COMMUNITY PARTNERSHIPS FOR REDUCING CHILDHOOD ASTHMA DISPARITIES

CACE Hubs

Abstract

Childhood asthma is one of the most common chronic childhood diseases. Children and teens with asthma are especially vulnerable to persistent symptoms or uncontrolled asthma affecting learning, wellness, and overall quality of life. We propose six Community Asthma Care & Education (CACE) Hubs identified through Medicaid claims data to implement proven and effective strategies to reach 18,000 children with asthma to improve access to patient-centered, guidelines-based best practices care and better asthma control. The approach includes asthma educators, asthma provider champions (e.g. pediatricians, nurse practitioners, school nurses) and a Parent Advisory Group in each CACE Hub, a statewide learning collaborative, claims data analysis, information exchange system, and school and community programs to achieve the collective impact of reduced disparities and improved asthma control.

Asthma Ready® Communities

https://asthmaready.org/

University of Missouri

Columbia, Missouri

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CACE Hubs: Community Partnerships for Reducing Childhood Asthma Disparities

Table of Contents

CACE Hubs: Community Partnerships for Reducing Childhood Asthma Disparities

Project

a. Why?

Childhood asthma remains one of the most common chronic childhood diseases.[1] Asthma disproportionally affects low socioeconomic populations (e.g. Medicaid recipients) in rural areas and other population groups such as African Americans having 6 times the emergency department (ED) visit and 5 times the hospitalization rate for asthma than whites. Children and teens are particularly vulnerable to asthma exacerbations and persistent uncontrolled asthma resulting in impairment (e.g., interference with sleep and normal activity), absenteeism from school, and a disproportionate share of ED visits and hospitalizations. Well controlled asthma results in increased productivity and reduced morbidity, mortality, and overall health costs. However, disparities in health outcomes continue to exist despite advances in understanding the pathophysiology and corresponding treatment of the disease.

The purpose of this project is to bring up to scale a proven and effective approach that enables successful community partnerships that lead to integrated quality asthma care across settings and better population health outcomes. Asthma Ready® Communities (ARC) at the University of Missouri proposes six *Community Asthma Care & Education Hubs* or CACE Hubs. CACE Hubs are designated, contiguous multicounty regions identified through Medicaid claims data having disparate rates of uncontrolled pediatric asthma. Cross-setting initiatives will improve access and reduce uncontrolled asthma. Each CACE Hub, serving approximately 3,000 Medicaid children with asthma, will engage at least three clinics with a high burden of uncontrolled asthma, school districts, and community agencies. A Parent Advisory Group and a regional, multidisciplinary asthma champion team will lead each CACE Hub with support from Asthma Ready® Communities project staff and contractors. Over three years the six autonomous hubs will launch (Figure 1, larger in Attachment 1). Table 1 provides an overview of the components, purpose and people/systems involved in each CACE Hub.

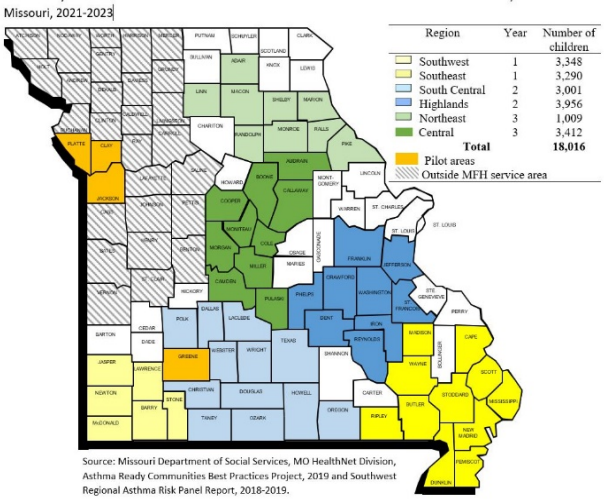

Figure 1.

The global aim of the CACE Hub project is to reduce the percentage of uncontrolled asthma by 25% in three years for 18,000 Medicaid children. Specific aims of the CACE Hub initiative are to: 1) reduce disparities in each service region among Medicaid children

with asthma; 2) prepare local asthma providers and health systems to use claims data to implement best asthma practices for at risk children in coordination with community services in schools, homes, and other settings; and 3) develop and sustain a regional community-based partnership in each hub that increases access to high quality asthma care over the next decade.

Table 1. Components, Purpose and People/Systems comprising each CACE Hub

Component	Purpose	People / Systems
Infrastructure		
Leadership Group	Guide overall hub, partnerships, interventions	Asthma experts, clinicians, regional coordinators, respiratory therapists, pharmacist, community members
Local Asthma Experts for clinics and schools	Direct relationship with providers, local resource, mentoring, child assessments (asthma check-ups)	Clinicians, asthma educators, environmental assessors
Parent Advisory Committee	Drive needs assessment and community-based interventions	Child, parent, and families, caregivers
Community Health Centers	Access to care, care coordination, assistance in enrollment for health care coverage	Clinicians, care managers, community health and social workers
Schools / School Nurses	Prevalence of children with asthma, child assessments, information exchange with parents / clinicians	School nurses, administrators, regional coordinators
Interventions		
Learning Collaborative (on the Project ECHO platform)	Experts and peer-to-peer learning, case studies, asthma champions	Experts, clinicians, school nurses, asthma educators
Asthma Risk Panel Reports	Determine asthma risk for patient panels, consultation, follow-up	Medicaid claims data
Professional Development (AAE Becoming an Asthma Educator and Care Manager - BAECM / Teaming Up for Asthma Control - TUAC)	Train clinic and school staff to provide evidence-based care coordination and self-management education	Clinicians, school nurses, respiratory therapist, care managers
Student Health Assessment Report Exchange (SHARE)	Share symptom and heath health status info from school to health center	Clinics, schools, community health workers
Not One More Life Campaign	Engage community, including churches, through communications campaign	Community and faith-based organizations
Community-specific interventions	Address local issues, barriers, and concerns, tailor interventions to community and deliver key messages	Parents, community members, organization and resources

There were approximately 120,000 children with asthma in Missouri[2] and about 53,019 (44%) were enrolled in MO HealthNet in 2019 (see *Letter of Support*).[3] In pilot CACE Hubs, according to Medicaid administrative claims analysis, a substantial proportion of these children were found to have uncontrolled asthma (25%), defined as high utilization

of acute care services and risky medications such as systemic oral steroids for asthma. Medicaid children with asthma in rural Missouri are seeing their provider approximately once per year on average, while the National Asthma Education and Prevention Program Expert Panel Report 3 (EPR3) guidelines recommend at least twice per year.[4] They seek costly acute care far too often with approximately 30% of all encounters occurring in urgent care or emergency settings. Also, rural primary care providers need access to resources and continuing medical education to improve their ability to deliver asthma care that is valued by families and effective.

While EPR3 guidelines dedicate an entire section to "Education for a Partnership in Asthma Care," advocating services at "all points of care where health professionals interact with patients (clinics, medical offices, EDs, hospitals, pharmacies, homes, and community sites (e.g., schools, community centers)", lack of integration across settings prevails. Innovative approaches including electronic linkages coupled with tailored interventions for disparate populations across settings are needed to sustain effective, coordinated care and long-term regional partnerships to address social determinants of health.[4,5] The reason to propose this project at this moment in time is that pilot CACE Hubs in Missouri have shown remarkable success in disrupting traditional care resulting in improved pediatric asthma outcomes and an opportunity to expand across Missouri with MFH support.

This project fits well into the current landscape by providing timely data for decision-making, evidence-based online collaborative learning, and connecting specialty care, primary care and community resources to impact and drive comprehensive care and better outcomes. Providers benefit from examining their practice in terms of national standards and assessing health risks evident in Medicaid asthma claims for their patient panel. They also benefit by collaborating with their peers to learn through case review, sharing workflow solutions and by consulting with asthma specialists. Referrals to local asthma preventive services (education and home environmental assessments) through community partnerships enable better treatment decisions and care that addresses social determinants of health. Providers also benefit from timely information such as on the COVID-19 pandemic which has forced rapid modifications in asthma assessment, treatment, self-care education, and demand for telemedicine.

b. Who and What Will Change?

Across six rural hubs access to effective, cross-setting asthma care will reach approximately 18,000 children enrolled in MO HealthNet and many others in these communities. Children with uncontrolled asthma, as well as their families and health professionals, are the target populations. This project will change access to and coverage for care (Attachment 2), adoption of best practices in care and treatment, and improve coordination and health

outcomes, Guided by claims analysis, local asthma champions will adopt asthma best practices and dispatch innovative community services that achieve and sustain better health outcomes for disparate populations where they live, learn, play and access health care.

Regional asthma claims reports will identify those Medicaid children at greatest asthma risk, as well as the clinicians, schools and agencies who serve them. Clinical teams will be recruited through partnerships with Missouri Asthma Prevention and Control Program (MAPCP, *see MOA*) and MO HealthNet Primary Care Health Home Program. Clinic and community health professionals will be supported through existing Missouri Asthma Extension for Community Health Outcomes (ECHO®) programs that have served > 1,500 health professionals. Local community organizations (e.g. schools, non-profits, faith-based) in each CACE Hub will be recruited to enable cross-setting initiatives that address health disparities. The Parent Advisory Group will identify approaches best suited for local underserved populations and deliver impactful messages to overcome barriers to asthma control. Additionally, regional community partnerships (CACE Hubs) will develop their own specific asthma initiatives through goal setting and collective impact mission statements directly addressing felt needs of local families.

c. To What End?

