Achieving Better Care for Asthma

CHCS

Center for Health Care Strategies, Inc.







Best Clinical and Administrative Practices for Medicaid Health Plans

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Achieving Better Care for Asthma

A Best Clinical and Administrative Practices Toolkit for Medicaid Health Plans

About the Center for Health Care Strategies

The Center for Health Care Strategies promotes high quality health care services for low-income populations and people with chronic illnesses and disabilities. We achieve this objective through awarding grants and providing "real world" training and technical assistance to state purchasers of publicly financed health care, health plans, and consumer groups. Our projects aim to improve access to care, increase the use of effective preventive care services, prevent unnecessary hospitalizations and institutionalizations, promote clinical quality by using accepted standards of care, and build organizational capacity to improve managed care services.

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Preface

Best Clinical and Administrative Practices (BCAP) is a five-year, \$4.4 million initiative of the Center for Health Care Strategies (CHCS) to improve the quality and cost effectiveness of care provided by health plans serving Medicaid and State Children's Health Insurance Program (SCHIP)* enrollees. The program is funded primarily with a major grant by The Robert Wood Johnson Foundation, with additional support from The Commonwealth Fund.

BCAP targets key areas for quality improvement within Medicaid managed care, including birth outcomes, preventive care services for children, achieving better care for asthma, children with special health care needs, adults with chronic illnesses and disabilities, and early child development services. For each topic, BCAP convenes a workgroup of eight to 15 health plan medical directors and other health plan decision makers to develop and pilot best practices. These best practice models are shared with health plans nationwide through workshops and toolkits.

The BCAP Achieving Better Care for Asthma workgroup convened 11 health plans that worked collaboratively to develop and pilot best practices for more effective asthma care. In the last decade, a great deal of work has been done to develop and implement programs to improve care for people with asthma. Despite these efforts, however, asthma care for people in low-income families remains a challenge. Systems of care often are fragmented and many providers need the necessary knowledge and support to address the needs of these individuals. Improvements in the medical management of asthma depend on coordinating efforts among providers to address simultaneously the medical needs and personal circumstances that interfere with health outcomes. The move by many states to provide health services to low-income families through managed care arrangements presents an opportunity to improve the management of asthma.

*Activities in this toolkit relate to both Medicaid and State Children's Health Insurance Program enrollees. To simplify text, Medicaid is used throughout the toolkit to represent both populations.

¹ The Evolution of the Oregon Health Plan: First Interim Report. Health Care Financing Administration. Springfield, VA, National Technical Information Service, 1999.

² Brodsky KL and Baron RJ. "A 'Best Practices' Strategy to Improve Quality in Medicaid Managed Care Plans." Journal of Urban Health, December 2000.

Using this Toolkit to Benefit Your Health Plan



This toolkit offers a structured approach for addressing quality improvement and a collection of "lessons learned" by a diverse group of health plans serving Medicaid members. Whether your health plan intends to develop a new asthma management program or is seeking to improve an existing program, this toolkit offers practical, realistic approaches that can help you:

- Recognize common barriers faced by Medicaid plans in achieving better care for members with asthma.
- Develop strategies to overcome these barriers.
- Review clinical and administrative strategies that other health plans have implemented.
- Measure incremental and long-term change.

As reported by the National Asthma Education and Prevention Program (NAEPP) Task Force, most health plan leaders agree that it is important to develop programs supporting better care for asthma because:³

- More than 12 million people in the United States suffer from asthma, five million of whom are under the age of 18.
- Asthma disproportionately affects the urban poor.
- Children from low-income populations and certain racial and ethnic groups are more likely to report fair or poor health due to asthma.⁴
- Despite many advances in the treatment of asthma, the rates of asthma-related hospitalizations and emergency department visits have risen steadily.
- In 1990, the health care costs of asthma amounted to \$3.4 billion. By 1996, that figure rose to \$4.6 billion *just for children with asthma.*⁵

How this Toolkit is Organized

The toolkit begins with a brief discussion of the process improvement model used in BCAP. It then presents the BCAP "Typology for Improvement" developed for the *Achieving Better Care for Asthma* workgroup, followed by a separate chapter covering each typology category. For each typology category, an inventory of change strategies is listed, followed by case studies of innovative pilot projects of this workgroup. The next chapter describes methods to improve provider practices in designing more effective asthma management services. The last chapter outlines effective communication tactics to facilitate change. Finally, the Appendices provide sample tools from BCAP workgroup health plans and other relevant materials.

