

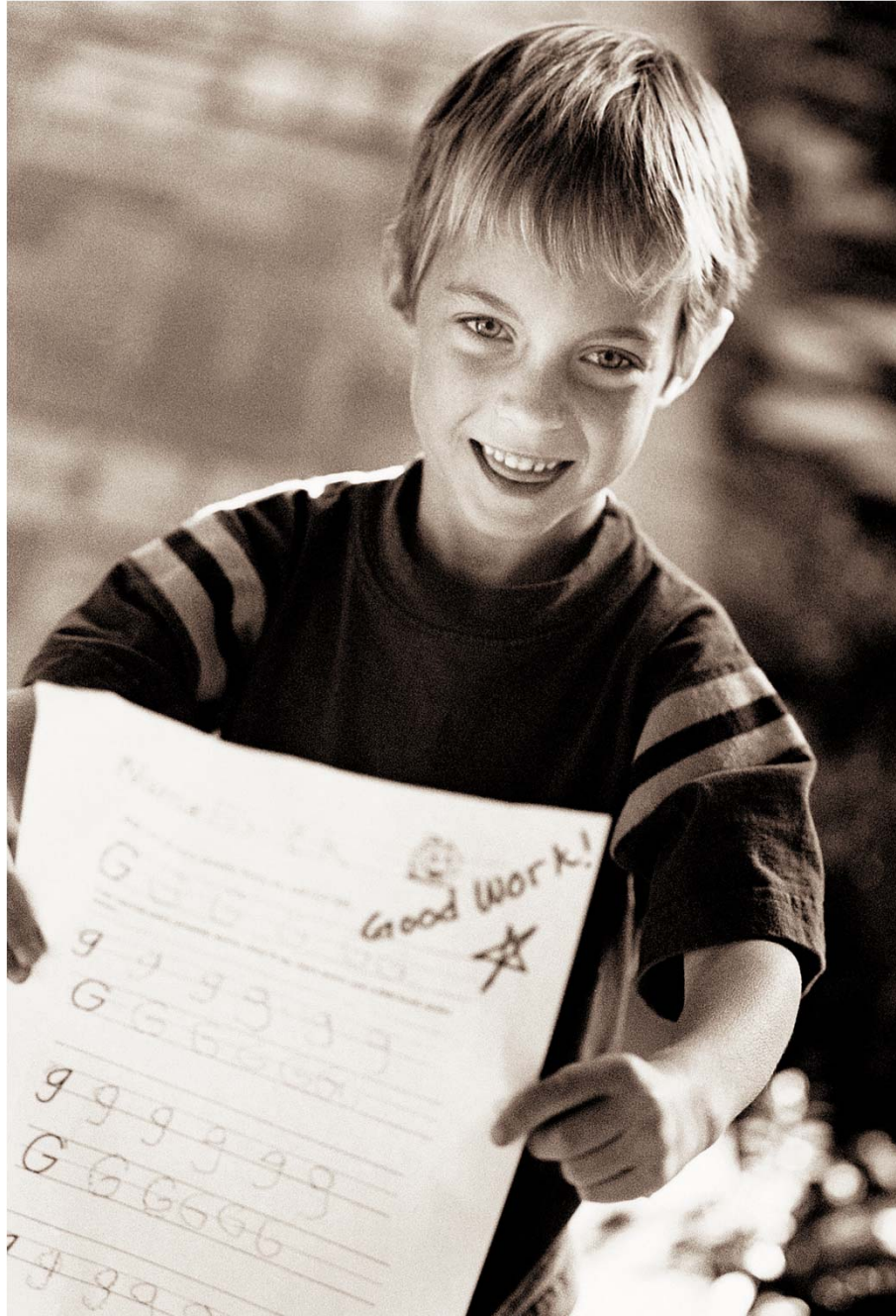


Regional Asthma Disease Management Program

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Asheville, North Carolina



Pictured l-r: Don Russell, M.D., Supervising Physician; Shawn Henderson, Practice Manager, Mission Children's Hospital; Melinda Shuler, Principal Investigator/Regional Clinical Supervisor; Amy Trees, Case Manager; Helen Thingvoll, Office Specialist. (Not pictured: Mary Ellen Flaherty, Asthma Educator.)



