National Center for Healthy Housing

HEALTHCARE FINANCING OF HEALTHY HOMES:

Findings from a 2014 Nationwide Survey of State Reimbursement Policies

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EXECUTIVE SUMMARY

Background

A growing number of healthcare payers and organizations are interested in increasing their investments in the social determinants of health to prevent disease, reduce costs, eliminate disparities, and improve quality of life. These investments have the potential to dramatically reduce the burden of preventable housing-related illness, including asthma and childhood lead poisoning. While some states have established Medicaid reimbursement for services delivered in the home environment related to asthma and lead exposure, many others are actively trying to establish or expand reimbursement opportunities. To increase understanding of the opportunities of healthcare financing for healthy homes surveys, the National Center for Healthy Housing (NCHH) conducted a nationwide survey to identify states where home-based services for children with lead exposure or for patients with asthma are already in place or pending.

NCHH developed two online surveys—one survey focused on Medicaid coverage of home-based asthma services and the other on Medicaid coverage of follow up services for children with lead exposure. 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.[i] NCHH sent the online surveys to state Medicaid directors and state program contacts in April 2014.[ii] NCHH received responses from 46 different states in response to the asthma survey, a response rate of 92%, and from 49 states in response to the lead survey, a response rate of 98%.

Key Findings

- A total of 27 states (54%) reported having some Medicaid reimbursement policy in place for either home-based asthma services or follow-up services for children with lead exposure.
  - Twenty-three states (46%) reported that some Medicaid reimbursement was in place for lead follow-up services. Eighteen states (36%) reported that lead follow-up services were a required service, and seven states (14%) reported that the services were in place as an optional service within the state. For details about the reimbursable services, go to page 9.
  - Thirteen states (26%) reported that some Medicaid reimbursement was in place for home-based asthma services. Only one state reported that this was a required service. For details about the reimbursable services, go to page 12.
- Seven states (14%) reported that one or more private payers in the state provide or reimburse for home-based asthma services, and an additional seven (14%) report that one or more private payers are actively exploring putting these services into place. By contrast, only three states (6%) reported knowledge of private payers who reimburse for or provide lead follow-up services, and none were aware of private payers who were actively pursuing these services.
- States also reported on other financing mechanisms, including hospital community benefits, social impact bonds, and state-funded programs to provide services. In general, these types of financing mechanisms were less common than Medicaid reimbursement. More states reported knowledge of community benefits, social impact bonds, and Accountable Care Organizations (ACOs) investing in home-based asthma services than in environmental follow-up services for lead-exposed children. However, more states reported state funding in place to provide environmental follow-up services for children exposed to lead.
- Overall, respondents felt that state Medicaid agencies (56%), federal agencies (55%) and state asthma control or lead and healthy homes programs (47%) were the most influential groups for states seeking to establish reimbursement for healthy homes services. Program respondents were more likely than Medicaid respondents to rate state and local health, housing and Medicaid agencies as influential but less likely than Medicaid respondents to rate federal agencies as an important and influential group.

[i] See Appendix A for copies of the survey instruments, including definitions of lead poisoning follow-up services and home-based asthma services provided to respondents.

[ii] For the asthma survey, state contacts were identified using the CDC's National Asthma Control Program Grantees and Non-funded Asthma Contacts (www.cdc.gov/ASTHMA/contacts/default.htm). For the lead survey, state program contacts were identified using the State and Local Healthy Homes and Childhood Lead Poisoning Prevention Program (www.cdc.gov/HealthyHomes/programs.html). The survey was also sent to Medicaid Directors in all 50 states (www.stateside.com/wp-content/uploads/2014-State-Medicaid-Directors-FactPad-Insert.pdf).

- When asked about specific drivers of change, both lead and asthma respondents rated credible information about potential health improvements resulting from interventions and potential cost savings, federal funding for programs, political will/leadership, and relationships or partnerships to get the issue on the table as the most important drivers for states seeking to put reimbursement into place. Both program and Medicaid respondents rated credible information about potential health improvements and cost savings as important, but program respondents rated drivers like political will/leadership, individual champion(s) within state agencies, relationships/partnerships to get the issue on the table, and the recent change in the Essential Health Benefits rule as more important compared to Medicaid respondents.

INTRODUCTION

Housing-related illnesses, including asthma and childhood lead poisoning, are estimated to cost the nation $53 billion annually.[1] Some states have established Medicaid reimbursement for services delivered in the home environment related to asthma and lead exposure, while many others are actively trying to establish or expand reimbursement opportunities for these activities through Medicaid waivers, State Plan Amendments, or by leveraging existing Medicaid authority (see page 5 for an overview of the Medicaid program).

This paper summarizes the results of a recent survey conducted by the National Center for Healthy Housing (NCHH) on Medicaid reimbursement of healthy homes services. NCHH sent the survey to state Medicaid directors and state asthma and lead program contacts. The survey included questions about healthcare financing, including Medicaid reimbursement for home-based asthma education and assessment, remediation of the home environment to eliminate or reduce environmental asthma triggers, and reimbursement for follow up activities in the home environment for children who have been exposed to lead.

The purpose of this paper is to:

- document current practices regarding reimbursement for environmental health services in the homes of people with asthma and children exposed to lead, and
- highlight opportunities for increasing access to these benefits.

535,000
U.S. children have elevated blood lead levels.

26 million
U.S. children and adults have asthma.

$53 billion
Estimated annual cost of housing-related illness and injury, including asthma and lead exposure.

Blood Lead Testing and Follow-up in the Medicaid Population

Lead Poisoning: Prevalence and Burden

In 2010, an estimated 535,000 U.S. children younger than five years had elevated blood lead levels of ≥5 µg/dL (elevated BLLs).[2] Childhood exposure to lead can have lifelong consequences including decreased cognitive function, developmental delays, and behavior problems, and, at very high levels it can cause seizures, coma, and even death.[3] No safe blood lead level in children has been identified. New findings suggest that the adverse health effects of BLLs less than 10 µg/dL in children extend beyond cognitive function to include cardiovascular, immunological, and endocrine effects.[4] These adverse effects reinforce the importance of screening and continued measures to eliminate or control lead sources in children's environments before they are exposed.

These findings led CDC to eliminate of the use of the term "blood lead level of concern" (previously set at 10 micrograms of lead per deciliter of blood (µg/dL) and employ a reference value based on the 97.5th percentile of the NHANES-generated blood lead level distribution in children in 2007-2010. The current reference value is 5 µg/dL. CDC's advisory committee recommends follow-up services for children with blood lead levels at or above the reference value, 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. The committee recommends that environmental investigation of the home include testing of paint, soil, dust, and water and recommends that "[c]hildren with EBLs will need to be followed over time until the environmental investigations and subsequent responses are complete".[5]

Despite significant progress in reducing the geometric mean blood lead levels in recent decades, racial and income disparities persist. These observed disparities can be traced to differences in housing quality, environmental conditions, nutrition, and other factors.[5] Lead exposure does not impact all children equally. Children in low-income families (below 130 percent of the federal poverty line) living in older housing (built before 1946) are among the most vulnerable for lead poisoning.[6,7] Children participating in the Medicaid program are estimated to be two times more likely than non-Medicaid enrolled children to have blood lead levels above 5 µg/dL.[iii,7]

Medicaid Coverage of Blood Lead Testing and Follow-Up

Since 1989 Congress has required that all children enrolled in Medicaid receive blood lead testing and appropriate follow-up under the Early and Periodic Screening, Diagnostic and Treatment (EPSDT) benefit.[8] Section 1905(r) of the Act defines the EPSDT benefit to include a comprehensive array of preventive, diagnostic, and treatment services for low-income infants, children, and adolescents under age 21.

States are required to arrange for and cover any Medicaid coverable service listed in section 1905(a) of the Act that is determined to be medically necessary to correct or ameliorate any physical or behavioral conditions for individuals eligible for the EPSDT benefit. The EPSDT benefit is more robust than the Medicaid benefit package required for adults and is designed to assure that children receive early detection and preventive care, in addition to medically necessary treatment services, so that health problems are averted or diagnosed and treated as early as possible. All children must receive EPSDT screenings designed to identify health and developmental issues, including lead exposure, as early as possible. When a screening examination indicates the need for further evaluation of a child's health, the child should be appropriately referred for diagnosis and treatment without delay. Ultimately, the goal of EPSDT is to assure that children get the healthcare they need, when and where they need it.

CDC and CMS enable states to implement targeted blood lead testing of Medicaid-enrolled children if sufficient data demonstrate that universal blood lead testing is not the most effective method of identifying exposure to lead.[9,10,11] To date, no states have submitted sufficient data to justify a targeted screening approach. Therefore, Medicaid policy requires lead toxicity screening in line with Advisory Committee on Childhood Lead Poisoning Prevention (ACCLPP) recommendations that all at-risk children be screened for elevated BLLs at 12 and 24 months of age, or at 36 to 72 months of age if they have missed recommended screenings at a younger age.[12,13]

Once a child is exposed to lead, an effective response must include all three areas of secondary prevention: environmental investigation, case management, and control of identified hazards. "Environmental investigation" means the examination of a child's living environment, usually the home, to determine the source or sources of lead exposure for a child with an elevated blood lead level. According to the CDC, "case management" includes the following eight components: "client identification and outreach; individual assessment and diagnosis; service planning and resource identification; the linking of clients to needed services; service implementation and coordination; the monitoring of service delivery; advocacy; and evaluation."[14] According to the Department of Housing and Urban Development, lead hazard reduction means "measures designed to reduce or eliminate human exposure to lead-based paint hazards through methods including interim controls and abatement."[15]

Presently, Medicaid reimbursement for the environmental investigation for a child with lead exposure is limited to the health professional's time, as well as activities during an on-site investigation of the child's home or primary residence.[16] Part 5 of the *State Medicaid Manual* states that "investigations to determine the source of lead may be reimbursable... under certain circumstances." In a 1999 letter to state Medicaid directors, CMS (formerly HCFA) clarified that the term "may" [in the manual] does not mean this is an optional service. The intent was that certain

[iii] Although this difference has been decreasing over time and is not statistically significant at a national level, the disparities in prevalence of lead poisoning by Medicaid status may be more prominent at a state or local level.

medical circumstances must be present before the investigation is reimbursable as a Medicaid service; i.e., the child must have an elevated blood lead level. The letter went on to say that "we [HCFA] will revise the State Medicaid Manual in the near future to make this requirement more explicit."[17] Fifteen years later, such a revision has not been made.

Despite clear Medicaid policy, many at-risk Medicaid-eligible children are still not receiving required EPSDT lead screenings and follow-up care. A 2010 CMS analysis indicated that, although all children enrolled in Medicaid should be screened, only 66% of children were screened for lead during 2008–2009.[18]

Asthma in the Medicaid Population

Childhood Asthma: Prevalence and Burden

Asthma is among the most common chronic diseases in the United States. According to CDC, in 2011, almost 26 million people in the United States—approximately 9.5% of children younger than 18 years of age and 8.2% of adults aged 18 years and older—had asthma.[19, 20] Asthma is the single most common chronic condition among children in the U.S., with poor and minority children suffering a greater burden of the disease.[21] Not only is asthma widespread, the economic burden is substantial. Researchers estimate that asthma costs the healthcare system $56 billion annually in both direct healthcare expenditures and indirect costs from lost productivity.[22]

Medicaid beneficiaries are more likely to have asthma. Individuals with incomes below 100% of the federal poverty line (FPL) have an asthma prevalence of 11.2%, compared to 7.3% asthma prevalence among persons above 200% FPL.[23, 24] In some states, more than half of all children with asthma rely on Medicaid for their health coverage.[25, 26] The burden of asthma in the Medicaid population is also more acute: lower-income populations are less likely to have well-controlled asthma and are more likely to use an emergency department for crisis-oriented asthma treatment.[27, 28, 29]

Evidence-based guidelines from the National Asthma Education and Prevention Program (NAEPP) emphasize the importance of home- and community-based asthma education and environmental assessments as vital components of effective asthma management.[30] Similarly, the *Guide to Community Preventive Services*[iv] (Community Guide) recommends "the use of home-based

MEDICAID BASICS

Medicaid is the nation's main public health insurance program for low-income people of all ages. Medicaid is financed through a federal-state partnership in which each state designs and operates its own program within broad federal guidelines. The Centers for Medicare and Medicaid Services (CMS) is the federal agency that administers the Medicaid program and manages the federal-state partnership for each state program.

