



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

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

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



AT A GLANCE

Medicaid Reimbursement for Home-Based Asthma Services in MO

Medicaid in Missouri

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

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

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

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

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

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

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

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

Other Funding Mechanisms in Missouri (page 4-5)

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

Key Insights from Missouri (page 7)

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

Medicaid in Missouri

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Looking for case studies featuring experiences in other states?

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

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

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

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

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

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

PLANNED DEFINITIONS:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The MAPCP's "enviro-clinical" approach acknowledges

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

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

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

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

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

Barriers to Implementing Home-Based Asthma Services within Medicaid

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

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

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

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

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

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

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

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

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

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

Lessons Learned

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

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

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

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

ACRONYMS

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

DEFINITION OF SERVICES

Home-based asthma services

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

About the Project

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

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

Endnotes and Sources

- ¹ Nurmamagambetov, T. A., Barnett, S. B. L., Jacob, V., Chattopadhyay, S. K., Hopkins, D. P., Crocker, et al. (2011). Economic value of home-based, multi-trigger, multicomponent interventions with an environmental focus for reducing asthma morbidity: A Community Guide systematic review. *American Journal of Preventative Medicine*, 41(2S1), S33-S47. Retrieved from <http://www.thecommunityguide.org/asthma/supportingmaterials/Asthma%20Econ.pdf>
- ² National Center for Healthy Housing & Milken Institute School of Public Health. (2014, November). *Healthcare financing of healthy homes: Findings from a 2014 nationwide survey of state reimbursement policies*. Retrieved from http://www.nchh.org/Portals/0/Contents/Reimbursement%20Landscape_MAIN%20REPORT_FINAL%20%2818%20November%202014%29.pdf
- ³ Centers for Medicare and Medicaid Services. (n.d.). Missouri: Monthly Medicaid and CHIP enrollment data. Retrieved from <http://www.medicare.gov/Medicaid-CHIP-Program-Information/By-State/missouri.html>
- ⁴ Henry J. Kaiser Family Foundation. (n.d.). Status of state action on the Medicaid expansion decision. Retrieved from <http://kff.org/health-reform/state-indicator/state-activity-around-expanding-medicare-under-the-affordable-care-act/>
- ⁵ Centers for Medicare and Medicaid Services. (n.d.). Demonstrations & waivers. Retrieved from http://www.medicare.gov/medicaid-chip-program-information/by-topics/waivers/waivers_faceted.html
- ⁶ Missouri Department of Social Services (n.d.). MO HealthNet managed care enrollment: State fiscal year 2015. Retrieved from <http://dss.mo.gov/mhd/mc/pdf/2015-enrollment-mohealthnet-managed-care.pdf>
- ⁷ Missouri Department of Social Services (n.d.). MO HealthNet managed care population. Retrieved from <http://dss.mo.gov/mhd/mc/pages/population.htm>
- ⁸ Missouri Department of Social Services (n.d.). MO HealthNet managed care regions. Retrieved from <http://dss.mo.gov/mhd/mc/pages/regions.htm>
- ⁹ Office of Missouri Governor Jay Nixon. (2015, May 8). Gov. Nixon signs FY2016 budget bills, making investments in public education, economic development and services for vulnerable Missourians [Press release]. Retrieved from <https://governor.mo.gov/news/archive/gov-nixon-signs-fy2016-budget-bills-making-investments-public-education-economic>
- ¹⁰ Hancock, J. (2015, April 8). Missouri Senate approves budget that would expand Medicaid managed care. *The Kansas City Star* [The Buzz blog]. Retrieved from <http://www.kansascity.com/news/local/news-columns-blogs/the-buzz/article17826803.html>
- ¹¹ Shapiro, J. (2015, May 15). More managed care, more problems? *St. Louis Post-Dispatch* [Online]. Retrieved from http://www.stltoday.com/business/local/more-managed-care-more-problems/article_f9730fb2-f039-51bb-9125-a72a48d98da6.html
- ¹² Keller, R. (2016, January 26). Senators seek ways to reduce Medicaid supplemental spending. *Columbia Daily Tribune* [Online]. Retrieved from http://www.columbiatribune.com/news/politics/senators-seek-ways-to-reduce-medicare-supplemental-spending/article_f97ff045-8d44-5370-bc3b-00676ccf64cf.html
- ¹³ Office of Missouri Governor Jay Nixon. (2015, May 8). Gov. Nixon signs FY2016 budget bills, making investments in public education, economic development and services for vulnerable Missourians [Press release]. Retrieved from <https://governor.mo.gov/news/archive/gov-nixon-signs-fy2016-budget-bills-making-investments-public-education-economic>
- ¹⁴ Hancock, J. (2015, April 8). Missouri Senate approves budget that would expand Medicaid managed care. *The Kansas City Star* [The Buzz blog]. Retrieved from <http://www.kansascity.com/news/local/news-columns-blogs/the-buzz/article17826803.html>
- ¹⁵ Shapiro, J. (2015, May 15). More managed care, more problems? *St. Louis Post-Dispatch* [Online]. Retrieved from http://www.stltoday.com/business/local/more-managed-care-more-problems/article_f9730fb2-f039-51bb-9125-a72a48d98da6.html