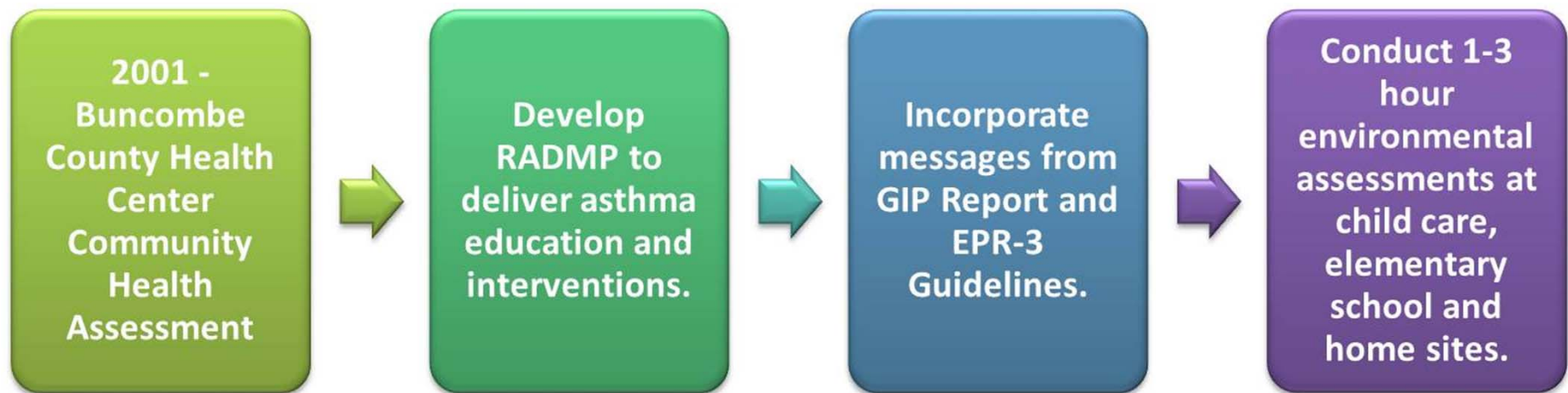


- Location: Asheville, North Carolina
- Type of Program: Non-profit Community Health System
- Service Area: 21 counties in Western North Carolina, including the Eastern Band of the Cherokee Indians
- Population Served: Remote, rural; Urban; Latino and Slavic communities

Building the System



Conduct Needs Based Planning:





Building the System

Focus on Resource Strategy at Every Step

- ***Utilize Community Partnerships:***
 - Faith-based organizations
 - WNC School systems
 - WNC Child care centers
 - Charitable community partners
- ***State Partnerships:***
 - NC Division of Public Health
 - NC Asthma Program
- ***National Partnerships:***
 - National Heart, Lung, and Blood Institute
 - Asthma Allergy Foundation of America
 - National Environmental Health Association
 - National Center for Healthy Housing



Our Typical Patient

- Uninsured or underinsured
- Poor socioeconomic status
- Average patient age 8
- Variety of ethnic groups
- Single parent home



Patient Referral

- Primary Care Provider
- Hospitalist
- ED Physicians
- Specialist
- School Nurses
- School Social Worker
- Satellite clinics



Clinical Assessment

- Lung Spirometry with pre/post bronchodilator
- eNO (a measurement of inflammation by assessment of nitric oxide concentrations)
- Exercise Challenge
- Peak Flow Meter Monitoring
- Symptom Diary Usage
- Quality of Life questionnaire
- Vital signs



Patient Education

- Pathophysiology of asthma
- Identification of triggers and avoidance measures
- Identification of early and/or late warning signs
- Appropriate use of device(s)
- Empowering the patient self-manage



Medication Assessment

- History
- Assess compliance
- Recommendations based on the National Institute of Health, Expert Panel Report -3 (EPR-3)
- Written Asthma Action Plan

Six Key Messages of the Guidelines Implementation Panel Report and the Underlying EPR-3 Recommendations:

- **Classification of asthma severity**
- **Assess level of control**
- **Use of inhaled corticosteroids**
- **Asthma action plans**
- **Allergen and irritant exposure control**
- **Follow-up visits**



Environmental Assessment

**Conduct 1-3
hour
environmental
assessments at
child care,
elementary
school and
home sites.**



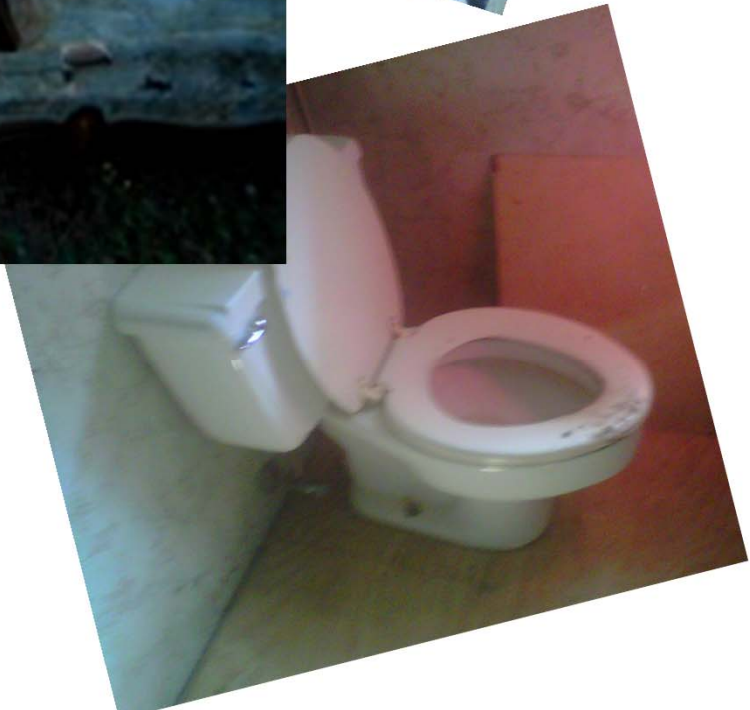
Social Determinants of Health

- Environmental
- Financial
- Social
- Community Resources













Health Promotion



- World Asthma Day
- Fit Together
- Environmental Assessments
- Health Fairs
- Asthma In-services



Specific Program Activities 2009 - 2011

Event Name	Description	Target Audience	Number of People impacted	Location
World Asthma Day	Asthma education and in-service for elementary-age children	Elementary-age children, school teachers and principals throughout WNC	1,840	School systems in WNC
WNC School Nurse Asthma In-service	Workshop, presentation and training in regards to asthma	School nurses of WNC	120	Western Region of North Carolina
NC Asthma Summit	Asthma Conference	Health Care Providers	530	Research Triangle Park
Physician In-service	Presentation of EPR - 3 Guidelines and GIP (Guidelines Implementation Panel); NACI Demonstration Project	PCP's from Cherokee Indian Reservation (Tallulah Valley Health Center and Snowbird Clinic); Macon County (Angel Medical Center); Haywood County; Mission Children's Specialist	~ 250	Cherokee Indian Hospital; Mission Children's Rueter Outpatient Center
Mission Children's Specialist "Lunch and Learn"	Presentation in regards to asthma	Nurses at Mission Children's.	15	Mission Children's Specialist
Health Professional Asthma In-service	Workshop, presentation and training in regards to asthma	Social Workers	12	Mission Hospital