State programs have traditionally provided Medicaid benefits using a fee-for-service delivery system in which providers are paid for individual services (e.g., providers are paid for each office visit, test, and procedure). However, Medicaid benefits in many states have been increasingly offered through a managed care delivery system, which offers greater flexibility in the way services are provided. As of 2013, three out of every four Medicaid enrollees were enrolled in Medicaid managed care, and this number is expected to grow following the implementation of healthcare reform.[31] Other recent changes include:[31]

- the expansion of eligibility criteria in many states (which may increase the number of covered adults, but not necessarily with the same benefits package offered to those who meet traditional eligibilty requirements)
- an increased emphasis on prevention and community-based services
- an active interest in many states to test delivery system reforms
- a change to Medicaid regulations that allows Medicaid programs to reimburse for preventive services provided by professionals that fall outside of a state's clinical licensure system (e.g., certified asthma educators, community health workers), as long as the services are initially recommended by a physician or other clinically licensed practitioner.[32]

Another important program is the Children's Health Insurance Program (CHIP), which provides health coverage for children whose families can't afford private coverage but do not qualify for Medicaid. Like Medicaid, CHIP is designed and administered by each state within broad federal guidelines.

With all of the emerging opportunities to finance healthy homes services through the healthcare system, it can be overwhelming to know where to start. Opportunities may exist within a state's current Medicaid authority, but in some states, paying for healthy homes services may mean working with the state Medicaid agency to enact changes to the state's program.

For more information, see *Pathways to Reimbursement: Understanding and Expanding Medicaid Services in Your State* (www.nchh.org/resources/healthcarefinancing).

multi-trigger, multicomponent interventions with an environmental focus for children and adolescents with asthma" based on strong evidence of effectiveness in improving overall quality of life, and for the effectiveness of these interventions in: (i) improving asthma symptoms and (ii) reducing the number of school days missed due to asthma.The *Community Guide* recommendation is based on a detailed review of 23 studies that met rigorous selection criteria. The authors of the *Community Guide* concluded that not only do multi-trigger, multicomponent interventions in the home lead to improved quality of life for children and adolescents with asthma, but providing such services leads to substantial cost savings ranging from $5.30-$14.00 for every dollar invested.

Medicaid Coverage of Asthma Services

While Medicaid could play a significant role in bringing multi-trigger, multicomponent asthma interventions to the home and community–especially to low-income and medically underserved populations–Medicaid programs do not generally offer coverage for asthma services provided in homes and other nonclinical settings.

Unlike for childhood lead exposure, there is no specific mention of asthma within the Medicaid statute and its EPSDT regulations. For children, clinical asthma services (e.g., physician checkups and medication prescribing) arguably fall within the broad range of preventive, acute care, and diagnostic and treatment services available to Medicaid-enrolled children under EPSDT. In addition, under EPSDT regulations, each state must cover periodic assessments, which must include health education and anticipatory guidance designed, in part, to promote healthy lifestyles and disease prevention.[33] Educating children and their families about asthma self-management, medication adherence, and home trigger reduction strategies can and should be included within EPSDT.

For adults, Medicaid services for asthma may be more limited. Coverage of preventive services, including asthma education and environmental assessments, is not required for Medicaid-enrolled adults aged 21 and older. Federal law defines these services as "optional" Medicaid benefits.[34] States have considerable flexibility to determine the scope of preventive services offered, and these benefits can change year to year.

However, Medicaid does not ordinarily cover many of the additional services children and adults may need to address asthma triggers in their home, such as allergen-proof mattress covers, air humidifiers, or other supplies that are otherwise considered "medical assistance."[35] States depend on Section 1115 Waiver authority to cover these types of services. For example, Massachusetts obtained a waiver from CMS in 2011 to, in part, cover supplies to reduce asthma environmental triggers in the homes of children with high-risk asthma.[36]

In addition, States can require Medicaid managed care organizations (MCO), through contractual agreements, to offer additional asthma interventions to plan enrollees. MCOs also have the flexibility to manage their members' health using cost-effective techniques that may go beyond what is available under traditional fee-for-service Medicaid, such as disease management strategies to manage chronic conditions. Some Medicaid MCOs have designed disease management programs for their members that include case management services, educational materials, home environmental assessments, and supplies for reducing exposure to environmental triggers.[37, 38, 39]

Current and Future Federal Guidelines

Current Medicaid guidelines already give states the flexibility to define their practice settings, and therefore Medicaid programs can authorize payment to providers who offer recommended lead and asthma interventions outside of a "traditional" clinical setting, such as in the home, school, or other community location. For example, Medicaid's EPSDT requirement covers health education. EPSDT regulations do not limit health education to clinical settings, yet states have traditionally paid for these services within a well-child visit delivering the service through a pediatrician or nurse in a clinical setting. Arguably, however, health education could

[iv] Community Preventive Services Task Force. *Asthma Control: Home-Based Multi-Trigger, Multicomponent Environmental Interventions*. Available at: http://www.thecommunityguide.org/asthma/multicomponent.html. The Task Force on Community Preventive Services' recommendations are based on rigorous, replicable systematic reviews of the scientific literature conducted by diverse teams led by methodologic and subject matter experts. Selection of studies into the systematic review are based on 5 criteria: (1) potential for reducing the burden of disease and injury; (2) potential for increasing healthy behaviors and reducing unhealthy behaviors; (3) potential to increase the implementation of effective interventions that are not widely used; (4) potential to phase out widely used less-effective options; (5) current level of interest among providers and decision makers. Evidence levels of included articles are based on standardized assessment forms.

be provided under the EPSDT benefit in *nonclinical* settings.

CMS guidance emphasizes that any practitioner licensed by the state may become qualified to provide EPSDT services, and encourages states to "[t]ake advantage of all [provider] resources available."[40] CMS also encourages EPSDT programs to coordinate with a broad range of social service programs to provide various services, including health education and counseling.[41] Thus, a reimbursable service could include the important coordination role of a health worker to connect clients to services outside of the healthcare system. For a child with lead exposure, this might include connecting the child's family to resources for lead hazard control or to neuropsychological testing or educational interventions.

A recent development holds promise for Medicaid reimbursement of preventive services delivered in the home and community setting. Effective January 1, 2014, CMS changed Medicaid regulations regarding which types of providers can be reimbursed for providing preventive services to Medicaid and CHIP beneficiaries. Before this rule change, Medicaid regulations limited the scope of allowable coverage of preventive services to those that are actually *provided by* a physician or other licensed practitioner. As a result, most state Medicaid programs had limited coverage of preventive services to those furnished by licensed providers in a clinical setting. The old regulation significantly limited access to evidence-based services and interventions in homes and other community environments for Medicaid beneficiaries.

In a final rule released July 15, 2013, CMS updated these regulations to allow state Medicaid programs to reimburse for preventive services provided by those 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.[42] Beginning January 1, 2014, Medicaid (either directly or through its managed care contractors) is able to cover and pay for community-based lead and asthma interventions when carried out by a range of practitioners, including asthma educators, healthy homes specialists, or other community health workers. This rule change adds greater flexibility to federal Medicaid law, which already gives states discretion over the settings in which care is furnished.

TERMS USED IN THIS REPORT

Clinical or nursing case management
According to the CDC, case management includes the following eight components: client identification and outreach; individual assessment and diagnosis; service planning and resource identification; the linking of clients to needed services; service implementation and coordination; the monitoring of service delivery; advocacy; and evaluation.

EBL
Elevated blood lead level. The current CDC reference value for EBLs is 5 µg/dL. The CDC's advisory committee recommends follow-up services for children with blood lead levels above this reference value.

Home-based asthma services
The survey used the *Community Guide to Preventive Services* definition of home-based, multi-trigger, multi-component 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 for the full definition.

Lead poisoning follow-up services
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 for the full definition used in the survey.

Optional service*
Optional services are not mandated, but state Medicaid reimbursement policies give decision-makers the option to provide these services (e.g., as an optional component of MCO contracts, as an optional service reimbursed through quality improvement activities or as part of an integrated care model, such as the Medicaid health home).

Payer
An entity that finances or reimburses the cost of health services for patients (e.g., a health plan, a managed care plan, a state Medicaid agency).

Required service*
Services that are currently mandated benefits for Medicaid or CHIP beneficiaries (e.g, offered as part of a fee-for-service delivery system or as a required element of Medicaid MCO contracts.

**States may have multiple delivery systems in place, and, as a result, the categories of required and optional services are not mutually exclusive.*

METHODS

Online Surveys

During the spring of 2014, the National Center for Healthy Housing (NCHH) conducted a nationwide survey to identify states where home-based services for children with lead exposure or for patients with asthma are already in place or pending.

NCHH developed two online surveys using SurveyMonkey Platinum, a web-based survey platform. One survey focused on Medicaid coverage of home-based asthma services and the other on Medicaid coverage of follow-up services for children with lead exposure. NCHH solicited input from partners with expertise in lead and asthma, pilot-tested the surveys with state lead and asthma program contacts, and revised the surveys to reflect this feedback.

NCHH sent the online surveys to Medicaid directors and state program contacts in April, 2014. Data were collected through the end of June, 2014, with multiple attempts to follow up with non-responders via phone and email.[ii] Respondents were asked questions about Medicaid reimbursement for home-based asthma services or services for children with lead exposure, with an emphasis on environmental assessment, education and remediation. NCHH defined home-based asthma services using the *Community Guide to Preventive Services* definition of multifaceted, multi-component, multi-trigger interventions. NCHH defined follow-up services for lead to include one or more service directed at lead hazards in the home environment (e.g., assessment of lead hazards, in-home education about how to reduce lead hazards, lead hazard control activities).[i] See Appendix A for full definitions of lead poisoning follow-up services and home-based asthma services provided to respondents.

NCHH collected detailed information about whether these services are currently mandated benefits for Medicaid and CHIP beneficiaries (e.g., offered as part of a fee-for-service delivery system or as a required element of Medicaid MCO contracts) or whether state Medicaid reimbursement policies give decision-makers the option to provide these services to beneficiaries (e.g., as an optional component of MCO contracts, as an optional service reimbursed through quality improvement activities, or as part of an integrated care model, such as the Medicaid health home). NCHH also collected data on efforts underway in states to seek or expand reimbursement for home-based asthma services or lead poisoning follow-up services.

In states where respondents reported that services were already in place or expected to be in place within a year,[v] respondents also provided information about, among other things, the geographic coverage of services, eligibility criteria, types of services covered, and types of agencies/organizations eligible for reimbursement for providing these services. Finally, all respondents were asked a set of questions about important drivers and barriers to seeking reimbursement and about funding streams in their states that might cover these services where Medicaid coverage is lacking (private insurers, ACOs, social impact bonds, hospital community benefits, and state-funded programs). Most questions were multiple choice with an option to enter additional open-ended comments.

NCHH sent respondents custom links using email collectors that tracked the respondent type (Medicaid or Program) and the unique email address. Respondents manually entered their names, organizations, and contact information to verify their identities in the event that the link was forwarded. Respondents were able to complete a portion of a survey and return later to finish the rest, but were limited to submitting a single response that could not be edited after their final submissions.

Analysis

Survey data was cleaned and analyzed using SAS version 9.3.

For the asthma survey, NCHH received a total of 58 responses, 55 of which were complete responses. For the lead survey, NCHH received a total of 68 responses, 63 of which were complete. To be considered a "complete" response, the survey respondent had to answer both questions about required (mandated) and optional services, but all other answers could be left blank.[vi] NCHH removed incomplete responses from the dataset before analysis. A total of eight states for asthma and 16 states for lead had one or more duplicate responses

[v] For states where services were expected to be in place within a year, but were not yet in place, respondents were directed to provide their best understanding of what services would be available by the end of the year.

[vi] Questions 4 and 14 for the asthma survey and questions 4 and 13 for the lead survey. See Appendix A

(e.g., multiple complete responses from the same state).

NCHH created two datasets for each survey. The opinion dataset was used to analyze responses to questions about barriers and drivers. Due to the nature of these questions, multiple respondents from a state were included in the dataset, but duplicate responses from the same individual were removed. The final opinion dataset had a total of 117 complete responses (53 asthma responses and 64 lead responses). The policy dataset was used for analyzing the majority of survey questions but only allowed one response per state. To select the best respondent from each state, NCHH used a set of pre-determined criteria (Appendix B). The final policy dataset had a total of 46 responses for asthma and 49 responses for lead, where each response to a survey represents a single state.

Descriptive statistics were generated for all survey questions. One of the primary purposes of the survey was to determine the extent to which home-based environmental services are being covered by Medicaid. Therefore, respondents were directed to answer that a required or optional services was in place only if the covered service had an environmental component.To ensure a consistent interpretation of these services, an extra data validation step was imposed before a state was classified as having services in place. Respondents who answered "YES" to questions about whether services were already in place also had to select one or more environmental activities in the corresponding question about what types of services were reimbursable. Two states for the lead survey were recoded as a result of this data validation (recoded to indicate that services were not in place despite an affirmative answer to question four). If a respondent did not answer any of the questions about reimbursable services, their responses to the question about services being in place was not recoded, but was flagged for additional follow-up.