Success has been demonstrated in two Missouri regions from 2016-2020: Kansas City and Springfield (pilot hubs). The CACE Hub in Kansas City called *BreatheUP* engages families and partners including the Black Health Care Coalition, local public health departments, Blue Cross Blue Shield, Children's Mercy Hospital, University of Kansas Medical Center, local FQHCs, school districts, and other agencies. The SMART Aim of BreatheUP is to reduce uncontrolled asthma rates for greater Kansas City in five years (7,000+ children). Currently, BreatheUP is soliciting MOUs of commitment from partner organizations and is seeking local support from government, employers, hospitals, and foundations in 2021. The United Way of Greater Kansas City serves as the fiscal agent of BreatheUP. Springfield (i.e., Greene County) has seen a significant decline in asthma ED visits among children age <18 from 3.53 per 1,000 (2016) to 2.26 (2018) as well as hospitalizations by -22.5% (7.63 to 5.91 per 10,000, 2015 to 2018).

The CASE Hub approach has demonstrated great success with improved outcomes (e.g., less acute care, more outpatient care, and less risky medication use) for 900+ predominantly African-American children served by FQHCs and a faith-based clinic in Kansas City. Children attending Kansas City Public Schools (KCPS) with uncontrolled asthma were also enrolled in *TUAC* - an effective school nurse-led asthma care program.[6] The uncontrolled rate of asthma for these patient panels was reduced by 25%.

Likewise, CACE Hubs will identify local resources and partnerships that will sustain asthma improvement efforts well beyond this proposed three-year MFH funding period. In addition, the learning collaboratives are ongoing and with Medicaid expansion on the horizon, the focus continues on increasing health care coverage for those in need.

d. How?

A comprehensive. empowerment approach to transformative community planning is proposed for each CACE Hub that embraces diversity and collective wisdom to develop a community agenda, plans and strategies; develop progress metrics and tracking; and ensure sustainability and community engagement for the long-term. Figure 2 depicts the infrastructure process.

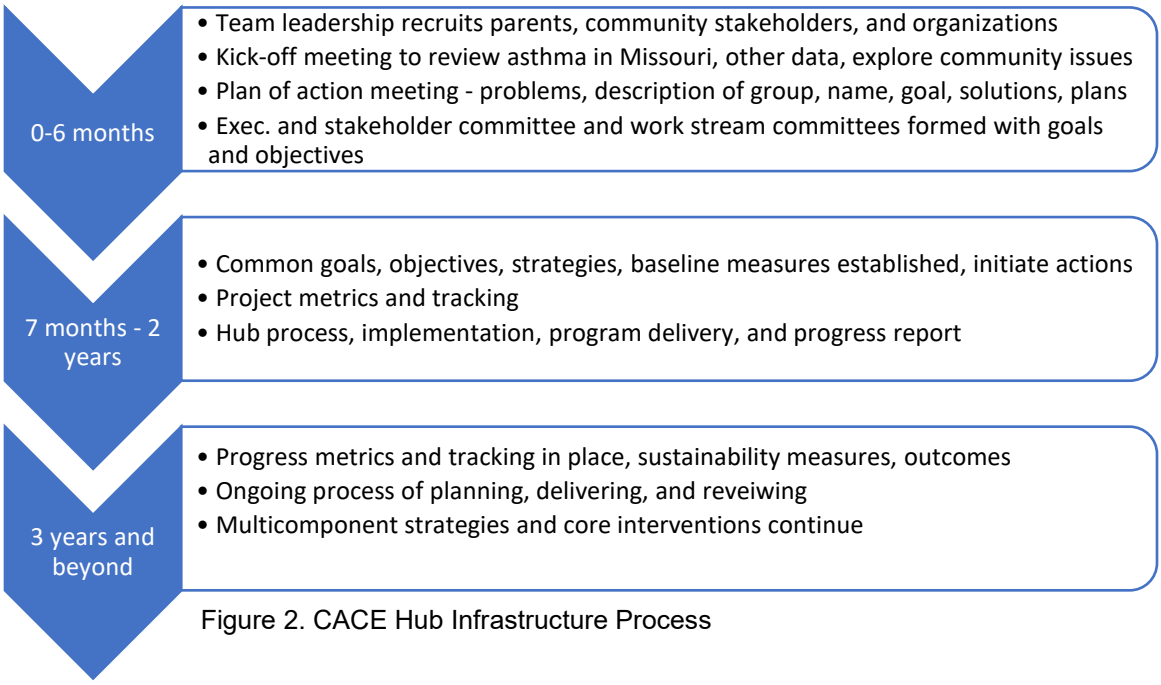

Figure 2. CACE Hub Infrastructure Process

The CACE Hubs approach encompasses multi-component interventions including a learning collaborative. Project ECHO® is a disruptive model which revolutionizes medical education to provide best practice, specialty-level care to rural and underserved urban populations with funding provided by State of Missouri general revenue to the Missouri Telehealth Network (MTN, see *MOA*). The ECHO model™ breaks down the walls between specialty and primary care. It links expert specialist teams at an academic 'hub' with primary care clinicians in local communities – the 'spokes' of the model. Together, they participate in weekly ECHO™ clinics, which are like virtual grand rounds, combined with mentoring and patient case presentations. The clinics are supported by basic, widely available teleconferencing technology. During ECHO clinics, primary care clinicians from multiple sites present patient

cases to a specialist team and to each other, discuss new developments relating to their patients, and determine treatment. Specialists serve as mentors and colleagues, sharing their medical knowledge and expertise with primary care clinicians. We propose that the community is the real hub, knowing the path to change. In the CACE Hubs, local families and asthma champions will guide interventions as health professionals and community partners learn together through existing Missouri Asthma ECHO®s (see *Letter of Support*). ARC has developed three complimentary ECHO programs designed to drive better pediatric asthma population health outcomes: 1 *Asthma Essentials ECHO,* 2 *Asthma Care Accelerator (ACA) ECHO,* and 3 *Asthma Care and Education (ACE) ECHO* (https://showmeecho.org/). Combined these ECHO programs assist with the fundamental components of asthma care, identify and address asthma risk and impairment in panel of patients, promote effective ways to implement EPR3 guidelines[7], offer Maintenance of Certification credits for clinicians, and supports asthma champions. In addition, sessions address best practices and resources for asthma assessment, self-care education, health home “touches”, home environmental assessments, incorporate COVID-19 safety recommendations and precautions, school health, telehealth protocols, and serve as the convener for CACE hubs. This approach received national recognition from the American Board of Medical Specialties (ABMS) as the "Quality Improvement Achievement of the Year Award for 2019-20" (see News Release). We are ready to deploy this strategy.

The Asthma Risk Panel Reports (Attachment 3), a core intervention component, utilizes Medicaid health services measures to identify children through sophisticated stratification algorithms and display percent of uncontrolled asthma, asthma medications dispensed (inhaled corticosteroids, short acting beta agonists, and systemic oral steroids), acute care days, and proportion of outpatient visits to total visits. ARPRs are repeated every six months. In addition, monthly run charts track 10 asthma patients to assess quality indicators: including asthma severity and control, objective measures of airflow, adequacy of inhalation effort, inhaled corticosteroids dispensing rate, preventive services, and asthma action plans.

As part of the information exchange for better care component, ARC is committed to streamlining communication of critical asthma data between clinic, community, insurer and home settings in a secure and efficient manner through “Student Health Assessment Report Exchange” (SHARE). Field testing of SHARE in 30 schools proved very impactful, however until recently it was difficult to exchange information directly with clinicians through their electronic health record (EHR). CMS has mandated interoperability between health systems and community-based providers recommending the SMART on FHIR standard for clinical decision support. To transition the SHARE application to this universal protocol we are asking for MFH

support. Significant in-kind support and technical expertise was approved by the Tiger Institute Board of Governors (a Cerner-MU technology incubator) for this project (Attachment 4). This collaboration will enable rapid transfer of claims, self-report, clinical and community data, such as school nurse asthma assessments to providers through any EHR. Exchange of actionable data is key to the long-term success of community asthma initiatives.

e. How will we know?

A study entitled "Asthma Best Practices" was approved by the University of Missouri Health Sciences Institutional Review Board in June of 2018. The purpose is to identify ways to significantly improve population-level asthma control. Asthma Risk Panel Reports "look backward" one year from start date of enrollment in ECHO. ARPRs will be repeated every twelve months during three-year project period. Medicaid claims are compared – baseline, intervention and post project year. Each CACE Hub will develop a collective impact statement with strategic planning goals for partnering organizations (Attachment 5). These CACE hubs will have a shared common agenda, shared short list of common indicators, mutually reinforcing activities, regular communication including recorded ZOOM conferences, and staff that support the activities and communication between partners. In addition, a logic model, performance and outcome measures, storytelling as well as process, intervention-specific, surveillance, evaluation, and claims data will be used to monitor and assess short-, intermediate-, and long-term success of the project. The MAPCP, ARC team, contractors, and partners will evaluate the project's success including qualitative surveys for each CACE Hub to understand regional factors impacting outcomes. Key partners are shown in Table 2.

f. With whom?