Evaluating the System



Collect health data

- Severity level, level of control, environmental trigger exposure

Encourage patients to pledge to create an asthma friendly environment

Examine patient charts to assess program effectiveness:

- ED visits
- Hospitalizations
- Missed school days
- Lung spirometry and exhaled nitric oxide

Asthma Disease Management Program's Goals:

- Subjective improvement of patient's quality of life
- Decrease school absenteeism
- Decrease ED utilization and/or inpatient visits –resulting in cost reductions

The Regional Asthma Disease Management Program embraces the holistic approach to patient care through compassion and patient advocacy.



National Asthma Control Initiative (NACI)

- **Funded by the National Heart, Lung, and Blood Institute (NHLBI) of the National Institute of Health.**

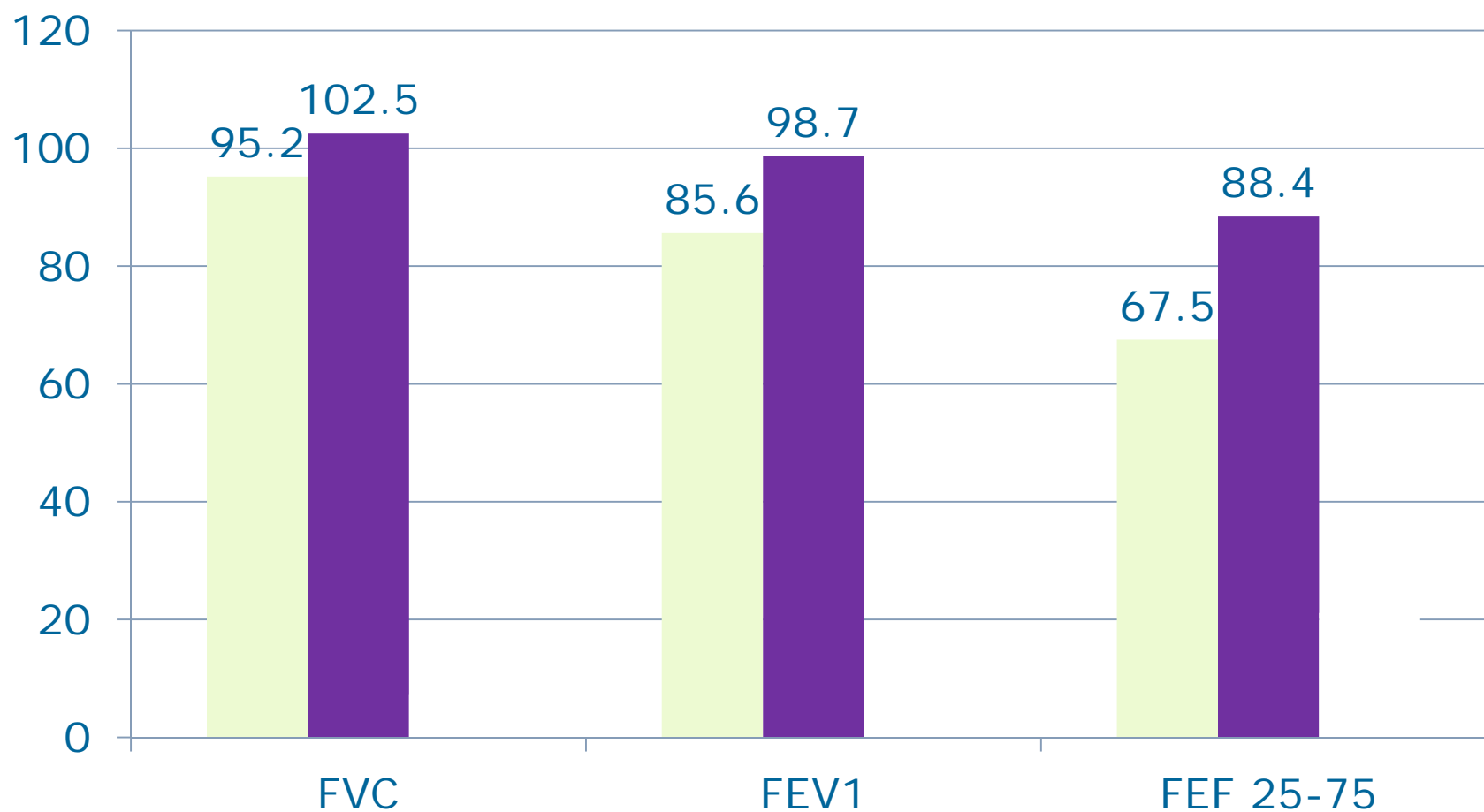


Demographics

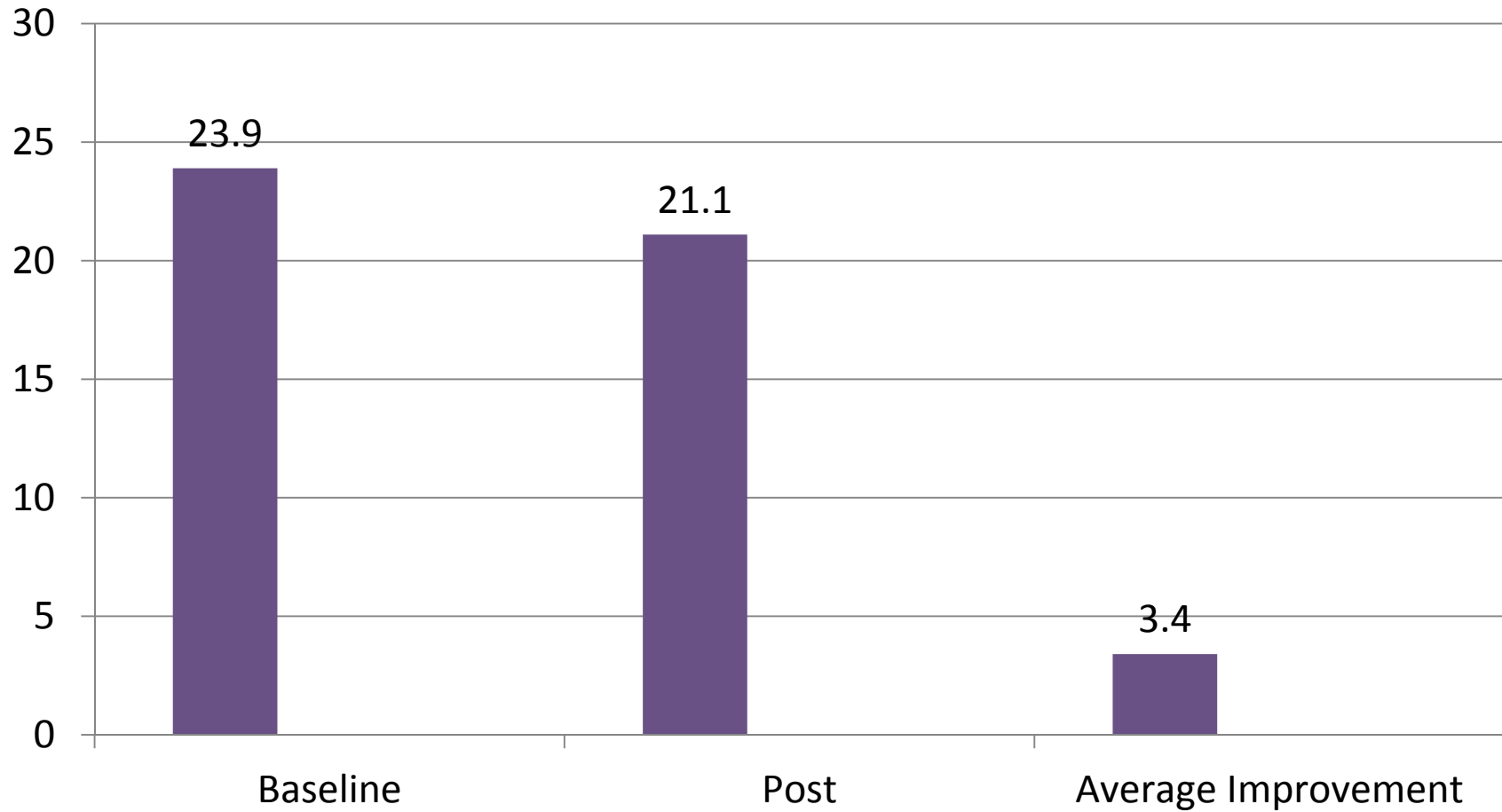
Number	n=50
Average Age	8 years
Age Range	3-12 years
Male	56%
Female	44%
Caucasian	38%
American Indian	28%
Hispanic	6%
Mexican American	4%
African American	24%