Finally, based on clarifying comments entered in open-ended text boxes, NCHH recoded one asthma survey respondent's answer indicating that services were already in place to an answer indicating that services were expected to be in place within a year.

For the question about drivers that respondents rated on an importance scale, average ratings were generated for each driver, for lead and asthma respondents separately and combined.[vii]

It is important to note that the survey findings are based on respondent self-report and have not been independently verified.

RESULTS

A total of 27 states (54%) reported having some Medicaid reimbursement policy in place, though not necessarily available statewide, for lead poisoning follow-up services or home-based asthma services. For details about services in individual states, visit: www.nchh.org/Resources/HealthcareFinancing/Snapshot.aspx.

Lead

NCHH received a total of 68 responses from 49 states in response to the lead survey, an overall response rate of 98%. Of these 49 responses, 29 came from program staff and 20 from staff within the state's Medicaid agency (Appendix C, Table 1).

Nearly three-quarters (72%) of states reported the delivery systems in their states included Medicaid managed care, and roughly two-thirds reported that services were also offered through a fee-for-service delivery system (Table 2). Fourteen percent of respondents were not sure what types of delivery systems existed in their state.

Twenty-three states (46%) reported that some Medicaid reimbursement was in place for lead-poisoning follow-up services,[i] with one additional state reporting that it expects services to be in place within a year. In the majority of states (27 states, 54%), no services were in place, or the respondents

[vii] Where 4=Very Important, 3=Important, 2=A little important and 1=Not important at all.

[viii] States may have multiple delivery systems in place, and, as a result, the categories of required and optional services are not mutually exclusive.

For details about services in individual states, visit:
www.nchh.org/Resources/HealthcareFinancing/Snapshot.aspx

were uncertain if services were in place, or they did not complete the survey.

Eighteen states (36%) (CA, GA, IA, ID, IL, KY, MI, MN, MO, NC, NH, NJ, NY, PA, RI, TX, VT, WI) reported that lead poisoning follow-up services were already in place as a required service, and seven states (14%) (AL, MD, MI, OH, OK, RI, SC) reported that the services were in place as an optional service within the state.[viii] One additional state reported that it expects lead poisoning follow-up services to be in place as a required service within a year, but none reported that they expected it to be in place as an optional service within a year. Seven states (14%) reported that they were exploring putting reimbursement for lead poisoning follow-up services into place (either as a new service or as an expansion of services for states with an existing policy). Three states reported pursuing reimbursement as a required benefit and five as an optional service (Appendix C, Table 2).

Required Services: Follow-up Services for Children With Lead Exposure (Table 3)

Among the 18 states that reported follow-up services for lead are in place as a required service, 100% reported that the service was available to child enrollees statewide. More than half of these states (11) indicated that this follow-up service for lead is covered through the EPSDT benefit (e.g., through the state-defined other necessary health services), with the remaining states using some other reimbursement mechanism. The most common eligibility requirements were a specific BLL (100%), or housing characteristics or location (61%). The required BLL to be eligible for services ranged from 5 µg/dL to 20 µg/dL. Some states reported that different levels of service were available for different BLLs (e.g., "10 µg/dL or greater to require investigation and ≤ 20 µg/dL to require remediation").

A majority of states with required lead follow-up services in place reported that

LEAD FOLLOW-UP SERVICES REIMBURSEMENT AT A GLANCE

How did the survey define the services?

Follow-up services were defined as services that went 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. A respondent also had to select at least one component that addressed exposure in the home environment to count as having follow-up services in place. See Appendix A for the full definition.

How many states have Medicaid reimbursement in place for these services?

Twenty-three states reported that there was an existing Medicaid policy in place to cover lead follow-up services (see states in red below), but it is important to note that in many cases, the services may be limited in scale or not being effectively translated into actual services for patients. Of these,18 states had a policy in place that required lead follow-up services. A total of seven states reported that efforts were underway to pursue expanding or establishing reimbursement policies for lead follow-up services.

Who is eligible?

Among the 18 states with required services in place, all base eligibility on blood lead levels, ranging from 5 µg/dL to 20 µg/dL.

What services are provided?*

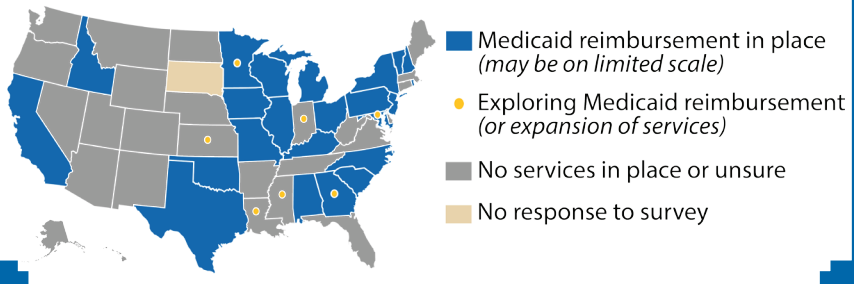
- Assessment of the primary residence (15 states, 83%)
- Clinical or nursing case management (14 states, 78%)
- In-home education to reduce lead exposure (12 states, 67%)
- Service coordination (8 states, 44%)
- Phone-based education (7 states, 39%)
- Assessment of a second residence/daycare/school (7 states, 39%)
- Enforcement activities (6 states, 33%)
- Lead hazard control activities (4 states, 22%)

What type of staff provides the services?

Most states reported that nurses, lead inspectors, and environmental health professionals provide services. Fewer than a quarter of states reported that other staff provide services.

**Among states with required services in place.*

The Reimbursement Landscape for Lead Follow-up Services
Self-Reported Status of State Reimbursement Policies, 2014



assessment of the primary residence (83%), clinical or nursing case management (78%), and in-home education about how to eliminate or avoid exposure to lead hazards (67%) were part of the reimbursable service. A third or more reported reimbursement for service coordination (44%), phone-based education about reducing exposure to lead hazards (39%), assessment of a second residence, daycare, or school (39%), and enforcement activities (33%). Roughly a fifth reported that lead hazard control activities are also a reimbursable service, but open-ended comments suggest that structural remediation may be funded through complementary funding streams (e.g., through a community development or housing funding stream or repair program).

Nearly three-quarters (13 out of 18) of the states with required lead services in place reported that nurses and lead inspectors provide some part of the reimbursable services, but services are also provided by sanitarians/environmental health professionals in 11 states (61%), community health workers/Promotoras in three states (17%), and housing professionals and other types of staff in two states each (11%).

Local health departments were the most common recipient of reimbursement for required lead poisoning follow-up services (83%), but states also reported that state health departments (56%), hospitals/clinics (39%), Medicaid Managed Care organizations (33%), home health agencies/visiting nurse associations (28%), other healthcare providers (28%), health home providers (11%), and community-based organizations (6%) are able to bill for these services.

Finally, data collected on the number of visits and amount of reimbursement will require additional follow-up and clarification. In general, states reported a range of possible number of visits and reimbursement levels. Based on a very preliminary analysis of data, the number of visits ranges from one to four, and reimbursement levels may range from $79 to $775 per patient (inclusive of all visits).

Optional Services: Lead Poisoning Follow-up Services (Table 4)

Among the seven states that reported lead poisoning follow-up services are in place as an optional service, most reported that the service was available to enrollees statewide (71%).

The most common eligibility requirement is a specific BLL (86%), ranging from 5 µg/dL to 20 µg/dL. Some states reported that different levels of service were available for different BLLs (e.g., "5 µg/dL for telephone questionnaire only and 10 µg/dL for nurse case management and public health lead investigation with risk assessment").

A majority of states reported that assessment of the primary residence (visual or environmental) (86%), clinical or nursing case management (71%), and in-home education about how to eliminate or avoid exposure to lead hazards (57%) were part of the reimbursable service. Just under half reported reimbursement for phone-based education about reducing exposure to lead hazards (43%) and assessment of a second residence, daycare, or school (43%).

A total of 27 states reported having some Medicaid reimbursement policy in place for lead poisoning follow-up services or home-based asthma services.

One state reported that lead hazard control activities are also a reimbursable service, but open-ended comments suggest that structural remediation may be funded through complementary funding streams (e.g., through a community development or housing funding stream or repair program). No states reported that enforcement activities were a reimbursable part of these optional lead poisoning follow-up services.

More than half of the states with optional services reported that nurses and lead inspectors provide some part of the reimbursable services (57%), but services are also provided sanitarians/environmental health professionals (43%), and CHWs/Promotoras (29%).

State health departments were the most common recipient of reimbursement for optional lead poisoning follow-up services (86%), but states also reported that local health departments (43%), hospitals/clinics (29%), Medicaid Managed Care organizations (29%), other healthcare providers (14%), and community-based organizations (14%) are able to bill for these services.

Finally, data collected on the number of visits and amount of reimbursement will require additional

follow-up and clarification.

Asthma

NCHH received a total of 58 responses from 46 different states in response to the asthma survey, an overall response rate of 92%. Of these 46 responses, 28 (61%) came from state asthma program staff and 18 (39%) from staff within the state's Medicaid agency (Appendix C, Table 1).

Roughly two-thirds of states reported the delivery systems in their states included Medicaid managed care, and nearly the same proportion reported that services were also offered through a fee-for-service delivery system (Appendix C, Table 2). A fifth of respondents were not sure what types of delivery systems existed in their states.

Thirteen states (26%) reported that some Medicaid reimbursement was in place for home-based asthma services, with three additional states reporting that they expect services to be in place within a year.[i] For the majority of states (37 states, 74%), the respondent reported that reimbursement was not in place, they were unsure if it was in place, or they did not complete the survey.

Only one state (South Carolina) reported that home-based asthma services were already in place as a required service. Thirteen states (AL, CA, CT, DE, MA, MI, MN, NC, NH, NY, OR, SC, VT) reported that home-based asthma interventions were in place as an optional service.[viii] Two additional states reported that they expect home-based asthma services to be in place as a required service within a year, and three states reported that they expected it to be in place as an optional service within a year. Nineteen states reported that they were exploring reimbursement for home-based asthma services (either as a new service or as an expansion of

HOME-BASED ASTHMA SERVICES REIMBURSEMENT AT A GLANCE

How did the survey define the services?

The survey used the *Community Guide to Preventive Services* definition of home-based, multi-trigger, multi-component 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. A respondent also had to select at least one component that addressed exposure in the home environment to count as having services in place. See Appendix A for the full definition.

How many states have Medicaid reimbursement in place for these services?

Thirteen states reported that there was an existing Medicaid policy in place to cover home-based asthma services (see map below), but in many cases, the services may be limited in scale or not effectively translated into services for patients. A total of 19 states reported that efforts were underway to pursue expanding or establishing reimbursement policies for lead follow-up services.

Who is eligible?

Among the 13 states with services in place, all provide services to children and over two-thirds provide services to adults. Healthcare utilization, and specifically a recent hospitalization or ED visit for asthma, were the most common eligibility criteria for these services.

What services are provided?*

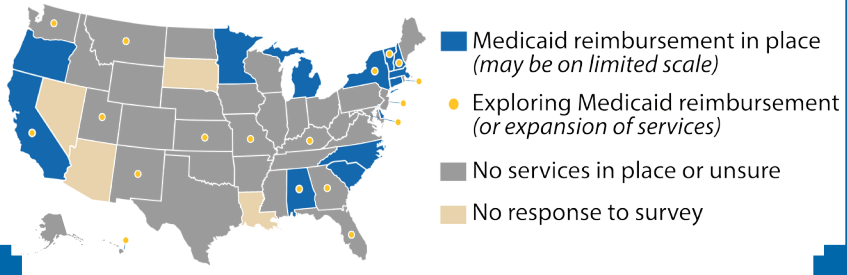
- Self-management education (10 states, 77%)
- Assessment of the primary residence (9 states, 69%)
- In-home education to reduce exposure to triggers (7 states, 54%)
- Low-cost supplies/services (5 states, 38%)
- Assessment of a second residence/daycare/school (3 states, 23%)
- Structural remediation (2 states, 15%)

What type of staff provides the services?

Most states reported that clinical staff (nurses, certified asthma educators, respiratory therapists) provide services, but just under a third reported that services are also provided by CHWs, and a few states reported using social workers and environmental health and housing professionals.

**Among states with required services in place.*

The Reimbursement Landscape for Home-Based Asthma Services
Self-Reported Status of State Reimbursement Policies, 2014



services for states with an existing policy). Fourteen states reported pursuing reimbursement as a required benefit and 10 as an optional service (Appendix C, Table 2).

