



10-YEAR

TRANSLATING EVIDENCE INTO PRACTICE: Merck Childhood Asthma Network IMPACT REPORT

THE OBJECTIVE

The Merck Foundation set out to create an organization that would make a significant contribution to a growing public health problem by building public-private partnerships to implement effective, evidence-based health interventions. As part of a three-phase planning process, the Merck Foundation chose childhood asthma as the focus and developed a plan for an organization to address it – the Merck Childhood Asthma Network, Inc. (MCAN).

MCAN RESPONDS TO A PUBLIC HEALTH NEED



More than **6 million U.S. children have asthma**, and it is the third leading cause of hospitalizations among *children under age 15*.

The burden of childhood asthma is much heavier in African-American and Puerto Rican communities and for families living below the poverty level than in the U.S. population as a whole. MCAN was established in 2005 as the only independent 501(c)(3) organization to **focus solely on the burden and associated morbidity of childhood asthma**. The organization began with a vision to become a leading national resource and advocate for children with asthma and their families by working with national, regional, and community partners.

MCAN's initial efforts focused on:



Devising a plan to implement the guidelines and lessons learned from earlier controlled studies of asthma interventions into strategies that would improve the quality of care and life for children with asthma in diverse community and healthcare settings.



Identifying valid methods to evaluate the effectiveness of evidence-based asthma interventions across these diverse settings.

More than just a pervasive chronic condition, asthma is a bellwether of public health and healthcare system performance.

Effective management of asthma, especially among under-resourced patient populations, spans the entire health system and depends on efficient coordination and effective communication among key actors.



Polymakers



Local Health Centers



Schools



Government Agencies



Private Practitioners



CARE COORDINATION

The Care Coordination initiative involved the implementation of evidence-based interventions in different “care coordination” settings: **school district, clinic or health care system, and community**.

Asthma symptoms and health care utilization significantly improved in the four program sites, Chicago, San Juan, PR, Philadelphia, and Los Angeles.

	Baseline n=805	12-month Follow-up n=805
Nighttime awakenings, past month (mean)	6.55	2.02
Emergency room visits, past year	2.86	1.09
Hospitalizations, past year	1.11	0.36
Daytime symptoms within the past 4 weeks (mean)	7.38	3.13
Use of rescue medication within the past 2 weeks (mean)	5.73	2.01

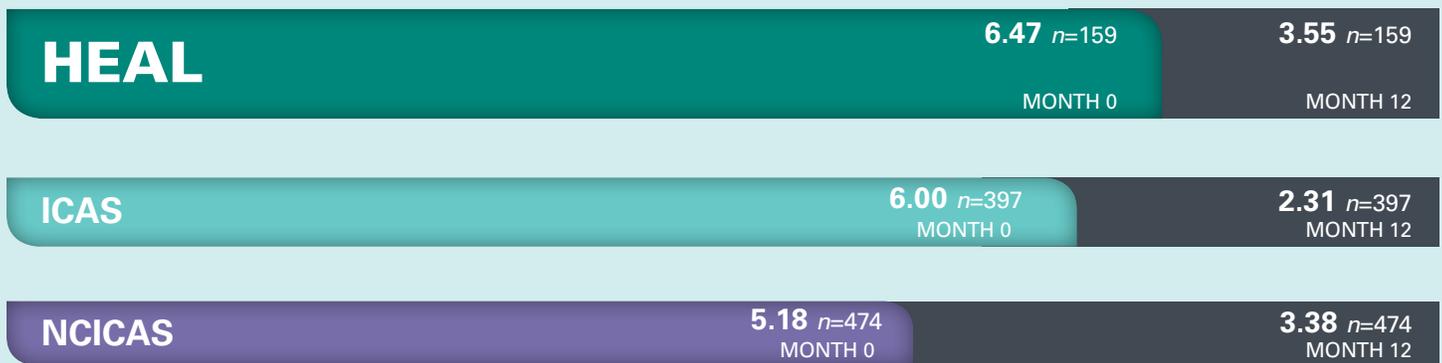


HEALing ASTHMA IN NEW ORLEANS

When Hurricane Katrina hit the Gulf Coast, the healthcare systems in the affected areas were disrupted and the flood waters brought increased levels of mold and other allergens that had the potential to exacerbate asthma symptoms. Recognizing an area of need, MCAN joined forces with the NIH, and the deLaski Family Foundation to create an initiative called HEAL or **Head-off Environmental Asthma in Louisiana Project that worked to assess and improve the effects of the post-Katrina environment on childhood asthma.**

The HEAL project was a unique “hybrid” intervention, which drew from essential elements of the National Cooperative Inner-City Asthma Study (NCICAS) and the Inner-City Asthma Study (ICAS), 2 of the most rigorously evaluated asthma studies conducted and shown effective amongst children living in the inner cities. Patients reported that the average number of **maximum symptom days declined from 6.5 to 3.6, a statistically significant 45% REDUCTION.** These findings were consistent with the changes observed in the NCICAS and ICAS interventions (35% and 62% reduction in symptom days, respectively).