³ National Asthma Education and Prevention Program Task Force Report on the Cost-Effectiveness, Quality of Care, and Financing of Asthma Care. American Journal of Respiratory Critical Care Medicine, 1996.

⁴ Summers LL and Simpson J. Asthma Care for Children: Financing Issues. Center for Health Care Strategies, October 2001.

⁵ Center on an Aging Society analysis of data from the 1996 Medical Expenditure Panel Survey.



How this Toolkit was Developed

The contents of this toolkit reflect the experiences of the *Achieving Better Care for Asthma* workgroup, a group of 11 health plans that collaborated to develop and pilot best practices for improving asthma outcomes in their enrollee populations.

The health plans in the *Achieving Better Care for Asthma* workgroup continue to refine their BCAP-related quality improvement strategies and actively participate in the BCAP Network, an alliance of health plans joined by the common goal of furthering the quality and cost-efficiencies of Medicaid managed care.

Throughout this toolkit, you will learn from the projects undertaken by these health plans. Some of them have demonstrated impressive results and chart paths you may want to follow. Some of them provide clear documentation of hypotheses that have yet to realize the intended results. All are works in progress, and they have been selected by the authors because they each have lessons to impart.

Health Plan	Location	Medical Director Participant	Number of Medicaid Members*
Affinity Health Plan	Bronx, NY	Susan Beane, MD	83,700
AmeriChoice Northeast	New York, NY	Steven Arnold, MD	258,000
CareOregon	Portland, OR	David Labby, MD	88,000
Cimarron Health Plan	Albuquerque, NM	Stephen Ryter, MD	66,330
Community Health Plan of Washington	Seattle, WA	Melicent Whinston, MD	112,858
Health Plus	Brooklyn, NY	Arthur Levin, MD	148,000
University of Oklahoma dba Heartland Health Plan of Oklahoma	Oklahoma City, OK	Kathy Musser, MD**	115,733
Network Health	Cambridge, MA	Allan Kornberg, MD	45,000
Partnership HealthPlan of California	Suisun City, CA	Chris Cammisa, MD	77,000
Passport Health Plan	Louisville, KY	Jacqueline Simmons, MD	118,000
UCare Minnesota	Minneapolis, MN	Craig Christianson, MD	75,000
Total Medicaid Membership			1,187,621

Table 1: Achieving Better Care for Asthma Workgroup Health Plans

*Plan estimates as of August 2002.

** Dr. Musser left the health plan in July 2002.

Measuring for Success: A Process Improvement Strategy

Sustained improvement requires fundamental change in the care-delivery system.⁶ Health plans participating in BCAP are encouraged to test changes for long-term viability using a structured model for improvement. Such models provide guidance and focus for health plans implementing change. They also create a common language and approach that facilitates communication and shared learning among the health plans.

A Brief Guide to The Model for Improvement

There are numerous improvement models used in the managed care industry. All offer a systematic guide for identifying problems and making changes. The Model for Improvement⁷ used by the *Achieving Better Care for Asthma* workgroup identifies aim, measure, and change strategies by asking three questions:

AIM	What are we trying to accomplish?
MEASURE	How will we know that a change is an improvement?
CHANGE	What changes can we make that will result in improvement?



The framing of these questions is followed by the use of learning cycles to plan and test changes in systems and processes. These are referred to as P-D-S-A (Plan-Do-Study-Act) cycles. The P-D-S-A cycles guide improvement teams through a systematic analysis and improvement process.



⁶ Headrick L, Katcher W, Neuhauser D, and McEachern E. "Continuous Quality Improvement and Knowledge for Improvement Applied to Asthma Health Care." *Joint Commission Journal on Quality Improvement*, 1994.

⁷ Langley G, Nolan K, Nolan T, Norman C, and Provost L. *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance*, 1996.

Step 1: Creating Your Aim Statement

An Aim Statement recognizes a deficiency in an important process or performance measure. It provides a clear goal for your plan's quality improvement team. An effective Aim Statement is clear and specific, and sets "stretch" goals (quantitative targets that are a real reach).

Principles of an Effective Aim Statement

- Write clearly.
- Use specifics.
- Set direction.
- Set numerical goals.
- Set "stretch" or ambitious goals.