Required Services: Home-Based Asthma Services (Appendix C, Table 3)

For the one state with required services, the policy applies to eligible enrollees statewide. Only children are eligible for the service, but no other criteria based on healthcare utilization, Asthma Control Test scores, allergen testing or housing characteristics are used to determine eligibility. The service includes in-home education about how to reduce or avoid exposure to triggers, but does not include low-cost supplies or structural remediation. The service is performed by "nonclinical staff" and is coordinated through a single entity for the entire state (a statewide nonprofit).

Optional Services: Home-Based Asthma Services (Appendix C, Table 4)

Among the 13 states that reported that home-based asthma services are in place as an optional service, roughly half reported that the service was available to enrollees statewide and the other half that the service was only available in a limited number of jurisdictions.

All of the states with optional services in place provide services to children, and nearly two-thirds provide services to adults. The most common eligibility requirements were a recent hospitalization or ED visit (62%), or another type of healthcare utilization like medication-based criteria (38%). A handful of states reported using an Asthma Control Test score (15%) and housing characteristics or location (15%) to determine eligibility, and even fewer reported basing eligibility on the results of allergen screening (8%), screening questions about the home environment (8%), or a referral from a school or daycare (8%).

A majority of the 13 states with optional home-based services in place reported that education about self-management (77%), assessment of the primary residence (69%), and in-home education about how to eliminate or avoid exposure to triggers (54%) were part of the reimbursable service. More than a third reported reimbursement for low-cost supplies or services (e.g., mattress encasements, integrated pest management services), and roughly a fifth reported that assessment of a second residence, daycare, or school is a reimbursable service. Two states reported that structural remediation is a covered part of the service, but open-ended comments suggest that this may be funded through complementary funding streams (e.g., through a community development or housing funding stream or repair program).

Just over three-quarters (10 out of 13) of the states reported that nurses provide some part of the reimbursable services, but services are also provided by certified asthma educators in seven states (54%), respiratory therapists in five states (38%), CHWs/Promotoras in four states (31%), and housing professionals, sanitarians/environmental health professionals, and social workers in two states each (15%).

Medicaid Managed Care organizations were the most common recipient of reimbursement for home-based asthma services (54%), but states also reported that visiting nurse associations/home health agencies (46%), hospitals/clinics (38%), local health departments (31%), other healthcare providers (15%), state health departments (8%), and community-based organizations (8%) are able to bill for these services.

Finally, data collected on the number of visits and amount of reimbursement will require additional follow-up and clarification. In general, states reported a range of possible number of visits and reimbursement levels. Based on a very preliminary analysis of data, the number of visits ranges from one to 10, and reimbursement levels may range from $162 to $1,000 per patient (inclusive of all visits).

Important Drivers (Appendix C, Tables 6 and 7)

Overall, respondents felt that state Medicaid agencies (56%), federal agencies (55%) and state asthma control or lead and healthy homes programs (47%) were the most influential groups for states seeking to establish reimbursement for healthy homes services. Respondents to the asthma survey were more likely to note the importance of state Medicaid agencies (72% compared to only 44% of lead respondents), advocates (53% compared to just 27% of lead respondents), state programs (49% compared to 45% of lead respondents), other state health department programs (40% compared to 20% of lead respondents), local housing agencies and organizations (30% compared to 22% of lead respondents), the research community (21% compared to 8% of lead respondents), and the

general public (19% compared to 11% of lead respondents). Program respondents were more likely than Medicaid respondents to rate state and local health, housing, and Medicaid agencies as influential, but less likely than Medicaid respondents to rate federal agencies as an important and influential group.

When asked about specific drivers, both lead and asthma respondents rated credible information about potential health improvements resulting from interventions and potential cost savings, federal funding for programs, political will/leadership, and relationships or partnerships to get the issue on the table as the most important drivers for states seeking to put reimbursement into place. However, a number of other drivers were also rated as important (3.0) or better (see Appendix C, Table 7 for the full results). Program respondents rated drivers like political will/leadership, individual champion(s) within state agencies, relationships/partnerships to get the issue on the table and the recent change in the Essential Health Benefits rule as more important compared to Medicaid respondents.

Other Healthcare Financing

Seven states (14%) reported that one or more private payers in the state provide or reimburse for home-based asthma services and an additional seven (14%) report that one or more private payers are actively exploring putting these services into place. By contrast, only three states (6%) reported knowledge of private payers who reimburse for or provide lead poisoning follow-up services, and none were aware of private payers who were actively pursuing these services. Six states (12%) reported that a hospital community benefit program in their state includes home-based asthma services (compared to none for lead), two states (4%) reported that an ACO in their state provides home-based asthma services (compared to one state aware of an ACO providing lead poisoning follow-up services) and only one state indicated that a social impact bond was financing home-based asthma services in their state (again, compared to none for lead). When asked about state-funded programs (not including federal or other grants), 20 states reported having a program in place to provide lead poisoning follow-up services, compared to only 12 who provide home-based asthma services. It is worth noting that respondents based in state agencies may have limited knowledge of some of these financing mechanisms that can be very local in scope.

DISCUSSION

A growing number of healthcare payers and organizations are interested in increasing their investments in the social determinants of health to prevent disease, reduce costs, eliminate disparities, and improve quality of life. The Affordable Care Act is reshaping the way our nation thinks about health and healthcare by recognizing the critical importance of factors outside the clinical healthcare system in determining our health status. The results of this survey indicate that more than half of U.S. states have some policy in place to support Medicaid reimbursement for either home-based asthma services or follow-up services for children with lead exposure.[ix] This number should be encouraging to public health and housing practitioners who have long recognized the potential for investment in housing to improve population health. However, the survey findings also reveal that we are far from meeting the full promise of healthcare financing in reducing the burden of housing-related illness and injury.

In many places, policies may be very limited in scale (in geographic scope, patients eligible for services, and/or range of services available). In other cases, policies exist but may not be effectively translated into actual services for patients. More specifically, given that appropriate follow-up for children with lead exposure is a requirement of EPSDT, it is also troubling that so few states report that the service is a required benefit. Additional follow-up is merited to uncover the infrastructure and drivers behind effective policies and the barriers faced by states whose policies are limited, not effectively translated into services, or not in place at all. Follow-up research being conducted by NCHH and the Milken Institute School of Public Health at the George Washington University will explore this in further detail.

There were also important differences between the survey findings for asthma and lead. Generally speaking, fewer overall states have existing policies covering Medicaid reimbursement of home-based asthma services. This is to be expected since coverage of lead services is a federal requirement. Yet the survey suggests that a greater proportion of states are actively pursuing putting asthma home-

based services into place or expanding existing services. Fewer states reported that such plans were in process for lead. This could be because CDC has required for over a decade that its grantees pursue Medicaid reimbursement as part of their Childhood Lead Poisoning Prevention grant programs. States may have long ago explored this opportunity and confronted obstacles discouraging continued effort.

Where home-based asthma services are in place, they seem to be embedded in or integrated with a clinical framework (e.g., in terms of the criteria used to determine eligibility, reliance on clinical staff to provide services, types of entities that typically bill for services). By contrast, lead follow-up services appear to be less connected to clinical services, but more robustly integrated into the environmental public health infrastructure of government agencies. This contrasting picture of integration with clinical services for asthma and integration with environmental public health was also apparent in the prevalence of other types of financing in place to cover services, with a greater number of state programs funding lead follow-up services, but a greater number of private payers, hospital community benefits, and ACOs investing in home-based asthma services. These differences may highlight opportunities for practitioners in asthma control and lead poisoning prevention to share lessons learned with each other (e.g., for asthma practitioners to find opportunities to increase integration with the public health system and for lead practitioners to increase integration with the clinical healthcare system).

An increased investment in housing has the potential to dramatically reduce the burden of preventable housing-related illness, including asthma and childhood lead poisoning. However, additional work is needed to expand access to lead follow-up and home-based asthma services.[43]

[ix] As of Spring 2014. Survey findings are based on respondent self-report and have not been independently verified. Furthermore, reimbursement policies may have changed since the time of the survey.

APPENDIX A. SURVEY INSTRUMENTS

Healthcare Financing of Healthy Homes: Lead Poisoning

Welcome!

Thank you for taking the time to complete this brief survey. The survey should take you less than 15 minutes to complete. You will be asked questions about healthcare financing of lead poisoning services in your state, including Medicaid reimbursement, for assessment and remediation of the home environment to eliminate lead hazards. You will be asked separately about services that are required and services that are optional. To assist you in answering these questions additional guidance and web links for more information are provided throughout the survey. **Please answer to the best of your ability.**

The survey is designed to be short, but may take more time for states where more services are in place. However, you do **not** have to complete it in one session. When you want to save your work, click "Next" at the bottom of the page you're on and Survey Monkey will save the responses you've entered so far. Survey Monkey will remember where you left off and bring you to that page the next time you click on the link you were emailed.

To go back and change responses on an earlier page in the survey, use the "Previous" button at the bottom of each page to navigate back to the page you want to edit.

If you encounter any difficulties or have any questions about the survey, please contact Amanda Reddy (areddy@nchh.org or 443.539.4152).

Click "next" when you are ready to begin.

About the project:
The National Center for Healthy Housing (NCHH) is working to research and document opportunities to pay for healthy homes services, including lead poisoning follow-up care and asthma trigger reduction, through the health care system. NCHH will identify specific examples where healthy homes activities are currently being financed through non-profit hospitals and public or private insurance and describe the steps involved in getting financing into place. This work will culminate in a peer-reviewed journal article, 3-5 technical briefs, and a resource bank (with links to both existing and new materials) to provide resources for state and local agencies and organizations interested in partnering with the healthcare system to reduce housing-related illness and injury. www.nchh.org

Healthcare Financing of Healthy Homes: Lead Poisoning

***1. Choose your state from the drop-down menu:**

State:

***2. Please enter your name, email address and phone number in case we need to contact you for more information or to clarify an answer:**

Name:

Organization/Agency

Email Address:

Phone Number:

Note: You may be contacted if we need additional clarification about your responses, but you will NOT be personally identified in any publication related to this work.

3. What type of delivery systems are in place for your state's Medicaid program?

Select all that apply. See links below for more information about Medicaid delivery systems.

- ☐ Fee-for-Service
- ☐ Medicaid Managed Care
- ☐ Other
- ☐ Unsure

Comments:

Click for more information about Fee-for-Service
Click for more information about Medicaid Managed Care
Click for general information about Medicaid Delivery Systems

Healthcare Financing of Healthy Homes: Lead Poisoning

Medicaid Reimbursement: Required Services

***4. Are lead poisoning services, as defined below*, a REQUIRED service for Medicaid or CHIP beneficiaries in your state (e.g., a required benefit in a Fee-for-Service model or a required component of Medicaid Managed Care contracts or as part of an integrated care model, like health homes)?**

Please choose yes if the service defined below (or any component of the service) is a required service. If the service is not yet reimbursable, but there are efforts to put reimbursement into place, please choose the appropriate answer below. You'll be asked about optional services elsewhere in the survey.

- ◯ Yes, one or more of these types of services are required in my state
- ◯ Not yet, but we expect these services to be a required benefit within a year
- ◯ Not yet, but there is work going on to explore adding a requirement to provide these services in my state (skip to question #13)
- ◯ No (skip to question #13)
- ◯ Not sure (skip to question #13)

****Do not include services that ONLY cover blood lead screening. Please include all services that 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. Examples of these types of services could include, but are not limited to:***

A nurse or community health worker or other health professional provides phone-based education or visits the home of a child with an elevated blood lead level to provide the family with information about reducing exposure to lead hazards and proper nutrition.

An environmental health professional, lead risk assessor, nurse or community health worker visits the home a child with an elevated blood lead level to assess the home for potential lead hazards and provide education about reducing exposure to lead hazards.

Potential lead hazards are remediated in the home a child with an elevated blood lead level. Remediation activities could include, but are not limited to: stabilizing or repairing deteriorated paint, abatement of lead-based paint from components (e.g., doors, windows), replacement of components (e.g., doors, windows), making floor and window surfaces smooth and cleanable, performing specialized cleaning of horizontal surfaces, other lead hazard control activities.

Healthcare Financing of Healthy Homes: Lead Poisoning

Additional Detail about Required Services

You indicated that lead poisoning services related to the home environment are REQUIRED services, reimbursable by Medicaid or CHIP in your state (OR that there are efforts to pursue reimbursement for these services).

You'll be asked about optional services later in the survey. For the questions on this page, if these services are already required, please answer based on what is currently reimbursable. Otherwise, if reimbursement is pending, please give your best understanding of what the required service would look like. If there is variation or flexibility in how providers provide the service (e.g., who is eligible, what is covered), please give your best understanding of what would be allowable within your state's Medicaid or CHIP program.

5. Please indicate if these lead poisoning services are required services everywhere in the state or only in a limited number of places in your state.

