

Medicaid Health Plans of America
Center for Best Practices

Best Practices Compendium in Childhood Asthma Care



MEDICAID HEALTH PLANS OF AMERICA

MHPA

CENTER FOR BEST PRACTICES



About MHPA Center for Best Practices

The Medicaid Health Plans of America (MHPA) Center for Best Practices is a 501(c)(3) affiliate organization created to support MHPA's mission: to provide efficient health care services and improve quality and access to care for Medicaid beneficiaries. The Center serves as a convener of Medicaid health plans on research, quality improvement and dissemination of health plan best practices in both clinical and operational domains. With guidance from the leadership of premier health plans serving Medicaid populations and expert stakeholders, the Center uses data, information and knowledge transfer to disseminate innovative solutions to caring for underserved populations.

Medicaid Health Plans of America
 MHPA Center for Best Practices
 1050 18th Street, NW
 Suite 1010
 Washington, DC 20036
 Tel: (202) 857-5720 Fax: (202) 857-5731
 info@mhpa.org www.mhpa.org

Table of Contents

President's Letter

A Message from Thomas L. Johnson 5

Part 1: Introduction - The Burden of Asthma

Asthma Treatment Recommendations..... 10
 Quality Gaps 12
 Quality Measurement and Health Plan Accountability for Asthma Care 16
 The Role of Medicaid Health Plans 17
 Institute for Clinical Systems Improvement (ICSI) Asthma Treatment Algorithm..... 19
 Medicaid Health Plans and Medicaid Managed Care Fact Sheet..... 20

Part 2: Case Studies of Medicaid Health Plan Asthma Management Best Practices

Best Practice Submissions:

AmeriHealth Mercy Family of Companies (Keystone Mercy Health Plan)..... 21
 Centene Corporation® (Centene)..... 23
 Gateway Health Plan® 24
 Group Health Cooperative of Eau Claire 25
 HealthCare USA, a Coventry Health Care Plan 27
 Horizon NJ Health..... 29
 Midwest Health Plan..... 31
 WellCare Health Plans, Inc. (WellCare)..... 33

Part 3: Asthma Resources

Resources for Health Plans..... 35
 Resources for Physicians and Other Clinicians..... 38
 Resources for Medicaid Members and Families..... 40
 NHLBI Asthma Action Plan 42

Part 4: Asthma Impact Data

National Center for Health Statistics, National Health Interview Survey..... 44
 CDC Asthma Data..... 46

References

Endnotes Index 48

Best Practices in Childhood Asthma Care

By Sherrie Dulworth, RN, CPHRM and Liza Greenberg, RN, MPH



Supported by an independent grant from Merck



Copyright © 2011
Medicaid Health Plans of America



MHPA Center for Best Practices
1050 18th Street, NW
Suite 1010
Washington, DC 20036
Tel: (202) 857-5720 ♦ Fax: (202) 857-5731
info@mhpa.org ♦ www.mhpa.org

President's Letter

A Message from Thomas L. Johnson, MHPA President & CEO



Dear Colleagues:

I am pleased to present a new publication from the Medicaid Health Plans of America Center for Best Practices — the *Best Practices Compendium in Childhood Asthma Care*. This Asthma Compendium is the first in what we hope will be a portfolio of publications addressing best practices in a variety of targeted clinical areas important to Medicaid health plans, states and beneficiaries. Medicaid health plans organize health care for more than 23 million beneficiaries in 35 states plus the District of Columbia. This represents nearly half of the Medicaid population. In addition, 72% of children enrolled in the Children's Health Insurance Program (CHIP) receive benefits through health plans. Medicaid health plans offer states the opportunity to purchase coordinated care services from health plans that accept accountability for both cost and quality of care.

The MHPA Center for Best Practices was created in 2010 to develop educational resources such as this one to help drive adoption of best practices and improve outcomes in Medicaid health plans. The

Center will support MHPA and its member organizations with research, identification of best practices, and education on improving operations and outcomes. The Center also aims to help health plans reduce disparities in health care and health outcomes for racial and ethnic minorities, and to improve care for enrollees with complex care needs.

Clearly, improving asthma outcomes is a high priority for Medicaid health plans. Asthma is one of the most common chronic diseases among children. It is an important cost driver to states and plans — and perhaps more important — it is a significant factor in school absences. Thus not only does uncontrolled asthma adversely affect the health and quality of life of children in the present, it hampers their opportunities for future successes. Asthma disproportionately affects children of color, with black children four times more likely to use the ER, and over seven times more likely to die from asthma.

I am very pleased to recommend the models of care identified in this Compendium and I thank the plans that submitted the Best Practice examples for the publication. I also want to thank MHPA's members and collaborators such as the Association of Clinicians for the Underserved, who helped us to identify resources for the publication. Finally, we wish to sincerely thank Merck for its generous sponsorship of this publication. By working with partners to identify effective practices and educational resources for plans, providers and patients, we can begin to close gaps in asthma care and drive improvements in outcomes.

Sincerely,

Thomas L. Johnson
President & CEO
Medicaid Health Plans of America

PART I: Introduction

The Burden of Asthma

More than 7 million children, or 9.6 percent of all children, currently have asthma.¹ Childhood asthma interferes with activities as simple as being able to run on a playground or more complex cognitive abilities that influence learning.² One of the primary causes of missed school days in children,³ asthma is also the leading source of childhood disability. Asthma is linked to obesity, an increasingly chronic condition in children. In setting goals for the Nation's health in 2020, the federal Healthy People program recognized asthma as a high priority and set specific objectives for health improvement.

Asthma disproportionately affects children in low-income homes and children of color.^{4,5} For example, compared to non-Hispanic whites, Puerto Rican children are 2.4 times more likely to have an asthma diagnosis.⁶ Disparities in asthma outcomes and use of services for African American children with asthma are staggering: African American children are twice as likely to have asthma, are seven times more likely to die of asthma than non-Hispanic white children and are 4.5 times more likely to have asthma-related emergency department visits.⁷ Asthma prevalence rises as income falls. Prevalence of asthma is almost at 12% for people below 100% of the poverty level. Figure 1 (on page 8) illustrates the link between race, poverty and asthma.

Asthma also has cost and productivity implications. Children with symptomatic asthma experience increased healthcare utilization through emergency department visits and hospitalizations, have more missed school days and more overall activity limitations.⁸ The George Washington University, School of Public Health and Health Services found that children with asthma incur 50% more in health care costs than children without asthma.⁹ Estimates of asthma treatment cost per child were about \$784 with as much, or more, in indirect costs attributed to missed school and missed work.¹⁰

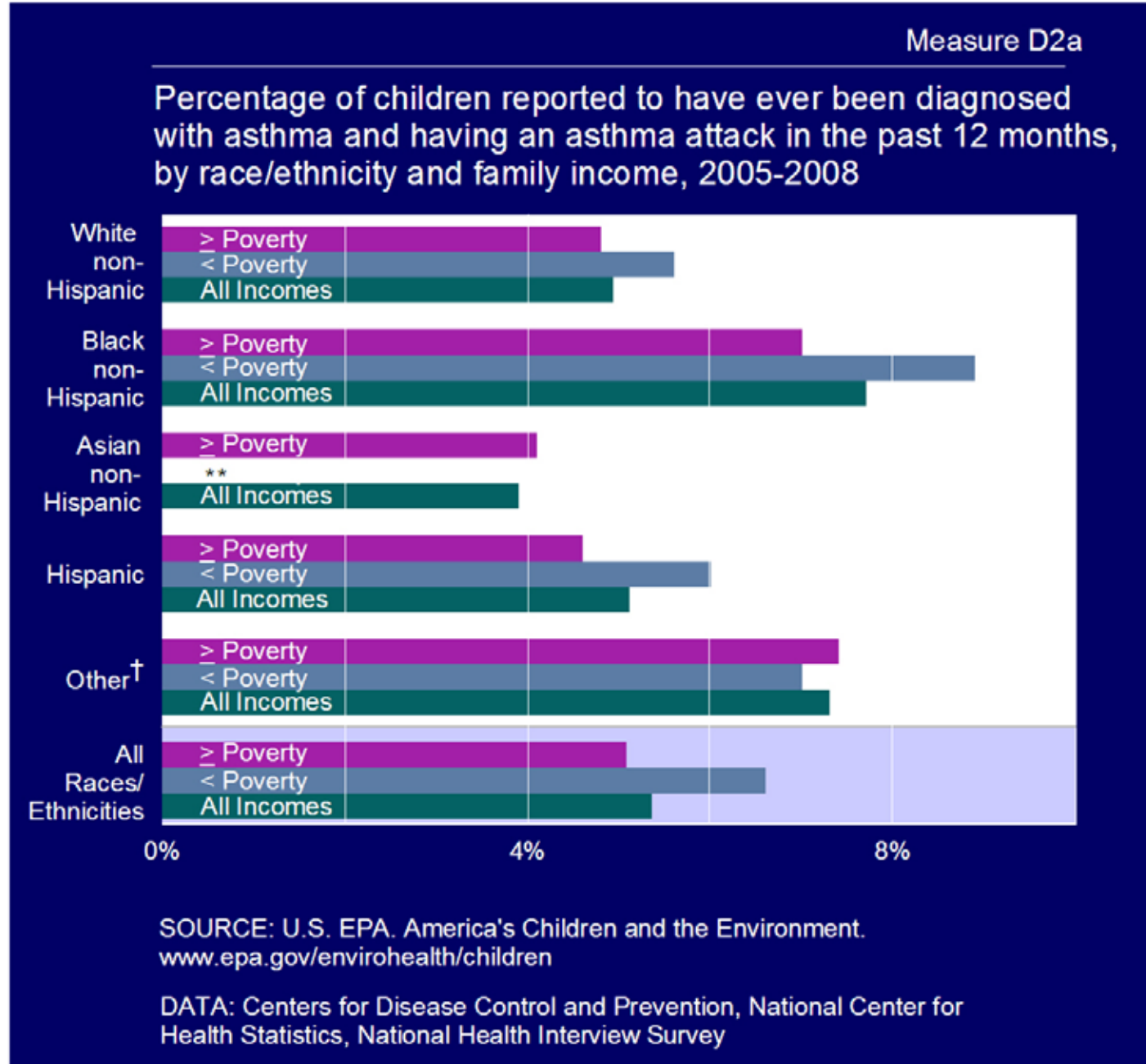
Healthy People 2020 Asthma Objectives

- Reduce asthma deaths
- Reduce hospitalizations
- Reduce hospital emergency department visits
- Reduce the proportion of persons with asthma who miss school or work days
- Increase the proportion of persons with current asthma who receive formal patient education
- Increase the proportion of persons with current asthma who receive appropriate asthma care according to National Asthma Education and Prevention Program (NAEPP) guidelines.

FROM: [Healthy People.gov/2020](https://www.healthypeople.gov/2020)
www.healthypeople.gov



Figure 1



Although asthma cannot be cured, effective treatments are available. Treatments for asthma are designed to manage the symptoms of asthma — such as shortness of breath and coughing — and reduce the risk factors and allergens in the environment that trigger dangerous and frightening asthma attacks. The challenge to effective asthma treatment lies in helping people to access and stick with the most effective treatments that enable children to lead healthy, productive lives. Education of children, their parents and other caregivers also plays an important role in successful asthma management.

Helping families to access preventive services for asthma and closing the disparities gap is a key mission of Medicaid health plans. By definition, Medicaid and CHIP health plans serve predominantly low-income populations, including large numbers of racial and ethnic minority children. This Best

Practice Compendium examines strategies used by selected Medicaid health plans to decrease gaps in childhood asthma care and improve outcomes. The Medicaid health plans profiled here offer innovative models for improving asthma care or have established specific quality improvement efforts to address childhood asthma. Many of these plans have established specific objectives around closing the asthma disparities gap.

The Compendium also identifies recommended treatments, discusses common gaps in care, and highlights how Medicaid health plans are working to close the quality gaps. More discussion of ethnic disparities is found throughout this publication, with specific resources noted in Part 3 of this Compendium.

Health Plan Profiles in the Asthma Best Practices Compendium

- AmeriHealth Mercy Family of Companies (Keystone Mercy Health Plan):** The AmeriHealth Healthy Hoops® Program addresses the co-morbid conditions of asthma and obesity. The program goal is to reduce the effects of exercise-induced asthma and simultaneously help encourage exercise among children.
- Centene Corporation®:** Centene developed a children’s book on asthma awareness and management, available in English, Spanish and an audio version. The new asthma book is modeled on an obesity initiative developed by Centene that resulted in documented improvements in member knowledge.
- Gateway Health Plan®:** The “AIR” Gateway®, (Asthma Intervention Gets Results) program, automatically enrolls pediatric members with asthma. Members receive child-specific educational materials, care coordination services as needed, and connections to community resources.
- Group Health Cooperative of Eau Claire:** Group Health Cooperative (GHC) of Eau Claire uses an integrated approach to childhood asthma management including member health risk assessment, risk scoring, data analytics and other tools to identify pediatric asthmatic members who have suspected and actual asthma diagnoses. Once identified, members are referred for disease and case management outreach and intervention.
- HealthCare USA (a Coventry Health Care Plan):** HealthCare USA’s program supports the primary care medical home model and includes standardized intensive nursing education and health coaching in collaboration with members and providers. The program is designed to reduce avoidable Emergency Room visits and inpatient hospital admissions, and improve quality of life for members with asthma.
- Horizon NJ Health:** Horizon NJ Health’s Emergency Room (ER) partnership is designed to reach and educate health plan members with low-acuity, non-emergent (LANE) diagnoses who use the ER for treatment. An on-site ER social worker provides asthma information to help members get better asthma care. The social worker also offers information primary care access, preventive care services, disease management, immunization requirements, dental care and well-child visits.
- Midwest Health Plan:** The Plan’s asthma focused program identifies members with asthma and offers a spectrum of support services based on their level of risk. Midwest Health Plan also works directly with physicians to ensure appropriate medication management for members. The Plan also helps physicians meet patient needs and maintain standards of practice for asthma care.
- WellCare Health Plans, Inc:** Wellcare works to reduce non-emergency use of emergency services for asthma care by educating members, coordinating care, and ensuring that members receive both controller and rescue medications. Wellcare notifies providers when members need additional care and supports coordinated care with home visits and environmental surveys as needed.