Table 2. Key Partners for CACE Hubs to Reduce Childhood Asthma Disparities

Partner Organization Name	Role and Benefit to the Project
Missouri Telehealth Network	Recruitment and training of providers and clinics
Missouri Primary Care Health Home	Standardizes impactful asthma home services
Mo Asthma Prevention and Control	Evaluates effectiveness of the program for CDC

Organizational History and Qualifications

Missouri Telehealth Network, in the MU School of Medicine, began in 1994 as one of the nation's first telehealth partnerships. MTN trains new and manages several telehealth programs including ECHO, and increases access to patient -centered health care via telehealth,

particularly for rural and underserved areas. In Missouri, community health centers have provided access to high-quality, affordable primary care and preventive services for more than 50 year. The Missouri Primary Care Health Home initiative began in 2012 and provides team-based, person-centered care and coordination to address chronic diseases with asthma as the most common condition for enrolled children < 18 years of age (50.8% in 2019). Established in 2001 with continuous CDC funding, the Missouri Asthma Prevention and Control Program goal is to improve health equity and asthma outcomes for all children with asthma.

Asthma Ready® Communities at the University Missouri- School of Medicine has developed and implemented innovative public health approaches to asthma care management and preventative services since 2003. The diverse ARC team of health professionals and contractors (Table 3) is led by Dr. Ben Francisco, who has 30+ years of experience in clinical practice and is a professor of medicine. ARC has built partnerships throughout Missouri with support, recognition, and funding from the State MAPCP, Project ECHO, US Centers for Disease Control and Prevention, MFH, Centers of Medicare-Medicaid, Health Forward Foundation of Kansas City, Robert Wood Johnson Foundation, American Board of Medical Specialties, Allergy and Asthma Network, and Association of Asthma Educators. ARC builds upon extensive experiences, expertise, and interventions in support of evidence-based asthma care to lead this comprehensive, data-driven approach to pediatric asthma control.

Table 3. CACE Hubs: Project Team members, roles, and area of expertise

Name	Role	Expertise
Ben Francisco, PhD, NP, AE-C	Principal investigator	Clinical care, management, training
Tammy Rood, DNP, AE-C	Clinical / school liaison	Clinical care, schools, training
Paul Foreman, PhD, MS, MA	Project director	Program management, partnerships
Julie Patterson, BA	Admin. coordinator	ECHO and training programs operations
Bhawani Mishra, PhD	Data analyst	Medicaid data, panel reports
Sherri Homan, PhD, FNP	Epidemiologist	Surveillance, data analysis, evaluation
Claudia Preuschoff, MD	Pediatrician	Asthma champion, training faculty
Deb Cook, RN, AE-C	School nurse liaison	Asthma champion, school nurse training
Tammy Reed, RRT, AE-C	School nurse liaison	School nurse clinical training
Nico Linsteadt, RRT, AE-C	Clinical / school liaison	Clinical and school training
Michelle Dickens, NP, AE-C	Clinical / school liaison	Clinical and school telehealth
Eric Armbrecht, PhD, MS	Evaluator MAPCP	Evaluation, design, outcomes research

Funding Sources: MOAs: MAPCP; MTN, and Tiger Institute (Attachment 6); Letters of Support: ECHO Institute and Missouri DSS MO HealthNet Division (Attachment 7); Other ABMS News Release (Attachment 8); Sustaining Asthma Efforts - BreatheUP (Attachment 9)

References

[1] Akinbami LJ, Simon AE, Rossen LM. Changing trends in asthma prevalence among children. Pediatrics 2016;137(1). doi: 10.1542/peds.2015-2354; PMCID: PMC4755484

[2.] Missouri Department of Health and Senior Services. Asthma in Missouri, 2019 Brief. Jefferson City, MO: Missouri Asthma Prevention and Control Program. Available from: https://health.mo.gov/living/healthcondiseases/chronic/asthma/pdf/asthma-in-mo-brief.pdf

[3] Missouri Department of Social Services and Asthma Ready® Communities, Asthma Best Practices Project. Jefferson City and Columbia, MO.

[4] National Heart, Lung, and Blood Institute, National Asthma Education and Prevention Program. Guidelines for the Diagnosis and Management of Asthma, Expert Panel Report-3. Available from: https://www.nhlbi.nih.gov/sites/default/files/media/docs/asthgdln_1.pdf

[5] President's Task Force on Children's Environmental Health Risks and Safety Risks to Children. Coordinated Federal Action Plan to Reduce Racial and Ethnic Asthma Disparities. 2012. Available from: https://ptfceh.niehs.nih.gov/activities/assets/files/coordinated_federal_action_plan_to_reduce_racial_and_ethnic_asthma_disparities_508.pdf

[6] Francisco B, Rood T, Nevel R, Foreman P, Homan S. Teaming Up for Asthma Control: EPR-3 Compliant School Program in Missouri Is Effective and Cost-Efficient. Prev Chronic Dis 2017;14:170003. DOI: http://dx.doi.org/10.5888/pcd14.170003

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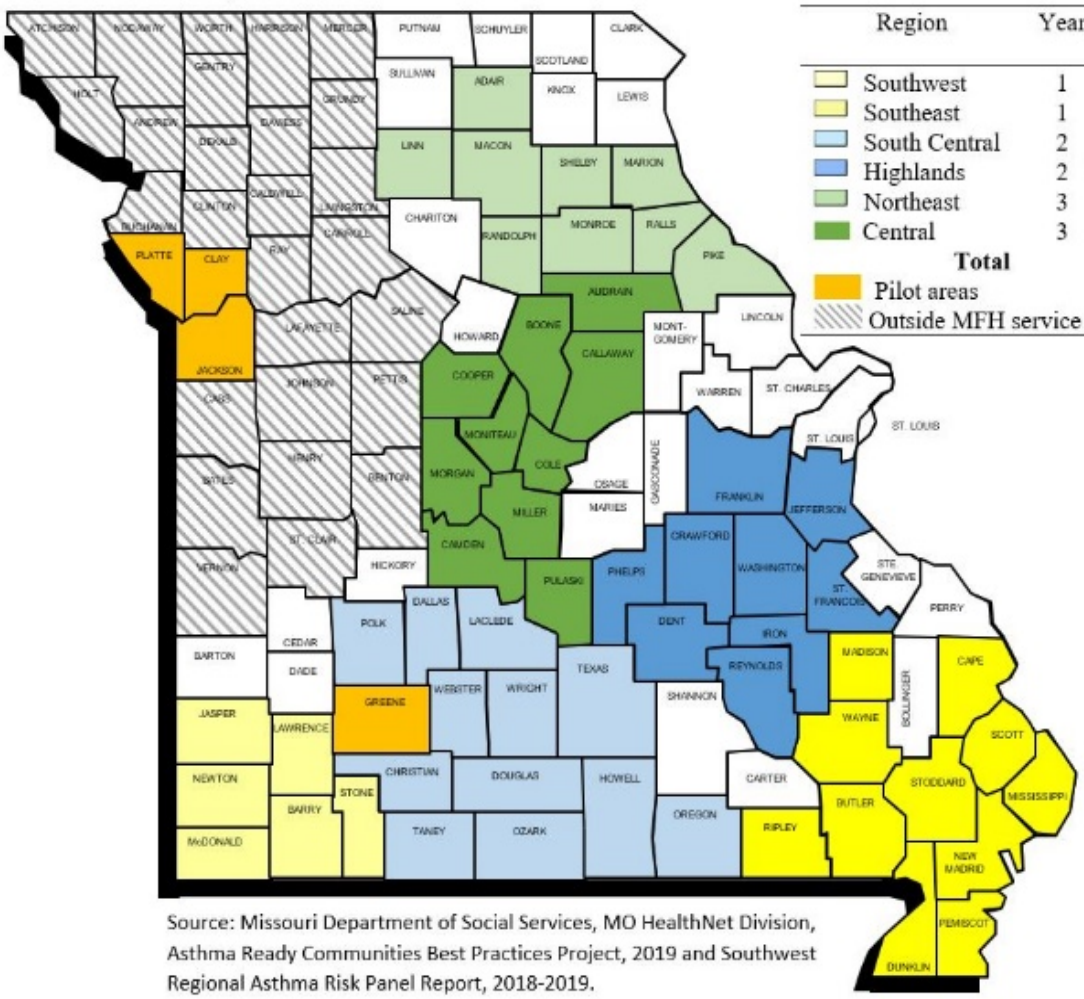
Attachment 1

Community Asthma Care & Education Hubs for children with asthma enrolled in MO HealthNet, Missouri, 2021-2023



Region	Year	Number of children
Southwest	1	3,348
Southeast	1	3,290
South Central	2	3,001
Highlands	2	3,956
Northeast	3	1,009
Central	3	3,412
Total		**18,016**

Pilot areas

Outside MFH service area

Source: Missouri Department of Social Services, MO HealthNet Division, Asthma Ready Communities Best Practices Project, 2019 and Southwest Regional Asthma Risk Panel Report, 2018-2019.