Endnotes and Sources (continued)

- ¹⁶ Keller, R. (2016, January 26). Senators seek ways to reduce Medicaid supplemental spending. *Columbia Daily Tribune* [Online]. Retrieved from http://www.columbiatribune.com/news/politics/senators-seek-ways-to-reduce-medicaid-supplemental-spending/article_f97ff045-8d44-5370-bc3b-00676ccf64cf.html
- ¹⁷ Swedien, J. (2015, December 1). Senator: Missouri should move slowly to privatize Medicaid statewide. *Springfield News-Leader* [Online]. Retrieved from <http://www.news-leader.com/story/news/politics/2015/12/01/senator-missouri-should-move-slowly-privatize-medicaid-statewide/76617270/>
- ¹⁸ Reidhead, M. (2015, June). Hospital utilization for pediatric asthma in Missouri. *HIDI HealthStats*. Retrieved from the Missouri Hospital Association website: <http://web.mhanet.com/hidi>
- ¹⁹ Reidhead, M. (2015, June). Hospital utilization for pediatric asthma in Missouri. *HIDI HealthStats*. Retrieved from the Missouri Hospital Association website: <http://web.mhanet.com/hidi>
- ²⁰ U.S. Centers for Disease Control and Prevention. (2014, June 26). State-based Medicaid costs for pediatric asthma emergency department visits. Retrieved from http://www.cdc.gov/pcd/issues/2014/14_0139a.htm
- ²¹ National Center for Healthy Housing & Milken Institute School of Public Health. (2014, November). *Healthcare financing of healthy homes: Findings from a 2014 nationwide survey of state reimbursement policies*. Retrieved from http://www.nchh.org/Portals/0/Contents/Reimbursement%20Landscape_MAIN%20REPORT_FINAL%20%2818%20November%202014%29.pdf
- ²² General Assembly of the State of Missouri H.B. 2011. (2014). Retrieved from <http://www.house.mo.gov/billtracking/bills141/biltxt/truly/HB2011T.htm>
- ²³ Nixon, J. W. (2014, June 24). To the Secretary of State of the State of Missouri [Letter]. Retrieved from <http://www.house.mo.gov/billtracking/bills141/rpt/HB2011vl.pdf>
- ²⁴ Bouscaren, D. (2015, July 1). Missouri to start offering asthma home assessments to children on Medicaid. *St. Louis Public Radio* [Online]. Retrieved from <http://news.stlpublicradio.org/post/missouri-start-offering-asthma-home-assessments-children-medicaid>
- ²⁵ Missouri Health Department Oversight Committee. (2015, August 4). MHD Primary Care Health Home Community Health Worker Pilot [PowerPoint presentation]. Retrieved from <https://dss.mo.gov/mhd/oversight/pdf/150804-community-health-worker-presentation.pdf>
- ²⁶ Children's Mercy Hospital. (n.d.). Environmental health: Healthy Home Program. Retrieved from https://www.childrensmercy.org/Patients_and_Families/Support_and_Services/Environmental_Health/Healthy_Home_Program/
- ²⁷ Ciaccio, C. E., Kennedy, K., & Portnoy, J. M. (2012). A new model for environmental assessment and exposure reduction. *Current Allergy and Asthma Reports*, 12(6), 650-655. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3493798/>
- ²⁸ Phipatanakul, W., Matsui, E., Portnoy, J., Williams, P. B., Barnes, C., Kennedy, K., et al. (2012, December). Environmental assessment and exposure reduction of rodents: A practice parameter. *Annals of Allergy, Asthma & Immunology*, 109(6), 375-387. Retrieved from <https://www.aaaai.org/Aaaai/media/MediaLibrary/PDF%20Documents/Practice%20and%20Parameters/Env-assessment-and-exposure-reduction-of-rodents-2012.pdf>
- ²⁹ Portnoy, J. M., Kennedy, K., Sublett, J. L., Phipatanakul, W., Matsui, E., Barnes, C., et al. (2012, April). Environmental assessment and exposure control: A practice parameter—furry animals. *Annals of Allergy, Asthma & Immunology*, 108(4), 223-e1-223.e15. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3519933/pdf/nihms424730.pdf>
- ³⁰ U.S. Department of Housing and Urban Development. (n.d.). Secretary's Award for Healthy Homes. Retrieved from http://www.huduser.gov/portal/about/healthyHomesAward_2015_2.html
- ³¹ Finuf, B. (n.d.). Children's Mercy Pediatric Care Network (PCN) an integrated pediatric network (IPM). Retrieved from http://www.cmpcn.org/pcndocs/MACH_Presentation_0812.pdf
- ³² Missouri Foundation for Health. (n.d.). About Missouri Foundation for Health. Retrieved from <https://www.mffh.org/content/7/about-mfh.aspx>
- ³³ Missouri Foundation for Health. (n.d.). About Missouri Foundation for Health. Retrieved from <https://www.mffh.org/content/7/about-mfh.aspx>
- ³⁴ Bouscaren, D. (2015, July 1). Missouri to start offering asthma home assessments to children on Medicaid. *St. Louis Public Radio* [Online]. Retrieved from <http://news.stlpublicradio.org/post/missouri-start-offering-asthma-home-assessments-children-medicaid>
- ³⁵ Missouri Foundation for Health. (n.d.). Ongoing funding. Retrieved from <https://www.mffh.org/content/783/ongoing-funding.aspx>
- ³⁶ University of Michigan Center for Managing Chronic Disease. (n.d.). Childhood Asthma Linkages in Missouri (CALM) cross-site evaluation. Retrieved from <http://cmcd.sph.umich.edu/research-program-areas/childhood-asthma-linkages-in-missouri-calm-evaluation/>
- ³⁷ University of Michigan Center for Managing Chronic Disease. (2014, May). CALM evaluation narrative report to MFH. Retrieved from https://www.mffh.org/mm/files/CALM_FULL%20FINAL%20REPORT%202014.pdf