Asthma Treatment Recommendations

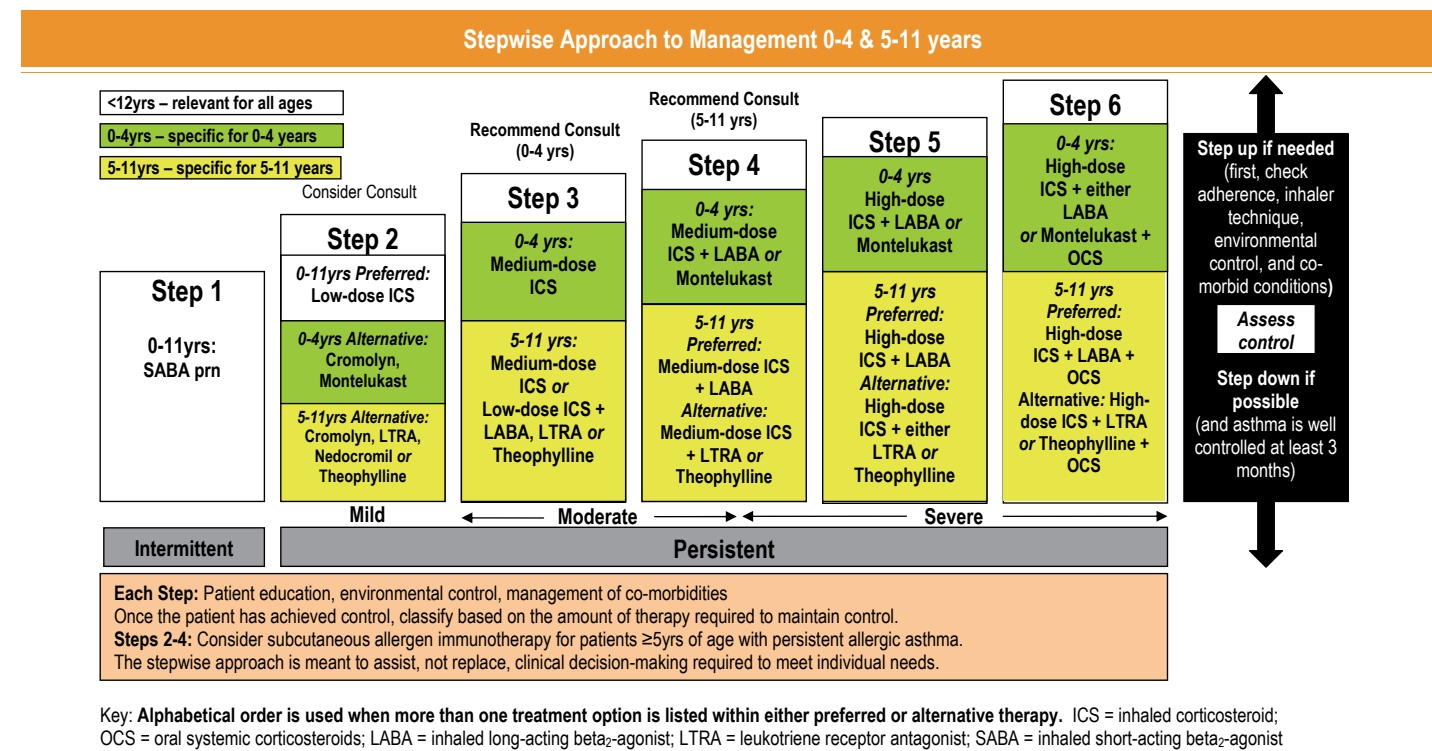
Treatment of asthma includes both reducing risk factors and treating symptoms. Treatment is designed to minimize activity limitations and life-threatening asthma attacks. Clinical treatment requires a combination of “controller” drugs, to prevent asthma exacerbations, and “rescue” drugs, short-acting medications that open the airway for people experiencing the shortness of breath resulting from asthma attacks.

Clinical guidelines are available to help physicians and other clinicians evaluate asthma symptoms and prescribe appropriate treatments. Clinical guidelines based on the National Asthma Education and Prevention Program (NAEPP),¹¹ part of the National Institute Heart, Lung and Blood Institute (NHLBI). Figure 2 shows one example of a stepped approach to asthma management, illustrating the need for controller and other medications. Regardless of the guideline, key management principles addressed include:¹²

1. Treatment with long-term control medications to prevent asthma attacks
2. Availability of short-acting bronchodilating agents (SABAs) to treat asthma attacks
3. Development of an Asthma Action Plan agreed to by both the patient and providers
4. Removal of environmental triggers where possible
5. Management of other triggers.

Figure 2 also illustrates the complexity of asthma assessment and management. Providers also need to be attuned to the symptoms and severity of the patient’s asthma, which can vary in different populations and age groups. Patients need tailored interventions that are consistent with guidelines and appropriate for their needs.

Figure 2: Stepped Approach to Asthma Management



Classifying Asthma Severity <12 years (The Chronic Disease) / Stepwise Approach to Management 0-4 & 5-11 years

Source: NHLBI Guideline as adapted by Maine Health

The complexity of asthma care is one reason many children still suffer from asthma attacks and limitations. It is also why both patients and providers need education and assistance to get treatment right and keep it current.

Clinical guidelines recommend that patients with asthma receive a personalized asthma management plan that they understand and agree with. For many patients, that means identifying culturally competent ways to transmit information and engaging children and their caregivers to implement the plan.

Along with clinical treatments for asthma, environmental control is an essential aspect of asthma care.¹³ Control of asthma triggers such as tobacco smoke, dust, animal dander, mold and other irritants is a vital element of care and one that can be overlooked in a clinical visit. An effective treatment plan includes preventive education to both parents and children and often includes an interview-based or on-site environmental assessment. An example of a practical but fun, educational guide for children and parents on avoiding environmental triggers is Centene Corporation’s, *Adventures from Puffletown* patient education booklet described later in this publication.

Figure 3 outlines goals of asthma treatment from the patient perspective, showing that improved health and productivity are key factors, along with a reduction in need for urgent or emergency care. For children, quality of life and reducing limitations is a major consideration. For instance, AmeriHealth developed the innovative Healthy Hoops® program to promote exercise and education for children with asthma, combining the goals of good fun, good health and improved quality of life.

At the end of Part 1, we include a copy of a clinical algorithm from the Institute for Clinical Systems Improvement illustrating the sequence for outpatient diagnosis and management of asthma to help physicians manage the clinical complexity of asthma. Part 3 of this Compendium includes links to NHLBI and other clinician organizations that have developed guidelines on overall asthma care and management of asthma for specific age groups. Resources for both patients and provider education are also identified in Part 3.

Figure 3: Goals for Asthma Treatment

The Patient will:

- Be free from troublesome symptoms day and night, including sleeping through the night.
- Have the best possible lung function.
- Be able to participate fully in any activities of their choice.
- Not miss work or school because of asthma symptoms.
- Need fewer or no urgent care visits or hospitalizations for asthma.
- Use medications to control asthma with as few side effects as possible.
- Be satisfied with their asthma care.

Source: Maine Health Asthma Clinical Guideline as Adapted from National Heart Lung and Blood Institute

Asthma Guidelines

Asthma Guidelines developed by the National Heart Lung and Blood Institute (NHLBI) are based on recommendations in the 2007 NAEPP “Expert Panel Report 3,” which addressed the latest information on treatment of asthma for people of all ages. Many other organizations have adapted NHLBI guidelines. Some of the aspects of asthma care addressed in NHLBI guidelines include:

- Definition and Implications for Treatment
- Disease Diagnosis
- Long-Term Management
 - Assessment and monitoring (including severity assessment)
 - Patient Education
 - Control of environment factors and co-morbid conditions
 - Medication management
- A Step-Wise management approach broken into age ranges of:
 - 0 – 4 years
 - 5 -11 years
 - > 12 years
- Managing special situations (such as pregnancy)
- Managing exacerbations

For more details, see NHLBI: www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm

Quality Gaps

Gaps in quality care can occur due to multiple types of barriers, both clinical and non-clinical. Gaps in quality care lead to decreased patient quality-of-life, increased emergency department and hospital utilization and, potentially, increased mortality. As Figure 4 shows, while many children met the asthma quality targets identified by the Centers for Disease Control and Prevention, there is still room for care improvement.¹⁴ For example, only 44% of children have an asthma management plan — a plan that explains how to handle asthma exacerbations — and 72% received education about early warnings of an asthma attack.

Figure 4:

Children who Get Recommended Asthma Care, 2008 (Under 18 Years)

44%	72%	53%	78%	96%
Establishing an asthma management plan	Education about the early signs or symptoms of an asthma episode	Advice regarding changing things at home, school or work to improve asthma	Education on how to respond to an asthma episode	Taught to use an inhaler

Adapted from CDC/NCHS National Health Interview Survey

Along with identifying the gap or variance, Medicaid health plans help to identify and resolve the underlying causes. This section explores some common gaps in care and identifies health plan strategies to close the gaps.

Underuse of anti-inflammatory, long-acting control medications or overuse of “rescue” medications: One of the largest gaps in quality care for children with asthma is the underuse of anti-inflammatory, long-acting control medications.¹⁵ The medication quality gap is most pronounced among African-Americans.¹⁶ Medication therapy for asthma includes several drug classes of long-term controller drugs, including inhaled corticosteroids, long-acting beta agonists, leukotriene modifiers, immuno-modulators and combinations of medications prevent asthma exacerbations. These are coupled with “rescue” drugs, or short-acting medications that open the airway for people experiencing the shortness of breath resulting from asthma attacks. Patients need regular assessment to determine the need for controller medications to prevent frequent asthma attacks and reduce need for high doses of rescue medications. Programs with enhanced childhood primary care interventions and care coordination may improve asthma outcomes and improve cost efficiencies. Wellcare developed an initiative described in Part 2 to improve use of controller medications and lessen member reliance on rescue medications while addressing disparities among African-American members.

Low Medication Adherence: Prescribing the appropriate medication is only part of the equation — appropriate use of the medications is another essential element of asthma care. Volumes have been written about the importance of, the barriers to and strategies for improving patient medication adherence. Parental beliefs, knowledge and concerns about medications, especially those prescribed long-term for chronic conditions such long-term controller medications, can influence a child’s adherence.^{17,18} Culturally competent and patient-centered health care services that work with parents and children to engage them in asthma self-management adherence are crucial to achieving good health outcomes.

Medicaid health plans use a variety of tactics to identify gaps in adherence and bridge them with interventions. For example, plans are using pharmacists to counsel members on medications and home visits to address environmental trigger control. In this Compendium, several plans use case managers and home visits to address low medication adherence. HealthCare USA's case study describes how they have incorporated members and provider incentives as part of their program's comprehensive strategy to improve member education and medication adherence.

Lack of Primary Care Access or Overuse of Emergency Department (ED) Care: Frequent ED use, asthma hospitalizations and frequent asthma re-hospitalizations are red flags that signal gaps in quality care. Use of high intensity services is not efficient for asthma management, both in terms of cost and quality of care. These care patterns can often be attributed to difficulty securing primary care visits, gaps in provider-patient communications and inadequate medication management. A child experiencing respiratory distress is a frightening event for parents and children that must be addressed. But, prevention of emergencies through better primary care, self-management and trigger control is an essential proactive part of asthma care.

Figure 5 shows some of the more common reasons for non-emergency use of emergency services. Many Medicaid health plans have developed innovative initiatives to remove barriers to non-emergency care that result in members seeking routine care in EDs. For example, Horizon New Jersey Health (HNJH) placed social workers in local Emergency Departments to provide counseling and resource information to members with low-acuity asthma who presented for ED care. Members are linked to primary care providers to increase access to coordinated care services.

Figure 5: Factors Influencing Avoidable Emergency Department Use

- Lack of transportation for routine check-ups
- Difficulty obtaining or paying for prescription refills
- Difficulty in contacting the primary care provider
- Difficulty in obtaining an office visit for urgent care
- Parental perception that physicians prefer them to use the ED for asthma exacerbations¹⁹

Preventable Hospitalizations and Rehospitalizations: Asthma is estimated to be responsible for more inpatient hospitalizations than any other childhood disease for those aged 5-17.²⁰ African-American children, with Medicaid or without any insurance coverage, have a higher risk of readmission than their counterparts of different ethnicities or those with insurance coverage.²¹ Disease severity is a factor for hospitalization, but contributory factors include inappropriate medication prescriptions or adherence, inadequate access to appropriate outpatient care, and confounding psychosocial issues. Each subsequent admission tends to result in an increasing probability of future admissions so that hospitalization is a "red flag" in itself for the likelihood of potential future hospitalizations.

Many Medicaid health plans address preventable hospitalization by working to ensure coordinated, patient-centered outpatient primary care. Plans also try to identify high-risk patients who may be most likely to be hospitalized one or more times. Attention to both the risk profile of the patient as well as identifying the triggering factors for the initial and subsequent hospitalizations is important to break the cycle of re-hospitalizations. For example, Midwest Health Plan helps ensure timely follow-up care with a primary care provider (PCP) during the crucial time following an asthma hospitalization. This provides an opportunity for the PCP to identify reasons for the recent exacerbation and either adjust treatment or provide patient education.

Lack of Care Coordination: Because asthma control usually requires multiple medications and management of the environment, care must be coordinated among physicians and community resources. Medicaid health plans support patients by improving care coordination and flagging members receiving fragmented care. As noted, health plans play a vital role in provider communications by informing physicians of patient visits to the ED or asthma inpatient admissions. They also facilitate timely follow-up following an exacerbation. Plans also track "medication possession" by members to identify when members are not refilling asthma medications or using high levels of rescue medications.

For example, Gateway Health Plan uses plan information to identify members with asthma and track visits, medication use and referrals. Gateway® focuses particularly on emergency service use and inpatient hospitalizations for asthma to identify members in need. Members with the most severe cases of asthma are provided with case management services to help them navigate the complex medical and environmental management of asthma. Gateway developed a Community Resource Repository to link members with community services that help them to effectively manage asthma and meet other social service needs.

Low health literacy: Health literacy, the ability to read or understand health care related information, has an important effect on the ability of patients to comply with treatment. For Medicaid populations, health literacy of both children and parents is a crucial issue in effective management of childhood asthma. Patients with low health literacy may have difficulty using the metered dose inhalers and peak flow meters required for asthma management or may have difficulty following an asthma care action plan. These limitations on asthma self-management may lead to more frequent exacerbations and more frequent emergency visits and hospitalizations.²²

Medicaid health plans have made important investments in improving health literacy among members. For example, Aetna recently launched a year-long pilot program for its Delaware Medicaid members tackling health literacy as one factor in improving asthma outcomes.²³ The program was designed to improve health outcomes of Hispanic and African American asthmatic patients. Participants receive culturally appropriate educational materials and information on disease management programs. Resources are written in plain language so that they are easy to understand. Patients are also offered the opportunity to have an environmental assessment of their homes to identify asthma triggers. Through this program, Aetna's approach is designed to better control asthma among members and help to reduce the need for emergency visits. (Aetna's program is new and is not included as a case study, but will be revisited once outcome data are available.)

Quality Measurement and Health Plan Accountability for Asthma Care

Health plans report to state Medicaid agencies and also commonly benchmark their performance against metrics collected by the National Committee for Quality Assurance (NCQA). Health plans publicly report on the quality of care using standardized measures developed by the NCQA called the Healthcare Effectiveness Data and Information Set (HEDIS®). HEDIS includes standardized measures on medication use for asthma, along with general measures of access to care and other preventive health services important to child development.