Attachment 2

Strategies for Enrollment and Access to Effective Asthma Care

A core function of the Primary Care Health Homes (PCHH) is to assure care coordination and that patients receive timely, high quality and efficient health care and support services within and outside of the health home. As part of patient and family support and referrals to community and support services, community health centers offer expert resources to impact access to care and health care coverage for this proposal including:

- Advocating for patient and family assistance with obtaining medication and other treatment supplies
- Assistance with paperwork for housing, food security, healthcare coverage, etc.
- Exploring eligibility claims for early response to health care coverage enrollment issues
- Care plan development
- Engaging legal assistance groups to assist family applications to address home environmental hazards
- Work with community health workers on barriers and needs

Asthma Ready® Communities at the University of Missouri School of Medicine is a member of the Collective Impact Forum https://www.collectiveimpactforum.org/ and will use the *Asthma Care and Education (ACE) ECHO* 10 sessions annually to incorporate and address access to care including Medicaid expansion and insurance programs, foundation and industry medication assistance programs (e.g., Merck Family Assistance medication program), and connecting community health centers with community organizations and resources, especially school health nurses and clinics, home self-management educators, environmental health experts, and to the peer-to-peer learning collaborative ECHO. Key resources include:

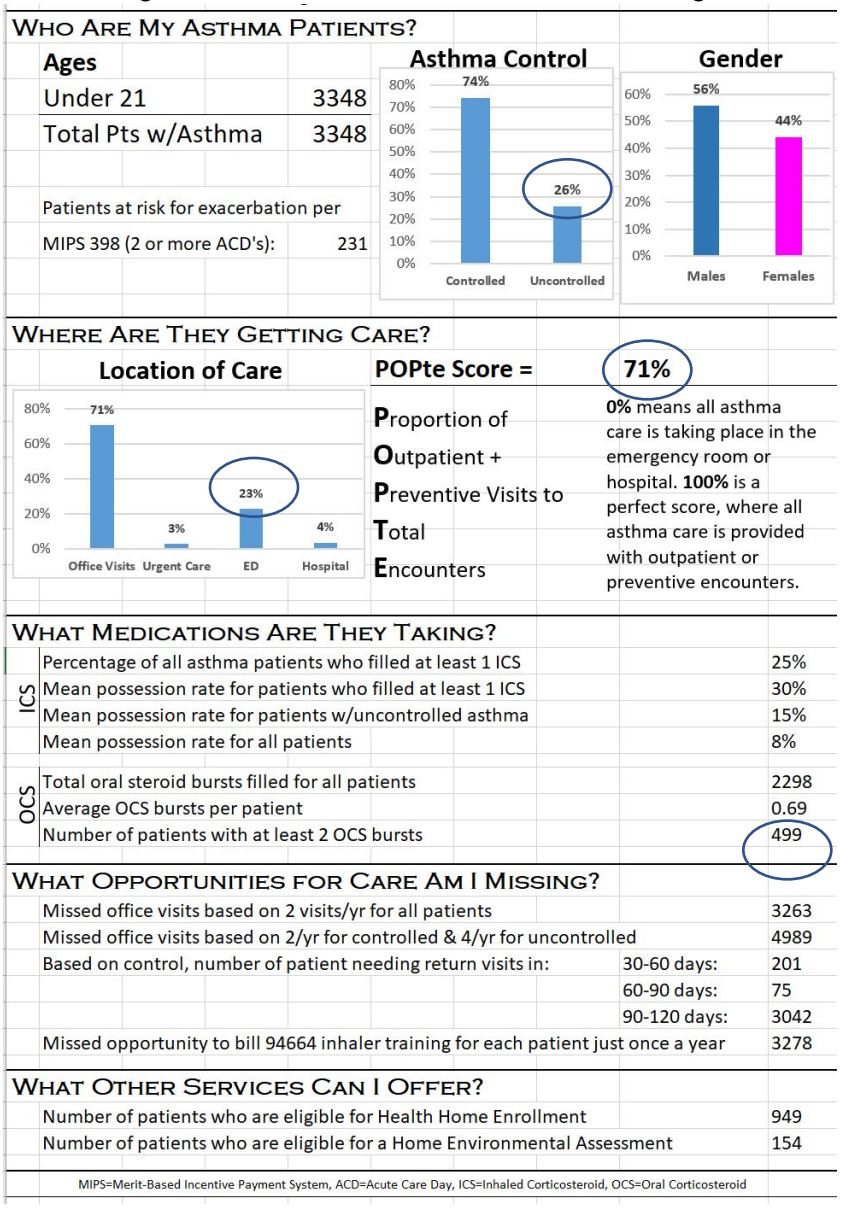
- Referrals through Asthma Bridge http://www.asthmabridge.com/
- SchoolNurseLink.com http://www.schoolnurselink.com/
- Asthma Ready® Communities https://asthmaready.org/
- Missouri Asthma Prevention and Control Program https://health.mo.gov/living/healthcondiseases/chronic/asthma/publications.php
- Asthma 3 - Community: Asthma Care & Education https://showmeecho.org/clinics/ace/

Attachment 3

Evidence of Asthma Disparities - Southwest and Southeast Regions

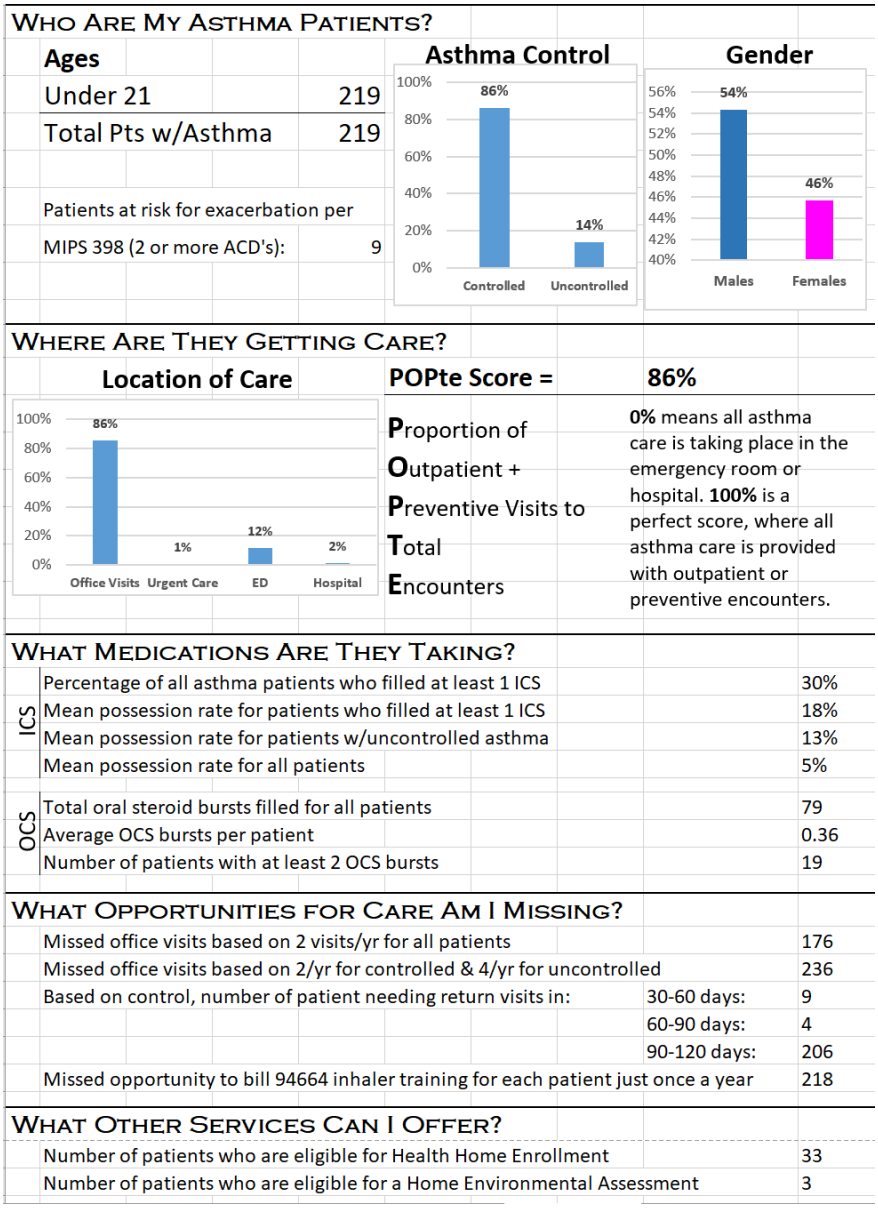
The Missouri southwest Community Asthma Care & Education (CACE) Hub is comprised of six counties: Barry, Jasper, Lawrence, McDonald, Newton, and Stone. To focus interventions in areas of greatest need, a population risk framework was developed. Medicaid administrative claims data using risk indicator algorithms, are used to generate de-identified population-based panel risk reports. Risk indicators such as frequent asthma acute care visits (i.e., emergency visits and hospital inpatient days), medication overuse (i.e., short acting beta agonists or systemic oral corticosteroids), or underuse of control medication are used. The southwest CACE Hub panel report indicates that slightly more than one-fourth (26.0%) of children had uncontrolled asthma and a large proportion sought care through emergency department (ED) visits (23%) (Figure 1). The proportion of outpatient plus preventive visits to total encounters (i.e., Popte Score) shows that 71% of the asthma encounters are outpatient or preventive, while 29% are acute care. The data also indicate that a substantial number of children required at least one oral steroid burst for an exacerbation and many, almost 15%, required 2 or more oral systemic therapies.

Figure 1. Asthma Dash Board Southwest Region



Panel reports with enrollment in the Asthma Ready Community© program are also generated for primary care practices and clinics. A practice panel report for a primary care clinician enrolled in the program, participating in the learning collaborative, and case reviews indicates fewer children with uncontrolled asthma (14%), less acute care episodes (12% ED visits) with improved POPte Score (86%), and lower proportion requiring two or more systemic oral steroids for asthma attacks (8.7%) (Figure 2).