Maximum Symptom Days per 2 weeks



HEAL PHASE II RESULTS

MCAN continued the HEAL initiative as HEAL Phase II, implementing the “hybrid” intervention in Federally Qualified Health Centers (FQHCs) managed by the Daughters of Charity Services of New Orleans.

	Baseline <i>n</i> =187	12-month Follow-up <i>n</i> =187
 Number of missed school days, past year (mean)	1.4	0.6
 Emergency room visits, past year	41%	22%
 Hospitalizations, past year	10%	5%
 Number of days child experienced daytime symptoms within the past 4 weeks	8.0	4.7
 Use of rescue medication within the past 2 weeks	55%	45%

The percentages represent the percentage of participants who reported that they had an ER visit/hospitalization/or used their rescue meds.



COMMUNITY HEALTHCARE FOR ASTHMA MANAGEMENT AND PREVENTION OF SYMPTOMS (CHAMPS)

The CHAMPS program employed the “hybrid” intervention that proved effective in HEAL in 3 Federally Qualified Community Health Centers with 3 comparison centers.

The FQHCs that implemented the intervention included:

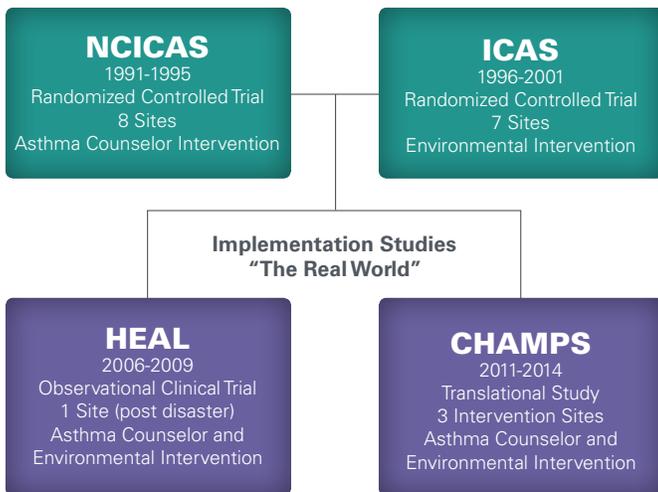
- El Rio Community Health Center (Tucson, AZ)
- Cherry Health (Grand Rapids, MI)
- Costa Salud Community Health Centers (Rincon, PR)



The comparison FQHCs were:

- Mariposa Community Health Center (Nogales, AZ)
- Center for Family Health (Jackson, MI)
- Camuy Health Services Inc. (Camuy, PR)

Randomized Controlled Trials “The Laboratory”



IMPACTING POLICY

MCAN recognized early the need for policy and system-level changes in order to implement and sustain its programs. As challenges to effective community-based health care initiatives emerged, potential solutions were sought and MCAN made efforts to implement these into the communities affected and into the broader public health debate.

The State of Childhood Asthma Conference set policy goals and direction for the duration of the organization. Outcomes of that conference included:

- The development of the NIH Asthma Outcomes Workshop
- The impetus for the Changing pO₂ Policy Report
- The Childhood Asthma Leadership Coalition (CALC)
- Partnership with the American Academy of Pediatrics on the Comprehensive Asthma Project

Among the most important CALC successes is its advocacy in support of **two Medicaid policy changes: withdrawal of the “free care” rule and reimbursement for preventive services provided by practitioners other than licensed providers.**

SUSTAINABILITY

Sustainability of funded programs was an important indicator of success and another pathway to fulfilling the MCAN mission.

Examples of lasting impact include:



Medicaid reimbursement for preventative services and home visits



Certification as patient-centered medical home



Grant funded positions incorporated into institutional budgets

With external funding, CALC’s federal and state-based advocacy activities on behalf of children with asthma will continue.

SUMMARY

MCAN’s experience demonstrates the value of implementing evidence-based pediatric asthma interventions in community settings, or the “real world.” This experience contributes to the ongoing efforts to **close the gap between what works in controlled settings and what is done in healthcare practice.**



MCAN substantially furthered the state of knowledge about how to **reduce the burden of childhood asthma** and **improve the quality of life** for our nation’s most vulnerable yet valuable resource.