NCQA’s “Use of Appropriate Medications for People with Asthma” performance measure specifically examines how many people diagnosed with asthma are prescribed short- or long-acting medications needed to manage the condition. This measure reflects the percentage of members aged 5-50 years who were identified as having persistent asthma and who were prescribed recommended medications during the measurement year.²⁴ The measure is reported by age ranges. Figure 6 shows the gains in asthma treatment quality since 2006 for children enrolled in Medicaid health plans. In 2009 the average Medicaid treatment rate had increased to 91.8 percent for health plan members ages 5-11 years old.²⁵

Figure 6
Use of Appropriate Medications for People with Asthma in Medicaid Health Plans (HEDIS®)

Age	2006	2007	2008
Ages 5-9 years	84.67	89.7	89.7
Ages 10-17 years	82.4	87.2	87.1

The current HEDIS Appropriate Medications quality measure means that members with asthma are prescribed appropriate controller and rescue medications for management of the condition. NCQA recently introduced two newly proposed asthma measures for HEDIS 2011, both targeting improved pharmaceutical management for members with persistent asthma:

- Asthma Medication Ratio; and
- Medication Management for People with Asthma²⁷

The *Medication Ratio* measure looks at the ratio of controller medications to total asthma medications (controller medications plus relief medications such as short-acting, inhaled beta-2 agonists) during the measurement year. The goal is for members to have controllers and relievers as part of their therapeutic regime and not to rely on reliever medications alone. The *Medication Management* measure looks at members with persistent asthma who were dispensed appropriate asthma medications and who remained on their controller medications during the treatment period – in other words, treatment adherence.

In addition to reporting HEDIS measures, Medicaid health plans often report on asthma management quality using other types of metrics. For example, according to the federal Center for Medicare and Medicaid Services (CMS), eight states use non-HEDIS measures to help evaluate health plan performance within their managed Medicaid population. Some asthma-specific measures are state measures, which include:²⁸

- Rescue medicine for clients with asthma
- Appropriate asthma medications with three or more controller dispensing events
- Pharmacology for clients with persistent asthma
- Emergency department (ED) visits for asthma
- Follow-up visit to an ED Visit for asthma (within 30 days)

The National Quality Forum recent endorsed a measure developed by the Agency for Healthcare Research and Quality (AHRQ) on pediatric hospital admissions for asthma. AHRQ developed the measure as an assessment of ambulatory care, since gaps in primary care may trigger asthma admissions.²⁹

The Role of Medicaid Health Plans

Although physicians and other clinical providers are accountable for direct clinical care, Medicaid health plans have an important role in improving treatment of children with asthma. Key competencies for Medicaid health plans include identifying members with asthma and ensuring that they receive coordinated care to prevent acute exacerbations.

Some critical capabilities for health plans include:

- Using claims and other data to identify members with asthma to assess quality of care and identify opportunities for improvement
- Identifying gaps in care, i.e., determining whether patients with an asthma diagnosis are receiving appropriate short- and long-acting medications
- Offering case management or disease management programs that can support patients and providers with additional education or wraparound services
- Identifying and addressing gaps in primary care access or patient knowledge
- Monitoring for frequent use of emergency or urgent services that may signify lack of care coordination
- Working with patients and families through case management programs to develop and implement a comprehensive asthma plan
- Developing culturally competent strategies that reflect understanding of language, culture and literacy of the enrolled population
- Assessing physician performance and educating practitioners on asthma care clinical guidelines
- Reporting back to state Medicaid programs and providers on asthma care and outcomes

Medicaid health plans are accountable for both the cost and quality of health care and are committed to reducing racial and ethnic disparities in asthma outcomes. Medicaid health plans commonly target asthma for quality improvement activities for the reasons discussed above – it is difficult for patients to manage, it involves both clinical and environmental management, it drives high health care costs and it reduces the quality of life for children.

Typically, Medicaid health plans' quality improvement activities focus on the following areas:

- Improving identification of children with asthma
- Increasing appropriate treatment for asthma
- Improving long-term asthma medication adherence
- Reducing asthma-related Emergency Department utilization
- Reducing asthma-related preventable hospital admissions
- Addressing cultural and ethnic disparities in asthma care
- Using and measuring the effective of appropriate patient education
- Reducing environmental triggers for asthma

Group Health Cooperative of Eau Claire's profile describes a multi-faceted approach that includes health risk assessments, data analytics and other tools, to identify and stratify asthmatic members for the appropriate level of follow-up interventions.

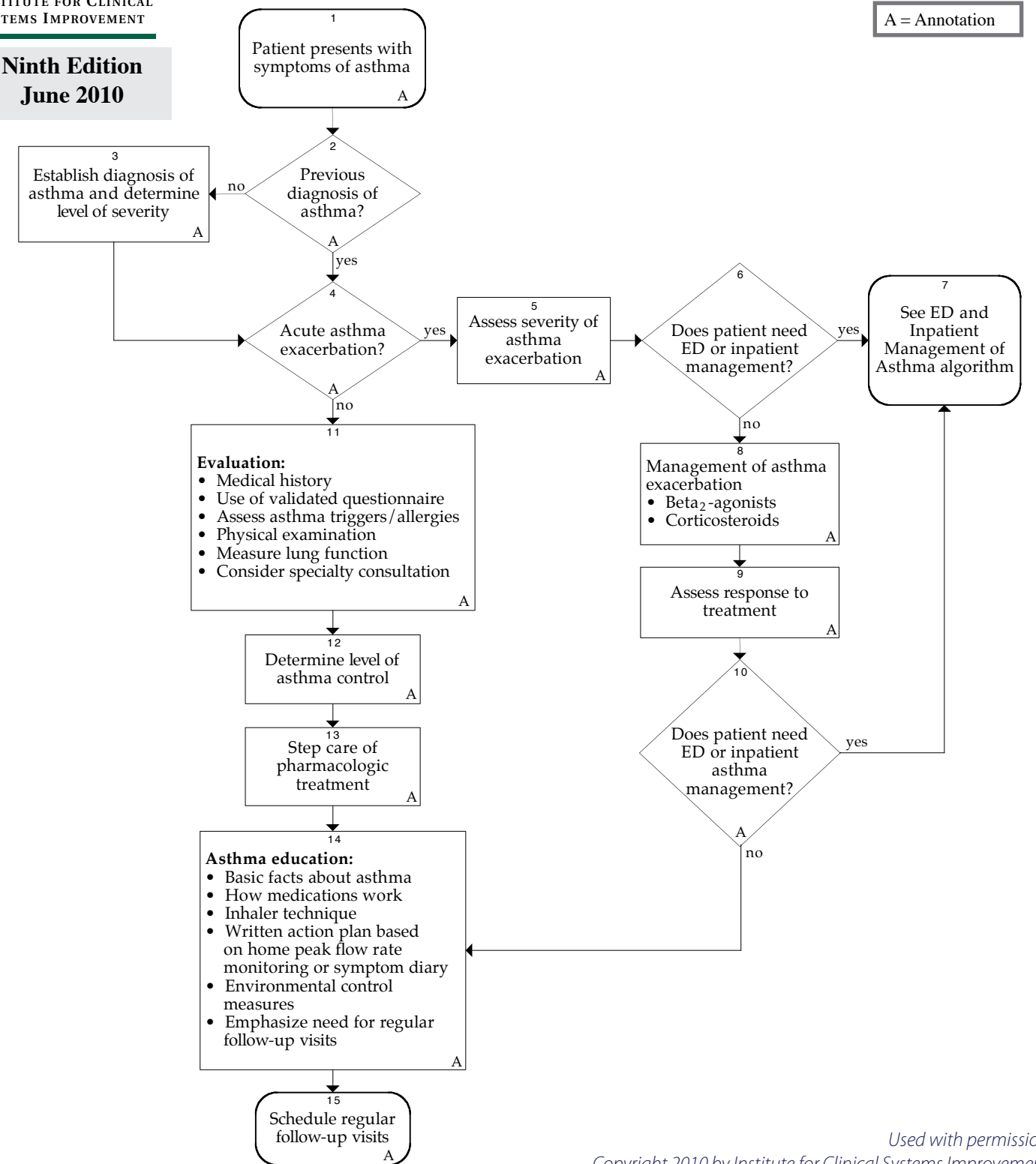
Medicaid health plans use data, information and care management techniques to improve asthma patient quality of care, lifestyle and function and reduce health system costs. Health plans report to states on quality metrics, quality improvements and patient experiences. The best practices and systematic quality improvement strategies highlighted in Part 2 of this Compendium illustrate accountability and innovation in improving asthma outcomes for children.



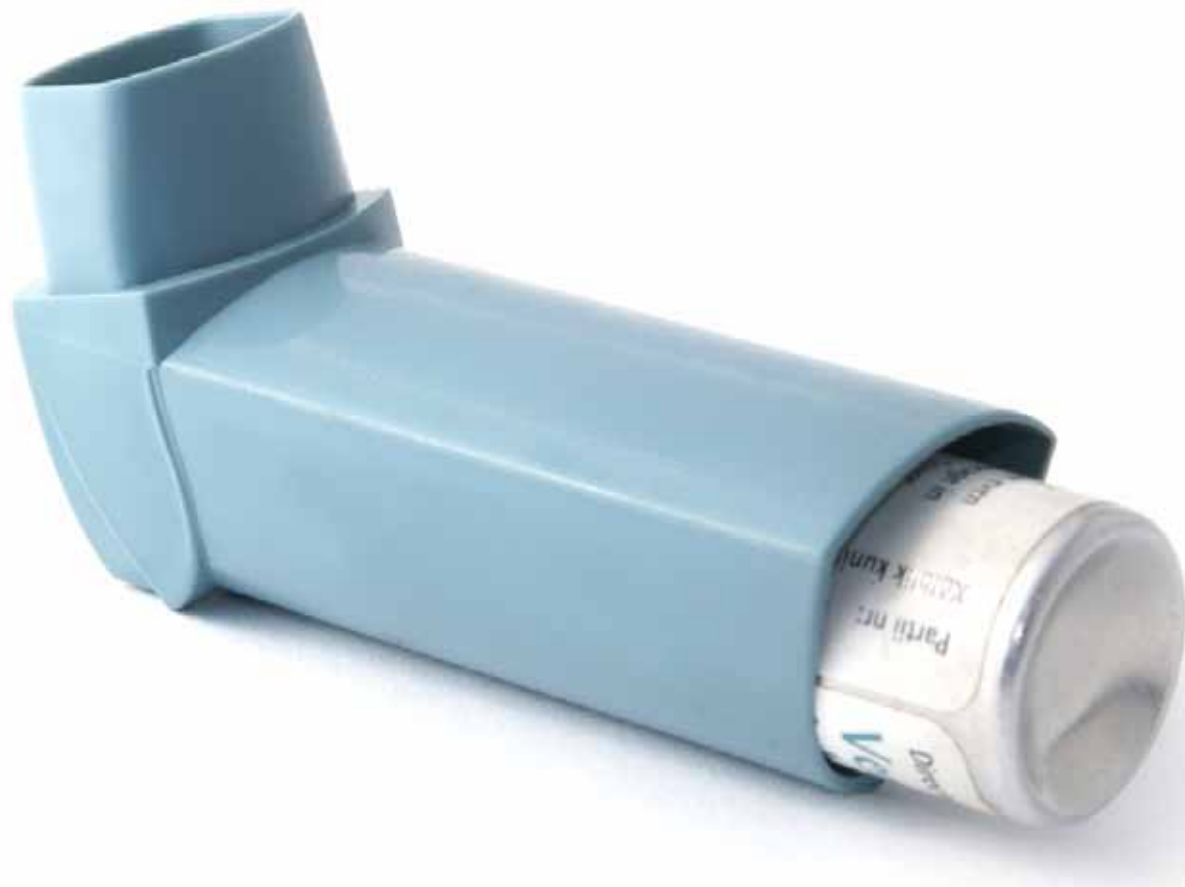
**Ninth Edition
June 2010**

Health Care Guideline: Diagnosis and Management of Asthma

A = Annotation



Used with permission.
Copyright 2010 by Institute for Clinical Systems Improvement.
ICSI retains all rights to the material. The material may in no way be used to determine provider compensation



Medicaid Health Plans and Medicaid Managed Care Fact Sheet

As federal policy expands Medicaid to help cover the uninsured and states struggle with limited budgets and cost containment, it is important to consider the prominent role that Medicaid health plans play in providing coverage to low-income individuals, children and families. While most Medicaid beneficiaries receive care through Medicaid health plans, health plans are often neglected in state and federal policymaking conversations. This primer aims to provide an introduction to the Medicaid health plans, their role in state Medicaid programs, and the improved health care services they provide.



What is Medicaid Managed Care?

Medicaid managed care is a delivery system model that improves access to care and care coordination by assuring that enrollees have access to their primary care physician and a network of providers.

What is the role of Medicaid Health Plans?

To implement a Medicaid managed care program, many states will enlist private health plans to provide Medicaid benefits. These “Medicaid health plans” enter into contracts with state Medicaid agencies to provide these benefits to enrollees. The state pays the health plan a per-member-per-month, or “capitated” fee transferring the financial risk away from the state to the health plan. States rely on Medicaid health plans to contract with an adequate network of providers to ensure patients have access to physicians. Medicaid health plans also provide additional services such as disease management, case management, and managed behavioral health services.

How does it work for patients?

Depending upon state rules, enrollees either choose a health plan or are automatically assigned to a health plan. Patients are assigned to a primary care physician who will be their primary point of contact for their health care services.

Medicaid Managed Care In Brief

- Medicaid managed care is an alternative to traditional fee-for-service
- States generally use Medicaid health plans for managed care
- Medicaid health plans provide predictable costs to states through capitation
- Medicaid managed care ensures that enrollees have access to a medical home and a network of qualified providers.

PART 2: Case Studies

AmeriHealth Mercy Family of Companies

Keystone Mercy Health Plan’s Healthy Hoops® Program

PROGRAM OVERVIEW: Keystone Mercy Health Plan’s (KMHP) Healthy Hoops® initiative focuses on two critical childhood health conditions: asthma and obesity. Healthy Hoops uses basketball as a platform to engage children with asthma, and their families, and teaches them to manage asthma through appropriate medication usage, proper nutrition, monitored exercise and recreational activities. The program provides comprehensive health screenings, individualized asthma action plans and targeted health education. This important offering won the NCQA’s “Innovation in Multicultural Health Care” award and Public Relations Society of America Health Academy Innovation Award – Excellence in Community Relations, Special Events, and Observance. The program focused on members within the metro area of Philadelphia, PA.

KEY OBJECTIVES:

- Increasing appropriate treatment for asthma
- Improving long term asthma medication adherence
- Addressing cultural and ethnic disparities in asthma care
- Using and measuring the effect of appropriate patient education

ACTIONS TAKEN: The Healthy Hoops Program promotes childhood asthma control through education and timely use of medications, to reduce emergency episodes brought on by physical exertion. The keys to the program are the physical assessment and screening of each of the children participating in the program and the close monitoring by the medical staff at all of the Healthy Hoops basketball games. All participants undergo full physicals and pre- and post-program health screenings. The health screenings assess each participant’s health status and medications, review appropriate medication use, establish a personalized action plan and evaluate results. The diagnostic tests include: spirometry readings; peak air flow; pulse rate; respiratory rate; and breath-sounds to identify wheezing.

The Healthy Hoops program works directly with the parents and the extended families of the program’s enrollees. Once their child’s Body Mass Index (BMI) is calculated, the program counselors discuss the child’s eating habits and general diet with each family. Specific suggestions are made in a culturally conscious way, assisting the family to re-direct the child to less fatty foods and less sugar and carbohydrate intake.