Figure 2. Asthma Dash Board Primary Care Practice Southwest Region
Data Range Between 8/1/18 and 7/31/2019



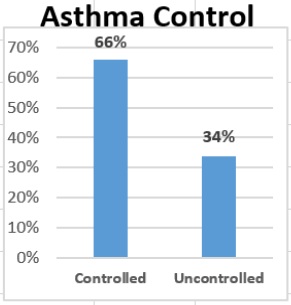
To benchmark, we use a specialty clinic where practitioners have the best of the best scores. This specialty clinic panel report (Figure 3) indicates that while more than one-third of the children have uncontrolled asthma (34%), only 6% of the care are ED visits, the POPte Score is 93% (outpatient/preventive care), and only 7% of the care is acute visits (i.e., ED or urgent care or hospital stays). In addition, children requiring two or more systemic oral steroids are kept at a minimum 17.4%. This provides an indication of the progress that can be achieved through enrollment in the program and providing professional education, training, and guidelines-based care.

Figure 3. Asthma Dash Board Specialty Clinic, Best of the Best Benchmark Data Range Between 12/1/18 and 11/30/19

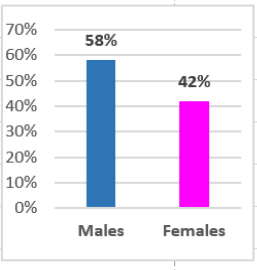
WHO ARE MY ASTHMA PATIENTS?

Ages	
Under 21	224
Total Pts w/Asthma	224
Patients at risk for exacerbation per MIPS 398 (2 or more ACD's):	14

Asthma Control

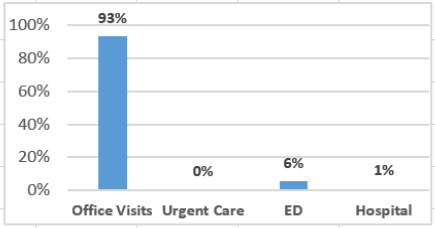


Gender



WHERE ARE THEY GETTING CARE?

Location of Care



POPte Score = 93%

Proportion of
Outpatient +
Preventive Visits to
Total
Encounters

0% means all asthma care is taking place in the emergency room or hospital. **100%** is a perfect score, where all asthma care is provided with outpatient or preventive encounters.

WHAT MEDICATIONS ARE THEY TAKING?

ICS	Percentage of all asthma patients who filled at least 1 ICS	82%
	Mean possession rate for patients who filled at least 1 ICS	50%
	Mean possession rate for patients w/uncontrolled asthma	54%
	Mean possession rate for all patients	41%
OCS	Total oral steroid bursts filled for all patients	178
	Average OCS bursts per patient	0.79
	Number of patients with at least 2 OCS bursts	39

WHAT OPPORTUNITIES FOR CARE AM I MISSING?

Missed office visits based on 2 visits/yr for all patients		-531
Missed office visits based on 2/yr for controlled & 4/yr for uncontrolled		-379
Based on control, number of patient needing return visits in:	30-60 days:	4
	60-90 days:	15
	90-120 days:	195
Missed opportunity to bill 94664 inhaler training for each patient just once a year		218

WHAT OTHER SERVICES CAN I OFFER?

Number of patients who are eligible for Health Home Enrollment	37
Number of patients who are eligible for a Home Environmental Assessment	49

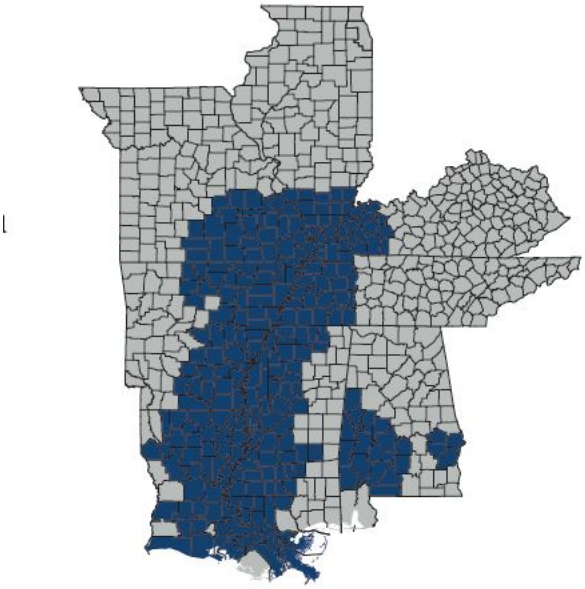
CACE Hubs: Community Partnerships for Reducing Childhood Asthma Disparities

Asthma Southeast Hub Counties

The Health Resources and Services Administration (HRSA), an agency of the U.S. Department of Health and Human Services, is the primary federal agency for improving health care to people who are geographically isolated, economically or medically vulnerable. HRSA is responsible for improving health and achieving health equity through access to quality services, a skilled health workforce, and innovative programs. The Office of Regional Operations (ORO) at HRSA consists of 10 regional offices that provide outreach to increase the reach, impact, and awareness of HRSA programs. Missouri is included in region 7.

https://www.hrsa.gov/about/organization/bureaus/oro/index.html

The Delta Region Community Health Systems Development Project is a collaboration of HRSA's Federal Office of Rural Health Policy (FORHP) and the Delta Regional Authority. The Delta project improves healthcare delivery in the Delta region (including Missouri) through intensive, multi-year technical assistance to healthcare facilities in rural communities. The Delta Regional Authority works to improve regional economic opportunity by helping to create jobs, build communities, and improve the lives of the 10 million people who reside in the 252 counties and parishes of the eight-state Delta region.



Project sites across eight states:
Alabama, Arkansas, Illinois, Kentucky, Louisiana, Missouri, Mississippi and Tennessee

https://www.hrsa.gov/sites/default/files/hrsa/ruralhealth/deltaregion-community-hthsys.pdf

CACE Hubs: Community Partnerships for Reducing Childhood Asthma Disparities

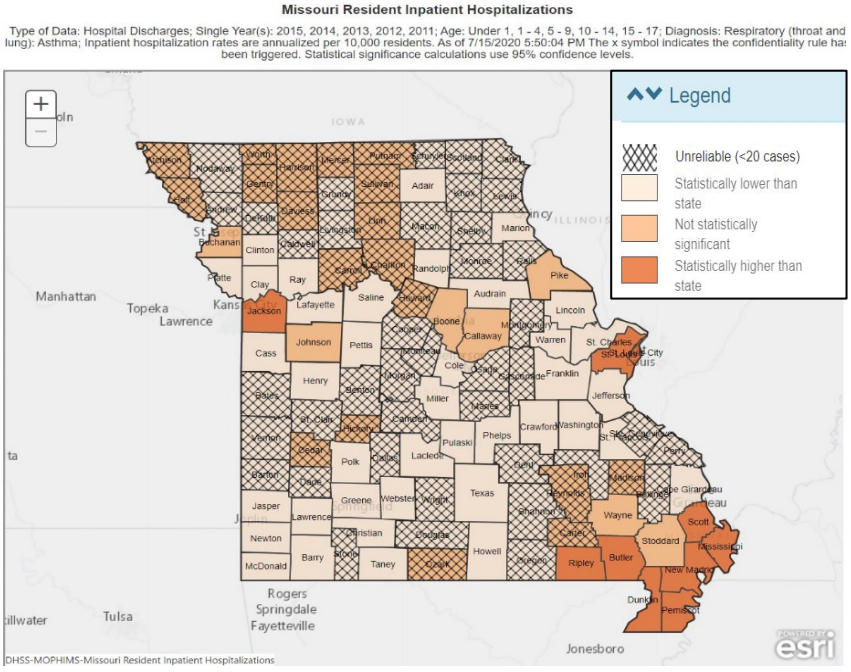
Southeast Region Hub

County	Asthma Counts 2019 MHN	Emergency Department Rate* Age 0-17 2011-2015	ED State Rank	Hospitalization Rate* Age 0-17 2011-2015	Sig Higher Hospital Rate than State	HRSA Primary Care HPSA°
Butler	493	4.63	65	31.64	SH	X
Cape Girardeau	479	5.41	50	11.79		X
Dunklin	452	9.46	6	26.28	SH	X
Madison	152	12.35^	4	13.10		X
Mississippi	225	8.98	8	44.89	SH	X
New Madrid	181	5.65	42	22.96	SH	X
Pemiscot	252	9.90	5	29.41	SH	X
Ripley	123	5.77	40	23.59	SH	X
Scott	596	9.36	7	31.20	SH	X
Stoddard	220	4.20	78	15.10		X
Wayne	117	4.09	79	17.24		X
Total 11 counties	**3,290**	**6.87**	**--**	**23.12**	**SH**	
Missouri	53,019	9.79	--	16.05	--	--

*ED visit rate per 1,000 population; Hospitalization rate per 10,000 population.
° HRSA: Health Resources & Services Administration; Primary Care HPSA: Health Professional Shortage Area
^Statistically significantly higher asthma ED visit rate than the state.
SH: Statistically significantly higher asthma hospitalization rate than the state.