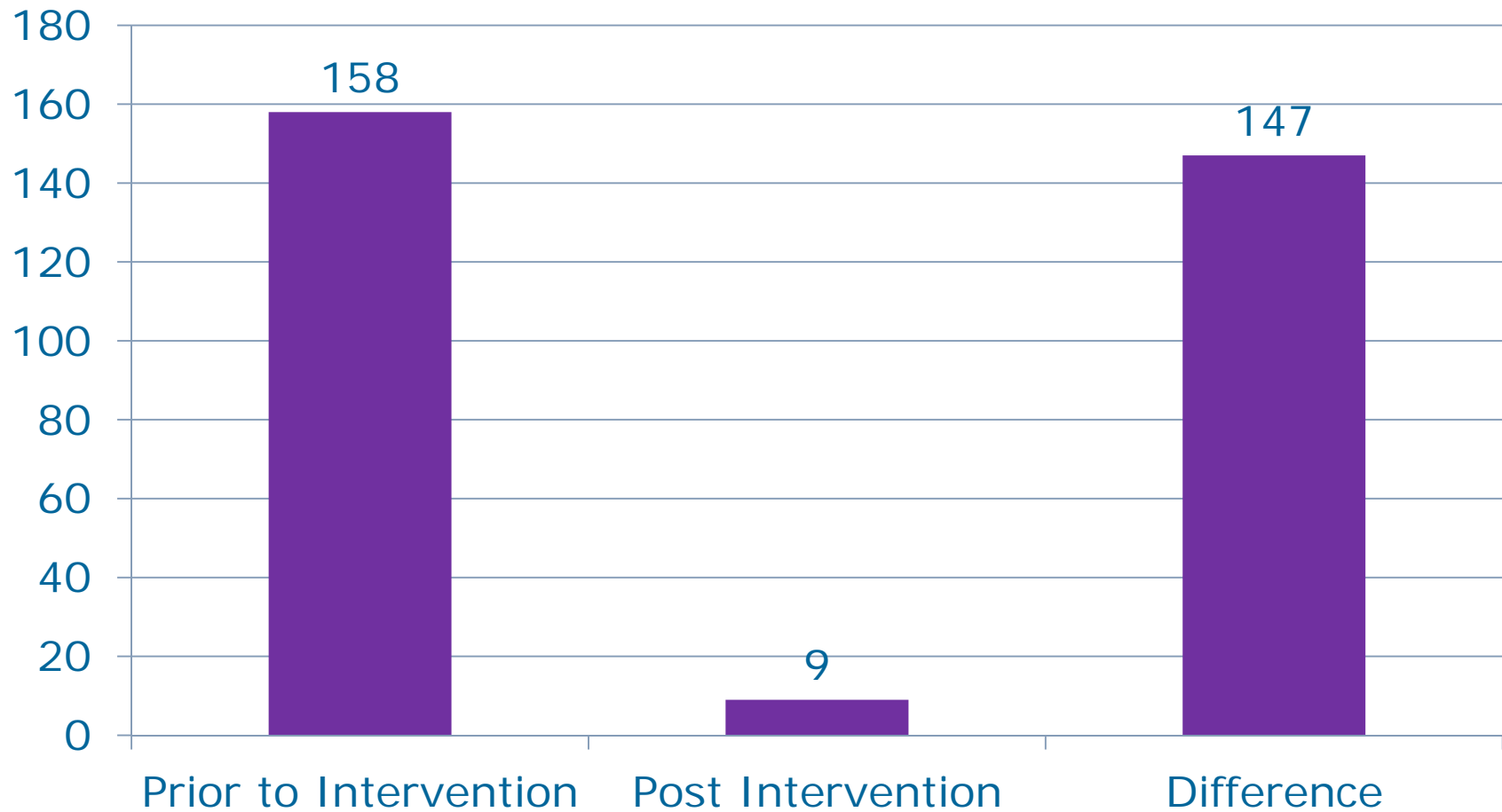
Average Pulmonary Function Measures



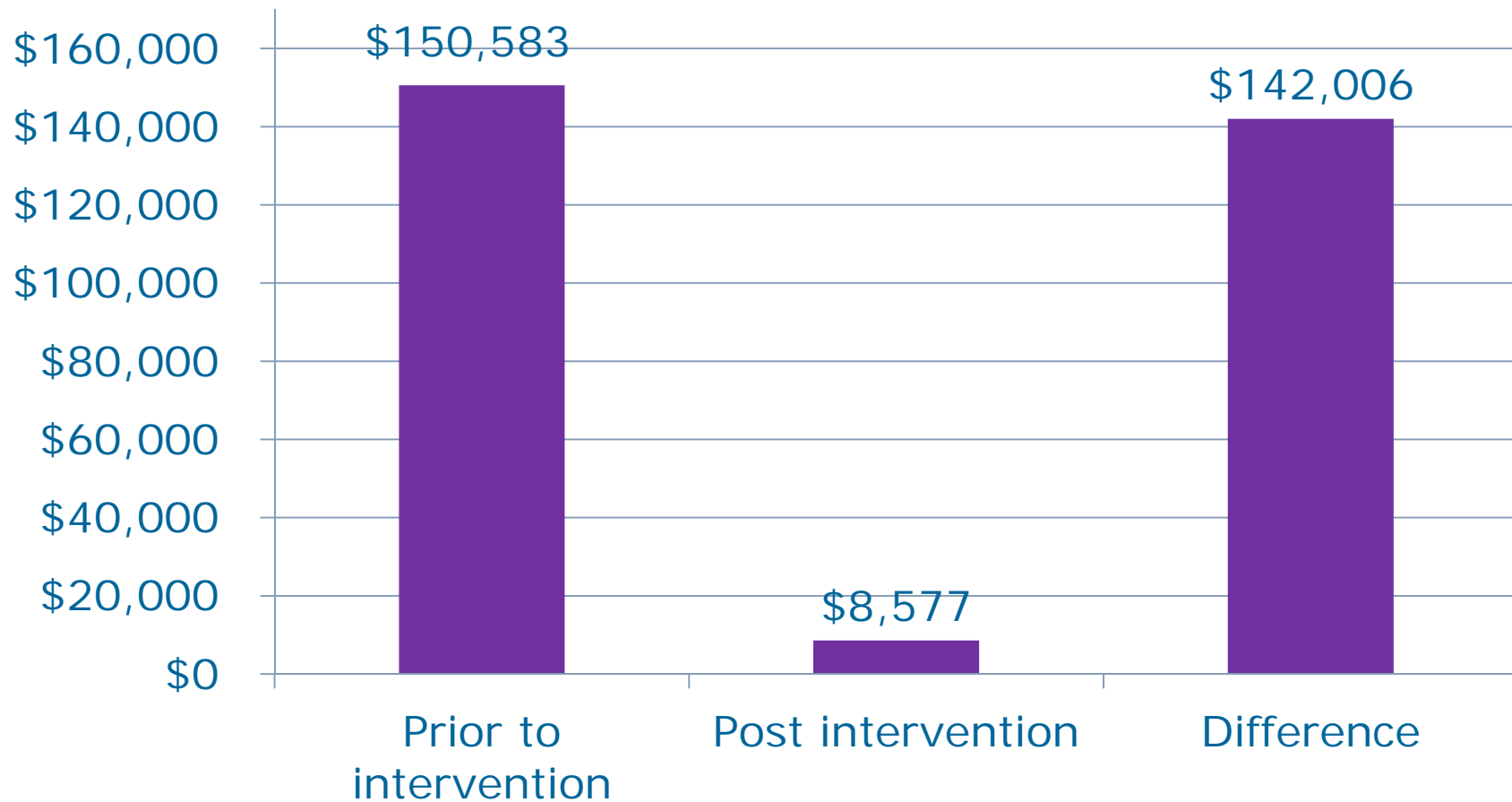
Exhaled Nitric Oxide



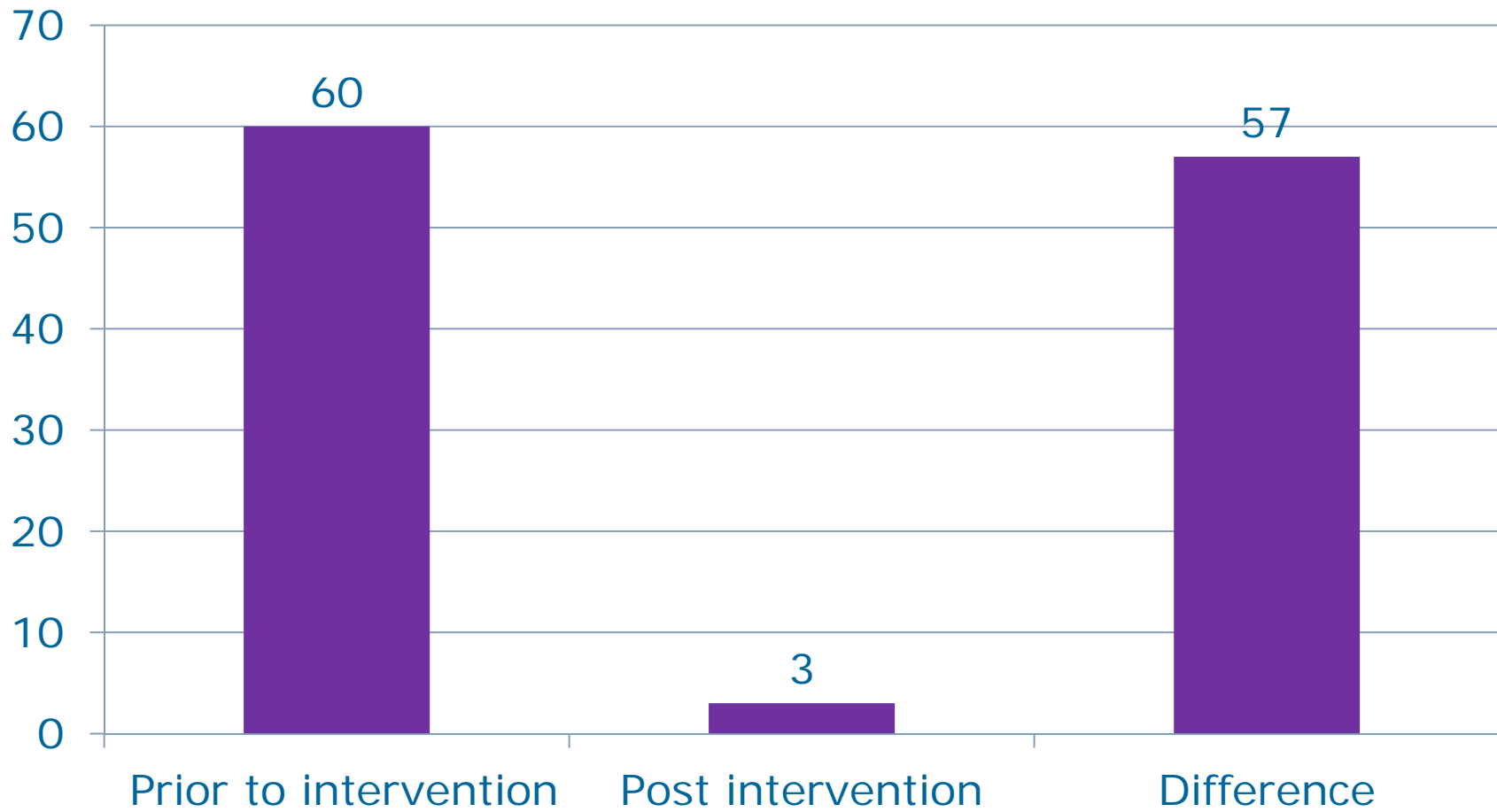
Emergency Department Visits



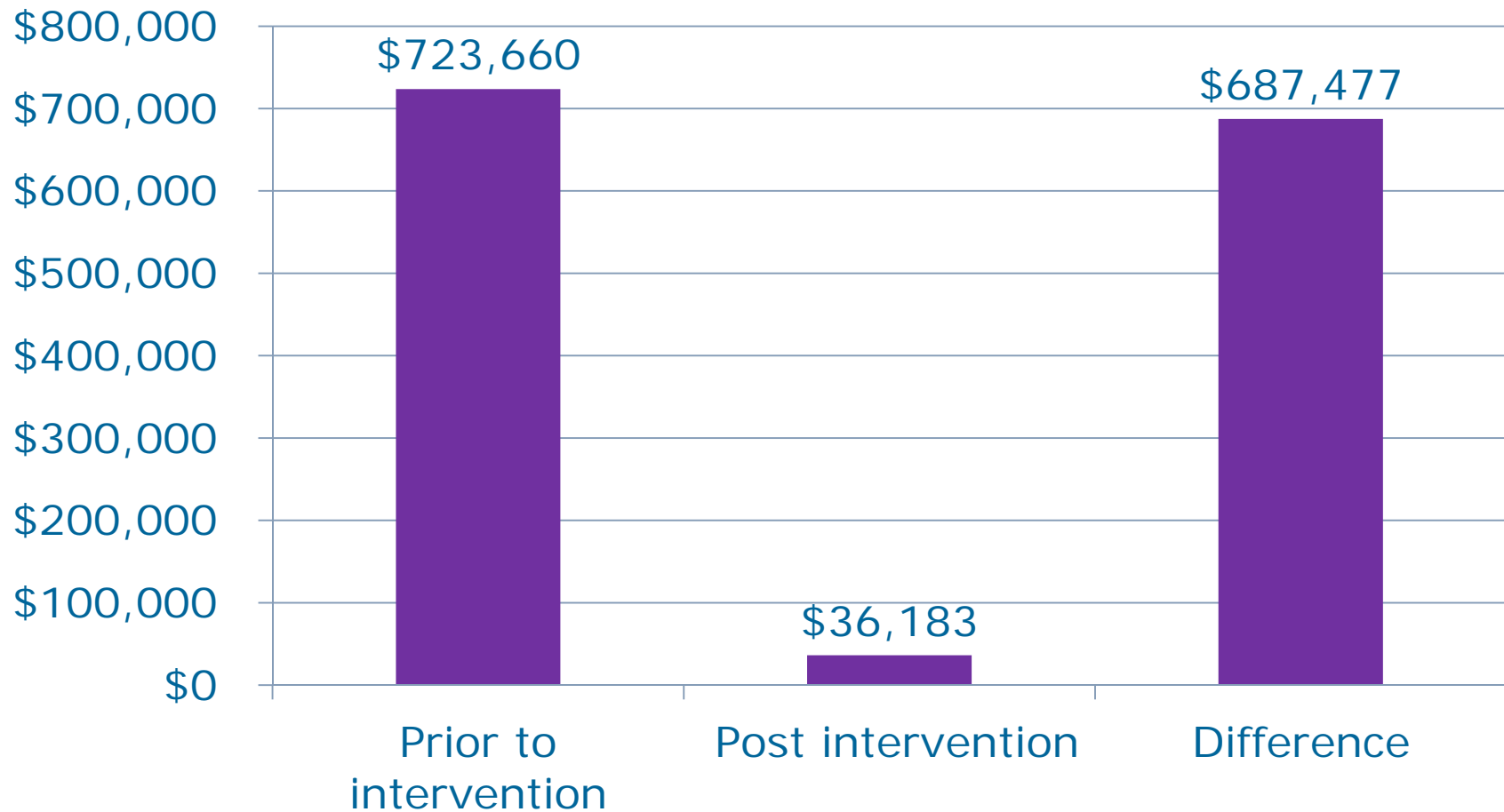
