

CHILDHOOD ASTHMA

LINKAGES IN MISSOURI



Missouri Foundation  
for Health

# CALM

## THE HEALTH ISSUE:

Childhood asthma is the leading cause of emergency room visits, inpatient hospitalizations and school absenteeism among children under age 15 due to a chronic condition. While there have been significant advances in asthma management over the past decade that allow most people with asthma to live active and healthy lives, many children—in Missouri and around the country—continue to suffer.

10.2% OF CHILDREN  
UNDER THE AGE OF 18  
IN MISSOURI  
SUFFER FROM ASTHMA

*According to the 2012 Missouri Behavioral Risk Factor Surveillance System*

ASTHMA AND ITS  
RELATED COMPLICATIONS  
COST MISSOURI  
\$500 MILLION PER YEAR.

## THE INITIATIVE:

In 2007 Missouri Foundation for Health identified childhood asthma as a major health issue in the state. It established the Childhood Asthma Linkages in Missouri (CALM) initiative to demonstrate that a collaboration between a child's school, medical care provider and other community organizations would lead to better overall asthma care for the child, as well as a reduction in symptoms.

The Foundation awarded a total of more than \$6.6 million to 14 organizations to integrate childhood asthma support into their daily operations. Funds went to collaborative and multifaceted program models led by community hospitals, school districts and university-affiliated health centers that utilize community-based approaches to build successful linkages among those responsible for asthma care in children.

COLLABORATIONS AMONG:



COMMUNITY ORGANIZATIONS



SCHOOLS



MEDICAL CARE PROVIDERS

LEAD TO:



BETTER ASTHMA CARE

## GRANTEES

Grantees of the CALM Initiative extended across 14 urban and rural sites throughout Missouri, with project periods ranging from 3-5 years. CALM sites were based in academic, clinical, or school settings, with most of the programs including an emphasis on serving school-aged children in school settings. All of the sites used community-based approaches and planning interventions to improve asthma management and asthma-related health outcomes.



- 1 Barton County Memorial Hospital
- 2 Cox Monett Hospital, Inc.
- 3 School District of Springfield R-12
- 4 School of the Osage
- 5 Curators of the University of Missouri
- 6 Fulton Public Schools
- 7 Hannibal Public Schools #60
- 8 Union R-XI School District
- 9 Washington County Memorial Hospital
- 10 City of St. Louis Department of Health
- 11 Institute for Family Medicine
- 12 St. Louis Children's Hospital
- 13 Kennett #39 School District
- 14 Cape Girardeau School District No. 63

*(Click the names to learn more about the grantees)*

# CALM PROGRAM MODEL

The University of Michigan's Center for Managing Chronic Disease worked with CALM grantees to conduct a comprehensive evaluation of the Initiative that resulted in cross-site assessments of reach, linkages, sustainability of efforts, and asthma-related outcomes.



## Interventions

Grantees implemented a variety of interventions as part of their programs. All grantees included some aspect of education and training, and many incorporated home visits and community outreach as well.



## Reach

More than 7000 children and 3000 adults were reached annually through the many interventions. 86 schools were reached directly through interventions, along with the entirety of the St. Louis Public Schools system. Additionally, 100 school districts were reached through the Asthma Ready Schools program.

over  
**10K**  
reached



## Linkages

Grantees reported improved communication and coordination with other care providers, increased access to specialist services, care providers using consistent treatment plans, and a more rapid identification of students with asthma.

Other commonly reported benefits included increased awareness through education and additional access to resources, such as medications and devices like spacers and peak flow meters. Transportation support also spurred program participation.

[Learn more about the CALM Program Model](#)

“

Due to the educational component of this grant, the staff is much more aware of the signs and symptoms of asthma and, in turn, they know exactly whom to report that to so help can be given.

– CALM Grantee

”



City of St. Louis  
Department of Health

The Asthma-Friendly St. Louis team created an Asthma Home Assessment Workbook, which was distributed to families in the area, and is utilized by other organizations.

[Learn more](#)