Examples of Aim Statements

"Identify 100 percent of health plan members, age two-18 years, who have asthma."

"75 percent of members with asthma will have an asthma action plan."

Step 2: Creating Measures for Improvement

Establishing a "culture of measurement" within health plans is critical to providing quality, cost-effective care. Most health plans have quality improvement departments responsible for creating initiatives to improve the health care and satisfaction of their enrolled members. Where these initiatives often fall short, however, is in measuring the effectiveness of the implemented approach or improvement. The Health Plan Employer Data and Information Set (HEDIS)⁸ guidelines establish outcomes that health plans can use to measure improvement, but these measures are collected at lengthy intervals and are mainly useful for analyzing long-term trends.

Measurement for improvement differs substantially from judgment-based measurement in clinical research.⁹ Large amounts of data collected over long periods are rarely required to assess the impact of a change. Small repeated samples collected over time will allow you to document progress toward your aim.

Process measures will let you know whether your change is having the expected impact, and in some cases, can highlight the cause of unexpected results. These measures provide short-term feedback to evaluate ongoing improvement efforts. Process measures should be a direct reflection of the Aim Statement.

Creating Process Measures

- Seek usefulness, not perfection.
- Use small, repeated samples.
- Measure over time and over a wide range of conditions.
- Include quantitative and qualitative measures.

Linking Measures to Aims Aim "Contact 90 percent of all

members who have asthma."

Measure Numerator: # of successful outreach attempts to members who have asthma

<u>Denominator:</u> # of members with asthma

⁸ HEDIS is a registered trademark of the National Committee for Quality Assurance.

⁹ Solberg LI, Mosser G, and McDonald S. "The Three Faces of Performance Measurement: Improvement, Accountability, and Research." *The Joint Commission Journal on Quality Improvement*, 1997.

Step 3: Identifying, Planning, and Testing a Change

This toolkit inventories the change strategies tested by the plans in the *Achieving Better Care for Asthma* workgroup. The workgroup members selected strategies based on the needs of their own organizations. As you review these, consider which aims most closely reflect those of your organization. Then, review the strategies and barriers listed to determine which are best suited for your health plan. Test selected changes on a small scale, review measures, make adjustments, and measure again. Repeat the cycle until you are satisfied with the results.

As you plan to test a change, specify the "who, what, where, and when," so that all project staff know their roles clearly. Careful planning will foster successful implementation. Be sure to plan for appropriate **training** and **communication** when you "go live" with the change. Use an "Improvement Documentation Form" (Appendix A) to help with planning the change.

Why Test a Change?

- Document magnitude of expected improvement.
- Opportunity for "failure" without having an impact on performance.
- Evaluate "side effects" of change.
- Learn how to adapt the change to your local setting.
- Minimize resistance on full implementation.

Key Principles for Testing a Change

- Start small.
- Use volunteers.
- Don't worry about full buy-in.
- Plan multiple cycles to test and adapt change.

The improvement strategies documented in this toolkit are not "one-size-fits-all." Running testing cycles before full implementation offers a safe way to try something new and make modifications, while minimizing resource use and impact on the organization.

Measuring in Common: Highlighting Trends Over Time

Health plans participating in the Achieving Better Care for Asthma workgroup agreed to collect a common set of measures to reflect the progress of the initiative on a broader scale. The common measures included HEDIS measures as well as new measures that the workgroup developed. The purpose of collecting common measures is to document improvement and to show how each plan is improving from its own baseline. These measures provide a common metric for health plans in the BCAP workgroup to track progress.

What Common Measures Are Not

Market variations, carve-outs, population differences, physician practice patterns, and plan design may vary significantly among health plans. Common measures are not intended for comparisons of health plan performance, but rather to highlight improvement trends within each health plan.

Collecting BCAP Workgroup Measures

We encourage you to identify measures in Table 2 that will allow you to track the overall success of your improvement initiative, in addition to measuring the effects of individual changes.

