IHS) is the primary source of funding for tribal and urban Indian health programs.^{12,13} IHS arranges for the provision of healthcare to AI/AN populations through IHS-funded hospitals and health clinics. In Washington, there are 61 IHS-funded health clinics, 34 of which are tribally-operated medical clinics located in rural or remote areas of the state (individual tribes have the option of operating their own direct care facilities with IHS funding).¹⁴ However, there are no IHS hospitals in the Pacific Northwest, so all inpatient care and a large majority of specialty care is provided outside of the IHS system.¹⁵

In general, services provided through IHS- and tribally-operated facilities are limited to members of and descendants of members of federally recognized tribes that live on or near federal reservations. Urban Indian health programs serve a wider population, including those who are not able to access IHS- or tribally-operated facilities because they do not meet eligibility criteria or reside outside the service areas. Washington State is home to two urban Indian health clinics in Spokane and Seattle. Nationwide, the majority of AI/AN populations live in metropolitan areas,¹⁶ and in Washington, over 45% live in the Spokane and Seattle regions, far from most IHS and tribal facilities.¹⁷

Although IHS clinics provide a range of services, the IHS does not provide tribal communities with a defined set of benefits. Therefore, eligibility for IHS services alone does not meet Affordable Care Act requirements that individuals be enrolled in a health plan that qualifies as minimum essential coverage.^{18, 19} For this reason, unless covered by a job-based insurance, tribal members may enroll in a qualified health plan through the state health insurance marketplace or access coverage through Medicaid or Medicare based on eligibility.²⁰

Medicaid Coverage. Medicaid is an important source of insurance coverage for AI/AN populations. Nationwide, more than one million American Indians and Alaska Natives are enrolled in coverage through Medicaid/CHIP.²¹ As of 2013, 29% of the AI/AN population in Washington State was enrolled in Medicaid,²² and this number has likely increased as a result of Medicaid expansion in the state.

As Medicaid enrollees, AI/AN populations have the same access to services as all Medicaid-enrolled populations, and tribal populations in the state are able to access Medicaid services without any cost-sharing or premium requirements.^{23, 24} In addition, these populations continue to have access to

IHS- and tribally-operated facilities and services. When Medicaid-enrolled AI/AN populations access healthcare through an IHS or tribal facility, Medicaid reimburses for the cost of all Medicaid-eligible services rendered.²⁵

Reimbursements from Medicaid are an important source of revenue for IHS and tribally-operated facilities. Congress allocates a limited budget to the IHS, and funds remain insufficient to meet the healthcare needs of AI/AN populations.²⁶ According to the American Indian Health Commission for Washington, Indian Health Services in the state are funded at 55% of the level of need.²⁷ Because of this shortfall in funding, IHS programs and facilities in the state have aggressively sought third-party payment strategies, primarily in the form of Medicaid reimbursement.

Generally, the federal government and the states share in the cost of the Medicaid program; in the case of Washington State, the federal and state government split Medicaid costs 50/50. However, when services are provided at IHS- or tribally-operated facilities, the federal government covers 100% of Medicaid costs, thereby relieving states of this financial responsibility. Medicaid services provided to AI/AN populations outside of the IHS system are reimbursed at the usual match rate. This policy provides a strong financial incentive for state Medicaid programs to facilitate the use of IHS- or tribally-operated health facilities by AI/AN Medicaid beneficiaries.²⁸ However, because there is no IHS hospital in Washington, all inpatient care and a large majority of specialty care (including asthma care) is provided outside of the IHS system, at the usual match rate. Additionally, because 45% of the AI/AN population lives in urban areas, usual healthcare services are likely accessed outside of IHS or tribal facilities.

Medicaid Managed Care and AI/AN Populations. Federal law prohibits states from requiring AI/AN populations to enroll in Medicaid managed care organizations (MCOs), unless the MCO is operated by the IHS, a tribe, or an urban Indian health program.²⁹ The state of Washington does not require any AI/AN populations to enroll in managed care, and provides these individuals the option to enroll in the various MCO plans available in the state.³⁰

Interviewees were not aware of the percent of AI/AN populations enrolled in an MCO, and Washington State does not publish this data. However, interviewees believed that the percentage is high given the special protections federal law provides for American Indian and Alaska Native beneficiaries who are enrolled in an MCO. Medicaid MCOs that enroll

AI/AN populations must have a sufficient number of Indian health providers participating in their networks to ensure timely access to care.³¹ In addition, the MCO must also allow AI/AN beneficiaries to select an Indian health provider as his or her primary care provider and go outside the managed network to seek care through an Indian health program or urban Indian organization.