Summary

The Southeast CACE Hub counties include more than 3,000 children with asthma as a primary diagnosis enrolled in MO HealthNet. This 11-county area has a statistically significantly higher asthma hospitalization or ED rate among children age 0 to 17 years than the state and these counties are designated as primary care health professional shortage areas.[1]

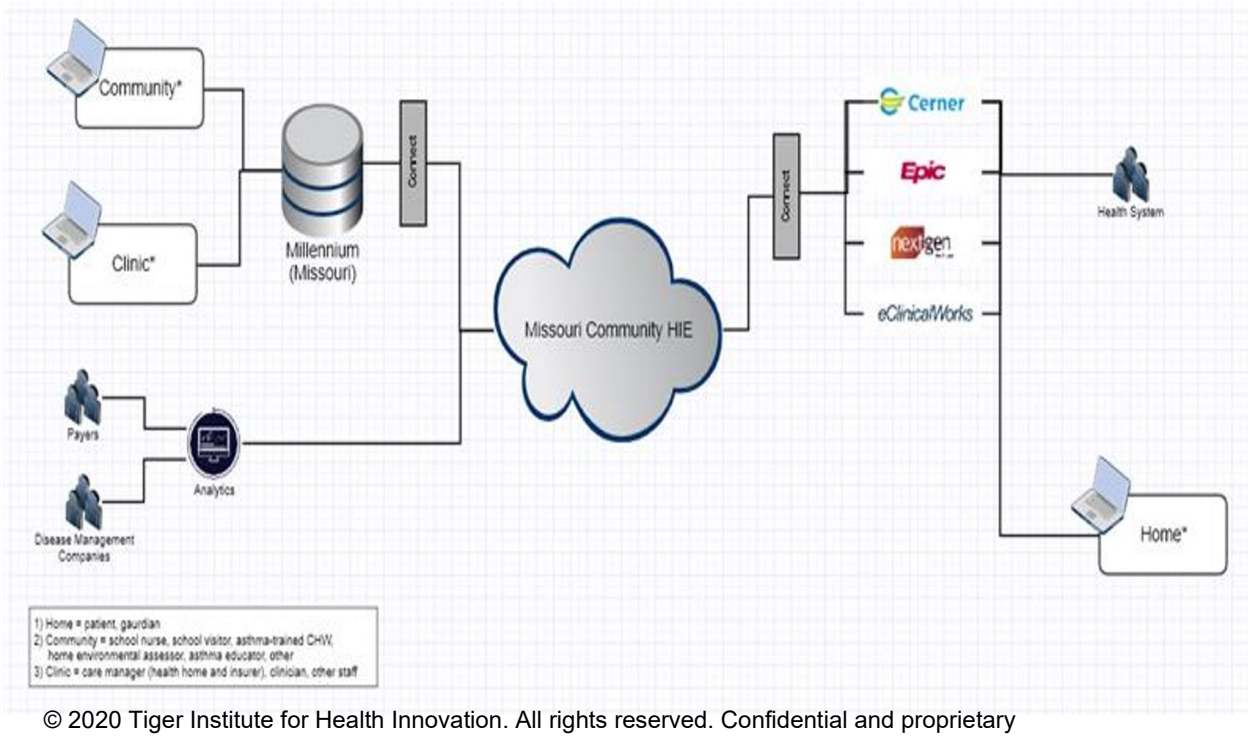


Source: Missouri Department of Health and Senior Services, Missouri Public Health Information Management System (MOPHIMS). https://healthapps.dhss.mo.gov/MoPhims/MOPHIMSHome

[1] Asthma Ready® Communities, University of Missouri, Department of Child Health. July 2020.

Attachment 4

SHARE Integration – Link partners across settings via HIE to Clinicians EHR



Attachment 5

CACE Hub Leadership Team Work Plan for CACE Hubs

See map for year to year detail https://missouri.box.com/s/c7cojk37nh8iapm7fv7u4o0a3haqhn4l

Phase I: Generate Ideas and Dialogue (4-6 Months)

1. CACE Hub Leaders including parent advocates will be recruited by Asthma Ready® Champion (ARC). Community stakeholders will be contacted – health care providers, health system leaders, families, school districts, public health departments, agencies and others. Messaging will be designed to increase awareness of local barriers to asthma care. Will solicit ideas for wider collaboration to improve care.

2. Each CACE Hub Leadership Team and Stakeholder Group will conduct a "Kick-Off Meeting". The *Collective Impact Consultant* (CIC) will serve as moderator and review the appropriate "Asthma in Missouri: - Area" https://missouri.box.com/s/ua7m8hw4am4v3mgpee39yntiabjjj91k produced by the staff epidemiologist. The CIC will facilitate dialogue regarding pertinent community issues, needs for resources including data, and further identify important stakeholders who are not yet at the table.

CIC - Ryan Mulligan is a system's change strategist fueled by empathy. An evangelist for quality improvement science, collective impact, and human-centered design, his work spans fortune 500 companies like Walmart Health and Quest Diagnostics, payor levels at Blue Cross & Blue Shield of Kansas City, and systems change at Cincinnati Children's Hospital and three collective impact alliances: Cradle Cincinnati, Cradle Kansas City, and BreatheUP KC. Ryan brings unique leadership to the messy collaboration needed to improve health outcomes at both the grass-roots and systems levels. A former art and design professor at the University of Cincinnati until he left academia to focus on health systems improvement after his son's diagnosis of severe non-verbal autism.

3. Each CACE Hub Leadership Team and Stakeholder Group will conduct "Our Plan of Action Meeting" within two-three months. The CIC facilitate group consensus for specifying: a) Our Problems, b) Who We Are (description / name), c) Our Bold Goal, d) How We Will Solve, e) Our Plan of Action, and f) Our Team (partnership names, leaders, and roles). Workstream committees to be determined. Schedule next CACE Hub Stakeholder Group meeting date/time.

4. CACE Hub Executive Committee will be determined and comprised of ARC Team member, Parent Advisory Group member, and members of the CACE Leadership Team and Stakeholder Group. One leader will be selected by consensus. This committee will be responsible for identifying all the workstream committees as well as members and leader in each one. Overarching goals and objectives of the CACE Hub documented as the CACE Hub Plan of Action.

Phase II: Initiate Action (6 months-one year)

1. Each CACE Hub workstream committee will meet regularly to determine specific goals and objectives for their role and resulting activities designed to achieve results.
2. Each workstream committee will determine specific baseline data required, how to measure change, and identify local gaps and issues that might prevent best results.
3. The third CACE Hub Stakeholder meeting will be conducted toward the end of the first year. Each CACE Hub workstream committee will present their plans for action that will align with the overarching goals of the CACE Hub project.

Phase III: Organize for Impact (2 Years)

1. CACE Executive Workstream Committee leaders will develop processes for an emerging infrastructure and identify best communication processes. Backbone staff will be identified and tasked for action.
2. The CACE Hub strategic Plan and mission Statement will be formulated and announced publicly. Memoranda of Agreements will be created and offered to strategic partnership entities for commitments.
3. The CACE Hub shared progress metrics will be agreed to and a resulting CACE Hub report will be published and disseminated to the community.

Phase IV: Sustain Action and Impact (3-5 Years)

1. CACE Hub data (progress metrics) are tracked, analyzed, and reported to the community partners.
2. Each CACE Hub Executive Workstream Committee leadership will seek sustainability from local potential funders or funding mechanisms.

Components for Success	Phase I Generate Ideas & Dialogue	Phase II Initiate Action	Phase III Organize for Impact	Phase IV Sustain Action & Impact
	4 - 6 months	6 months - 1 year	2 years	5 years
Governance & Infrastructure	Convene community stakeholders	Identify champions & Form cross-sector group	Create infrastructure (backbone & processes)	Facilitate & Refine
Strategic Planning	Hold dialogue about community issues, context, and available resources	Map the landscape & Use data to make case	Create common agenda (common goals and strategy)	Align goals & Strategies
Community Involvement	Facilitate continual outreach specific to goal	Facilitate community outreach	Engage community & Build public will	Continue engagement & Conduct advocacy
Evaluation & Improvement	Determine if there is consensus/urgency to move forward	Analyze baseline data & Identify key issues and gaps	Establish shared metrics (indicators, measurement, and approach)	Collect, track, & report progress (process to learn and improve)

Attachment 6

Memoranda of Agreement

Community Asthma Care and Education Hubs

MEMORANDUM OF AGREEMENT

between

University of Missouri School of Medicine Asthma Ready® Communities

("hereinafter referred to as Applicant Organization")

and

Missouri Department of Health & Senior Services Asthma Prevention & Control Program

("hereinafter referred to as Collaborative Partner")

Applicant Organization agrees to:

A. *Complete DHSS deliverables for "Asthma Outcomes – Health Care Collaboration" contract* **DH200047765** *while engaging shared resources (designated as in-kind staff and expertise) for completion of extended activities and impacts described in the CACE Hub proposal and made possible with funding by the Missouri Foundation for Health.*

B. *Provide monthly reports of progress and activities related to both projects, including the in-kind effort of staff who have roles on both Asthma Outcomes – Health Care Collaboration and CACE Hub projects.*

Collaborative Partner agrees to:

A. *The use of in-kind effort as outlined in the CACE Hub budget narrative by Ben Francisco, Tammy Rood, Julie Patterson, Sherri Homan, Bhawani Mishra and Adrienne Ohler.*

B. *Provide access to expertise from the Missouri Asthma Prevention and Control Program and the National Asthma Control Program (CDC) for execution and evaluation of CACE Hub project objectives.*