Endnotes and Sources (continued)

- ³⁸ University of Michigan Center for Managing Chronic Disease. (2014, May). CALM evaluation narrative report to MFH. Retrieved from https://www.mffh.org/mm/files/CALM_FULL%20FINAL%20REPORT%202014.pdf
- ³⁹ University of Michigan Center for Managing Chronic Disease. (2014, May). CALM evaluation narrative report to MFH. Retrieved from https://www.mffh.org/mm/files/CALM_FULL%20FINAL%20REPORT%202014.pdf
- ⁴⁰ University of Michigan Center for Managing Chronic Disease. (2014, May). CALM evaluation narrative report to MFH. Retrieved from https://www.mffh.org/mm/files/CALM_FULL%20FINAL%20REPORT%202014.pdf
- ⁴¹ Homan, S., Gaddy, P., & Armbrrecht, E. (n.d.). *Putting excellent asthma care within reach (2010-2014)*. Retrieved from <http://health.mo.gov/living/healthcondiseases/chronic/asthma/pdf/asthmastateplan.pdf>
- ⁴² U.S. Centers for Disease Control and Prevention, Office for State, Tribal, Local and Territorial Support. (2011, May 10). CDC Vital Signs: Asthma in the United States. Retrieved from http://www.cdc.gov/stltpublichealth/townhall/presentations/vs_asthma05102011.pdf
- ⁴³ U.S. Centers for Disease Control and Prevention, National Asthma Control Program. (2013). *Asthma self-management education and environmental management: Approaches to enhancing reimbursement*. Retrieved from http://www.cdc.gov/asthma/pdfs/Asthma_Reimbursement_Report.pdf
- ⁴⁴ U.S. Centers for Disease Control and Prevention, National Asthma Control Program. (2013). *Asthma self-management education and environmental management: Approaches to enhancing reimbursement*. Retrieved from http://www.cdc.gov/asthma/pdfs/Asthma_Reimbursement_Report.pdf
- ⁴⁵ U.S. Centers for Disease Control and Prevention, National Asthma Control Program. (2013). *Asthma self-management education and environmental management: Approaches to enhancing reimbursement*. Retrieved from http://www.cdc.gov/asthma/pdfs/Asthma_Reimbursement_Report.pdf
- ⁴⁶ Missouri Foundation for Health. (2009, October). *Missouri health coalitions: Success through collaborative efforts*. Retrieved from https://www.mffh.org/mm/files/Missouri_Health_Coalitions.pdf
- ⁴⁷ National Heart, Lung, and Blood Institute. (2007, October). *Guidelines for the diagnosis and management of asthma: National Asthma Education and Prevention Program expert panel report 3 (Summary report 2007)*. Retrieved from <http://www.nhlbi.nih.gov/files/docs/guidelines/asthsumm.pdf>
- ⁴⁸ Asthma Ready. (n.d.). Training programs. Retrieved from <http://asthmaready.org/training-programs/>
- ⁴⁹ U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. (2015, September 3). 2015 poverty guidelines. Retrieved from <https://aspe.hhs.gov/2015-poverty-guidelines>
- ⁵⁰ Asthma Community Network. (2013). Kansas City Regional Asthma Summit on Pediatric Home Asthma Interventions. Retrieved from <http://www.asthmacommunitynetwork.org/resources/conferences/2013KansasCitySummit>



Asthma Case Study #5 Healthcare Financing for Healthy Homes

We gratefully acknowledge the following individuals and organizations for providing information for this case study:

Katie Horton, JD, MPH, RN
Mary-Beth Malcarney, JD, MPH
Asthma and Allergy Foundation, St. Louis Chapter
Children's Mercy Hospital
Missouri Department of Health and Senior Services
Missouri Department of Social Services' MO HealthNet Division

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

This case study was made possible through an award from the W.K. Kellogg Foundation to the National Center for Healthy Housing. The contents of this document are solely the responsibility of the authors and do not necessarily represent the official views of the W.K. Kellogg Foundation.