Based on Predictive Modeling Analysis, members are stratified into low-risk or high-risk, or the likelihood that they will experience symptomatic asthma. Members who are assessed to be low-risk receive information via mailings with access to a case manager as necessary. Members who are identified as being high-risk are given targeted education and fact sheets on their disease along with a comprehensive health risk assessment and care plan identifying all interventions and enrolled in Healthy Hoops, the Asthma Intensive Case Management program and assigned a nurse case manager. Case managers address short- and long-term goals and develop a plan of care with input from the member and the physician. Members who participate in the Healthy Hoops program are referred for follow-up and fully engaged in case management. They remain in the program for the duration of their eligibility and continue to be monitored and re-stratified accordingly.

OUTCOMES: Although it is not unusual for health plans to experience an increase in ambulatory primary care and pharmacy utilization as ER and inpatient admissions decrease, KMHP's Healthy Hoops members have experienced a decrease of utilization and costs in multiple service and pharmacy categories as noted below. The Healthy Hoops members' participation in the program and the combination of KMHP's use of the health screening results and providing patient education on topics such as use of spacers, peak flows and asthma action plans showed results of markedly improved asthma control as evidence by decreases in acute health care utilizations and a decreased need for specialist visits. Due to this enhanced control, no additional primary care visits or intensification of controller therapies was required.

Pre-Post Medical Utilization Summary for 2009 KMHP Healthy Hoops Members

KMHP 2009 Healthy Hoops data: Pre- and 12-months post program.

Members enrolled in program: 124

- **Ambulatory:** Primary care visits decreased by 0.83%; Specialist visits decreased 23.44%
- **Emergency Room:** Although actual ER visits were unchanged; related ER costs decreased 6.21%
- **Inpatient:** Inpatient utilization visits decreased 62.5% and related inpatient costs decreased 45.86%

CONTACT: Andrea Gelzer, MD, MS, FACP
Corporate Chief Medical Officer, AmeriHealth Mercy Family of Companies
(215)-863-5700; andrea.gelzer@amerihealthmercy.com

Tonya Moody
AVP, Health Promotions & Program Development, Keystone Mercy Health Plan
(215)-863-5700; tonya.moddy@kmhp.com

Centene Corporation® Adventures from Puffletown

PROGRAM OVERVIEW: Centene partnered with a nationally known children's author to create a book that address asthma awareness and management, *Adventures from Puffletown*. The book targets both girls and boys from ages 5 to 9. It provides practical information on controlling asthma, including avoidance of environmental triggers and the impact of environmental factors. The book is written with the intent to appeal to a diverse group of ethnicities, personalities and interests. All character names and images are designed to be very topic specific, memorable and humorous to the reader. The book is available in English and Spanish.

In addition to the children's book, Centene created a parent's guide to accompany the book to help parents/guardians reinforce the lessons learned. A DVD and audio version of the book are available along with an accompanying coloring book, stickers and puzzles.

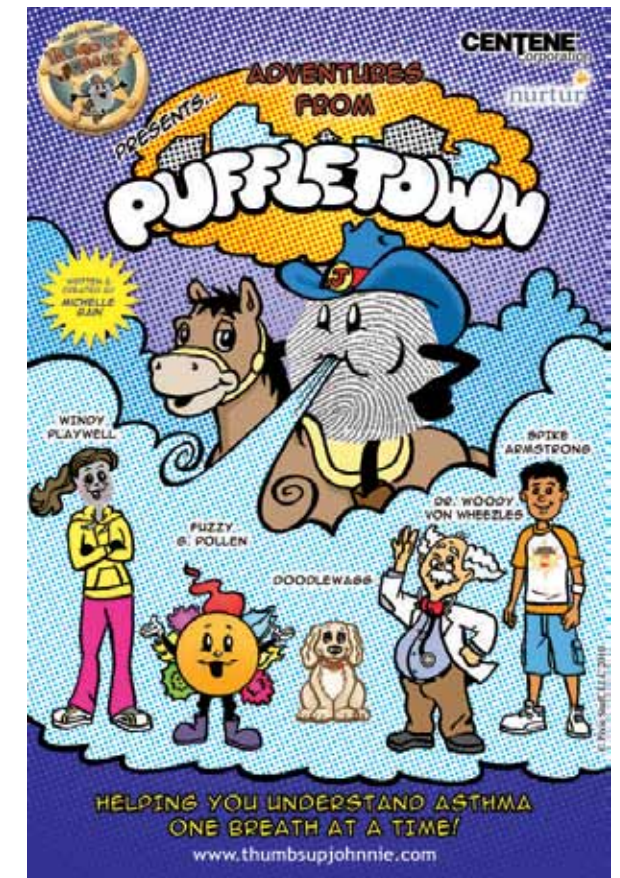
KEY OBJECTIVES:

- Using and measuring the effect of appropriate patient and caregiver education
- Addressing cultural and ethnic disparities in asthma care
- Improving identification of children with asthma

ACTIONS TAKEN: Centene used Case and Disease Management resources to identify children who could benefit from additional asthma education. They sent books to the children along with the accompanying parent's guide. Centene also distributed books to community organizations and facilitated books readings in schools.

OUTCOMES: Centene is conducting pre-post test scores to identify children's asthma knowledge before and after reading the book. It is too recent in this project to have asthma outcome scores; however, Centene previously sponsored an educational book on pediatric obesity prevention. The pre-post test scores from that publication yielded an improvement in discrete topics among grade school classes, ranging from 5% (healthy snacks) to 22% (healthy meals). Centene anticipates that *Adventures from Puffletown* may have similar knowledge improvements regarding pediatric asthma.

CONTACT: Mary V. Mason, MD
Sr. Vice-President and Chief Medical Officer
Centene Corporation
(314) 725-4477 x25924
mmason@centene.com



Gateway Health Plan® “AIR” (Asthma Intervention gets Results) Gateway®

PROGRAM OVERVIEW: “AIR” (Asthma Intervention gets Results) Gateway® is a population-based asthma disease management program developed by Gateway Health Plan. Gateway members who are identified with asthma are automatically enrolled in the program unless they elect to opt-out. Gateway has found that 59 percent of their members in the asthma registry are between the ages of 2 to 17 years. Gateway’s care managers use a holistic approach in helping their members, looking at overall factors beyond the direct medical care that might influence the asthma management and outcomes.

KEY OBJECTIVES:

- Improving identification of children with asthma
- Increasing appropriate treatment for asthma
- Improving long term asthma medication adherence
- Reducing asthma-related preventable hospital admissions

ACTIONS TAKEN: Gateway’s care managers reach out by phone to high-risk members with asthma, who are identified through Emergency Department visits, hospitalizations, observation stays or those who may lack prescriptions or refills for long-acting controller medications. In line with Gateway’s business model of Prospective Care Management (PCM®), care managers conduct a holistic assessment based on six domains including: Behavioral; Environmental; Economic; Medical; Social; and Spiritual (BEEMSS™) to help address needs that may be affecting the members’ well-being. Gateway’s care managers have access to an internally developed community repository that has information for the Pennsylvania counties in which Gateway provides coverage (primarily southwest and central PA) on topics such as: housing assistance; food banks; transportation; and financial assistance. The care managers may simply provide the member with the resource information but if needed, they may arrange and participate in third-party calls to help with applications and further assistance. Through the “AIR” Gateway® program, pediatric members and their parents receive educational materials in the mail periodically throughout the year.

OUTCOMES: In 2010, Gateway’s HEDIS scores for the quality measure, “Use of Appropriate Medications for People with Asthma,” for children ages 5 to 11 was 91.86 percent. The Plan saw an increase in ambulatory primary care physician and specialist visits of 5 percent over two recent years (2007-2009) while during the same time frame, they saw a corresponding 18 percent decrease in pediatric inpatient asthma admissions per thousand and a 12 percent decrease in asthma inpatient days per thousand.

CONTACT: Patricia Boody, RN
Manager, Care Management
Gateway Health Plan®
(412) 255-5607
pboody@gatewayhealthplan.com

“ Gateway takes a holistic approach to helping our members; We don’t just look at their asthma, we look at everything that impacts their asthma. ”

Group Health Cooperative of Eau Claire Chronic Disease Management Program

PROGRAM OVERVIEW: Group Health Cooperative (GHC) of Eau Claire’s chronic disease management program provides an integrated approach for members in the western half of Wisconsin. The program identifies pediatric asthmatic members, who have suspected and actual asthma diagnoses, through multiple strategies including Health-Risk Assessments, risk scoring, data analytics and other tools. Once identified, members are referred for outreach and intervention using an integrated disease and case management approach.

KEY OBJECTIVES:

- Improving identification of children with asthma
- Increasing appropriate treatment for asthma
- Improving long-term asthma medication adherence
- Using and measuring the effect of appropriate patient education
- Reducing environmental triggers for asthma

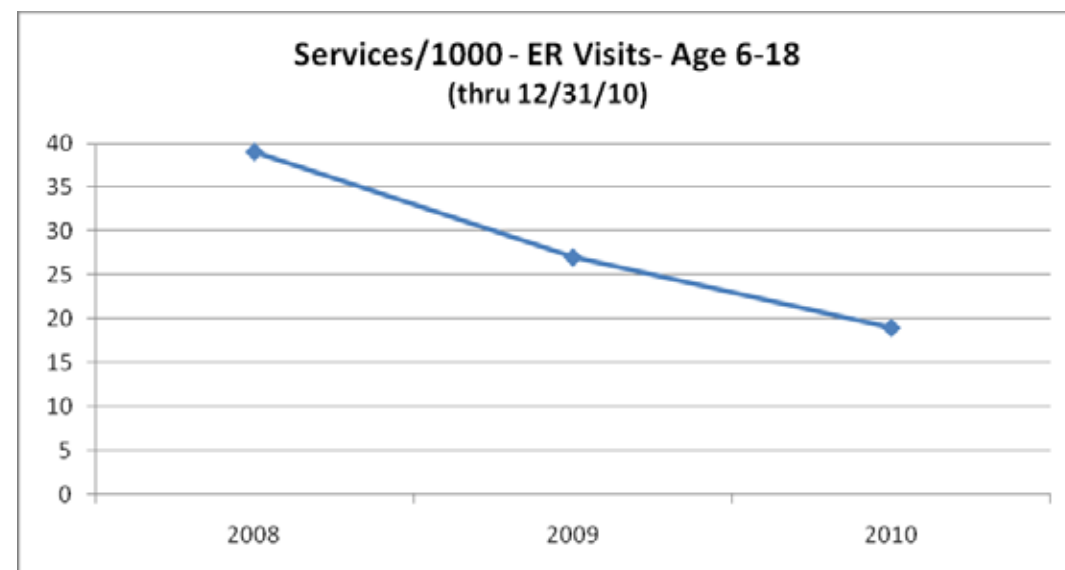
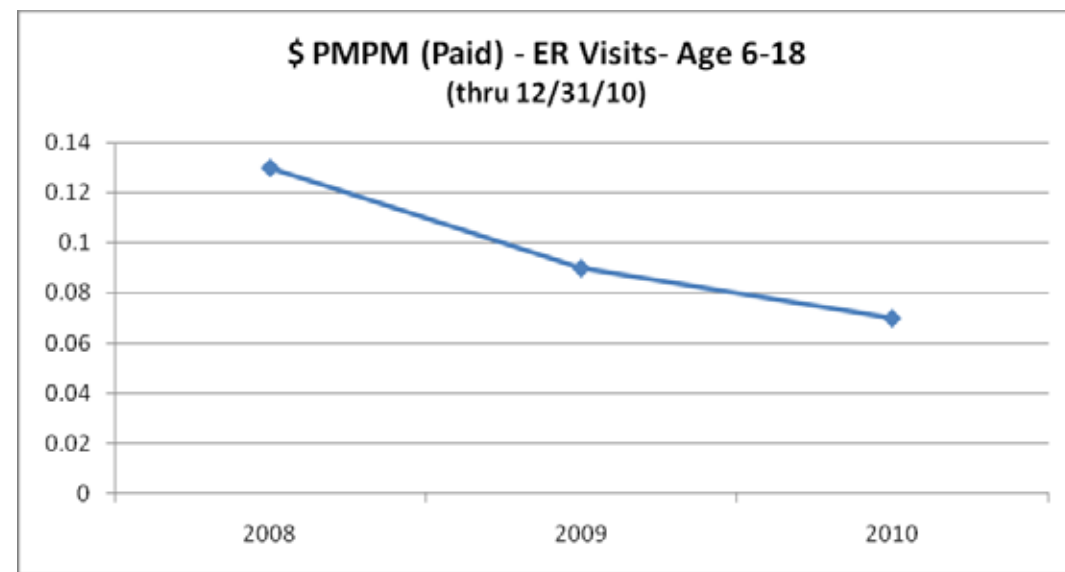
ACTIONS TAKEN: GHC of Eau Claire uses a variety of resources to identify potential candidates who could benefit from their disease management integration. These include their healthcare management system, which incorporates rules and exceptions to determine whether best practices that should be occurring are not (gaps in care) and whether there is activity that is occurring that might indicate a lower quality of care or lead to member exacerbations. The member identification process also includes use of health-risk assessments, provider referrals, (State Medicaid) risk scoring and member activity/ utilization patterns such as emergency room (ER) and hospitalizations.

Candidates for asthma disease management receive educational materials. A case management nurse may be assigned based upon the internal assessment. Early outreach includes a comprehensive medical and social assessment. For instance, child members are evaluated to ensure that they have had appropriate well-child visits and important pediatric immunizations such as a pneumococcal vaccine.

As part of their risk identification and reduction, when adult members who are smokers are identified as having asthmatic children, they are provided with educational information and counseling related to tobacco cessation. Members are given an asthma action plan that they can use to help constructively guide conversations and management of their condition during physician office visits.

“ Group Health Cooperative of Eau Claire looks to fully integrate care for our members to improve their health status. ”

OUTCOMES: Among other metrics such as NCQA’s HEDIS® Effective of Care measures, GHC of Eau Claire evaluates trends such the asthma cost of condition and utilization for their members. These trends reflect the program’s effectiveness over time. For example, over a two-year period from 2008 - 2010, the Plan has seen a decrease in both emergency room costs and services utilization for children with asthma aged 6 -18 signaling better ambulatory care coordination. As illustrated by the graphs below, the Plan’s performance of the 2-year period of 2008 - 2010 has yielded a 46% decrease in ER costs (from \$0.13 to \$0.07 per member per month) and a 51% decrease in ER service utilization (from 39 visits per 1,000 lives to 19 visits per 1000).



CONTACT: Michele Bachhuber, MD
Chief Medical Officer
Group Health Cooperative of Eau Claire
(715) 852-5721
mbachhub@group-health.com

HealthCare USA, a Coventry Health Care Plan Patient-Centered Asthma Disease Management Program

PROGRAM OVERVIEW: HealthCare USA implemented a patient-centered asthma disease management program for adults and pediatric members to reduce asthma-related morbidity and negative lifestyle impact. This program supports the primary care medical home model and includes standardized intensive nursing education and health coaching, in collaboration with members and providers. The program is conducted in the State of Missouri with an estimated 20,000 members identified as having asthma.