Ben Francisco, PhD

MU Asthma Ready® Communities

9/18/20
Date

Date

MO Asthma Prevention & Control Program

9/21/2020
Date

Date

Community Asthma Care and Education Hubs

MEMORANDUM OF AGREEMENT

between

University of Missouri School of Medicine Asthma Ready® Communities

("hereinafter referred to as Applicant Organization")

and

Missouri Telehealth Network

("hereinafter referred to as Collaborative Partner")

Applicant Organization agrees to:

A. *Comply with terms of the attached Show-Me ECHO® MOU (9/10/20) between Missouri Telehealth Network and Department of Child Health, Pulmonary Medicine Division, University of Missouri School of Medicine while engaging shared resources (designated as in-kind staff and expertise) for completion of extended activities and impacts described in the CACE Hub proposal and made possible with funding by the Missouri Foundation for Health.*

B. *Provide annual updates on Community Asthma Care and Education Hubs including:1) list of participating health systems, health centers, clinic sites, schools, and agencies, 2) list of individuals participating in Asthma 1, 2 or 3 ECHOs, 3) evidence of impact, including baseline and trends for key asthma indicators, including cost*

Collaborative Partner agrees to:

A. *The use of in-kind effort as outlined in the CACE Hub budget narrative by Ben Francisco, Tammy Rood, Paul Foreman, Claudia Preuschoff, Michelle Dickens, Deb Cook, Tammy Reed, and Nico Lindsteadt*

B. *Provide program support for Asthma ECHO 1, 2 & 3 as detailed in the attached Show-Me ECHO® MOU (9/10/20) between Missouri Telehealth Network and Department of Child Health, Pulmonary Medicine Division, University of Missouri School of Medicine*

	Rachel Hutton
MU Asthma Ready® Communities	**Missouri Telehealth Network**
Ben Francisco PhD	9/23/2020
Date	Date
Date 9/23/20	Date

Community Asthma Care and Education Hubs

MEMORANDUM OF AGREEMENT

between

University of Missouri School of Medicine Asthma Ready® Communities

("hereinafter referred to as Applicant Organization")

and

Tiger Institute

("hereinafter referred to as Collaborative Partner")

Applicant Organization agrees to:

A. *Develop working community partnerships with families, schools, agencies and health care professionals who are developing cross-setting solutions to reduce barriers to good asthma outcomes for children. These leadership teams and community projects will provide opportunities to design and pilot IT solutions for moving actionable data between settings.*

B. *Provide expertise in clinical asthma care, asthma care and education, and social determinants of health in support of piloting a community information exchange with implementation of an existing asthma check-up application that supports impactful two-way communication between clinical, community and home-based asthma improvement efforts. We will provide evaluation services using Medicaid administrative claims data over the 3 year progress of this initiative.*

Collaborative Partner agrees to:

A. *Design and implement a minimum viable version of an Asthma Check-in Application for use by community health professionals and parents that connects to at least one health system EHR.*

B. *Request investment from governing body for funding of scalable implementation of an Asthma Check-in Application leveraging a HIPAA-compliant community repository after assuring the successful pilot of the minimum viable version of the Asthma Check-in Application.*

MU Asthma Ready® Communities

9/25/20
Date

Tiger Institute

9/25/20
Date

Attachment 7

Letters of Support

Project ECHO® (Extension for Community Health Outcomes)

Paul M. Foreman, PhD, MS, MA,
Project Director, Asthma Ready Communities
University of Missouri-Columbia, School of Medicine

September 25, 2020

Dear Dr. Foreman,

On behalf of the ECHO Institute at the University of New Mexico Health Sciences Center, I am writing to express my support for Missouri Foundation of Health Opportunity Fund full proposal application by Asthma Ready Communities of the University of Missouri School of Medicine. Missouri has become a national leader in efforts to prepare school nurses, clinic, community and hospital staff for improving asthma care, and we support the continuation of ECHO programs to provide best-practice asthma care to healthcare professionals across the state.

Project ECHO is a lifelong learning and guided practice model that revolutionizes medical education and exponentially increases workforce capacity to provide best-practice specialty care and reduce health disparities. The heart of the ECHO model™ is its hub-and-spoke knowledge-sharing networks, led by expert teams who use multi-point videoconferencing to conduct virtual clinics with community providers. In this way, primary care doctors, nurses, and other clinicians learn to provide excellent specialty care to patients in their own communities. Project ECHO links expert specialist teams at an academic hub with care providers in local communities. The spokes in our model become part of a learning community, where they receive mentoring and feedback from specialists. Together, they manage patient cases to deliver care.

Missouri health care providers have benefited tremendously from Asthma Ready Communities (ARC) ECHO initiative at the University of Missouri School of Medicine. In the past five years, ARC has delivered three rotating Asthma ECHO programs, including Asthma Essentials ECHO, Asthma Care and Education ECHO, and Asthma Care Accelerator ECHO. These programs have delivered case-based asthma best practices training to more than a thousand health professionals working in primary care health homes, FQHCs, clinics, and hospitals across Missouri. This unique ECHO program received national and international attention at the MetaECHO Conference in March 2019. In addition, the Asthma Care Accelerator ECHO won the prestigious 2019-20 Outstanding Achievement in Quality Improvement Award from the American Board of Medical Specialties.

I am very supportive of these wide-ranging, sweeping steps to improve asthma outcomes through the ECHO model in Missouri. These asthma programs are innovative and impactful, and we wholeheartedly support the effort and are excited to collaborate with you.

Sincerely,

Sanjeev Arora

Sanjeev Arora, MD
Founder and Director, ECHO Institute; Professor, Department of Internal Medicine
University of New Mexico Health Sciences Center

Missouri Department of
SOCIAL SERVICES
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MICHAEL L. PARSON, GOVERNOR • JENNIFER TIDBALL, ACTING DIRECTOR

TODD RICHARDSON, DIRECTOR
MO HEALTHNET DIVISION
P.O. BOX 6500 • JEFFERSON CITY, MO 65102-6500
WWW.DSS.MO.GOV • 573-751-3425

September 22, 2020

Ben Francisco, PhD, PNP, AE-C
Director, Asthma Ready Communities
MU School of Medicine, Department of Child Health
400 North Keene Street
Columbia, MO 65201

Dear Dr. Francisco:

As Director of the Mo HealthNet Division, Missouri's Medicaid agency, I am happy to provide this letter of support for your proposal to Missouri Foundation for Health for "Opportunity Fund" entitled "**Community Asthma Care and Education Hubs".** We recognize that the University of Missouri-Columbia, Asthma Ready® Communities has an established track record of successful collaboration with Missouri Primary Care Association, the MU Center for Health Policy (CHP) and the Missouri Prevention and Control Program. With ongoing assurances that exchange of data will be HIPAA-compliant, we support this proposal. This project closes a critical information gap by transforming administrative claims data into important alerts at the point-of-care in both health care and community settings. Claims data together with family-led interventions for improving asthma control and home environmental conditions will support better treatment decisions.

Through your approved project that accesses Missouri Medicaid administrative claims data through the Mo HealthNet Data Project repository at CHP on the campus of the University of Missouri, you have delivered Asthma Risk Panel Reports to several safety net clinics and health systems across the state. Through local quality improvement efforts under the Asthma Care Accelerator ECHO these reports have driven significant reductions in asthma burden and cost.

Your proposed use of claims data and community-derived check-up data are strategic to the deployment of preventive asthma services and Missouri primary care health home care coordination.

Good Luck with your proposal!

Sincerely,

Todd Richardson, Director
Mo HealthNet Division

Attachment 8

American Board of Medical Specialties
News Release

University of Missouri, School of Medicine
Recipient of Quality Improvement Award

American Board of Medical Specialties
Higher standards. Better care.®

American Board of Medical Specialties
353 North Clark Street, Suite 1400
Chicago, IL 60654
T: (312) 436-2600
F: (312) 436-2700 www.abms.org

NEWS RELEASE

ABMS Media Contact: Rich Waters
(312) 436-2626
rwaters@abms.org

ABMS Names the University of Missouri School of Medicine as this Year's Recipient of its Quality Improvement Award

Annual award honors outstanding achievement in patient care quality, safety, outcomes, and experiences

CHICAGO – September 24, 2019 – The American Board of Medical Specialties (ABMS), the leading not-for-profit organization overseeing physician certification in the United States, has awarded the University of Missouri School of Medicine (MU SOM) as this year's ABMS Portfolio Program™ (Portfolio Program) Outstanding Achievement in Quality Improvement Award recipient.

The award, announced at ABMS Conference 2019, was established in 2018 to recognize the exemplary efforts and activities of Portfolio Program Sponsors that are working to improve patient care quality, safety, outcomes, and experiences. The organizations recognized will have demonstrated leadership and innovation in quality improvement (QI) planning, implementation, and the ability to spread and sustain QI initiatives and outcomes in their organization.