Medicaid and MCO Coverage for Home-Based Asthma Services^b

Tribal populations in Washington State suffer a disproportionately high burden of asthma. At every income level, AI/AN experience higher rates of asthma prevalence.³² Nearly one-quarter of the AI/AN adult population at or below 200% FPL suffers from asthma.³³ About 17% of AI/AN 12th graders statewide have asthma, which is almost twice the national rate.³⁴ Despite this burden, the IHS does not specifically cover asthma services, as it does not offer a defined set of health benefits for tribal communities. While a few individual tribes operate asthma programs funded through federal and state public health dollars (described below), tribal populations in Washington depend on Medicaid and MCOs to cover the asthma management services they need. This is especially true for tribal populations who require hospitalization or specialized care for asthma, as there is no IHS-funded hospital in the region.

Despite this burden, survey respondents to a 2014 survey conducted by the National Center for Healthy Housing and Milken Institute School of Public Health reported that there was no Medicaid reimbursement available in Washington State for asthma services in the home. Interviews and additional research have not uncovered any existing or prior Medicaid-supported coverage of home-based asthma services in Washington State either through FFS Medicaid or through an MCO.

Other Mechanisms for Funding Home-Based Asthma Services, Outside of Medicaid

As Medicaid support for home-based asthma services is very limited, programs that deliver these services for Medicaid-eligible patients rely on other public and private funding streams or innovative partnerships to ensure program sustainability. Interviewees pointed to several programs that currently deliver such home-based asthma services in Washington:

Tulalip Air Quality Program. The Tulalip Tribes Department of Environment facilitates the Tulalip

Indoor Air Quality Program.³⁵ Using culturally relevant approaches to outreach and education, the program works to reduce environment exposures that trigger asthma and other related health problems. This program is funded in large part by the Environmental Protection Agency (EPA) and boasts several initiatives, including:

- *Environmental Home Assessments.* The program has recently launched an asthma home visiting program through a partnership with the Tulalip Health Clinic. Using an electronic referral system, clinic providers refer certain high-risk patients for environmental home assessments. Trained community health workers (CHWs) provide the assessments. The program receives specific funding from EPA to train CHWs to conduct home assessments.
- *Collaboration with WIC Programs.* The Tulalip Air Quality Program has been engaging in creative efforts to secure additional funding for their home visitation programs, including potential new funds to support the purchase of basic remedial supplies through the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Reportedly, Tulalip is working with its WIC coordinator to establish another referral system in which the coordinator would refer pregnant women and women with infants to their program for home visits.
- *Healthy Homes Working Group.* To increase the reach and impact of the program, Tulalip recently launched the Healthy Homes Working Group. The working group serves as a mechanism for tribes to share best practices, strategies, and research regarding the successes and challenges in outreach and education around indoor air quality. Additionally, the working group seeks to establish a model for effective home interventions for tribal populations.

Yakima Valley Farm Works Clinic: Childhood Asthma Project (CAP). The Yakima Valley Farm Works Clinic (YVFWC) is a group of eight health clinics serving a rural area in eastern Washington. The clinic primarily serves the region's large Hispanic immigrant population, but members of the Yakima Nation frequently access clinic services because the tribal territory is adjacent to one of the YVFWC locations. YVFWC administers the Childhood Asthma Project (CAP), a program that sends CHWs to patient homes

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to address a number of conditions, including asthma. CHWs are trained by the clinic as asthma educators (using the American Lung Association's Asthma Educator Institute and Master Home Environmentalist training) and offer home assessments, education on asthma trigger identification and avoidance, asthma self-management education, and assistance with medication adherence.³⁷

In the late 1990s, the EPA provided a grant to the YVFWC for an asthma home visiting pilot program.³⁸ Since that initial seed funding, YVFWC has maintained its home visitor program through the clinic's operational budget. Because the program is facilitated through the YVFWC clinic, it benefits from a strong referral system and support from the clinic's providers who are essential for linking high-risk patients to home-based services. Eligible patients receive three home visits, and the program serves approximately 280 low-income, rural participants each year.³⁹

In 2010, researchers from Washington State University College of Nursing conducted an evaluation of CAP to assess its feasibility and acceptability among rural Latino populations.⁴⁰ The evaluation demonstrated that the intervention produced positive outcomes, including behavior change to mitigate asthma triggers and less frequent use of urgent care.