HealthCare USA has a team of professionals in the Asthma Disease Management (DM) program, dedicated to coordinating services for members with an asthma-related inpatient admission or at least two Emergency Room (ER) visits within a six-month time frame. Once a member is identified for asthma case or disease management, a nurse makes an outreach call to the member to assess his/her knowledge of asthma care, including the purpose for and understanding of the medications. The nurse also assesses the member's need for community resources, collaborates with the member and provider to develop a self-management plan, and helps to ensure that the member has a primary care medical home. HealthCare USA also has a team of professionals in the Asthma Case Management (CM) program.

Overall, the program is designed to reduce avoidable ER visits and inpatient hospital admissions, and improve quality of life for these members.

KEY OBJECTIVES:

- Increasing appropriate treatment for asthma
- Reducing asthma-related ER utilization
- Reducing asthma-related preventable hospital admissions

ACTIONS TAKEN: HealthCare USA's Asthma Disease Management (DM) program incorporates a multi-pronged approach for member identification; member outreach and education; care coordination and a special incentive design for members and providers.

Early Identification of and Outreach to Asthma Members

HealthCare USA identifies members for the asthma program through a variety of sources including a Health Risk Assessment (HRA) that is completed within the first month of a member's enrollment, and annually thereafter; from hospital claims, pharmacy claims, provider referrals, daily inpatient census and the internal nursing staff.

The asthma nurse initiates an outreach call and assesses the identified member for appropriate enrollment into the program. At the same time, members are reminded to visit their primary care provider and are advised of other available community resources. Translation services are available if English is not the member's primary language. Members are risk-stratified to identify the most vulnerable, those at the highest risk for poor outcomes and those able to benefit from the most intensive disease management interventions.

Education on Environmental Triggers

To help HealthCare USA's members assess environmental triggers, their case managers authorize nurse home health visits to conduct face-to-face environmental assessments. During the visit, the nurse educates the member on triggers identified in the home. If other issues are identified, the nurse and HealthCare USA case manager can help the member find resources to improve their environmental surroundings for better asthma control.

Reducing Emergency Room (ER) Visits

HealthCare USA receives daily ER logs from its in-network large hospital system. These ER logs are reviewed to identify HealthCare USA members receiving asthma care in the ER. If a member receives asthma treatment in the ER, a case manager makes an outreach call to assess if the member has scheduled a visit with his/her asthma care provider for a follow-up assessment and treatment. Also, the case manager determines if the member has medication at home to continue his/her asthma care. Additionally, the case manager assesses the member's knowledge of asthma care. If a knowledge deficit is identified, the member is provided with education and resources for successful asthma self-management and directed to follow-up with his/her asthma care provider.

Review of Medication Refill History

HealthCare USA's asthma case managers review medication refill history via the pharmacy secure web portal. The medication review helps the case managers assess the member's refill patterns for medication adherence.

Member and Provider Incentive Programs

HealthCare USA developed a member incentive program, "Asthma Around the World," to improve medication adherence. The incentive program objective is to give the member ownership in his/her own asthma care and to obtain documentation to improve HEDIS® scores related to asthma medications. The incentive program is a three-step process requiring the member to secure signatures from his/her asthma care provider, pharmacist and "rescue person."

- The asthma care provider confirms the member's asthma diagnosis and action plan, if applicable.
- The pharmacist verifies the member filled his/her medication prescription.
- The rescue person validates his/her agreement to care for the member if unable to care for himself/herself. The rescue person could be the school nurse, family member or friend.

HealthCare USA has also developed a provider incentive program to improve asthma care collaboration with the health plan. The program offers an increased reimbursement for providers who complete a specific asthma education program in their office for HealthCare USA's asthma-diagnosed members.

OUTCOMES: Within the population covered by the asthma program, HealthCare USA has identified three key outcomes: improved medication adherence, reduced emergency room visits and a reduced hospital readmission rate.

From June 2007 to August 2010, adherence to asthma medications increased from a baseline of 17% up to 30%. As a result of the improved adherence, asthma-related ER visit rates have been lower for Disease Management (DM) members versus non-DM members since Q4 2009.

Asthma-related hospital readmission rates have decreased for DM members and the rates remain less than those for non-DM members. In Q3 2009, the readmission rate was 2:1 higher for 30 and 90 day periods for non-DM members compared to those enrolled in DM. The outcomes in DM members continue to improve as non-DM asthma-related readmissions continue to trend upward versus those members in the DM program.

CONTACT: Tasha M. Smith
 Manager of Health Services
 HealthCare USA, a Coventry Health Care Plan
 (314) 444-7215
 tmsharp@cvtv.com

Horizon NJ Health Emergency Room Partnership

PROGRAM OVERVIEW: Horizon NJ Health developed an Emergency Room (ER) partnership with targeted New Jersey hospitals to outreach and educate the health plan members on the issues related to using the ER as a medical home. The Horizon NJ Health asthma initiative is part of this broader program. It is designed to help members with low-acuity, non-emergent (LANE), diagnoses who obtained care from emergency room physicians for asthma. A social worker care manager was placed in the ER for face-to-face education to members with asthma.

Through this program, Horizon NJ Health expects to improve appropriate ER utilization for asthma by directing members to their Primary Care Physicians (PCP) for routine asthma management. The decision to implement the program was based, in part, on reports from the Centers for Disease Control and Prevention (CDC) indicating that ER usage for asthma treatment has been increasing since 1996. This trend adds to rising health care costs and overcrowding in emergency rooms.

The Horizon NJ Health asthma initiative seeks to engage and educate an estimated 1,087 members who use the ER inappropriately for asthma treatment in the two targeted ERs. The initial challenge was to be able to see all the members with asthma who were presenting in the ER and provide them with a better understanding of available resources to care.

KEY OBJECTIVES:

- To reduce asthma-related ER utilization
- To educate and communicate with members on chronic disease using health literacy sensitive strategies
- To increase PCP and specialist visits



ACTIONS TAKEN: In August 2010, Horizon NJ Health placed a care manager, in two high-volume hospital ERs to be on-site and available during the day shift. The care managers initiated face-to-face encounters with members and/or their caregivers in the ER who had LANE diagnoses, including asthma. Members identified with asthma received education on an asthma treatment plan, asthma triggers, asthma medications, appropriate ER use, navigation of the health care system and availability of community resources. Most importantly, members and/or their caregivers received health education on how and when to communicate with their PCPs for care, preventive care education, disease management, immunization requirements, dental care and well-child visits.

The Disease Management staff provided further outreach through mailings and telephone calls to those members who were unable to meet with the on-site ER care managers. Outreach included Horizon NJ Health health education materials on asthma, preventive care and disease management. To improve communication and to address health literacy concerns, members received Horizon NJ Health educational materials written at a fifth-grade reading level.

Members contacted were screened and placed in Care Management, as needed.

OUTCOMES: Members with asthma who utilized the ER for an asthma diagnosis during August 2010 were used for the initial outcome analysis. There were 72 members who visited the ER in August 2010 for asthma. To be considered for inclusion, members must have been enrolled in Horizon NJ Health for six months prior to and six months after this date. The period before the date is considered baseline and the period after this date is considered the intervention period.

Baseline data demonstrated 95 ER visits, pre-intervention, with 88 ER visits post intervention. This represents a seven percent reduction in ER visits. PCP contacts increased as the 72 members visited their PCPs 111 times in the baseline pre-intervention period and 120 times in the post-intervention phase. This represents a seven percent increase in PCP interactions demonstrated by an office visit.

Feedback from the members has been positive. Members are receptive to the education. Contact information for the Horizon NJ Health Disease Management nursing staff was provided. As program growth and expansion are anticipated, outcomes will be measured specifically to the pediatric and adult populations.

CONTACT: Dee Rago, RN, MA
Director of Health Services
Horizon NJ Health
(609) 718-9220
dolores_rago@horizonNJhealth.com

Midwest Health Plan Asthma Focus Program

PROGRAM OVERVIEW: Midwest Health Plan (MHP) has an Asthma Focus program for member and provider outreach regarding asthma best practices. The program works to improve appropriate medication management for its members with asthma and facilitates primary care coordination following hospitalization.

The region for these initiatives is Southeastern Michigan, where the estimated asthma prevalence for children is 9.5% with the prevalence having increased over time among Medicaid recipients.

The program's success is measured through various means including:

- NCQA HEDIS® Effectiveness of Care scores for Use of Appropriate Medications for People with Asthma;
- Follow-up after Asthma Hospitalization, a non-HEDIS measure which looks at care facilitation and coordination; and
- Member program satisfaction and self-reported improvements in asthma education.

Through the continued use of the Asthma Focus program an improvement in the delivery of services and better member/physician awareness was evidenced by improved HEDIS scores. Further, those who participated in the program reported positive feedback on satisfaction surveys. Implementation of McKesson's Disease Monitor system continues to provide MHP with a more intense and targeted disease management program, including an electronic mechanism for communication between disease and case management staff.

KEY OBJECTIVES:

- Increasing appropriate treatment for asthma
- Improving long-term asthma medication adherence
- Reducing asthma-related Emergency Room utilization

ACTIONS TAKEN: Midwest Health Plan's asthma program is focused on both member education and resources for physicians, including guidelines and management updates. During 2009 and 2010 MHP used McKesson Disease Monitor software for its asthma program. McKesson's Disease Monitor, a module of McKesson's CareEnhance® Clinical Management Software (CCMS®) suite, provides an integrated and systematic way to identify program eligible members, stratify members based on disease severity, and track member interventions. Members are identified for inclusion in the program via health risk assessment upon enrollment, claims, pharmacy, utilization, case management, self referrals, and physician referrals. Members are stratified according to risk, and all members who are identified as having asthma, receive educational mailings during the year with high-risk members receiving additional interventions including a referral to case management services.

Providers receive quarterly mailings that inform them of their patients who may benefit from the addition of a long-term control therapy in their asthma management. PCP's are sent profiles of their patients who in the last three months have been identified as receiving multiple prescription fills of short-acting beta agonists in the absence of inhaled corticosteroids. The letter provides information regarding evidenced-based clinical guidelines and the use of inhaled corticosteroids.

In 2010, MHP conducted a survey with 580 members enrolled in the asthma program to evaluate member satisfaction with its Asthma Disease Management and to evaluate members' perception of their ability to better self-manage their disease.

OUTCOMES: MHP measures the effectiveness of their Disease Management programs through the annual analysis of outcomes based on specific indicators. Processes are then refined based on these outcomes. Two measures are used: HEDIS® Use of Appropriate Medications for People with Asthma and Follow-up after Asthma Hospitalization.

MHP’s 2010 HEDIS rate for Use of Appropriate Medications for People with Asthma for the age range of 5-11 was 90%. The rate for ages 12-50 was 89%. The combined rate demonstrated a significant improvement from 2008 to 2010 and was also above the NCQA 50th percentile.

Table 1: Use of Appropriate Medications for Asthma HEDIS Trend

Measure	2008	2009	2010	Goal NCQA 50 th	Amount Above/ Below Goal
Age 5-9	86%	84%	90% (Age 5-11)	N/A	
Age 10-17	77%	80%	89% (Age 12-50)	N/A	
Combined	81%	82%	89%	87%	+2 perc pts

*Rates are compared against 2009 NCQA National Quality Compass Medicaid results.

*N/A: NCQA changed age stratifications; therefore no benchmark data available for 2010.

Midwest also used a non-HEDIS measure (Follow-up after Asthma Hospitalization) to evaluate the effectiveness of their asthma program. The measure was the percentage of members who were discharged from the hospital with a diagnosis of asthma during the reporting period who had a follow up visit with a PCP within 7 days of discharge. Timely follow-up visits are important as they present an opportunity to address lifestyle issues that may be contributing to disease exacerbation, and provide an opportunity for the physician to review the treatment regimen to prevent further inpatient events.

The percentage of all members with asthma who had a follow-up visit with a PCP within 7 days from discharge of an asthma hospitalization increased significantly from 26% in 2009 to 69% in 2010. There was also a significant decrease in the number of inpatient asthma admissions during the same time frame.

Table 2: Follow-up after Asthma Hospitalization

Measure	2008	2009	2010	Goal	+/- Goal
Numerator	48	44	44	NA	
Denominator	185	171	64	NA	
Rate	26%	26%	69%	90%	-21 perc pts

In response to the member satisfaction survey, 63 of the 580 members and/or parents/guardians of members (11%) returned the survey. Survey results indicated a fairly high level of satisfaction with the program; 94% of respondents reported they were satisfied or very satisfied with the asthma program. Members or parents/guardians of members reported more confidence in their ability to handle asthma after the program was administered as evidenced by a 98% response rate. Compared to before the program, 94% reported an improvement in their ability to take better care of their asthma on a regular basis. Evaluation of the data indicated to MHP that implementation of their interventions was well designed to improve member outcomes.

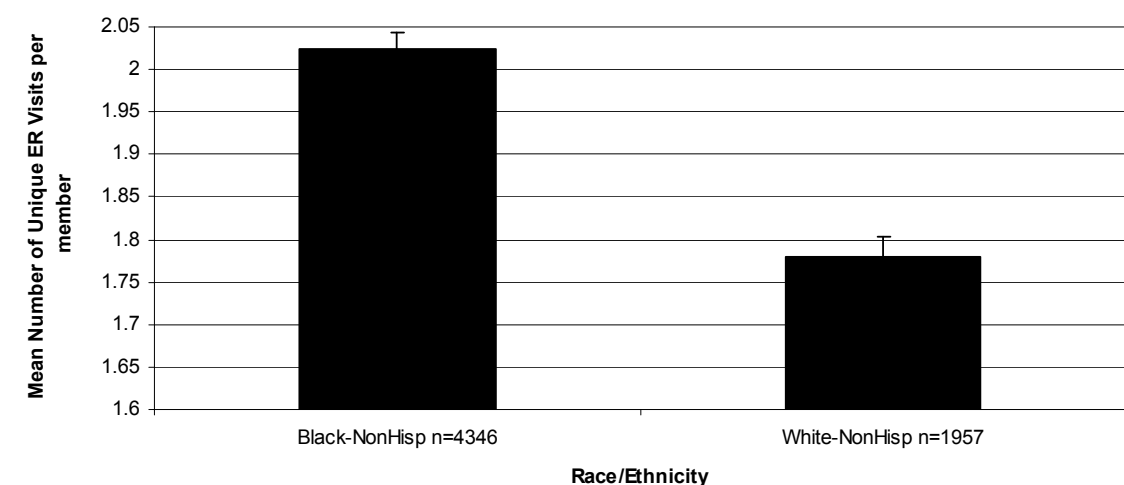
CONTACT: Andrea Fogarty
 Director, Health Management
 Midwest Health Plan
 (313) 586-6071
 afogarty@midwesthealthplan.com

WellCare Asthma Care

PROGRAM OVERVIEW: In 2010, WellCare Health Plans, Inc. developed focused initiatives for its health plans, providers and members in order to enhance the overall quality and effectiveness of asthma care. WellCare uses this three-pronged approach specifically to target and reduce disparities in access resulting in higher use of emergency department (ED) visits by non-Hispanic blacks than other members. The program was initiated when WellCare’s data confirmed findings from national trends of the high use of the ED.