- ◯ The service is required statewide
- ◯ The service is required only in a limited number of jurisdictions
- ◯ Not sure

Comments or additional detail:

6. Does your state have a specific policy to cover services to address lead hazards in the home environment through the Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit (e.g., through the state-defined other necessary health services)?

- ◯ Yes
- ◯ No
- ◯ Unsure

Comments:

Healthcare Financing of Healthy Homes: Lead Poisoning

7. Are any of the following considered in determining who is eligible for the service(s)?

Select one answer in each row and provide additional detail as directed.

	Yes	No	Not sure
Blood lead level (if yes, enter value below)	◯	◯	◯
Detail:			
Age (if yes, enter age (in years) below)	◯	◯	◯
Detail:			
Housing characteristics or location (if yes, enter description below)	◯	◯	◯
Detail:			
Enrollment in CHIP, Medicaid or Health Home (if yes, please describe below)	◯	◯	◯
Detail:			
Other (please describe below)	◯	◯	◯
Detail:			

Healthcare Financing of Healthy Homes: Lead Poisoning

8. Which of the following components of lead poisoning services are REQUIRED Medicaid services in your state?

Select all that apply.

- ☐ Assessment of the patient's primary residence for lead hazards
- ☐ Assessment of a second residence (or daycare or school) for lead hazards
- ☐ In-home education about how to eliminate or reduce exposure to lead hazards, nutrition or other case management
- ☐ Phone-based education about how to eliminate or reduce exposure to lead hazards, nutrition or other case management
- ☐ Lead hazard control activities to eliminate or reduce exposure to lead hazards (e.g., window replacement, abatement, interim controls, specialized cleaning, clearance testing)
- ☐ Enforcement activities
- ☐ Clinical or nursing case management for children with elevated blood lead levels
- ☐ Service coordination of environmental investigation and remediation
- ☐ Other (please describe below)

Please describe what other related services are reimbursable in your state:

Healthcare Financing of Healthy Homes: Lead Poisoning

9. Please indicate whether each of the following types of staff provide any of the reimbursable services and provide additional details about services rendered and credentialing required for each type of staff who provide reimbursable services in your state.

Choose one answer in each row and provide additional details as directed.

	Yes	No	Unsure
Nurses	◯	◯	◯
Details about services provided and credentialing required:			
Community Health Workers (also known as Promotoras)	◯	◯	◯
Details about services provided and credentialing required:			
Sanitarian or Environmental Health Professional	◯	◯	◯
Details about services provided and credentialing required:			
Lead inspector	◯	◯	◯
Details about services provided and credentialing required:			
Housing Professional	◯	◯	◯
Details about services provided and credentialing required:			
Other (describe below)	◯	◯	◯
Details about services provided and credentialing required:			

Healthcare Financing of Healthy Homes: Lead Poisoning

Medicaid Reimbursement: Optional Services

***13. The last set of questions asked about required services. Now we will ask you about services that are optional.**

Are lead poisoning services, as defined below*, included as an OPTIONAL service reimbursable by Medicaid or CHIP in your state (e.g., as an optional component of Medicaid Managed Care contracts, as an optional service reimbursed through quality improvement initiatives, as an optional service in your state's DSRIP program, or as part of an integrated care model, like health homes)?

Please choose yes if the service (or any component of the service) is available as an optional service financed through your state's Medicaid program. If the service is not yet reimbursable/financed, but there are efforts to put financing into place, please choose the appropriate answer below.

- ◯ Yes, one or more of these types of services are available as optional services financed or reimbursed by Medicaid or CHIP in my state
- ◯ Not yet, but we expect these services to be available as an optional service within a year
- ◯ Not yet, but there is work going on to explore adding these optional services in my state (skip to question #21)
- ◯ No (skip to question #21)
- ◯ Not sure (skip to question #21)

***Do not include services that ONLY cover blood lead screening. Please include all services that 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. Examples of these types of services could include, but are not limited to:**

A nurse or community health worker or other health professional provides phone-based education or visits the home of a child with an elevated blood lead level to provide the family with information about reducing exposure to lead hazards and proper nutrition.

An environmental health professional, lead risk assessor, nurse or community health worker visits the home a child with an elevated blood lead level to assess the home for potential lead hazards and provide education about reducing exposure to lead hazards.

Potential lead hazards are remediated in the home a child with an elevated blood lead level. Remediation activities could include, but are not limited to: stabilizing or repairing deteriorated paint, abatement of lead-based paint from components (e.g., doors, windows), replacement of components (e.g., doors, windows), making floor and window surfaces smooth and cleanable, performing specialized cleaning of horizontal surfaces, other lead hazard control activities.

Healthcare Financing of Healthy Homes: Lead Poisoning

Additional Detail about Optional Services

You indicated that lead poisoning services related to the home environment are an OPTIONAL service, reimbursable or financed by your state's Medicaid or CHIP program (OR that there are efforts to pursue reimbursement/financing for these services).

For the questions on this page, if these optional services are already in place, please answer based on what is currently reimbursable. Otherwise, if reimbursement/financing is pending, please give your best understanding of what the optional service would look like. If there is variation or flexibility in how providers provide the service (e.g., who is eligible, what is covered), please give your best understanding of what is or would be allowable within your state's Medicaid or CHIP program.

14. Please indicate if these optional services are available everywhere in the state or only in a limited number of places.

Answer based on what is allowable (e.g., even if the service isn't currently offered everywhere, but could be).

- ◯ The service is available statewide (e.g., providers anywhere in the state could opt to provide this service)
- ◯ The service is available only in a limited number of jurisdictions (e.g., providers in some parts of the state are NOT able to offer this service)
- ◯ Not sure

Comments or additional detail:

Healthcare Financing of Healthy Homes: Lead Poisoning

15. Are any of the following considered in determining who is eligible for the service?
Select one answer in each row and provide additional detail as directed.

	Yes	No	Not sure
Blood lead level (if yes, enter value below)	○	○	○
Detail:			
Age (if yes, enter age (in years) below)	○	○	○
Detail:			
Housing characteristics or location (if yes, enter description below)	○	○	○
Detail:			
Enrollment in CHIP, Medicaid or Health Home (if yes, please describe below)	○	○	○
Detail:			
Other (please describe below)	○	○	○
Detail:			

Healthcare Financing of Healthy Homes: Lead Poisoning

16. Which of the following components of lead poisoning services are OPTIONAL services that are reimbursed or financed through your state's Medicaid program? ***Select all that apply.***

- ☐ Assessment of the patient's primary residence for lead hazards
- ☐ Assessment of a second residence (or daycare or school) for lead hazards
- ☐ In-home education about how to eliminate or reduce exposure to lead hazards, nutrition or other case management
- ☐ Phone-based education about how to eliminate or reduce exposure to lead hazards, nutrition or other case management
- ☐ Lead hazard control activities to eliminate or reduce exposure to lead hazards (e.g., window replacement, abatement, interim controls, specialized cleaning, clearance testing)
- ☐ Clinical or nursing case management for children with elevated blood lead levels
- ☐ Other (please describe below)

Please describe what other related services are reimbursable in your state:

Healthcare Financing of Healthy Homes: Lead Poisoning

17. Please indicate whether each of the following types of staff provide any of the optional reimbursable services and provide additional details about services rendered and credentialing required for each type of staff who provide reimbursable services in your state.

Choose one answer in each row and provide additional details as directed.

	Yes	No	Unsure
Nurses	○	○	○
Details about services provided and credentialing required:			
Community Health Workers (also known as Promotoras)	○	○	○
Details about services provided and credentialing required:			
Sanitarian or Environmental Health Professional	○	○	○
Details about services provided and credentialing required:			
Lead inspector	○	○	○
Details about services provided and credentialing required:			
Housing Professional	○	○	○
Details about services provided and credentialing required:			
Other (describe below)	○	○	○
Details about services provided and credentialing required:			

Healthcare Financing of Healthy Homes: Lead Poisoning

18. What types of agencies or organizations are able to seek Medicaid reimbursement or Medicaid financing for these optional lead poisoning services? *Select all that apply.*

- ☐ Local health department
- ☐ State health department (e.g., to cover administrative or surveillance costs)
- ☐ Hospitals or clinics
- ☐ Visiting Nurse Associations or Home Health Care agencies
- ☐ Medicaid managed care organizations
- ☐ Health home providers
- ☐ Other healthcare providers (e.g., primary care)
- ☐ Housing agencies
- ☐ Community-based organizations
- ☐ Other (please describe)

Please describe what other types of agencies are eligible to seek reimbursement:

19. Please estimate the number of in-home visits that are typically provided, or, if there is variation, enter an estimated range (e.g., 2-4 visits).

Typical/average number of visits:

Estimated range (min-max):

20. Please estimate (in whole dollars) the typical/average reimbursement, or, if there is variation, the estimated range in reimbursement available for these optional services (e.g., $400-$1200).

Typical/average amount of reimbursement:

Estimated range (min-max):

Healthcare Financing of Healthy Homes: Lead Poisoning

Drivers

21. In your opinion, which group(s) were (or could be) most influential in securing reimbursement or healthcare financing for lead poisoning services in your state?

- ☐ Federal agencies (CMS, HUD, CDC, EPA)
- ☐ State Lead Poisoning Prevention or Healthy Homes Program
- ☐ State Medicaid Office
- ☐ Other State Health Department program
- ☐ Other State Agencies
- ☐ Local housing or health agencies or organizations
- ☐ Advocates
- ☐ Research community
- ☐ General public
- ☐ Other

Please specify what other groups were (or could be) influential:

Healthcare Financing of Healthy Homes: Lead Poisoning

22. In your opinion, if a state is considering reimbursement or healthcare financing for lead poisoning services, how important are each of the following to that process:

If your state already has reimbursement in place, please reflect on the important drivers and barriers to that process. If reimbursement is not in place, please reflect on what you see as the most important barriers and opportunities.

	Not important at all	A little important	Important	Very important
Healthcare reform resulting from Affordable Care Act	◯	◯	◯	◯
Change in Essential Health Benefits rule allowing CHWs and other non-clinical personnel to provide preventive services if ordered by a physician	◯	◯	◯	◯
Established workforce/infrastructure to deliver services	◯	◯	◯	◯
Available training and credentialing structure for eligible providers	◯	◯	◯	◯
Credible information about potential costs and savings	◯	◯	◯	◯
Credible information about potential improvements in health outcomes	◯	◯	◯	◯
Challenges related to Medicaid financing of low-cost supplies/services (e.g., intensive cleaning, minor repairs and painting)	◯	◯	◯	◯
Challenges related to Medicaid financing of structural remediation (e.g., window replacement)	◯	◯	◯	◯
Relationships/partnerships to get issue on table (e.g., relationship between the State Lead Program and State Medicaid)	◯	◯	◯	◯
Advocacy/interest from healthcare community	◯	◯	◯	◯
Advocacy/interest from research/academic community	◯	◯	◯	◯
Advocacy/interest from other local or external partners/stakeholders	◯	◯	◯	◯
Advocacy/interest from the general public	◯	◯	◯	◯
Interest from local agencies or organizations	◯	◯	◯	◯
Individual champion(s) within state agencies	◯	◯	◯	◯
Promotion of service by State Lead or Healthy Homes program	◯	◯	◯	◯
Information/evidence from local or regional demonstration projects	◯	◯	◯	◯
Federal funding for Lead Programs	◯	◯	◯	◯
Political will/leadership	◯	◯	◯	◯
Lead poisoning not perceived as a critical issue	◯	◯	◯	◯
Belief that the healthcare system should be responsible for social determinants of health, like housing	◯	◯	◯	◯
Other (please describe in comments)	◯	◯	◯	◯

Comments:

Other healthcare financing

23. In your state, do any <u>private or commercial</u> managed care plans reimburse for lead poisoning services, as defined below*?

- ◯ Yes
- ◯ No
- ◯ Not yet, but there is work going on to explore this issue in our state
- ◯ Not sure

Comments:

24. In your state, have any <u>municipalities or counties</u> received Medicaid reimbursement for lead poisoning services, as defined below*?

- ◯ Yes
- ◯ No
- ◯ Not yet, but there is work going on to explore this issue in our state
- ◯ Not sure

Comments:

Healthcare Financing of Healthy Homes: Lead Poisoning

25. Are you aware of any other ways that lead poisoning services, including environmental assessment or remediation of the home environment to eliminate lead hazards, are financed in your state?

Please select all that apply and provide additional details in the box below. Do not include initiatives funded through federal grants or other temporary programs or projects.