The MU SOM Multi-Specialty Portfolio Program was selected based on the QI excellence it demonstrated in its implementation of the Asthma Ready® Communities (ARC)-sponsored Asthma Care Accelerator (ACA) Extension for Community Healthcare Outcomes (ECHO®) QI project, an inner-city initiative seeking to decrease the rate of uncontrolled asthma. Based on a community needs assessment of stakeholder and family focus groups, the project launched in 2018 with an in-depth understanding of contributing factors involved as well as an array of effective interventions. Interdisciplinary and inter-professional in its structure and framework, the project created a learning collaborative to implement asthma practice changes in alignment with national guidelines. Activities included the use of objective measures for assessing airflow and coaching patients for optimal inhalation technique, educational program for school nurses, standardized asthma self-management education across settings, verification of dispensing rates, and electronic run charts to track practice changes. The ACA initial pilot resulted in increased use of inhaled corticosteroids with improved disease control and decreased risks. ACA is now available across the entire state of Missouri.

"It is our privilege to recognize the outstanding work of the University of Missouri School of Medicine by honoring them as the recipient of the second ABMS Portfolio Program Outstanding Achievement in Quality Improvement Award," stated ABMS President and Chief Executive Officer Richard E. Hawkins, MD. "Working with organizations such as MU SOM illustrates how ABMS and its Member Boards, in

partnership with a wide range of health care organizations, can impact patient safety and practice improvement. Through our collaboration with Portfolio Program Sponsors, we are helping to make practice and system changes that improve the care of patients, families, and the communities we serve."

"Our ARC team is honored to accept this prestigious award and equally grateful for the amazing contributions and tremendous commitment of frontline asthma champions throughout Missouri who skillfully participated in the ACA ECHO QI project in Kansas City, and online via the ECHO collaborative. The dedication of health care professionals to tackle local workflow challenges needed to promote population health and build resilient partnerships throughout Missouri with school nurses, community health workers, and home environmental assessors has collectively been a key driver in the success of the ACA ECHO QI program," stated Ben Francisco, PhD, PNP, AE-C, Professor, Pulmonary Medicine & Allergy, University of Missouri School of Medicine, Department of Child Health, and Director, ARC. "Furthermore, it is important to recognize the steadfast leadership and supporting contributions of MU SOM, MU SOM Child Health, Missouri Telehealth Network Show-Me ECHO®, ECHO® Institute, Health Forward Foundation (https://healthforward.org/), MU Center for Health Policy, MO HealthNet (Missouri Medicaid), Missouri Asthma Prevention and Control Program, Black Health Care Coalition, MU Extension, and the MU SOM Center for Continuing Medical Education & Physician Lifelong Learning, along with a variety of very special learning health systems throughout Kansas City and beyond."

"This year's submissions were all wonderful examples of how this program can help exact meaningful practice improvement, engaging team members across the continuum of care all for the benefit of their patients," Dr. Hawkins noted.

To date, the ABMS Portfolio Program has helped engage physicians in QI/practice improvement initiatives at hospitals and health systems across the country, with many showing improvement in care outcomes. Since its inception, more than 3,400 improvement efforts have been completed by 18,000 individual Portfolio Program participants. For more information about participation in the Portfolio Program, visit the program website at mocportfolioprogram.org.

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About ABMS
Established in 1933, the American Board of Medical Specialties (ABMS) is the leading not-for-profit organization overseeing physician certification in the United States. ABMS establishes the standards its 24 Member Boards use to develop and implement educational and professional evaluation, assessment, and certification of physician specialists. More than 900,000 physicians are certified in one or more of the approved 40 specialties and 87 subspecialties offered by the ABMS Member Boards. For more information about ABMS, visit abms.org or call (312) 436-2600.

About the University of Missouri School of Medicine
The MU School of Medicine has improved health, education and research in Missouri and beyond for more than 170 years. MU physicians treat patients from every county in the state, and more Missouri physicians received their medical degrees from MU than from any other university. For more information, visit *http://medicine.missouri.edu/*

Attachment 9

Sustaining Asthma Improvement Efforts – pilot hub convenes regional coalition

BreatheUP

breatheUP

Our Bold Goal

Cut Kansas City's uncontrolled asthma rate for children in half by 2030.

Our problem

- 50,000 Missed School Days because of asthma
- 2 or more children have died annually from asthma with no real improvement
- African Americans are 5 times more likely to die of asthma than whites

Who we are

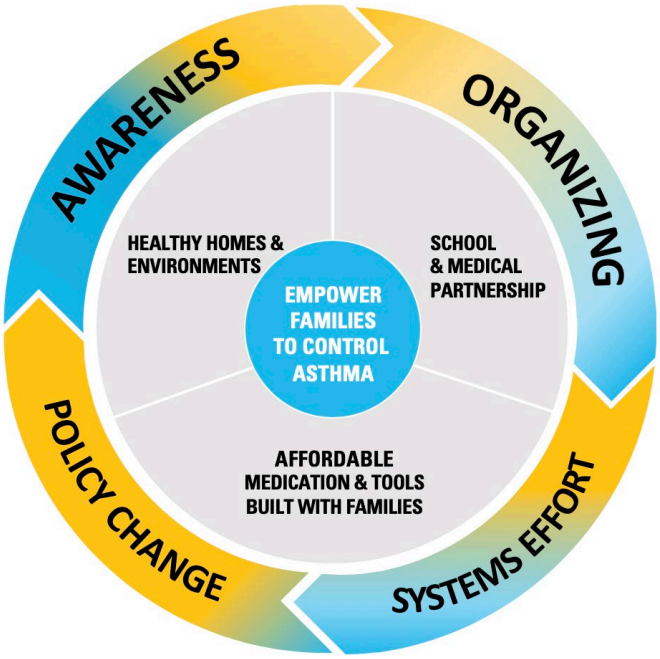
We are a coalition of doctors, community partners, school districts, funders, and families united to fight asthma. Our vision is to cut the uncontrolled childhood asthma rate of our city in half by 2030. It will take regional partners working smarter and aligning around DATA to address this daunting goal. In 2019, United Way of Greater Kansas City graciously offered to be our fiscal home and align with regional school absentee efforts.

We believe **Collective Impact** is the right framework for Kansas City to address this complex crisis. That means we need:

- A backbone staff waking up everyday to align partners.
- A common method to measure our work and learn together.
- Consistent messaging to motivate neighbors and officials.
- Reinforcing activities that make our individual work more impactful.

How we will solve this

- **Partner with families** to address the root causes
- **Asthma friendly homes** must be breathable
- **Medications are affordable**
- **Asthma Action Plans** are designed for everyone
- **Schools and providers partnering** better to support our families.



Our plan of action

1. Launch a regional **collective impact coalition** that rallies stakeholders and families around clear, actionable goals.
2. Align medical and school partners into a **learning collaborative** focused on quality improvement outcomes on a shared data platform.
3. **Co-design public messaging/grassroots campaigns** highlighting the inequity of asthma.
4. Build a coalition to **enact policy changes** that makes our homes healthy for our kids.

Because every child deserves to breathe easy.

Our team

EXECUTIVE COMMITEE
Dr. Bridgette Jones – Children's Mercy Medical Director of Diversity, Pulmonologist
Dr. Ning Haluck – Pediatrician, Swope Health
Dr. Matthew Sharpe –Director, KU Asthma Center
Kevin Kennedy – Environmental Health, Children's Mercy
Linda Crider – Executive Director, American Lung Association of Kansas City
Jim MacDonald – Chief Community Investment Officer, United Way of Greater Kansas City
Erica Forrest-Thermal Fisher Scientific

MEDICAL LEADERSHIP
Dr. Dave Burnett – KU Respiratory Care
Dr. Alan Greiner – KU Family Medicine

ASTHMA MANAGEMENT ADVISORS
Paul Foreman
Candace Ramos
Helen Murphy
Sunny Wathanacharoen

SCHOOL DISTRICTS
Lori Halsey - Independence
Shelby Rebeck - Shawnee
Kelli Charles - District 500 (KCK)
Charlene Henry - Raytown
Lauren Grimes - KCMO
Meagan Patterson – Center
Leslie Washington – Hickman Mills

ADDITIONAL PARTNERS
Blue Cross & Blue Shield of Kansas City
United Health Care – Community health team
New Bethel Church Community Development Corporation
Asthma Ready Communities
Cradle Kansas City
Johnson County Health Department
KCMO Health Department
Wyandotte Unified Government Health Department

Acronyms

ABMS	American Board of Medical Specialties
ACA	Asthma Care Accelerator
ACE	Asthma Care and Education
ARPR	Asthma Risk Panel Report
ARC	Asthma Ready Communities®
BAECM	Becoming an Asthma Educator and Care Manager
CACE	Community Asthma Care & Education
CARAT	Child Asthma Risk Assessment Tool
CDC	Centers for Disease Control and Prevention
CHW	Community Health Worker
CMS	Centers for Medicare and Medicaid Services
COVID	Coronavirus
DSS	Department of Social Services
ECHO	Extension for Community Health Outcomes
ED	Emergency Department
EHR	Electronic Health Record
EPR3	National Asthma Education and Prevention Program Expert Panel Report 3
EPA	Environmental Protection Agency
FQHC	Federally Qualified Health Center / Community Health Center
FHIR	Fast Healthcare Interoperability Resources
HIE	Health Information Exchange
KCPS	Kansas City Public School District
MAPCP	Missouri Asthma Prevention and Control Program
MFH	Missouri Foundation for Health
MOA	Memorandum of Agreement
MOC	Maintenance of Certification
MOU	Memorandum of Understanding
MTN	Missouri Telehealth Network
NHLBI	National Heart, Lung, and Blood Institute
SHARE	Student Health Assessment Report Exchange
SMART	Specific, Measurable, Actionable (Achievable), Relevant (Realistic), Time Bound