Clean Air for Kids. Clean Air for Kids Asthma and Allergies Management Program is a referral-based home visiting asthma program. The Tacoma-Pierce County Health Department administers the program, working with the MultiCare Health System and partners in the Puget Sound Asthma Coalition, which include approximately 30 other local healthcare, community, and academic organizations.⁴¹ The program links high-risk asthma patients (identified by recent hospitalization, emergency department visit, or other medical encounter) to Asthma Outreach Workers who visit patients in their homes to review physician instructions, conduct a medication review, instruct patients on asthma self-management, and educate families on asthma trigger identification and avoidance. Asthma Outreach Workers relay information gathered from home visits back to the MultiCare Health System. All services are free to clients.⁴² The program occasionally has adequate funding for basic low-cost supplies, but the availability of that funding fluctuates.

The program provides services to the nearby Puyallup and Yakima tribes, but is available to nontribal communities as well. In 2014, the Washington Board of Health awarded Clean Air for Kids with the Warren Featherstone Reid Award, the state's highest honor

for cost-effective and quality healthcare services.⁴³

Washington State Department of Health: Three Visit Model. The Washington State Department of Health created the three-visit model for in-home asthma services in 2011 in partnership with the Cowlitz County Health Department.⁴⁴ Under the model, three in-home visits are conducted over the course of three months, and the interventions offered at each visit serve the following goals: (1) to assess and increase the participants' knowledge about asthma management, and (2) to identify and eliminate asthma triggers in the home. The home visiting model is designed to be effectively implemented using community volunteers, medical assistants, CHWs, and other paraprofessionals as home visitors. The model is designed to be widely applicable to asthma programs, and several programs across the state have utilized this model (including the YVFWC program and a former asthma program offered by the Seattle Indian Health board). Data indicate that this model can successfully decrease hospitalizations, emergency room visits, urgent care visits, and missed school or work days.⁴⁵

Tribal Healthy Homes Network (THHN). The Tribal Healthy Homes Network (THHN) is an advocacy group that is specifically focused on the impact of asthma and lung disease among AI/AN populations. THHN's efforts promote healthy tribal homes and communities by serving as a clearing house for technical support, program guidance, resources, and funding. The Tulalip Tribes of Washington lead the THHN and participate in many of the network's field and research projects. The American Lung Association of the Mountain Pacific region provides THHN with physical office space and healthy homes expertise. THHN also receives technical support and their core program funding from the EPA.⁴⁶

Barriers to Implementing Home-Based Asthma Services within Medicaid

Loss of National Asthma Control Program Funding. As of September 2014, Washington State's asthma program, which was historically managed by the Department of Health, ceased operation due to the loss of funding from the Centers for Disease Control and Prevention's (CDC) National Asthma Control Program (NACP).⁴⁷ The loss of these federal dollars has meant that several basic asthma-related functions are no longer available in the state, such as basic asthma surveillance, updating of educational resources, and training of clinical staff on EPR-3 guidelines.

Loss of Funding for Asthma Advocacy. The loss of NACP funding has also resulted in the loss of financial

and administrative support for the Washington Asthma Initiative (WAI).⁴⁸ The WAI is a coalition of groups, healthcare providers, individuals, and government agencies from across the state working to improve asthma diagnosis, treatment, education, and management. Their efforts have largely centered on advocating for reimbursement of home-based asthma services and other key asthma care-related issues. Since NACP stopped funding asthma efforts in the state, the WAI has continued to exist, but solely on the dedication of volunteer members (see further descriptions of WAI's current efforts below).