- ☐ Hospital community benefits
- ☐ Accountable Care Organization (ACO)
- ☐ Social impact bonds
- ☐ State-funded programs other than Medicaid (e.g., a state-funded healthy homes program)
- ☐ Other *(please describe below)*

Additional details:

Click for more information about Hospital Community Benefit Programs
Click for more information about Accountable Care Organizations
Click for more information about Social Impact Bonds

***Do not include services that ONLY cover blood lead screening. Please include all services that 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. Examples of these types of services could include, but are not limited to:**

A nurse or community health worker or other health professional provides phone-based education or visits the home of a child with an elevated blood lead level to provide the family with information about reducing exposure to lead hazards and proper nutrition.

An environmental health professional, lead risk assessor, nurse or community health worker visits the home a child with an elevated blood lead level to assess the home for potential lead hazards and provide education about reducing exposure to lead hazards.

Potential lead hazards are remediated in the home a child with an elevated blood lead level. Remediation activities could include, but are not limited to: stabilizing or repairing deteriorated paint, abatement of lead-based paint from components (e.g., doors, windows), replacement of components (e.g., doors, windows), making floor and window surfaces smooth and cleanable, performing specialized cleaning of horizontal surfaces, other lead hazard control activities.

Healthcare Financing of Healthy Homes: Lead Poisoning

Thank you for completing this survey. Your answers will provide critical insight into opportunities for states to work with the healthcare system to reduce the burden of housing-related illness, like lead poisoning.

When you are ready to submit your answers to the National Center for Healthy Housing, click submit below.

If you would like more information about this project, please contact:

Amanda Reddy, Senior Analyst
National Center for Healthy Housing
areddy@nchh.org
www.nchh.org

Healthcare Financing of Healthy Homes: Asthma Home Visits

Welcome!

Thank you for taking the time to complete this brief survey. The survey should take you less than 15 minutes to complete. You will be asked questions about healthcare financing, including Medicaid reimbursement, for home-based asthma education and assessment and remediation of the home environment to eliminate or reduce environmental asthma triggers. You will be asked separately about services that are required in your state and services that are optional. To assist you in answering these questions additional guidance and web links for more information are provided throughout the survey. **Please answer to the best of your ability.**

The survey is designed to be short, but may take more time for states where more services are in place. However, you do **not** have to complete it in one session. When you want to save your work, click "Next" at the bottom of the page you're on and Survey Monkey will save the responses you've entered so far. Survey Monkey will remember where you left off and bring you to that page the next time you click on the link you were emailed.

To go back and change responses on an earlier page in the survey, use the "Previous" button at the bottom of each page to navigate back to the page you want to edit.

If you encounter any difficulties or have any questions about the survey, please contact Amanda Reddy (areddy@nchh.org or 443.539.4152).

Click "next" when you are ready to begin.

About the project:
The National Center for Healthy Housing (NCHH) is working to research and document opportunities to pay for healthy homes services, including lead poisoning prevention and asthma trigger reduction, through the health care system. NCHH will identify specific examples where healthy homes activities are currently being financed through non-profit hospitals and public or private insurance and describe the steps involved in getting financing into place. This work will culminate in a peer-reviewed journal article, 3-5 technical briefs, and a resource bank (with links to both existing and new materials) to provide resources for state and local agencies and organizations interested in partnering with the healthcare system to reduce housing-related illness and injury. www.nchh.org

Healthcare Financing of Healthy Homes: Asthma Home Visits

***1. Choose your state from the drop-down menu:**

State:

***2. Please enter your name, email address and phone number in case we need to contact you for more information or to clarify an answer:**

Name:

Organization/Agency

Email Address:

Phone Number:

Note: You may be contacted if we need additional clarification about your responses, but you will NOT be personally identified in any publication related to this work.

3. What type of delivery systems are in place for your state's Medicaid program?

Select all that apply. See links below for more information about Medicaid delivery systems.

- ☐ Fee-for-Service
- ☐ Medicaid Managed Care
- ☐ Other
- ☐ Unsure

Comments:

Click for more information about Fee-for-Service
Click for more information about Medicaid Managed Care
Click for general information about Medicaid Delivery Systems

Healthcare Financing of Healthy Homes: Asthma Home Visits

Medicaid Reimbursement: Required Services

***4. Are home-based asthma services, as defined below*, a REQUIRED service for Medicaid or CHIP beneficiaries in your state (e.g., a required benefit in a Fee-for-Service model or a required component of Medicaid Managed Care contracts or as part of an integrated care model, like health homes)?**

Please choose yes if the service defined below (or any component of the service) is a required service. If the service is not yet reimbursable, but there are efforts to put reimbursement into place, please choose the appropriate answer below. You'll be asked about optional services elsewhere in the survey.

- ◯ Yes, one or more of these types of services are required in my state
- ◯ Not yet, but we expect these services to be a required benefit within a year
- ◯ Not yet, but there is work going on to explore adding a requirement to provide these services in my state (skip to question #14)
- ◯ No (skip to question #14)
- ◯ Not sure (skip to question #14)

**** As described by the Community Guide to Preventive Services, these interventions typically involve trained personnel making one or more home visits to conduct activities within the home. These activities often focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and remediation. Most programs include additional components, such as self-management training, social support, and coordinated care, in conjunction with efforts to reduce asthma triggers in the home environment. Examples of this type of service could include, but are not limited to:***

A nurse who visits a patient with asthma at his/her home to provide education about medications, asthma self-management and avoidance of common asthma triggers.

A community health worker who visits a patient with asthma at home, conducts a visual assessment of the home to identify any common asthma triggers (e.g., pets, cockroaches, smoking in the home, mold) and assist the family with eliminating or reducing exposure to any identified triggers.

A patient with asthma is referred to a local housing organization for assistance in remediating his/her home environment to eliminate sources of common asthma triggers (e.g., replacing carpets, fixing structural or plumbing leaks) at little or no cost to the family.

Healthcare Financing of Healthy Homes: Asthma Home Visits

Additional Detail about Required Services

You indicated that home-based asthma services are REQUIRED services, reimbursable by Medicaid or CHIP in your state (OR that there are efforts to pursue reimbursement for these services).

You'll be asked about optional services later in the survey. For the questions on this page, if these services are already required, please answer based on what is currently reimbursable. Otherwise, if reimbursement is pending, please give your best understanding of what the required service would look like. If there is variation or flexibility in how providers provide the service (e.g., who is eligible, what is covered), please give your best understanding of what would be allowable within your state's Medicaid or CHIP program.

5. Please indicate if these home-based asthma services are required services everywhere in the state or only in a limited number of places in your state.

- ◯ The service(s) is required statewide
- ◯ The service(s) is required only in a limited number of jurisdictions
- ◯ Not sure

Comments or additional detail:

6. Does your state have a specific policy to cover home-based asthma services, or any component of the service to provide home-based asthma education or address potential asthma triggers in the home environment, through the Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit (e.g., through the state-defined other necessary health services)?

- ◯ Yes
- ◯ No
- ◯ Unsure

Comments:

Healthcare Financing of Healthy Homes: Asthma Home Visits

7. Who is eligible for the home-based asthma service(s)?

Select all that apply.

- ☐ Adults enrolled in Medicaid
- ☐ Adults enrolled in a Medicaid Health Home
- ☐ Children enrolled in Medicaid
- ☐ Children enrolled in CHIP
- ☐ Children enrolled in a Medicaid Health Home
- ☐ Other
- ☐ Not sure

Please specify what other groups are eligible:

8. Are any of the following considered in determining who is eligible for the home-based asthma service(s)?

Select all that apply.

- ☐ None (aside from a diagnosis of asthma)
- ☐ Age
- ☐ Allergen testing results
- ☐ Screening questions about the home environment
- ☐ Recent hospitalization or ED visit for asthma
- ☐ Other healthcare utilization (e.g., medication profile suggesting poorly controlled asthma)
- ☐ Asthma Control Test score
- ☐ ZIP code or neighborhood of patient's home
- ☐ Referral from school or daycare
- ☐ Other (please describe below)
- ☐ Not sure

Please provide additional detail or describe what other criteria are used to determine patient eligibility:

PLEASE COMPLETE ONLINE

Healthcare Financing of Healthy Homes: Asthma Home Visits

9. Which of the following components of home-based asthma services are REQUIRED Medicaid services in your state?

Select all that apply.

- ☐ Assessment of the patient's primary residence for common asthma triggers
- ☐ Assessment of a second residence (or daycare or school) for common asthma triggers
- ☐ In-home education about how to avoid or reduce exposure to common environmental asthma triggers
- ☐ Low-cost supplies or services to assist patients with reducing exposure to triggers found in the home (e.g., gel baits, mattress or pillow encasements, HEPA filters)
- ☐ Structural remediation to reduce exposure to environmental asthma triggers (e.g., repair of a leaky roof, replacement of flooring, venting of a stove)
- ☐ Education about asthma self-management (including medication usage and asthma action plans)
- ☐ Other

Please provide additional detail or describe what other related services are reimbursable in your state:

Healthcare Financing of Healthy Homes: Asthma Home Visits

10. Please indicate whether each of the following types of staff provide any of the reimbursable home-based asthma services and provide additional details about services rendered and credentialing required for each type of staff who provide reimbursable services in your state.

Choose one answer in each row and provide additional details as directed.

	Yes	No	Unsure
Nurses	◯	◯	◯
Details about services provided and credentialing required:			
Community Health Workers (also known as Promotoras)	◯	◯	◯
Details about services provided and credentialing required:			
Social Workers	◯	◯	◯
Details about services provided and credentialing required:			
Respiratory Therapists	◯	◯	◯
Details about services provided and credentialing required:			
Certified Asthma Educators (AE-C)	◯	◯	◯
Details about services provided and credentialing required:			
Environmental Health or Housing Professional	◯	◯	◯
Details about services provided and credentialing required:			
Other (describe below)	◯	◯	◯
Details about services provided and credentialing required:			

Healthcare Financing of Healthy Homes: Asthma Home Visits

11. What types of agencies or organizations are able to seek Medicaid reimbursement for these required home-based asthma services? *Select all that apply.*

- ☐ Local health department
- ☐ State health department (e.g., to cover administrative or surveillance costs)
- ☐ Hospitals or clinics
- ☐ Visiting Nurse Associations or Home Health Care agencies
- ☐ Medicaid managed care organizations
- ☐ Health home providers
- ☐ Other healthcare providers (e.g., primary care)
- ☐ Housing agencies
- ☐ Community-based organizations
- ☐ Other (please describe)

Please describe what other types of agencies are eligible to seek reimbursement:

12. Please estimate the number of in-home visits that are typically provided, or, if there is variation, enter an estimated range (e.g., 2-4 visits).

Typical/average number of visits:

Estimated range (min-max):

13. Please estimate (in whole dollars) the typical/average reimbursement, or, if there is variation, the estimated range in reimbursement available for these services (e.g., $400-$1200).

Typical/average amount of reimbursement:

Estimated range (min-max):

Healthcare Financing of Healthy Homes: Asthma Home Visits

Medicaid Reimbursement: Optional Services

***14. The last set of questions asked about required services. Now we will ask you about services that are optional.**

Are home-based asthma services, as defined below*, included as an OPTIONAL service reimbursable by Medicaid or CHIP in your state (e.g., as an optional component of Medicaid Managed Care contracts, as an optional service reimbursed through quality improvement initiatives, as an optional service in your state's DSRIP program, or as part of an integrated care model, like health homes)?

Please choose yes if the service (or any component of the service) is available as an optional service financed through your state's Medicaid program. If the service is not yet reimbursable/financed, but there are efforts to put financing into place, please choose the appropriate answer below.

- ◯ Yes, one or more of these types of services are available as optional services financed or reimbursed by Medicaid or CHIP in my state
- ◯ Not yet, but we expect these services to be available as an optional service within a year
- ◯ Not yet, but there is work going on to explore adding these optional services in my state (skip to question #23)
- ◯ No (skip to question #23)
- ◯ Not sure (skip to question #23)

**** As described by the Community Guide to Preventive Services, these interventions typically involve trained personnel making one or more home visits to conduct activities within the home. These activities often focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and remediation. Most programs include additional components, such as self-management training, social support, and coordinated care, in conjunction with efforts to reduce asthma triggers in the home environment. Examples of this type of service could include, but are not limited to:***

A nurse who visits a patient with asthma at his/her home to provide education about medications, asthma self-management and avoidance of common asthma triggers.

A community health worker who visits a patient with asthma at home, conducts a visual assessment of the home to identify any common asthma triggers (e.g., pets, cockroaches, smoking in the home, mold) and assist the family with eliminating or reducing exposure to any identified triggers.

A patient with asthma is referred to a local housing organization for assistance in remediating his/her home environment to eliminate sources of common asthma triggers (e.g., replacing carpets, fixing structural or plumbing leaks) at little or no cost to the family.

Healthcare Financing of Healthy Homes: Asthma Home Visits

Additional Detail about Optional Services

You indicated that home-based asthma services are an OPTIONAL service, reimbursable or financed by your state's Medicaid or CHIP program (OR that there are efforts to pursue reimbursement/financing for these services).