Emergency Department Cost Avoidance



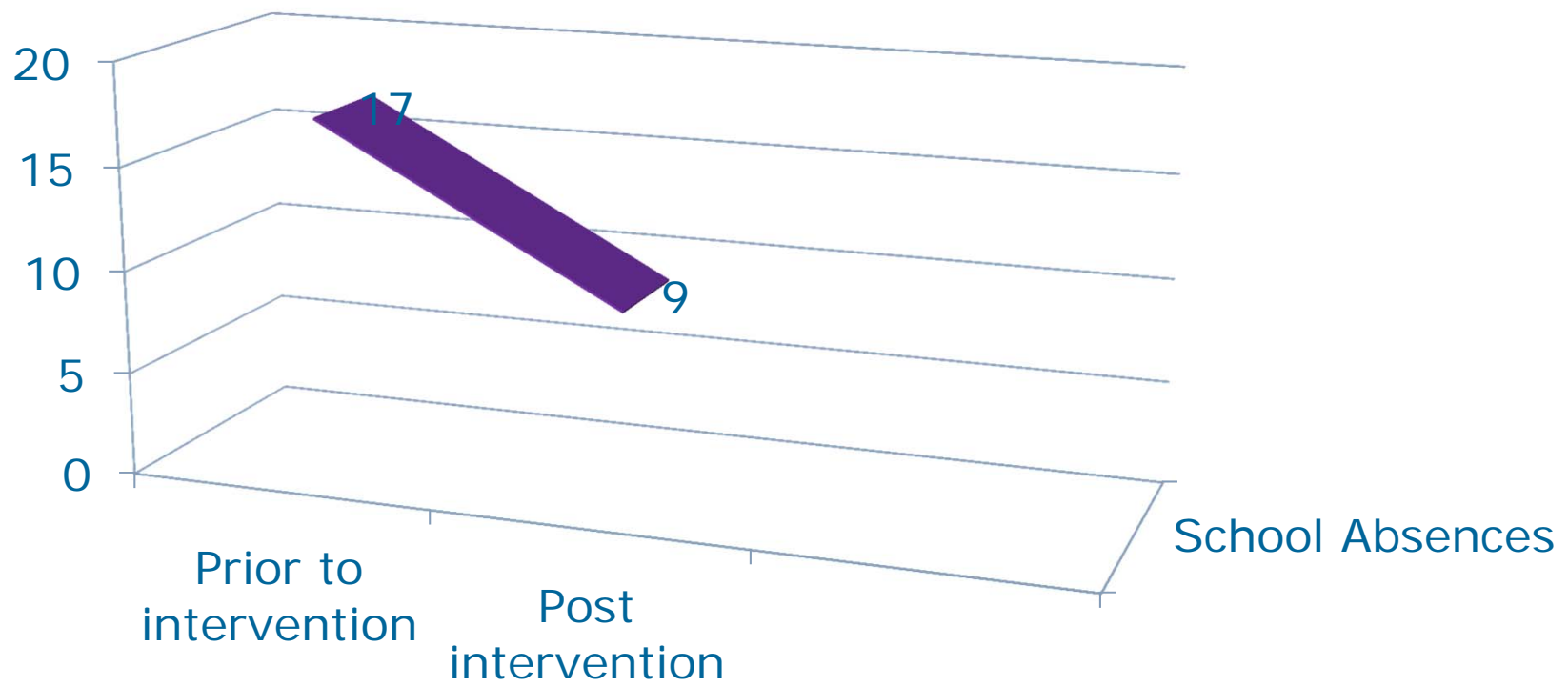
Hospitalizations



Hospitalization Cost Avoidance



School Absences





Summary of Asthma In-services

Child Care Sites	# Students Enrolled	# Participants	