From January 1 to December 31, 2010, non-Hispanic blacks accounted for 50.4 % of WellCare’s Georgia Medicaid membership with an asthma diagnosis but conversely made up 67% of all ED visits for asthma. This contrasts with 28% of ED visits for asthma by the non-Hispanic white population, which comprise 41.6% of WellCare’s Georgia members with asthma. Demographic analysis of WellCare’s Georgia Medicaid population for calendar year 2010 showed non-Hispanic blacks ages 0-21 with an asthma diagnosis had a rate of 500.3 ED visits per thousand members compared to a rate of 221.9 ED visits per thousand members for non-Hispanic whites.

Unique ER Visits per GA Medicaid Member (age 21 and under) with Asthma



KEY OBJECTIVES:

- Improve identification of children with asthma
- Increase appropriate treatment for asthma
- Reduce asthma-related emergency room utilization
- Address cultural and ethnic disparities in asthma care
- Use and measure the effect of appropriate patient education

ACTIONS TAKEN: WellCare’s health plan initiative involved redesigning member fulfillment materials and educational mailings with culturally appropriate messaging. WellCare’s disease management and case management nurses, who manage Georgia members, were given priority for training in cultural competency.

WellCare's Pharmacy department spearheaded a provider initiative by developing a program modeled after a previous pilot study to notify primary care providers of gaps in asthma care. Pharmacy claims for excessive use of short acting beta-agonist rescue inhalers were identified and alert letters were subsequently sent to the prescribing providers. The letters included member specific claims information along with a recommendation to add maintenance inhaled corticosteroid therapy, increase the dose of inhaled corticosteroids or add a long-acting beta agonist, as appropriate, for better symptomatic control.



WellCare's member initiative focused on improving care coordination and community outreach to high-risk members with asthma. Member outreach focuses on those members with increased ED visits, over-utilization of short-acting rescue medications or documented non-compliance or missing claims data for inhaled corticosteroids for persistent asthma. The community outreach initiative includes telephonic assessments and education, home visits with environmental survey and care coordination to support appointment scheduling and reminders.

OUTCOMES: WellCare developed a systematic method for identifying racial and ethnic data from state Medicaid enrollment files to address increased health risks that may occur in a given ethnic or racial group. Subsequently, a methodology for tracking medication adherence from pharmacy claims was implemented.

As a result of the Pharmacy-driven provider notification pilot study, 99 of 648 Medicaid members (15.3%) who had over-utilized short-acting beta-agonists (rescue medications) were prescribed maintenance inhaled corticosteroids (controller medications). Additionally, this initiative resulted in a 46.4% decrease in use of short-acting or "rescue" medications for 262 of 565 Medicaid members who were previously on an inhaled corticosteroid and had also over-utilized short-acting beta-agonist.

CONTACTS: Traci Ferguson, MD
Corporate Medical Director
WellCare Health Plans, Inc.
(813) 206-1284
traci.ferguson@wellcare.com

Ann Wehr, MD
Chief Medical Officer
WellCare Health Plans, Inc.
(813) 206-1284
ann.wehr@wellcare.com

PART 3: Asthma Resources

This section of the Childhood Asthma Best Practices Compendium provides Medicaid health plans with useful references for their case, disease and quality management departments. It also provides additional resources to share with their partnered physicians and other clinicians and well as material that is appropriate to share directly with health plan members.

Many of these resource listings are applicable to multiple stakeholders. They are organized by the most relevant target audience, but may well be of value to other stakeholders. The Resource Section is divided into three parts:

- A. Resources for Health Plans
- B. Resources for Treating Physicians and Other Clinicians
- C. Resources for Medicaid Members and Families

There are many excellent, established childhood asthma resources, with new ones emerging daily. This resource section does not represent an exhaustive list. Many of the websites and toolkits that are referenced here also contain their own large set of suggested resources. MHPA encourages users to delve deeper into these materials and to become familiar with the rich content.

The resources in this Section provide a quick and easy reference to help member health plans help their members and providers as they work to improve the quality of lives for children with asthma.

A. Resources for Health Plans

The Agency for Healthcare Research and Quality (AHRQ)

The Department of Health and Human Services (HHS), Agency for Healthcare Research and Quality (AHRQ) has multiple websites and provides various types of resource information including:

- The National Quality Measures Clearinghouse is a public resource for evidence-based quality measures and measure sets from various developers. The site allows for side-by-side comparison of up to three measures at a time.
National Quality Measures Clearinghouse <http://www.qualitymeasures.ahrq.gov/>
- The National Guideline Clearinghouse is a public resource for evidence-based clinical practice guidelines from various professional organizations and other developers. Like the quality measures, the website allows for side-by-side comparison of up to three guidelines at a time.
National Guideline Clearinghouse <http://www.guideline.gov/index.aspx>
- The Health Care Innovations Exchange website provides resources to help solve problems, improve health care quality and reduce disparities. For example the site features information on a program, "Culturally Competent Parent Mentors Support Families of Minority Children with Asthma, Leading to Better Health, Less Missed School and Work," in which parents of African-American and Latino asthmatic children were paired with trained, culturally competent parent mentors (experienced parents of asthmatic children) to help them understand and care for their children's asthma.
<http://innovations.ahrq.gov/>
- A Resource Guide for State Action provides products to assist state officials to improve asthma in their state, including: Asthma Care Quality Improvement: A Resource Guide for State Action; Asthma Care Quality Improvement: A Workbook for State Action, and an Asthma Return-on-Investment Calculator.
www.ahrq.gov/qual/asthmacare/asthmod1b.htm

ALLIES AGAINST ASTHMA

<http://asthma.umich.edu/>

Allies Against Asthma was a national initiative to improve asthma control for children and adolescents. While this particular initiative has been closed, evaluation of the impact of the coalitions' work continues. The site provides useful information about community-based coalitions that have implemented comprehensive pediatric asthma management programs. Among other resources, this site includes:

- Journal articles
- Tools for assessing asthma educational materials
- Evaluation Design and Instruments
- Site specific coalition products

ETHNIC DISPARITIES IN THE BURDEN AND TREATMENT OF ASTHMA

<https://www.aafa.org/pdfs/Disparities.PDF>

This resource, from The Asthma and Allergy Foundation of America and The National Pharmaceutical Council, provides data-rich and detailed information on:

- About the Burden of Asthma on Minorities
- Asthma Disparities Faced by Minorities
- Opportunities to Reduce Asthma Disparities

HEALTHY PEOPLE 2020

www.healthypeople.gov/2020/default.aspx

Healthy People 2020 site lists national objectives for improving asthma and other diseases by the year 2020. For asthma specific information, click on:

<http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=36>

IMPROVING ASTHMA CARE FOR CHILDREN: BEST PRACTICES IN MEDICAID MANAGED CARE TOOLKIT

Center for Health Care Strategies, Inc. (CHCS)
http://www.chcs.org/usr_doc/IACC_Toolkit.pdf

This 2006 toolkit focuses specifically on effective strategies and case examples for improving asthma care in health plans serving Medicaid consumers.

MERCK CHILDHOOD ASTHMA NETWORK

<http://www.mcanonline.org/index.html>

The Merck Childhood Asthma Network, Inc., (MCAN), is a separately incorporated, non-profit, 501(c)(3) organization established to address the complex and growing problem of pediatric asthma. MCAN focuses on enhancing access to quality asthma care and management for children in the United States.

- “Changing Policy: The Elements for Improving Childhood Asthma Outcomes” was developed by The George Washington University. It discusses the burden of asthma along with policy opportunities to improve asthma care.
http://www.mcanonline.org/policy_issues/index.html

- “The Affordable Care Act, Medical Homes, and Childhood Asthma: A Key Opportunity for Progress” is a publication examining key provisions in the Patient Protection and Affordable Care Act. The publication is first in a series of policy briefs developed through the RCHN Foundation, a national foundation created to support the mission of community health centers. It discusses opportunities in the Affordable Care Act to implement medical homes to improve health outcomes for children with asthma.
www.rchnfoundation.org/images/FE/chain207siteType8/site176/client/MedicalHomesBrief.pdf

NATIONAL ASTHMA EDUCATION AND PREVENTION PROGRAM (NAEPP) NATIONAL HEART LUNG AND BLOOD INSTITUTE (NHLBI)

U.S. Department of Health and Human Services/National Institutes of Health
<http://www.nhlbi.nih.gov/about/naepp/>

The multipart site includes many resources to improve asthma care based on Action Against Asthma: A Strategic Plan for the Department of Health and Human Services. The site contains health related information that Health Plans can direct others to or share with:

- Patients/General Public
- Health Care/Other Professionals
- Schools/Child Care

NATIONAL QUALITY FORUM (NQF)

www.qualityforum.org

National Quality Forum Endorsed® Standards provide quality metrics for various stakeholders to use for quality improvement processes and benchmarking. NQF standards are developed by other organizations such as NCQA and the American Medical Association, but endorsed by NQF. The details for the specific measures, including patient selection descriptions for numerators, denominators, patient selection ICD-9 and CPT codes, exclusions and adjustments are available by establishing an NQF account, which can be done on their website. There are a number of Endorsed® Standards for asthma disease assessment and management, including:

- Asthma Assessment
- Management Plan for People with Asthma
- Use of appropriate medications for people with asthma
- Asthma: pharmacologic therapy

Go to “Measuring Performance”, click on “NQF-Endorsed® Standards” and enter asthma in the search field.

PEDIATRIC ASTHMA.ORG

www.pediatricasthma.org

The Pediatric Asthma Initiative created with support from the Robert Wood Johnson Foundation, used clinical and non-clinical approaches to improve the management of pediatric asthma among members of high-risk populations. The website includes descriptions of three national managed Medicaid programs, community coalitions, Emergency Departments Demonstration Programs, a free online CME program on childhood asthma and other resources.

TAKING ON ASTHMA

America's Health Insurance Plans (AHIP)

<http://takingonasthma.org/index.htm>

The goal of Taking on Asthma: Communication, Education, and Outreach is to develop approaches that educate health insurance plans and their provider networks about the importance of integrating evidence-based environmental management into asthma management programs. Resources include Implementing and Asthma Home Visit Program: Ten Steps to Help Health Plans Get Started. This resource was sponsored by America's Health Insurance Plans (AHIP) through a cooperative agreement with the EPA.

B. Resources for Treating Physicians and Other Clinicians

AMERICAN ACADEMY OF PEDIATRICS

www.pedialink.org/cmefinder/search-detail.cfm/key/F73ADCAF-7788-4D89-B9F9-EFD7286EC6C6/type/course

This PediaLink Essentials course, Asthma Case Studies: Environment and Comorbid Conditions, consists of a collection of case studies featuring patients of various ages and ethnicities who have or are being considered for a diagnosis of asthma. The cases in this series highlight helping patients identify and reduce exposure to relevant allergens and irritants and control factors that affect asthma including: inhalant allergens, occupational exposures, irritants and comorbid conditions.

AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY (ATSDR)

Agency for Toxic Substances and Disease Registry (ATSDR)

www.atsdr.cdc.gov/csem/csem.html

ATSDR Case Studies in Environmental Medicine (CSEM) are self-instructional, continuing education primers designed to increase primary care providers' knowledge of hazardous substances and aid in the evaluation of patients potentially exposed to hazardous substances.

ASSOCIATION OF CLINICIANS FOR THE UNDERSERVED (ACU)

Association of Clinicians for the Underserved (ACU)

www.clinicians.org/asthma.cfm

ACU offers resources and tools for training primary care providers and community workers. Publications available in English or Spanish include Realistic Measures for the Reduction of Indoor Asthma Triggers and the Asthma Indoor Trigger Reduction Tool Card. ACU offers a mobile application, Pediatric Asthma and Indoor Trigger Management, free of charge in English and Spanish for the iPhone or iPod Touch.

New Training Offering for Clinicians

ACU is collaborating with MHPA on a multi-year cooperative agreement with the U.S. Environmental Protection Agency (EPA) to improve the quality of asthma healthcare for underserved populations. Through the program, ACU will train clinicians to provide asthma trigger education, management and mitigation strategies using culturally and linguistically competent care. The continuing professional education course will use updated guidelines from the National Heart Lung and Blood Institute's (NHLBI) National Asthma Education and Prevention program (NAEPP) and offer strategies to educate patients with low health literacy. The training will be offered live and via the Internet to a broad clinician population.

www.clinicians.org/asthma-care-for-underserved-populations.cfm

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

Centers for Disease Control and Prevention (CDC)

www.cdc.gov/asthma/parents.html

Part of the greater CDC offerings, this site provides asthma specific information and resources written for specific professional audience groups including healthcare professionals and public health professionals. It includes additional quick links to other resources such as printable and web-based Asthma Action Plans.

ENVIRONMENTAL MANAGEMENT OF PEDIATRIC ASTHMA: GUIDELINES FOR HEALTH CARE PROVIDERS

Environmental Management of Pediatric Asthma: Guidelines for Health Care Providers

National Environmental Educational Foundation

www.neefusa.org/health/asthma/astmaguidelines.htm

NEEF partners with the Environmental Protection Agency on environmental education. It offers English and Spanish guidelines aimed at integrating environmental management of asthma into pediatric health care. NEEF guidelines specify competencies in environmental health relevant to pediatric asthma that should be mastered by health care providers and outlines the environmental interventions that should be communicated to patients.

INSTITUTE FOR CLINICAL SYSTEMS IMPROVEMENT (ICSI)

Institute for Clinical Systems Improvement (ICSI)

www.icsi.org/about

ICSI offers evidence-based Health Care Guidelines, admission order sets, protocols and other resources intended for use by practitioners, health plans and systems, researchers and others. ICSI notes that for medical groups "copies may be provided to patients and the clinicians who manage their care, if the ICSI Health Care Guideline is incorporated into the medical group's clinical guideline program."

Enter asthma in search field to identify all document types or to help refine search.

THE NATIONAL HEART LUNG BLOOD INSTITUTE (NHLBI)

The National Heart Lung Blood Institute (NHLBI)
www.nhlbi.nih.gov

National Asthma Education and Prevention Program (NAEPP) 2007 Expert Panel Report 3 (EPR-3): Guidelines for the Diagnosis and Management of Asthma
<http://www.nhlbi.nih.gov/guidelines/asthma/index.htm>

These evidenced-based clinical practice guidelines are written primarily for use by practitioners and provide comprehensive information on assessment and management for people of all age ranges with asthma.

PHYSICIAN ASTHMA CARE EDUCATION

National Heart Lung and Blood Institute
 U.S. Department of Health and Human Services/National Institutes of Health
www.nhlbi.nih.gov/health/prof/lung/asthma/pace/

A two-part interactive, multi-media educational seminar to improve physician awareness, ability, and use of communication and therapeutic techniques for reducing the effects of asthma on children and their families.