For the questions on this page, if these optional services are already in place, please answer based on what is currently reimbursable. Otherwise, if reimbursement/financing is pending, please give your best understanding of what the optional service would look like. If there is variation or flexibility in how providers provide the service (e.g., who is eligible, what is covered), please give your best understanding of what is or would be allowable within your state's Medicaid or CHIP program.

15. Please indicate if these optional home-based asthma services are available everywhere in the state or only in a limited number of places.

Answer based on what is allowable (e.g., even if the service isn't currently offered everywhere, but could be).

- ◯ The service is available statewide (e.g., providers anywhere in the state could opt to provide this service)
- ◯ The service is available only in a limited number of jurisdictions (e.g., providers in some parts of the state are NOT able to offer this service)
- ◯ Not sure

Comments or additional detail:

16. Who is eligible for the optional home-based asthma service(s)?

Select all that apply.

- ☐ Adults enrolled in Medicaid
- ☐ Adults enrolled in a Medicaid Health Home
- ☐ Children enrolled in Medicaid
- ☐ Children enrolled in CHIP
- ☐ Children enrolled in a Medicaid Health Home
- ☐ Not sure

Please specify what other groups are eligible:

Healthcare Financing of Healthy Homes: Asthma Home Visits

17. Are any of the following considered in determining who is eligible for the optional home-based asthma service(s)?

Select all that apply.

- ☐ None (aside from a diagnosis of asthma)
- ☐ Age
- ☐ Allergen testing results
- ☐ Screening questions about the home environment
- ☐ Recent hospitalization or ED visit for asthma
- ☐ Other healthcare utilization (e.g., medication profile suggesting poorly controlled asthma)
- ☐ Asthma Control Test score
- ☐ ZIP code or neighborhood of patient's home
- ☐ Referral from school or daycare
- ☐ Other (please describe below)
- ☐ Not sure

Please provide additional detail or describe what other criteria are used to determine patient eligibility:

PLEASE COMPLETE ONLINE

Healthcare Financing of Healthy Homes: Asthma Home Visits

18. Which of the following components of home-based asthma services are OPTIONAL services that are reimbursed or financed through your state's Medicaid program? *Select all that apply.*

- ☐ Assessment of the patient's primary residence for common asthma triggers
- ☐ Assessment of a second residence (or daycare or school) for common asthma triggers
- ☐ In-home education about how to avoid or reduce exposure to common environmental asthma triggers
- ☐ Low-cost supplies or services to assist patients with reducing exposure to triggers found in the home (e.g., gel baits, mattress or pillow encasements, HEPA filters)
- ☐ Structural remediation to reduce exposure to environmental asthma triggers (e.g., repair of a leaky roof, replacement of flooring, venting of a stove)
- ☐ Education about asthma self-management (including medication usage and asthma action plans)
- ☐ Other

Please describe what other related services are reimbursable in your state:

Healthcare Financing of Healthy Homes: Asthma Home Visits

19. Please indicate whether each of the following types of staff provide any of the optional home-based asthma services and provide additional details about services rendered and credentialing required for each type of staff who provide reimbursable services in your state.

Choose one answer in each row and provide additional details as directed.

	Yes	No	Unsure
Nurses	◯	◯	◯
Details about services provided and credentialing required:			
Community Health Workers (also known as Promotoras)	◯	◯	◯
Details about services provided and credentialing required:			
Social Workers	◯	◯	◯
Details about services provided and credentialing required:			
Respiratory Therapists	◯	◯	◯
Details about services provided and credentialing required:			
Certified Asthma Educators (AE-C)	◯	◯	◯
Details about services provided and credentialing required:			
Sanitarian or Environmental Health Professional	◯	◯	◯
Details about services provided and credentialing required:			
Housing Professional	◯	◯	◯
Details about services provided and credentialing required:			
Other (describe below)	◯	◯	◯

Healthcare Financing of Healthy Homes: Asthma Home Visits

Details about services provided and credentialing required:

20. What types of agencies or organizations are able to seek Medicaid reimbursement or Medicaid financing for these optional home-based asthma services? *Select all that apply.*

- ☐ Local health department
- ☐ State health department (e.g., to cover administrative or surveillance costs)
- ☐ Hospitals or clinics
- ☐ Visiting Nurse Associations or Home Health Care agencies
- ☐ Medicaid managed care organizations
- ☐ Health home providers
- ☐ Other healthcare providers (e.g., primary care)
- ☐ Housing agencies
- ☐ Community-based organizations
- ☐ Other (please describe)

Please describe what other types of agencies are eligible to seek reimbursement:

21. Please estimate the number of in-home visits that are typically provided, or, if there is variation, enter an estimated range (e.g., 2-4 visits).

Typical/average number of visits:

Estimated range (min-max):

22. Please estimate (in whole dollars) the typical/average reimbursement, or, if there is variation, the estimated range in reimbursement available for these optional services (e.g., $400-$1200).

Typical/average amount of reimbursement:

Estimated range (min-max):

Healthcare Financing of Healthy Homes: Asthma Home Visits

PLEASE COMPLETE ONLINE

Healthcare Financing of Healthy Homes: Asthma Home Visits

Drivers

23. In your opinion, which group(s) were (or could be) most influential in securing reimbursement or healthcare financing for home-based asthma services in your state?

- ☐ Federal agencies (CMS, HUD, CDC, EPA)
- ☐ State Asthma Control Program
- ☐ State Medicaid Office
- ☐ Other State Health Department program
- ☐ Other State Agencies
- ☐ Local housing or health agencies or organizations
- ☐ Advocates
- ☐ Research community
- ☐ General public
- ☐ Other

Please specify what other groups were (or could be) influential:

Healthcare Financing of Healthy Homes: Asthma Home Visits

24. In your opinion, if a state is considering reimbursement or healthcare financing for home-based asthma services, how important are each of the following to that process:

If your state already has reimbursement in place, please reflect on the important drivers and barriers to that process. If reimbursement is not in place, please reflect on what you see as the most important barriers and opportunities.

	Not important at all	A little important	Important	Very important
Healthcare reform resulting from Affordable Care Act	◯	◯	◯	◯
Change in Essential Health Benefits rule allowing CHWs and other non-clinical personnel to provide preventive services if ordered by a physician	◯	◯	◯	◯
Emphasis on control of environmental factors in NAEPP clinical guidelines (EPR-3 report)	◯	◯	◯	◯
Recommendation in the CDC Guide to Community Preventive Services (including the economic review)	◯	◯	◯	◯
Established workforce/infrastructure to deliver services	◯	◯	◯	◯
Available training and credentialing structure for eligible providers	◯	◯	◯	◯
Credible information about potential costs and savings	◯	◯	◯	◯
Credible information about potential improvements in health outcomes	◯	◯	◯	◯
Challenges related to Medicaid financing of low-cost supplies/services (e.g., mattress encasements, intensive cleaning, Integrated Pest Management)	◯	◯	◯	◯
Challenges related to Medicaid financing of structural remediation (e.g., carpet removal)	◯	◯	◯	◯
Relationships/partnerships to get issue on table (e.g., relationship between the State Asthma Control Program and State Medicaid)	◯	◯	◯	◯
Advocacy/interest from healthcare community	◯	◯	◯	◯
Advocacy/interest from research/academic community	◯	◯	◯	◯
Advocacy/interest from other local or external partners/stakeholders	◯	◯	◯	◯
Advocacy/interest from the general public	◯	◯	◯	◯
Interest from local agencies or organizations	◯	◯	◯	◯
Individual champion(s) within state agencies	◯	◯	◯	◯
Promotion of service by State Asthma Control program	◯	◯	◯	◯
Information/evidence from local or regional demonstration projects	◯	◯	◯	◯
Federal funding for State Asthma Control Program and other asthma initiatives	◯	◯	◯	◯
Political will/leadership	◯	◯	◯	◯
Asthma not perceived as a critical issue	◯	◯	◯	◯
	◯	◯	◯	◯

Healthcare Financing of Healthy Homes: Asthma Home Visits

Belief that the healthcare system should be responsible for social determinants of health, like housing	◯	◯	◯	◯
Other (please describe in comments)	◯	◯	◯	◯

Comments:

Healthcare Financing of Healthy Homes: Asthma Home Visits

Other healthcare financing

25. In your state, do any <u>private or commercial</u> managed care plans reimburse for home-based asthma services, as defined below*?

- ◯ Yes
- ◯ No
- ◯ Not yet, but there is work going on to explore this issue in our state
- ◯ Not sure

Comments:

26. In your state, have any <u>municipalities or counties</u> received Medicaid reimbursement for home-based asthma services, as defined below*?

- ◯ Yes
- ◯ No
- ◯ Not yet, but there is work going on to explore this issue in our state
- ◯ Not sure

Comments:

Healthcare Financing of Healthy Homes: Asthma Home Visits

27. Are you aware of any other ways that home-based asthma services, including environmental assessment or remediation of the home environment to eliminate asthma triggers, are financed in your state?

Please select all that apply and provide additional details in the box below. Do not include initiatives funded through federal grants or other temporary programs or projects.

- ☐ Hospital community benefits
- ☐ Accountable Care Organization (ACO)
- ☐ Social impact bonds
- ☐ State-funded programs other than Medicaid (e.g., a state-funded healthy homes or asthma program)
- ☐ Other *(please describe below)*

Additional details:

Click for more information about Hospital Community Benefit Programs
Click for more information about Accountable Care Organizations
Click for more information about Social Impact Bonds

**** As described by the Community Guide to Preventive Services, these interventions typically involve trained personnel making one or more home visits to conduct activities within the home. These activities often focus on reducing exposures to a range of asthma triggers (allergens and irritants) through environmental assessment, education, and remediation. Most programs include additional components, such as self-management training, social support, and coordinated care, in conjunction with efforts to reduce asthma triggers in the home environment. Examples of this type of service could include, but are not limited to:***

A nurse who visits a patient with asthma at his/her home to provide education about medications, asthma self-management and avoidance of common asthma triggers.

A community health worker who visits a patient with asthma at home, conducts a visual assessment of the home to identify any common asthma triggers (e.g., pets, cockroaches, smoking in the home, mold) and assist the family with eliminating or reducing exposure to any identified triggers.

A patient with asthma is referred to a local housing organization for assistance in remediating his/her home environment to eliminate sources of common asthma triggers (e.g., replacing carpets, fixing structural or plumbing leaks) at little or no cost to the family.

Healthcare Financing of Healthy Homes: Asthma Home Visits

Thank you for completing this survey. Your answers will provide critical insight into opportunities for states to work with the healthcare system to reduce the burden of housing-related illness, like asthma.

When you are ready to submit your answers to the National Center for Healthy Housing, click submit below.

If you would like more information about this project, please contact:

Amanda Reddy, Senior Analyst
National Center for Healthy Housing
areddy@nchh.org
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Appendix B. Criteria for Revolving Duplicates

For the policy dataset, a set of predetermined criteria was used to select the best respondent from each state where there were multiple complete responses to the survey. To assess duplicates against these criteria, NCHH looked at responses to questions about reimbursement being in place moving through the conditions in the order listed below and stopping as soon as one of the conditions was satisfied. NCHH first assessed duplicate responses for the responses to required services (question four on both surveys) and then optional services (question 14 for asthma and question 13 for lead).

