



## Mission Children's Hospital Regional Asthma Disease Management Program Summary

Mission Children's Hospital Regional Asthma Disease Management Program was designed for rural Western North Carolina to address health disparities in underserved and impoverished children suffering from asthma. Poverty is present in many of these rural areas. A multi-faceted approach is used which helps families build skills in managing environmental triggers and connects them with other community resources. Addressing social determinants of health cannot be overlooked as our children are at risk for lower school performance, decreased attendance, fragile nutritional status, and inadequate housing. Comorbid conditions may include hypertension, diabetes, and obesity/overweight. For some of these families, English is a second language, and there are language barriers for them in the traditional medical setting. Through this program, children and families are given care and education in their local settings – homes, childcare centers, and schools. Most families live with challenging social and environmental circumstances, with daily exposure to multiple asthma triggers.

Key collaborators include the North Carolina Asthma Program, Asthma Alliance of North Carolina, Western North Carolina School Systems and Child Care Centers, North Carolina Department of Health and Human Services, North Carolina Department of Environmental and Natural Resources, National Center for Healthy Housing, National Asthma Control Initiative (NACI) of the National Heart, Lung and Blood Institute of the National Institutes of Health, National Asthma and Allergy Foundation of America, WNC Primary Care Providers, Cherokee Indian Hospital Authority, Satellite Clinics, Sub-specialists, school nurses, social workers, and case managers. The Regional Asthma Disease Management Program has a strong presence outside it is clinical settings, having built long-term relationships (partnerships) with schools, child care centers, faith based organizations, environmental agencies, health departments, and community organizations.

Through the various components of our program, the Regional Asthma Disease Management Program provides:

- Clinical assessments including lung spirometry exhaled nitric oxide (eNO), peak flow meter monitoring, and symptom diary usage.
- Patient education (culturally appropriate and literacy-sensitive materials): pathophysiology of asthma; identification of triggers and avoidance measures; identification of early and/or late warning signs of an asthma exacerbation; and empowering the patient to self-manage.
- Medication assessments, review, and appropriate recommendations based on the NHLBI guidelines.
- Development and implementation of an Asthma Action Plan, based on a patient's personal best and/or symptom history, promoting patient self-management.
- Environmental assessments of the patient's home and school/childcare setting, promoting an "asthma friendly environment" and reporting potential housing code violations that may worsen asthma symptoms. Home remediation—linkage of services with community organizations; integrated pest management.
- Communication of pertinent information to physicians, families, school nurses, teachers, and others, as deemed appropriate.
- Education programs and activities for community-based organizations, schools and provider groups.

Mission Children's Hospital Regional Asthma Disease Management Program implements the six key messages of the Guidelines Implementation Panel Report which reinforce the Expert Panel Report 3: Guidelines for the Diagnosis and Management of Asthma (EPR-3) recommendations: (1) assess asthma severity, (2) assess and monitor asthma control, (3) use of inhaled corticosteroids, (4) written asthma action plan, (5) control environmental exposures, (6) schedule follow-up visits.

The program's ultimate goal is to subjectively improve a patient's quality of life, decrease school absenteeism, decrease ED utilization and/or inpatient visits—resulting in cost avoidance. The Regional Asthma Disease Management Program embraces the holistic approach to patient care through compassion and patient advocacy.

The Regional Asthma Disease Management Program was the 2012 Health Care Provider Recipient of the Environmental Protection Agency's National Environmental Leadership Award in Asthma Management. This award is EPA's highest recognition a program and its leaders can receive for delivering excellent environmental asthma management as part of their comprehensive asthma care services. Each year, EPA honors exceptional health plans, health care providers, and communities in action.