Asthma Not a Top Priority. Interviewees described a lack of prioritization of asthma as a key health issue needing to be addressed. Although asthma is a leading cause of health expenditures for AI/AN populations in the state, IHS and tribal health decision-makers consistently prioritize other health conditions, such as obesity, diabetes, heart disease, addiction, and substance abuse, in healthcare program implementation and financing.⁴⁹

While home visitation programs are somewhat common in tribal communities (especially where populations live in rural settings), CHWs and others entering the home are already overwhelmed by addressing other chronic conditions and health needs and simply incorporating asthma services within these visits is not feasible. For example, many IHS-funded home visits in Washington are focused on the needs of elderly populations, and there is a concern that putting CHW resources toward asthma would diminish the care provided to elderly tribal members, a population on whom there is placed a large cultural value.

Interviewees observed that where home visiting programs are in place, there is a supply of trusted CHWs that could be deployed for addressing asthma in home settings. However, interviewees underscored the difficulty, even in pilot demonstration projects, of convincing tribal health clinics to divert one of their few staff or volunteer CHWs toward addressing asthma over other health concerns in the community.

Moving forward on asthma would require significant tribal, public health, or Medicaid resources to be put toward training additional CHWs to deliver home-based asthma services. The CHW training offered by the Washington State Department of Health may be an opportunity. This free, eight-week training course teaches CHWs skills in health education, informal counseling, social support, care coordination, health services enrollment and navigation, ensuring preventative health screenings, outreach, and advocacy.⁵⁰ Although not specific to asthma, it may

present an opportunity to increase the capacity of the CHW workforce to address asthma in home settings.

Lack of Funding for Home-Based Asthma Services. Interviewees observed that, without consistent and sustainable funding for home-based asthma services, hospitals and clinics in the state (tribal or otherwise) are not able to implement and institutionalize home-based asthma services within the care delivery system in Washington.

Confusion over Medicaid/IHS Interaction for Coverage of Home Services. As described above, in general, when Medicaid-enrolled AI/AN populations access healthcare through an IHS or tribal facility, Medicaid reimburses for the cost of Medicaid-eligible services rendered. Supposing Medicaid (either under FFS or an MCO plan) were to cover home-based asthma services in the state, would Medicaid become responsible for covering such services for tribal communities? If Medicaid is responsible for covering services at an IHS or tribal facility, does this responsibility extend to home settings? Or do these services remain under the jurisdiction of the Indian Health Service? These questions remain unresolved.

Distrust of Asthma Home Visitors. According to interviewees, only a handful of tribes have been able to implement and sustain asthma home visiting programs as tribal communities are often mistrustful of strangers entering their home to conduct health services or home health assessments (asthma-related or otherwise), in fear of resulting consequences. Tribal communities have had historically negative experiences with, for example, Child Protective Services and other agencies or initiatives that have caused disruption to family and homelife. Overcoming such deep-rooted mistrust of government services is a significant challenge for more widespread implementation of healthy homes services.

The most salient theme of the conducted interviews was that asthma is not perceived as a priority issue by key decision-makers in Washington State. This lack of urgency on the part of decision makers to address asthma continues to pose several barriers to reimbursement.

Barriers to Families Taking Action on Asthma. Interviewees described the many difficult issues that AI/AN populations face in addition to their health. Addiction, unemployment, extreme poverty, and substandard housing are just some of the many concerns that these populations have that may be more pressing than concerns over asthma triggers in the home. If home-based asthma programs do not also help families address these many other challenges (or at least link them to other service providers), it is unlikely that these programs will be successful.

Difficulty Engaging Providers. The Washington State Healthy Housing Initiative's Healthy Housing Strategic Plan emphasizes the importance of care coordination and consistent referrals to ensure that patients with asthma are connected to professionals who can help them to control their asthma and remedy asthma triggers within the home.⁵¹ However, based on experiences with past pilot projects seeking to implement home-based asthma services, some interviewees described overtaxed tribal clinic staff as reluctant to take on the additional coordination and staff time required to link patients with home-based asthma services (where such services are available).

Future of Medicaid Reimbursement for Home-Based Asthma Services: How Is the State Working to Expand Coverage and Reimbursement?