C. Resources for Medicaid Members and Families

AMERICAN LUNG ASSOCIATION®

www.lungusa.org/lung-disease/asthma

Multiple tools and resources including Making Treatment Decisions and Taking Control of Your Asthma

ASTHMA CONTROL TEST®

www.asthmacontrol.com

Quick and easy, interactive tests for children ages 4 -11 (with illustrative pictures) and age 12 and older to help assess the status of asthma control based upon patient supplied information. Based on computer entered answers, the scores can be calculated automatically and information printed to assist in communication during a clinical visit for asthma assessment and treatment. The tests are available in English and Spanish.

ASTHMA AND ALLERGY FOUNDATION OF AMERICA (AAFA)

www.asthmapact.org

Contains English and Spanish educational resources for multiple stakeholders including a free Asthma PACT™ (Personalized Assessment and Control Tool), online support groups, product and referral information.

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

www.cdc.gov/asthma/parents.html

Links to asthma information written for specific lay audience groups including kids, parents and schools and childcare providers.

CHILDREN'S HEALTH FUND

www.childrenshealthfund.org/publications/health-education-groups/family-asthma-guide

The Family Asthma Guide is produced in accordance with low literacy writing and design conventions and incorporates ethnic and cultural diversity into all content and illustrations. The Guide is available in both English and Spanish.

eMEDICINEHEALTH

emedicinehealth
www.emedicinehealth.com/asthma_in_children/article_em.htm

This website is owned and operated by WebMD and is part of the WebMD Network. It contains useful information for parents and children regarding asthma in children, including a pictured slideshow and an interactive self-test.

NATIONAL JEWISH HEALTH®

National Jewish Health®
 Pediatric Asthma
www.nationaljewish.org/healthinfo/pediatric/asthma/index.aspx

Pediatric asthma information including symptoms, diagnosis, triggers, treatment, lifestyle management and “Asthma Wizard” an online asthma knowledge test. The Lifestyle Management section includes information on diet, communication and Back-to-School Tips, and Checklist for Camps, among others.

PARENTS HELPING PARENTS FIGHT ASTHMA

Parents Helping Parents Fight Asthma
<http://innovations.ahrq.gov/content.aspx?id=2922>

In this training guide, as part of the AHRQ Innovations Exchange, experienced parents teach other parents of asthmatic children what they know about the disease and how to manage it. It includes sample presentation slides and a manual (also available in Spanish) that provides information on how to reduce asthma symptoms and attacks and improve the quality-of-life for both parents and children. Sample topics include, “Why asthma is such an important issue for American children” and “Being a successful parent mentor” and the site provides a link to the tool.

National Heart and Blood Institute Asthma Action Plan for Patients

Asthma Action Plan

For: _____ Doctor: _____ Date: _____

Doctor's Phone Number _____ Hospital/Emergency Department Phone Number _____

GREEN ZONE

Doing Well

- No cough, wheeze, chest tightness, or shortness of breath during the day or night
- Can do usual activities

And, if a peak flow meter is used,

Peak flow: more than _____
(80 percent or more of my best peak flow)

My best peak flow is: _____

Medicine	How much to take	When to take it
_____	_____	_____
_____	_____	_____
Before exercise	<input type="checkbox"/> _____ <input type="checkbox"/> 2 or <input type="checkbox"/> 4 puffs _____	5 to 60 minutes before exercise

YELLOW ZONE

Asthma Is Getting Worse

- Cough, wheeze, chest tightness, or shortness of breath, or
- Waking at night due to asthma, or
- Can do some, but not all, usual activities

-Or-

Peak flow: _____ to _____
(50 to 79 percent of my best peak flow)

First Add: quick-relief medicine—and keep taking your GREEN ZONE medicine.

_____ 2 or 4 puffs, every 20 minutes for up to 1 hour
(short-acting beta₂-agonist) Nebulizer, once

Second If your symptoms (and peak flow, if used) return to GREEN ZONE after 1 hour of above treatment:

Continue monitoring to be sure you stay in the green zone.

-Or- If your symptoms (and peak flow, if used) do not return to GREEN ZONE after 1 hour of above treatment:

Take: _____ 2 or 4 puffs or Nebulizer
(short-acting beta₂-agonist)

Add: _____ mg per day For _____ (3–10) days
(oral steroid)

Call the doctor before/ within _____ hours after taking the oral steroid.

RED ZONE

Medical Alert!

- Very short of breath, or
- Quick-relief medicines have not helped, or
- Cannot do usual activities, or
- Symptoms are same or get worse after 24 hours in Yellow Zone

-Or-

Peak flow: less than _____
(50 percent of my best peak flow)

Take this medicine:

_____ 4 or 6 puffs or Nebulizer
(short-acting beta₂-agonist)

_____ mg
(oral steroid)

Then call your doctor NOW. Go to the hospital or call an ambulance if:

- You are still in the red zone after 15 minutes AND
- You have not reached your doctor.

DANGER SIGNS

- Trouble walking and talking due to shortness of breath
- Lips or fingernails are blue

Take 4 or 6 puffs of your quick-relief medicine AND

Go to the hospital or call for an ambulance _____ NOW!
(phone)

See the reverse side for things you can do to avoid your asthma triggers.

How To Control Things That Make Your Asthma Worse

This guide suggests things you can do to avoid your asthma triggers. Put a check next to the triggers that you know make your asthma worse and ask your doctor to help you find out if you have other triggers as well. Then decide with your doctor what steps you will take.

Allergens

Animal Dander

Some people are allergic to the flakes of skin or dried saliva from animals with fur or feathers.

The best thing to do:

- Keep furred or feathered pets out of your home.

If you can't keep the pet outdoors, then:

- Keep the pet out of your bedroom and other sleeping areas at all times, and keep the door closed.
- Remove carpets and furniture covered with cloth from your home. If that is not possible, keep the pet away from fabric-covered furniture and carpets.

Dust Mites

Many people with asthma are allergic to dust mites. Dust mites are tiny bugs that are found in every home—in mattresses, pillows, carpets, upholstered furniture, bedcovers, clothes, stuffed toys, and fabric or other fabric-covered items.

Things that can help:

- Encase your mattress in a special dust-proof cover.
- Encase your pillow in a special dust-proof cover or wash the pillow each week in hot water. Water must be hotter than 130° F to kill the mites. Cold or warm water used with detergent and bleach can also be effective.
- Wash the sheets and blankets on your bed each week in hot water.
- Reduce indoor humidity to below 60 percent (ideally between 30–50 percent). Dehumidifiers or central air conditioners can do this.
- Try not to sleep or lie on cloth-covered cushions.
- Remove carpets from your bedroom and those laid on concrete, if you can.
- Keep stuffed toys out of the bed or wash the toys weekly in hot water or cooler water with detergent and bleach.

Cockroaches

Many people with asthma are allergic to the dried droppings and remains of cockroaches.

The best thing to do:

- Keep food and garbage in closed containers. Never leave food out.
- Use poison baits, powders, gels, or paste (for example, boric acid). You can also use traps.
- If a spray is used to kill roaches, stay out of the room until the odor goes away.

Indoor Mold

- Fix leaky faucets, pipes, or other sources of water that have mold around them.
- Clean moldy surfaces with a cleaner that has bleach in it.

Pollen and Outdoor Mold

What to do during your allergy season (when pollen or mold spore counts are high):

- Try to keep your windows closed.
- Stay indoors with windows closed from late morning to afternoon, if you can. Pollen and some mold spore counts are highest at that time.
- Ask your doctor whether you need to take or increase anti-inflammatory medicine before your allergy season starts.

Irritants

Tobacco Smoke

- If you smoke, ask your doctor for ways to help you quit. Ask family members to quit smoking, too.
- Do not allow smoking in your home or car.

Smoke, Strong Odors, and Sprays

- If possible, do not use a wood-burning stove, kerosene heater, or fireplace.
- Try to stay away from strong odors and sprays, such as perfume, talcum powder, hair spray, and paints.

Other things that bring on asthma symptoms in some people include:

Vacuum Cleaning

- Try to get someone else to vacuum for you once or twice a week, if you can. Stay out of rooms while they are being vacuumed and for a short while afterward.
- If you vacuum, use a dust mask (from a hardware store), a double-layered or microfilter vacuum cleaner bag, or a vacuum cleaner with a HEPA filter.

Other Things That Can Make Asthma Worse

- Sulfites in foods and beverages: Do not drink beer or wine or eat dried fruit, processed potatoes, or shrimp if they cause asthma symptoms.
- Cold air: Cover your nose and mouth with a scarf on cold or windy days.
- Other medicines: Tell your doctor about all the medicines you take. Include cold medicines, aspirin, vitamins and other supplements, and nonselective beta-blockers (including those in eye drops).

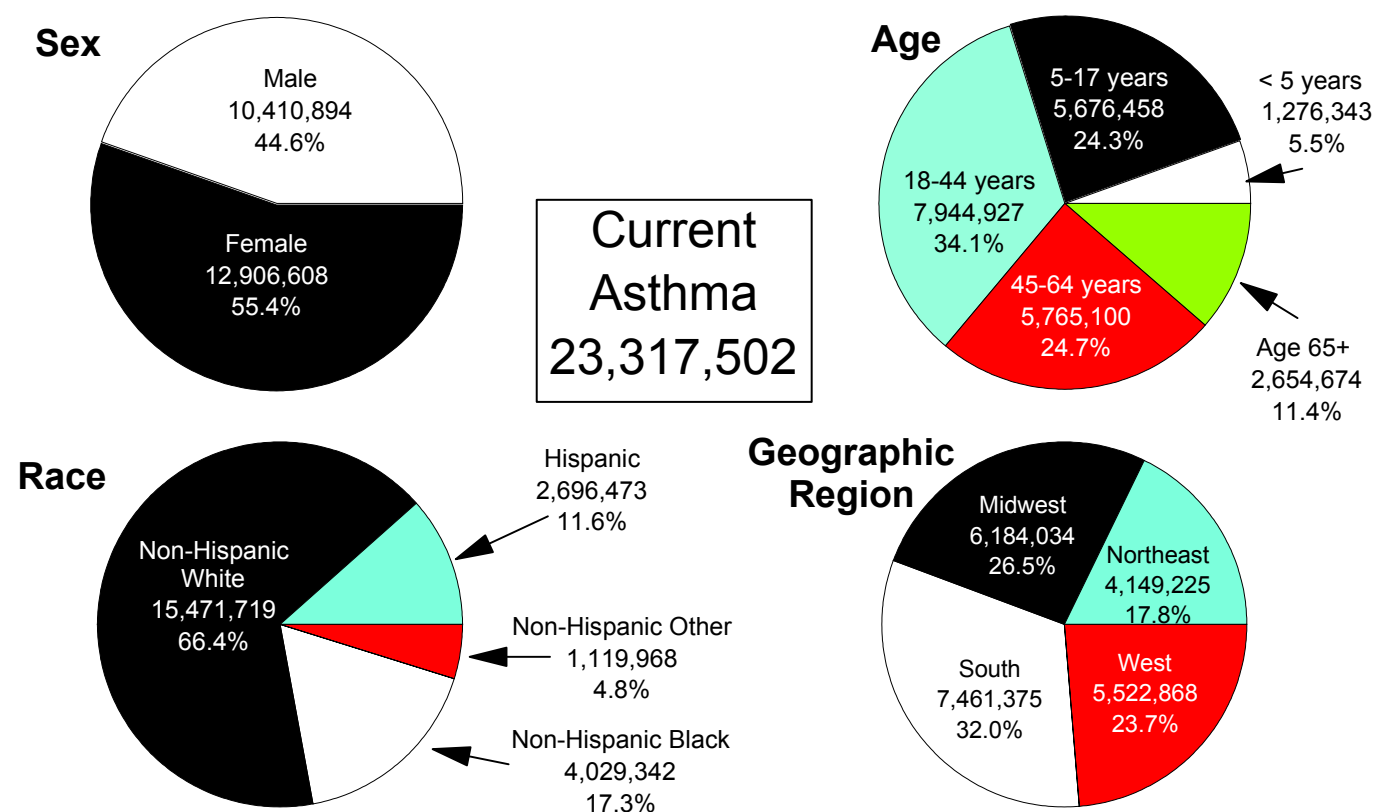


For More Information, go to: www.nhlbi.nih.gov

NIH Publication No. 07-5251
April 2007

PART 4: Asthma Impact Data

Percentage Distribution of Current Asthma by Sex, Age, Ethnic Origin and Geographic Region, 2008

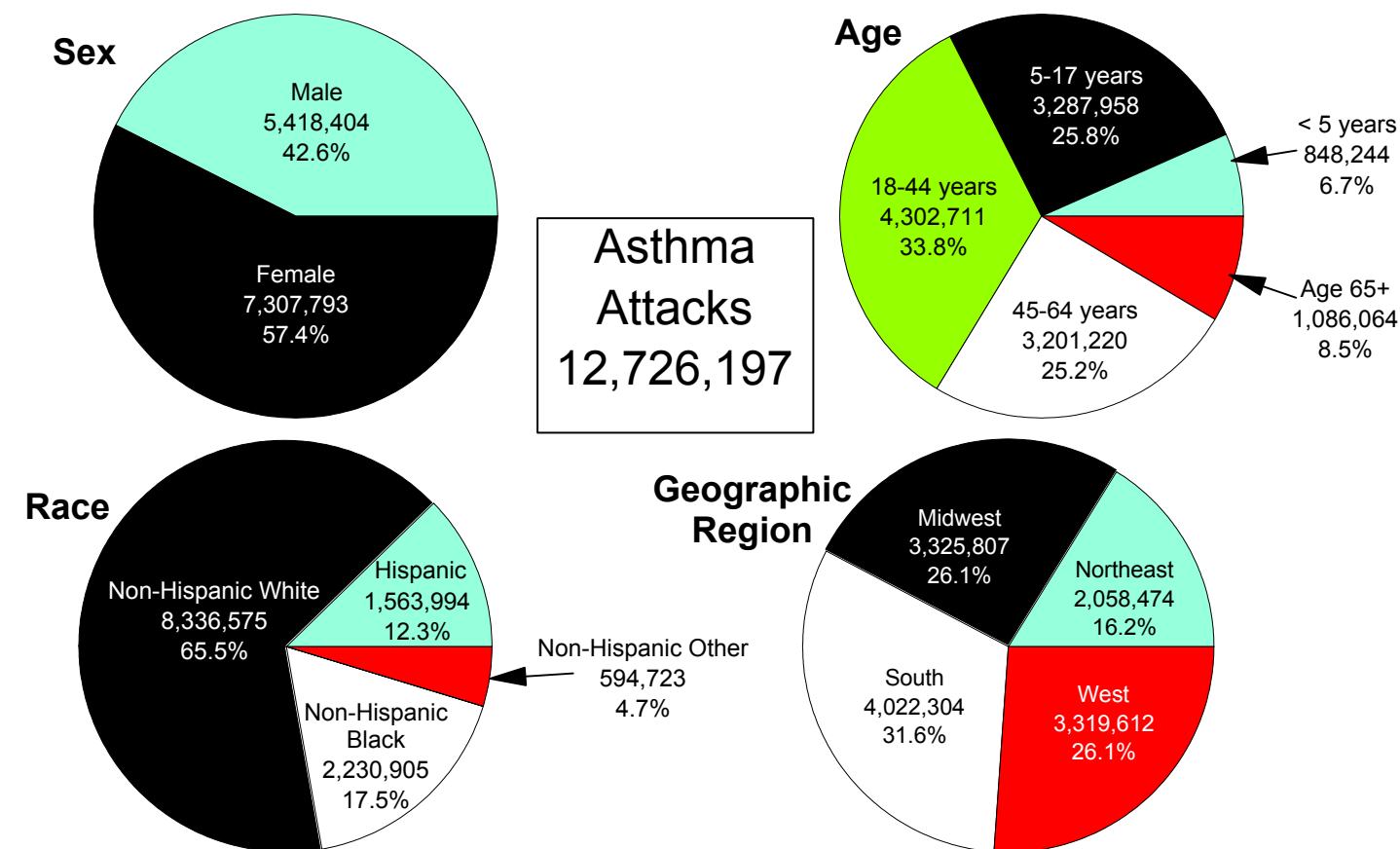


Source: National Center for Health Statistics. National Health Interview Survey, 2008.