% Increase in Knowledge	% of Adults Committing to a Smoke Free Environment	% of Adults Pledging to Create an Asthma Friendly Environment	Smoke Free Site	Environmental Assessment Complete
18	3415	259	32.4	91%	93%	100%	100%















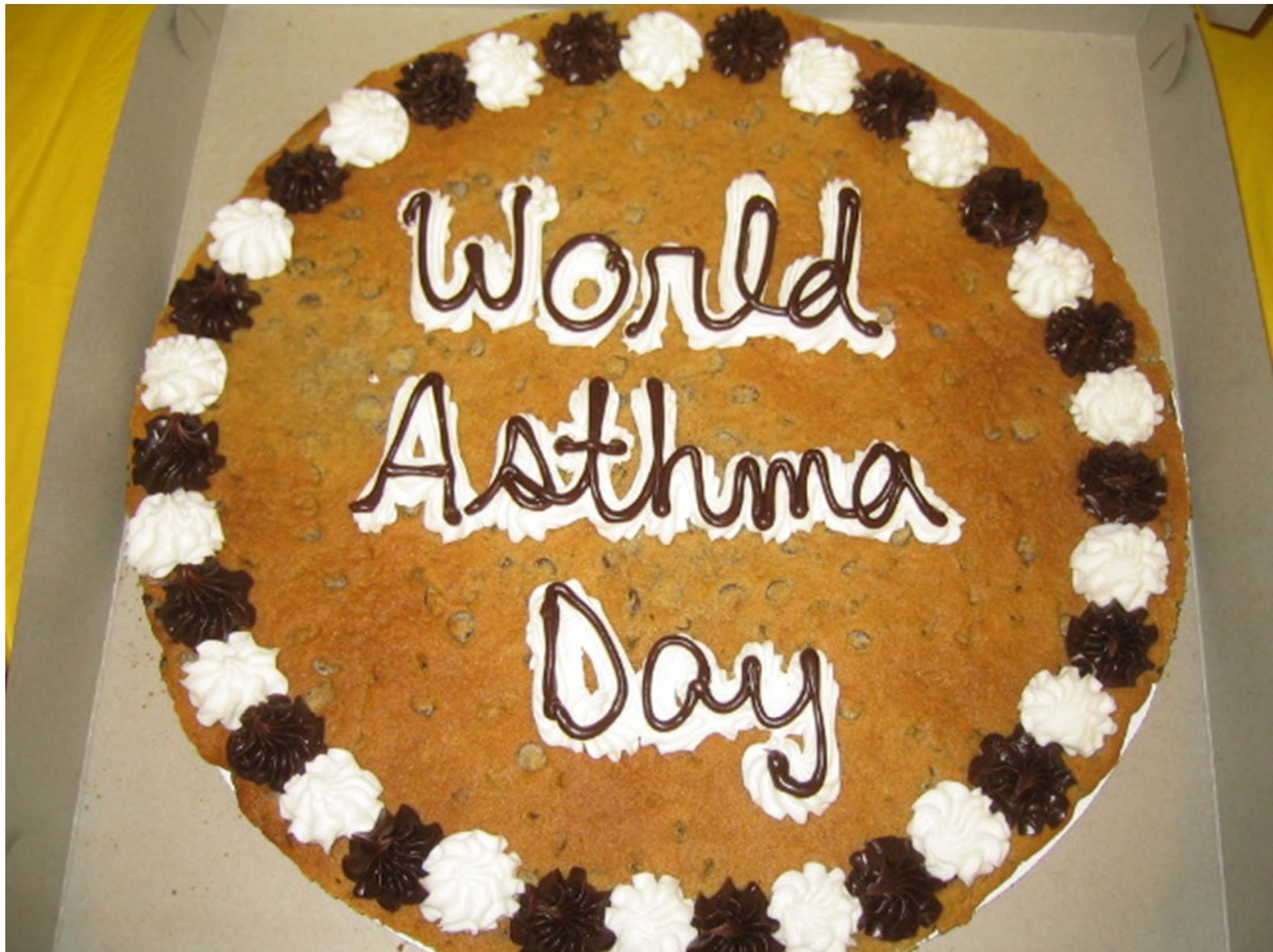












World
Asthma
Day

















**National Environmental Leadership
Award in Asthma Management**

❖ 2012 Health Care Provider Recipient

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.