Accountable Communities of Health. The State Innovation Models (SIM) Initiative, funded by the Center for Medicare and Medicaid Innovation (Innovation Center), is providing financial and technical support to states for the development and testing of state-led, multipayer, healthcare payment and service delivery models that will improve health system performance, increase quality of care, and decrease costs for Medicare, Medicaid, and Children's Health Insurance Program (CHIP) beneficiaries—and for all residents of participating states. In December 2014, Washington State received \$64.9 million to implement and test its State Health Care Innovation Plan.⁵² Under their SIM plan, the state will make several targeted investments, including fostering innovation and collaboration in communities through the implementation of regionally organized *Accountable Communities of Health* (ACH).⁵³

The ACH supports collaborative decision-making and action on a regional basis to improve individual healthcare delivery and health systems, focusing on the social determinants of health, clinical-community linkages, and whole person care. Asthma would seem a natural fit as part of an ACH model, and interviewees see this investment as an opportunity to elevate home-based asthma services in the state. At this time, a

couple of ACH efforts have been officially designated in Washington, but most are still in the development and pilot testing stages.⁵⁴ Reportedly, asthma advocacy groups have taken a number of strategies to promote asthma as a candidate for inclusion in an ACH model.

Expanding the Role of Community Health Workers in the Provision of Asthma Services. Washington, like many states, is engaging in discussions about how to adopt and implement a new federal Medicaid rule change that allows state Medicaid programs to cover and pay for preventive services provided by professionals that may fall outside of a state's clinical licensure system, so long as the services have been initially recommended by a physician or other licensed practitioner. This rule change means that, for the first time, asthma educators, healthy home specialists, and other CHWs with training and expertise in providing asthma services may receive FFS Medicaid reimbursement. According to interviewees, while advocates have engaged in some discussions around implementing this rule change, Washington State is largely waiting to see how the rule takes effect in other states first.

Medicaid Health Homes. The Affordable Care Act (ACA) creates a new state Medicaid option to permit individuals with one or more chronic conditions – specifically including asthma – to seek care through a “health home.”⁵⁵ Under the law, a health home is responsible for providing or coordinating all patient care, as well as a specific set of “health home” services, including many services important for asthma management such as care coordination and health promotion, patient and family support, and coordination with community and social support services.⁵⁶

Washington State has established a Medicaid health home targeting persons with asthma, among other chronic conditions.⁵⁷ Under Washington's health home approach, community health centers and rural health clinics (including tribal health centers) are eligible to serve as a lead health home provider, and CHWs, peer counselors, and other nonclinical personnel can serve as allied health staff as part of the health team.⁵⁸ In addition, health homes must include community health clinics and tribal health providers within provider networks. While public documents describing Washington's health home model do not specifically mention asthma services as a covered component, the model does focus on health promotion, self-management education, and active referral to community-based services, in addition to including the types of community-based providers that are important to asthma care.

It remains to be seen how Washington's health home model will impact populations with asthma, or tribal populations generally. However, this model may be a desirable way for states to test community asthma interventions, including home-based interventions, as the federal government will pay an enhanced federal Medicaid match rate of 90% during the first eight quarters of state participation.⁵⁹

Continued Advocacy Efforts. Despite challenges posed by severe funding cuts, the Washington Asthma Initiative (WAI) has continued to attract a number of highly committed volunteers who continue to work toward establishing reimbursement for home-based asthma services. In September 2014, upon the loss of NACP funding, the WAI organized a day-long summit primarily to invite attendees to join a newly established Reimbursement Task Force. According to interviewees, summit attendees showed a lot of energy around keeping an asthma initiative in place to advocate around asthma in general, and specifically improving access to and Medicaid reimbursement for home-based asthma services. Task force members work on a volunteer basis and have focused recent efforts on making the business case for Medicaid reimbursement for asthma services in home settings to the governor and state legislature. The task force has also worked to push forward home-based asthma interventions within the ACH projects underway in the state.

The Tribal Healthy Homes Network (THHN) also held a summit in the fall of 2014, organizing asthma stakeholders on similar issues. Currently, WAI and THHN are working together to advocate for better home-based asthma services in the state. Working collaboratively on these issues is important as, if reimbursement for home-based asthma services is ultimately established, the mechanisms will look very similar in both tribal and nontribal areas, although potential implementation issues may differ.