Note:
 (1) Current prevalence is defined as answering yes to "Have you EVER been told by a doctor or other health professional that you had asthma?" and "Do you still have asthma?"

Asthma charts from Trends In Asthma Morbidity and Mortality 2010 reprinted with permission © 2011 American Lung Association. www.LungUSA.org

Percentage Distribution of Asthma Attacks by Sex, Age, Ethnic Origin and Geographic Region, 2008

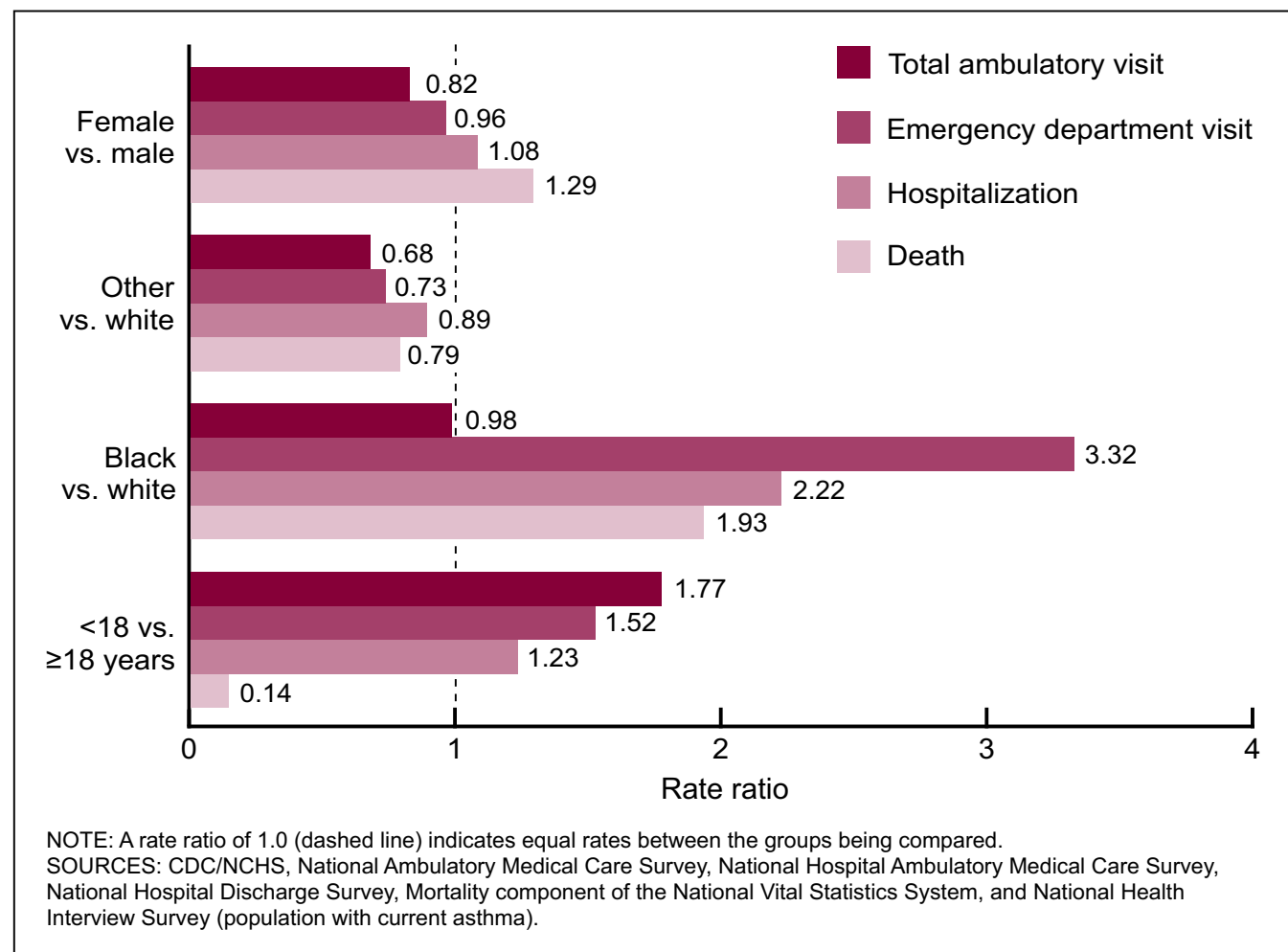


Source: National Center for Health Statistics. National Health Interview Survey, 2008

Note:
 (1) Attack prevalence is defined as answering yes to "Have you EVER been told by a doctor or other health professional that you had asthma?" and "During the past 12 months have you had an episode of asthma or an asthma attack?"

Asthma charts from Trends In Asthma Morbidity and Mortality 2010 reprinted with permission © 2011 American Lung Association. www.LungUSA.org

Relative Burden of Asthma Health Care Use and Mortality, Adjusted for Current Asthma Prevalence By Sex, Race and Age Group (United States, annual average 2005-2007)



Reprinted from: CDC National Health Statistics Reports, "Asthma Prevalence, Health Care Use, and Mortality: United States, 2005–2009" No. 32, January 12, 2011. Available at: www.cdc.gov/nchs/data/nhsr/nhsr032.pdf

Percentage (standard error) with Current Asthma, or Parents of Children with Current Asthma, Who Reported Receiving Key Asthma Education or Management Strategies from a Health Care Professional by Selected Characteristics: United States, 2008

Characteristic	Taught how to use an inhaler	Given an asthma management plan	Taught how to recognize early signs or symptoms of an asthma episode	Advised to change things at home, school, or work to improve asthma	Taught how to respond to an episode of asthma
Healthy People 2010 target	98.8	40.0	68.0	50.0	68.0
Total	95.9 (0.5)	34.2 (1.2)	60.0 (1.3)	50.9 (1.3)	68.2 (1.2)
Sex					
Male	96.0 (0.8)	35.4 (2.0)	61.1 (2.0)	48.7 (2.1)	67.8 (2.0)
Female	95.8 (0.7)	33.2 (1.6)	59.0 (1.6)	52.7 (1.6)	68.5 (1.5)
Race/ethnicity					
Non-Hispanic white	96.0 (0.7)	32.5 (1.6)	57.0 (1.7)	50.6 (1.7)	67.3 (1.6)
Non-Hispanic black	94.3 (1.4)	44.0 (2.8)	69.2 (2.4)	52.4 (2.7)	72.6 (2.4)
Puerto Rican	93.0 (2.8)	37.3 (6.4)	69.8 (6.2)	57.2 (6.7)	68.3 (6.3)
Mexican	97.7 (1.3)	28.8 (3.5)	54.7 (4.3)	42.3 (4.4)	58.7 (4.4)
Age					
Under 18 years	95.9 (0.9)	44.3 (2.3)	72.1 (2.0)	53.2 (2.5)	78.4 (1.9)
18 years and over	95.9 (0.6)	29.9 (1.4)	54.8 (1.6)	50.0 (1.5)	63.8 (1.5)
Percent of poverty level					
Below 100%	93.7 (1.6)	31.1 (2.6)	57.9 (2.9)	49.9 (2.9)	63.8 (2.8)
100%–less than 200%	94.5 (1.2)	33.6 (2.6)	58.7 (2.8)	52.5 (2.8)	65.2 (2.7)
200% and above	97.0 (0.6)	35.3 (1.6)	61.0 (1.8)	50.6 (2.2)	70.5 (1.7)

SOURCE: CDC/NCHS, National Health Interview Survey.

Reprinted from: CDC National Health Statistics Reports, "Asthma Prevalence, Health Care Use, and Mortality: United States, 2005–2009" No. 32, January 12, 2011. Available at: www.cdc.gov/nchs/data/nhsr/nhsr032.pdf

References

- ¹ Centers for Disease Control and Prevention/National Center for Disease Health Statistics/Fast Facts/Asthma <http://www.cdc.gov/nchs/fastats/asthma.htm>
- ² Bemt L; Kooijman S; Linssen V, et al. How Does Asthma Influence the Daily Life of Children? Results of Focus Group Interviews. *Health and Quality of Life Outcomes*. 2010; 8:5. <http://www.hqlo.com/content/pdf/1477-7525-8-5.pdf>
- ³ Centers for Disease Control and Prevention/National Center for Chronic Disease Prevention and Health Promotion Healthy Youth! <http://www.cdc.gov/HealthyYouth/asthma/2011>
- ⁴ Ethnic Disparities in the Burden and Treatment of Asthma. The Asthma and Allergy Foundation of America and The National Pharmaceutical Council. 2005. <https://www.aafa.org/pdfs/Disparities.PDF>
- ⁵ Akinbami LJ, Moorman, JE, Liu X. Asthma Prevalence, Health Care Use, and Mortality: United States, 2005–2009. *National Health Statistics Report*. 2011. No. 32. <http://www.cdc.gov/nchs/data/nhsr/nhsr032.pdf>
- ⁶ Akinbami LJ, Moorman, JE, Garbe PL, et al. Status of Childhood Asthma in the United States, 1980–2007. *Pediatrics*. 2009 (123) (suppl. 3): S131-S144
- ⁷ Office of Minority Health. Asthma and African Americans. Statistics from various sources. Available at: <http://minorityhealth.hhs.gov/templates/content.aspx?ID=6170>
- ⁸ National Health Statistics Report No. 32 January 12, 2011 <http://www.cdc.gov/nchs/data/nhsr/nhsr032.pdf>
- ⁹ The George Washington University School of Public Health. Changing Policy: The Elements for Improving Childhood Asthma Outcomes. 2010. Available at: http://www.mcanonline.org/pdf/MCAN_Policy_Report_Final.pdf
- ¹⁰ The George Washington University School of Public Health. Changing Policy: The Elements for Improving Childhood Asthma Outcomes. 2010. Available at: http://www.mcanonline.org/pdf/MCAN_Policy_Report_Final.pdf
- ¹¹ NHLBI NAEPPExpert Panel Report 3 Guidelines for the Diagnosis and Management of Asthma. 2007. <http://www.nhlbi.nih.gov/health/prof/lung/asthma/asthmacare.pdf>
- ¹² National heart, Lung and Blood Institute. How is Asthma treated and Controlled. Available at: http://www.nhlbi.nih.gov/health/dci/Diseases/Asthma/Asthma_Treatments.html
- ¹³ National Heart, Lung and Blood Institute National (NHLBI) Asthma Education and Prevention Program Expert Panel Report (NAEPP) Report 3 Guidelines for the Diagnosis and Management of Asthma. 2007. <http://www.nhlbi.nih.gov/health/prof/lung/asthma/asthmacare.pdf>
- ¹⁴ Asthma Prevalence, Health Care Use, and Mortality: United States, 2005–2009. Centers for Disease Control and Prevention/National Health Statistics Report January 12, 2011. No. 32 <http://www.cdc.gov/nchs/data/nhsr/nhsr032.pdf>
- ¹⁵ Asthma Prevalence, Health Care Use, and Mortality: United States, 2005–2009. Centers for Disease Control and Prevention/National Health Statistics Report January 12, 2011. No. 32. <http://www.cdc.gov/nchs/data/nhsr/nhsr032.pdf>
- ¹⁶ Mattke S, Martorell F, Sharma P., et al. Quality of Care for Childhood Asthma: Estimating Impact and Implications. *Pediatrics*. 2009,123. (suppl 3): S199-204. http://pediatrics.aappublications.org/cgi/reprint/123/Supplement_3/S199
- ¹⁷ Gardiner P., Dvorkin L., Promoting Medication Adherence in Children. *American Family Physician*. 2006; Vol. 74 (5):793:798
- ¹⁸ Smeeton NC, Rona RJ, Gregory J, et al. Parental attitudes towards the management of asthma in ethnic minorities. *Archives of Disease in Childhood* 2007; 92:1082-1087 <http://adc.bmj.com/content/92/12/1082>
- ¹⁹ Fredrickson DD, Molgaard CA, Dismuke SE, et al. *Understanding Frequent Emergency Room Use by Medicaid-Insured Children with Asthma: A Combined Quantitative and Qualitative Study*. *The Journal of the American Board of Family Practice*. 2004. Vol. 17(2) 96-100
- ²⁰ The Asthma and Allergy Foundation of America. Asthma Facts and Figures. http://www.aafa.org/display.cfm?id=9&sub=42#_ftn20
- ²¹ Bloomberg GR, Trinkaus KM, Fisher EB, et al. *Hospital Readmissions for Childhood Asthma: A 10-year Metropolitan Study*. *American Journal of Respiratory and Critical Care Medicine*. 2003. Vol. 167: 1068-1076
- ²² Thai A.L., George M., *The Effects of Health Literacy on Asthma Self-management*. *Journal of Asthma & Allergy Educators*. 2010: Vol. 1 (2): 50-55
- ²³ Aetna News Releases, Aetna Launches Program to Improve Asthma Outcomes of African American and Hispanic Medicaid Members In Delaware. March 7, 2011. http://www.aetna.com/news/newsReleases/2011/0307_AsthmaOutcomes.html
- ²⁴ National Committee for Quality Assurance/State of Healthcare Quality 2010/HEDIS Measures of Care: 57-58
- ²⁵ National Committee for Quality Assurance/State of Healthcare Quality 2010/HEDIS Measures of Care: 57-58
- ²⁶ Medicaid Managed Care Quality Benchmarking Project: Final Report/Appendix E. NCQA. 2010. <https://www.cms.gov/MedicaidCHIPQualPrac/Downloads/NCQAMBench.pdf>
- ²⁷ National Committee for Quality Assurance HEDIS 2012 Public Comment. <http://www.ncqa.org/tabid/938/Default.aspx>
- ²⁸ Medicaid Managed Care Quality Benchmarking Project: Final Report/Appendix E. NCQA. 2010. <https://www.cms.gov/MedicaidCHIPQualPrac/Downloads/NCQAMBench.pdf>
- ²⁹ The Agency for Healthcare Quality and Research/Child Health Care Quality Toolbox/Established Child Health Care Quality Measures. <http://www.ahrq.gov/chtoolbox/measure3.htm#PAAR>



MEDICAID HEALTH PLANS OF AMERICA

MHPA

CENTER FOR BEST PRACTICES

1150 18th Street, NW
Suite 1010
Washington, DC 20036
(202) 857-5720
FAX (202) 857-5731
info@mhpa.org
www.mhpa.org