**PROGRAM PARTICIPANTS EXPERIENCED:**  
*(ONE-YEAR FOLLOW-UP)*



**FEWER SYMPTOM DAYS**

**1214**

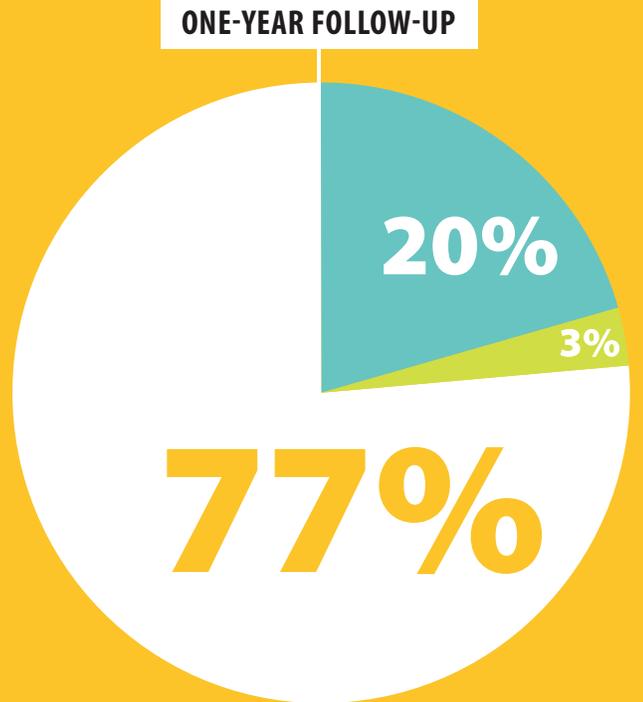
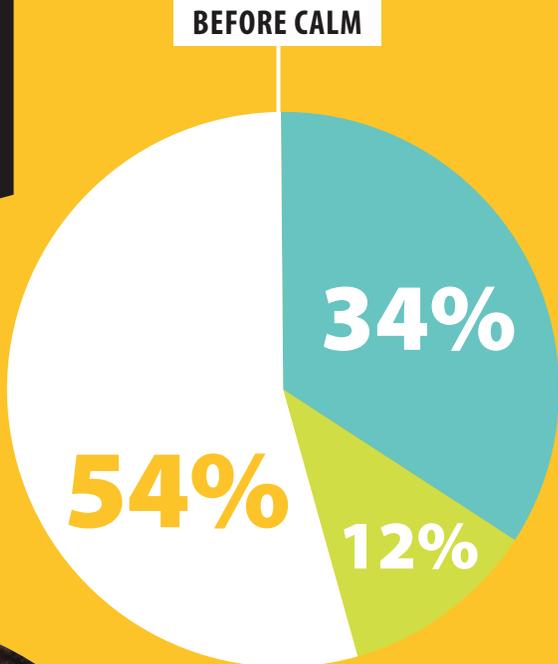
**681**

**FEWER NIGHTS  
AWAKENED BY SYMPTOMS**



**CHANGE IN ASSESSMENT OF ASTHMA CONTROL OVER TIME (450 PARTICIPANTS)**

- Well controlled
- Not well controlled
- Very poorly controlled



**Washington County Memorial Hospital**  
 Camp Catch-Ya-Breath is a weekend camp that helps children learn about their asthma and how to control it.  
[Learn more](#)

**SCHOOL ATTENDANCE & ACTIVITY DAYS (ONE-YEAR FOLLOW-UP)**

Decrease in days of school missed due to asthma in the last twelve months

**44%**  
 (1.6 to 0.9 days)

**35%**  
 (2.0 days to 1.3 days)

Decrease in days children were inactive due to asthma in past four weeks

**BEYOND MFH**

**SUSTAINABILITY THROUGH CHANGES IN ASTHMA POLICY AND PRACTICE**

**CALM INITIATED CHANGES INCLUDE:**

- School-based policies incorporating parental consent that enable schools and clinics to communicate with primary care providers
- Increased asthma education provided to students, school nurses, and other school staff by doctors and asthma educators
- Improved asthma assessment tools and procedure manuals outlining inhaler techniques, medication management, and standardized care per the National Heart, Lung, and Blood Institutes
- Brief asthma education included in CPR/ACLS classes

Learn more about changes in asthma policy and practice, as well as grantee challenges.



School-based policies implementing standardized asthma action plans that are updated and on file for all students with asthma



Informational asthma meetings hosted by schools and regional hospitals, fostering collaboration between parents, the hospital, and the school



Asthma education included before hospital discharge for any patient with asthma



Financial assistance for purchasing inhalers through partnerships with local pharmacies and pharmaceutical companies

## CHANGES IN ASTHMA-RELATED HEALTH OUTCOMES (ONE-YEAR FOLLOW-UP)

Decrease in days of rescue inhaler use in the past four weeks

49%  
(5.3 to 2.7)

45%  
(2.9 to 1.3)

Decrease in nighttime awakenings in the past four weeks

51%  
(5.5 to 2.7)

Decrease in days experiencing symptoms in the past four weeks

### University of Missouri

The Asthma Ready Communities program provides standardized, evidence-based educational programs for children with asthma, families, and health professionals.

[Learn more](#)

# LASTING IMPACT



### St. Louis Children's Hospital

The Healthy Kids Express – Asthma Program brings a team of asthma experts in an equipped bus to provide information and resources free of charge to children and their families.

[Learn more](#)

Grantees reported that parents, children, and school nurses were more knowledgeable about how to manage asthma and decrease asthmatic episodes. Increased training and health literacy education was also found among health professionals. Finally, grantees noted an increase in the number of children in the schools who have an Asthma Action Plan.

CALM was such a success that in 2014 grantees from the initiative helped the Missouri Asthma Prevention and Control Program garner a federal grant. A portion of those funds are going toward the creation of CALM2, a five-year statewide expansion of the CALM model.

[Learn more about the Missouri Asthma Prevention and Control Program](#)



mffh.org

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Project funded by Missouri Foundation for Health

Missouri Foundation for Health is a resource for the region, working with communities and nonprofits to generate and accelerate positive changes in health. As a catalyst for change, the Foundation improves the health of Missourians through partnership, experience, knowledge, and funding.

For more information about Missouri Foundation for Health, visit our website. [↗](#)

Evaluation by University of Michigan - Center for Managing Chronic Disease [↗](#)

[READ THE COMPLETE CALM REPORT](#) [↗](#)