Combination of responses from respondent A/ respondent B	Action	Number of duplicates resolved this way:	
		Asthma	Lead
Yes/Not Sure	Keep respondent with yes answer.	2	5
Yes/Any other answer	If the yes respondent is from Medicaid, keep the Medicaid response. If the yes response is from the program, assess details from other questions and/or follow up with yes respondent to ask for confirmation.	0	0
Expect services within a year/work going on to explore	Keep respondent with the “expect within a year” answer. They are similar concepts, but the “expect within a year” is asked for details and the “work going on to explore” is not.	0	0
Expect services within a year/any answer other (no, not sure)	Keep respondent with the “expect within a year” answer. Respondents who answered no may simply not be aware of pending efforts and since efforts will only be characterized as “exploring,” this should not raise concern.	0	0
Exploring/no or Exploring/not sure	Take Medicaid response, or if no Medicaid response or multiple Medicaid responses, take earliest response.	1	0
No/Not sure	Take Medicaid response, or if no Medicaid response or multiple Medicaid responses, take earliest response.	0	0
Any situation where there is agreement between Medicaid and other respondent (e.g., Yes/ Yes; Not sure/Not sure).	Take Medicaid response over program response unless: Program meets above conditions for precedence for “optional” question OR program responses provide more detail to questions at the end of the survey but are otherwise identical to the Medicaid respondent.	3	5
One more complete, one partial response	Keep respondent with more complete response (made it to end of survey)	1	5
One of the responses appears invalid	Keep valid response (e.g., one respondent selected a different state than his own from the drop-down menu and entered X’s instead of answers)	0	1
Responses are the same for critical questions and duplicate responses are the same respondent type	Take earliest response	2	0

Appendix C. Full Results Tables

Table 1. Response rate and respondent types (policy dataset)

	ASTHMA		LEAD	
	#	%[a]	#	%[a]
Number of states that responded to the survey[a]	46	92%	49	98%
By respondent type				
Medicaid	18	36%	20	40%
Program	28	56%	29	58%
No response	4	8%	1	2%

Table 2. Delivery systems and existing Medicaid reimbursement policies (policy dataset)

	ASTHMA		LEAD	
	#	%[a]	#	%[a]
Delivery systems				
Fee-for-Service	34	68%	34	68%
Medicaid Managed Care	33	66%	36	72%
Other	3	6%	4	8%
Unsure	10	20%	7	14%
Medicaid reimbursement policies				
Required services				
In place already	1	2%	18	36%
Expect to be in place in a year	2	4%	1	2%
Exploring	14	28%	3	6%
No services	20	40%	20	40%
Not sure	9	18%	5	10%
Optional services				
In place already	13	26%	7	14%
Expect to be in place in a year	3	6%	0	0%
Exploring	10	20%	5	10%
No services	13	26%	24	48%
Not sure	7	14%	10	20%
Any reimbursement in place	13	26%	23	46%
Exploring any reimbursement	19	38%	7	14%

[a]*Out of a possible 50 states.*

Table 3. Details about reimbursement policies in states with REQUIRED services (policy dataset)

	ASTHMA n=1[b]		LEAD n=18[c]	
	#	%*	#	%*
Geographic Coverage				
Statewide	1	100%	18	100%
Limited number of jurisdictions	0	0%	0	0%
Not sure	0	0%	0	0%
EPSDT Policy				
Yes	0	0%	11	61%
No	0	0%	3	17%
Unsure	0	0%	4	22%
Eligible Populations				
Adults enrolled in Medicaid	0	0%	––	––
Adults enrolled in Medicaid Health Home	0	0%	––	––
Children enrolled in Medicaid	1	100%	––	––
Children enrolled in CHIP	1	100%	––	––
Children enrolled in a Medicaid Health Home	0	0%	––	––
Other	0	0%	––	––
Not sure	0	0%	––	––
Other Eligibility Requirements				
None (aside from diagnosis)	1	100%	––	––
Age	1	100%	15	83%
Allergen testing results	0	0%	––	––
Screening questions about the home environment	0	0%	––	––
Recent hospitalization or ED visit	0	0%	––	––
Other healthcare utilization	0	0%	––	––
Asthma Control Test score	0	0%	––	––
ZIP code or neighborhood of patient's home	0	0%	––	––
Referral from school or daycare	0	0%	––	––
Enrollment in CHIP, Medicaid, or Health Home	––	––	9	50%
Housing characteristics or location	––	––	11	61%
BLL	––	––	18	100%
Other	0	0%	2	11%
Not sure	0	0%	0	0%

[b] *SC*
[c] *CA, GA, IA, ID, IL, KY, MI, MN, MO, NC, NH, NJ, NY, PA, RI, TX, VT, WI*

Table 3, continued

	ASTHMA n=1[b]		LEAD n=18[c]	
	#	%*	#	%*
Reimbursable services				
Assessment of the primary residence for asthma triggers/ lead hazards	0	0%	15	83%
Assessment of a second residence, daycare, or school	0	0%	7	39%
In-home education about how to eliminate or avoid exposure	1	100%	12	67%
Phone-based education	––	––	7	39%
Low-cost supplies or services for asthma trigger reduction	0	0%	––	––
Structural remediation	0	0%	––	––
Lead hazard control activities	––	––	4	22%
Enforcement activities	––	––	6	33%
Education about asthma self-management	0	0%	––	––
Clinical or nursing case management	––	––	14	78%
Service coordination	––	––	8	44%
Other	0	0%	2	11%
Staffing				
Nurses	0	0%	13	72%
CHWs/Promotoras	0	0%	3	17%
Social Workers	0	0%	––	––
Respiratory Therapists	0	0%	––	––
Certified Asthma Educators	0	0%	––	––
Sanitarians/Environmental Health Professionals	0	0%	11	61%
Lead Inspectors	0	0%	13	72%
Housing Professionals	0	0%	2	11%
Other	1	100%	2	11%
Agencies/organizations eligible for reimbursement				
Local health department	0	0%	15	83%
State health department	0	0%	10	56%
Hospitals or clinics	0	0%	7	39%
Visiting nurse associations/home health care agencies	0	0%	5	28%
Medicaid Managed Care organizations	0	0%	6	33%
Health home providers	0	0%	2	11%
Other healthcare providers (e.g., primary care)	0	0%	5	28%
Housing agencies	0	0%	0	0%
Community-based organizations	0	0%	1	6%
Other	1	100%	2	11%

[b] *SC*
[c] *CA, GA, IA, ID, IL, KY, MI, MN, MO, NC, NH, NJ, NY, PA, RI, TX, VT, WI*

Table 4. Details about reimbursement policies in states with OPTIONAL services (policy dataset)

	ASTHMA n=13[d]		LEAD n=7[e]	
	#	%*	#	%*
Geographic Coverage				
Statewide	6	46%	5	71%
Limited number of jurisdictions	6	46%	0	0%
Not sure	1	8%	1	14%
Eligible Populations				
Adults enrolled in Medicaid	4	31%	––	––
Adults enrolled in Medicaid Health Home	8	62%	––	––
Children enrolled in Medicaid	5	38%	––	––
Children enrolled in CHIP	12	92%	––	––
Children enrolled in a Medicaid Health Home	5	38%	––	––
Other	2	15%	––	––
Not sure	0	0%	––	––
	0	0%	––	––
Other Eligibility Requirements				
None (aside from diagnosis)				
Age	2	15%	5	71%
Allergen testing results	1	8%	––	––
Screening questions about the home environment	1	8%	––	––
Recent hospitalization or ED visit	8	62%	––	––
Other healthcare utilization	5	38%	––	––
Asthma Control Test score	2	15%	––	––
ZIP code or neighborhood of patient's home	2	15%	––	––
Referral from school or daycare	1	8%	––	––
Enrollment in CHIP, Medicaid, or Health Home	––	––	2	29%
Housing characteristics or location	––	––	2	29%
BLL	––	––	6	86%
Other	1	8%	2	29%
Not sure	4	31%	––	––

[d] *AL, CA, CT, DE, MA, MI, MN, NC, NH, NY, OR, SC, VT*
[e] *AL, MD, MI, OH, OK, RI, SC*

Table 4, continued

	ASTHMA n=13[d]		LEAD n=7[e]	
	#	%*	#	%*
Reimbursable services				
Assessment of the primary residence for asthma triggers/ lead hazards	9	69%	6	86%
Assessment of a second residence, daycare, or school	3	23%	3	43%
In-home education about how to eliminate or avoid exposure	7	54%	4	57%
Phone-based education	––	––	3	43%
Low-cost supplies or services for asthma trigger reduction	5	38%	––	––
Structural remediation	2	15%	––	––
Lead hazard control activities	––	––	1	14%
Enforcement activities	––	––	––	––
Education about asthma self-management	10	77%	––	––
Clinical or nursing case management	––	––	5	71%
Service coordination	––	––	––	––
Other	0	0%	0	0%
Staffing				
Nurses	10	77%	4	57%
CHWs/Promotoras	4	31%	2	29%
Social Workers	2	15%	––	––
Respiratory Therapists	5	38%	––	––
Certified Asthma Educators	7	54%	––	––
Sanitarians/Environmental Health Professionals	2	15%	3	43%
Lead Inspectors	––	––	4	57%
Housing Professionals	2	15%	0	0%
Other	0	0%	0	0%
Agencies/organizations eligible for reimbursement				
Local health department	4	31%	3	43%
State health department	1	8%	6	86%
Hospitals or clinics	5	38%	2	29%
Visiting nurse associations/home health care agencies	6	46%	0	0%
Medicaid Managed Care organizations	8	62%	2	29%
Health home providers	0	0%	0	0%
Other healthcare providers (e.g., primary care)	2	15%	1	14%
Housing agencies	0	0%	0	0%
Community-based organizations	1	8%	1	14%
Other	1	8%	0	0%

[d] *AL, CA, CT, DE, MA, MI, MN, NC, NH, NY, OR, SC, VT*
[e] *AL, MD, MI, OH, OK, RI, SC*

Table 5. Details about other healthcare financing mechanisms (policy dataset)

	ASTHMA		LEAD	
	#	%[f]	#	%[f]
Private/commercial insurance				
In place	7	14%	3	6%
Exploring/pursuing	7	14%	0	0%
Municipality or county				
In place	5	10%	15	30%
Exploring/pursuing	4	8%	0	0%
Other mechanisms				
Hospital community benefits	6	12%	0	0%
Accountable Care Organizations (ACOs)	2	4%	1	2%
Social impact bonds	1	2%	0	0%
State-funded programs	12	24%	20	40%
Other	10	20%	11	22%

[f] *Out of a possible 50 states.*

Table 6. Proportion of respondents who rated groups as important or influential for states interested in pursuing Medicaid reimbursement (opinion dataset)

	ASTHMA (n=53)[g]		LEAD (n=64)[g]		COMBINED (n=117)[g]	
	#	%	#	%	#	%
Federal agencies	29	55%	35	55%	64	55%
State asthma, lead poisoning or healthy homes program	26	49%	29	45%	55	47%
State Medicaid Office	38	72%	28	44%	66	56%
Other state health department program	21	40%	13	20%	34	29%
Other state agencies	8	15%	9	14%	17	15%
Local housing or health agencies/ organizations	16	30%	14	22%	30	26%
Advocates	28	53%	17	27%	45	38%
Research community	11	21%	5	8%	16	14%
General public	10	19%	7	11%	17	15%
Other	3	6%	3	5%	6	5%

[g] *Individual respondents*

Table 7. Average importance rating of drivers for states interested in pursuing Medicaid reimbursement, by respondent type (opinion dataset); *top five drivers in each column shown in blue, bolded text*

	ASTHMA (n=53)[g]		LEAD (n=64)[g]	
	PROGRAM (n=32)	MEDICAID (n=21)	PROGRAM (n=40)	MEDICAID (n=24)
	Average Rating[h]			
Healthcare reform resulting from Affordable Care Act	3.2	2.9	2.7	2.6
Change in Essential Health Benefits rule	3.4	2.8	3.0	2.6
Emphasis on control of environmental factors in NAEPP clinical guidelines	3.2	2.7	–	–
Recommendation in the CDC Guide to Community Preventive Services	3.0	3.0	–	–
Established workforce/infrastructure to deliver services	3.4	**3.2**	3.3	**3.2**
Available training and credentialing structure for eligible providers	3.4	3.0	3.0	**3.1**
Credible information about potential costs and savings	**3.8**	**3.5**	**3.5**	**3.4**
Credible information about potential improvements in health outcomes	**3.7**	**3.5**	**3.6**	**3.4**
Challenges related to Medicaid financing of low-cost supplies/services	3.0	2.9	2.9	2.9
Challenges related to Medicaid financing of structural remediation	2.8	2.7	2.9	2.6
Relationships/partnerships to get issue on table	**3.5**	3.1	**3.5**	3.0
Advocacy/interest from healthcare community	3.3	3.1	3.2	**3.1**
Advocacy/interest from research/academic community	2.8	2.8	2.7	2.8
Advocacy/interest from other local or external partners/stakeholders	3.0	2.9	2.9	2.9
Advocacy/interest from the general public	3.0	2.7	2.9	2.8
Interest from local agencies or organizations	3.0	2.7	3.1	2.9
Individual champion(s) within state agencies	3.3	2.8	3.4	2.8
Promotion by state asthma control, lead poisoning, or healthy homes program	3.3	**3.2**	3.2	**3.1**
Information/evidence from local or regional demonstration projects	3.3	**3.2**	2.5	2.7
Federal funding for programs	3.3	**3.4**	**3.6**	**3.5**
Political will/leadership	**3.8**	**3.2**	**3.5**	**3.1**
Asthma/lead poisoning not perceived as a critical issue	2.8	2.6	3.1	3.0
Belief that healthcare should be responsible for social determinants of health, like housing	2.9	2.5	2.8	2.5
Other	**3.8**	2.4	3.0	2.4

[g] *Individual respondents*
[h] *Where 4=Very Important, 3=Important, 2=A little important and 1=Not important at all.*

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For information and resources related to healthcare financing of healthy homes services:

www.nchh.org/resources/healthcarefinancing

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