Lessons Learned

Making Asthma a Priority. In each interview, the most salient theme was that asthma was not perceived as a priority issue by key decision-makers in Washington State. The lack of urgency on the part of decision makers to address asthma continues to pose several barriers to reimbursement in Washington, including the persistent lack of funding for WAI, the difficulty of engaging clinical providers on this issue, and the exclusion of asthma-related activities in many home visiting programs that do exist, particularly in tribal communities. Advocates in Washington are working on making the business case to key decision-makers on the importance of addressing asthma through

home interventions. The Medicaid health home and Accountable Communities of Health models are important opportunities for testing community asthma interventions and documenting outcomes and cost savings.

Educating Stakeholders on the Interaction between Medicaid and Indian Health Services. The interplay between Medicaid and IHS coverage for services is complicated. Interviewees describe the confusion advocates and decision-makers have around which program will be responsible for covering home-based asthma services, assuming these services were covered by Medicaid. This confusion is not the only reason that the healthcare system (IHS, Medicaid, or otherwise) is not providing coverage for home-based asthma services, however, ambiguity over which federal entity has financial responsibility for these services when provided to AI/AN populations may contribute to the lack of prioritization of healthy homes interventions within the healthcare system. Clarifying fiscal responsibilities and roles is important and may require guidance from the U.S. Department of Health and Human Services (HHS).

Importance of Maintaining Advocacy Efforts. Washington is a state that has worked hard to bring asthma stakeholders together despite very limited resources. The recent loss of NACP funding has galvanized the individuals and organizations engaged in asthma advocacy efforts around the issue and targeted their efforts on educating policymakers on the return on investment for home-based asthma interventions. Interviewees stated that future opportunities to apply for CDC funding through the NACP would serve to reinvigorate partnerships and collaborations.

ACRONYMS

ACA	<i>Affordable Care Act</i>
ACH	<i>Accountable Communities of Health</i>
AI/AN	<i>American Indian/Alaska Native</i>
CAP	<i>Childhood Asthma Project</i>
CHIP	<i>Children’s Health Insurance Program</i>
CHW	<i>Community health worker</i>
IHS	<i>Indian Health Service</i>
FFS	<i>Fee-for-service</i>
FPL	<i>Federal poverty level</i>
HCA	<i>Washington State Health Care Authority</i>
MCO	<i>Managed care organization</i>
NACP	<i>National Asthma Control Program</i>
SIM	<i>State Innovation Model</i>
THHN	<i>Tribal Healthy Homes Network</i>
WAI	<i>Washington Asthma Initiative</i>
WIC	<i>Special Supplemental Nutrition Program for Women, Infants, and Children</i>
YVFWC	<i>Yakima Valley Farm Works Clinic</i>

DEFINITION OF SERVICES

Home-based asthma services

The original survey that formed the basis for these follow-up case studies used the *Community Guide to Preventive Services* definition of home-based, multitrigger, multicomponent asthma interventions. These interventions typically involve trained personnel making one or more home visits and include a focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and/or remediation. See Appendix A of *Healthcare Financing of Healthy Homes: Findings from a 2014 Nationwide Survey of State Reimbursement Policies*² for the full definition.

About the Project

This multiyear project is working to document and demystify the landscape and opportunities surrounding healthcare financing for healthy homes services. In year one of the project, the National Center for Healthy Housing (NCHH) conducted a nationwide survey to identify states where healthcare financing for lead poisoning follow-up or home-based asthma services was already in place or pending. In years two and three of the project, NCHH and a project team led by the Milken Institute School of Public Health conducted a series of interviews in key states identified by the survey. An interview guide was developed to ask key informants in each state questions about the extent and nature of Medicaid-supported services within the state, details of services covered, barriers to implementation, next steps for expanding services and increasing access, and lessons learned. In each state, the project team conducted interviews with at least one representative from the state Medicaid agency, a program contact in the state health department, and one to two additional stakeholders (e.g., advocates, local programs, payers, or providers). The interviews were used to develop detailed case studies to distill lessons learned in states with Medicaid reimbursement for healthy homes services, and ultimately to better equip other states in seeking reimbursement for these services.

For more information: www.nchh.org/Program/DemystifyingHealthcareFinancing.aspx.

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Asthma Case Study #7 Healthcare Financing for Healthy Homes

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For additional resources, including many of the sources cited in this document, visit www.nchh.org/resources/healthcarefinancing.aspx

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