Table 2: BCAP Workgroup Common Measures for Achieving Better Care for Asthma

Measure	Description
Identification 1) % of members with diagnosis of asthma	# of members meeting definition of asthma All members in health plan
Stratification 1) % of members with asthma stratified	# of members with asthma stratified by plan's criteria # of members with asthma
2) Validity of stratification	<pre># of members stratified into same category by two methods # of members with asthma stratified</pre>
Outreach	
1) Contact rate	<pre># of members with asthma "successfully" contacted* # of members with asthma attempted to contact</pre>
2) Participation rate	 # of members with asthma engaging in program activity # of members with asthma contacted
	* A successful contact is defined according to the health plan's outreach method (e.g., mailings not returned, completed phone calls, home visits).
Intervention	
1) % of members with asthma hospitalized	# of members with one or more asthma admissions in 12 months # of members identified with asthma in the same period
2) % of members with asthma who visit the emergency department (ED)	# of members with one or more asthma visits to ED in 12 months # of members identified with asthma in the same period
3) Average missed work or school days per member with asthma	<pre># of days missed at school or work reported by member # of members with asthma surveyed</pre>
4) % of members with asthma with written asthma management plan	<pre># of members with asthma with a written management plan # of members with asthma</pre>
5) Quality of life	Measure varies according to quality of life tool chosen by plan.
6) Appropriate medication use	HEDIS measure without continuous enrollment criterion.

A Typology for Improvement

CHCS developed a "Typology for Improvement" to classify health plans' activities in designing quality initiatives. The four-step classification system addresses barriers commonly faced by health plans serving Medicaid beneficiaries. The model was developed based on interviews with health plan medical directors and quality improvement directors in 10 states. Participating health plans have found the structure of the typology useful in considering strategies for improvement. It offers a template for approaching quality initiatives that can be customized for a variety of clinical quality improvement projects.

Typology Category	Description
Identification	How do you identify the relevant population?
Stratification	How do you assign risk within that population?
Outreach	How do you reach the target population?
Intervention	What works to improve outcomes?



Applying the Typology to Achieving Better Care for Asthma

- ▶ Identification Identifying members with asthma is the first step toward improving the management of their condition. Useful activities may include:
 - Examining the current method the health plan uses to identify members with asthma.
 - Encouraging providers to assist the health plan in identifying members with asthma.
 - Creating and regularly updating a registry for those members with asthma.

Health plans that invest in efforts to identify members with asthma are in a better position to offer case management or support services to those most at risk of poor health outcomes.

- Stratification Once the health plan has identified its population of members with asthma, how does it determine which members are most at risk of having poor outcomes? Risk factors include:
 - A history of hospitalization for asthma.
 - Emergency department use for asthma.
 - Inappropriate use of asthma medications.
 - Multiple asthma-related absences from school or work.

• **Outreach** Ongoing outreach efforts are critical to ensure that members have access to appropriate services and adhere to asthma management regimens. Health plans must evaluate:

- How does the health plan reach its members with asthma?
- Does the health plan make regular calls to members? Does the plan have a home visiting program, or a community presence?
- Once members with asthma are contacted, how does the health plan encourage ongoing asthma self-management?

Intervention Once the health plan has identified members with asthma, determined their level of risk, successfully contacted them, and encouraged them to participate in asthma management activities, what interventions does the plan offer to meet member needs? Questions to consider include:

- What programs are available to members with asthma who are at risk for poor outcomes?
- Are these programs cost effective?
- Do members use the service?
- Can the plan document improvements in health outcomes as a result of these programs?

While this typology is useful for organizing tactics into a systematic strategy, there also can be overlap between typology categories. A successful effort to improve identification, for example, can promote activities in stratification, outreach, and intervention. This toolkit is meant as a guide to help organize ideas, but also is designed to allow flexibility for creative planning and design of new initiatives.

Identification



How and when does the health plan find out which of its members has asthma?

By identifying members in need of asthma management services, health plans can address risk factors through outreach and intervention strategies. It also is essential to assess the resources necessary to identify members at risk. Plan data systems and information sources might allow the plan to get basic demographic information, but not provide detailed data that will help the plan more effectively target limited resources.

Here are approaches for identifying members with asthma that can be combined and cross-referenced to identify more members:

- Perform a claims run for ICD-9 493.xx codes.
- Perform pharmacy data analysis on all bronchodilators and inhaled steroids.
- Collaborate with other health plans to build a regional registry.
- Collaborate with schools or school-based health centers to identify children with asthma using standard screening questionnaires.

Additional approaches include:

- Searching durable medical equipment claims for asthma-related devices, e.g., nebulizer, peak flow meter.
- Obtaining information from members, e.g., through new member surveys and a recorded message on the plan's main phone number, such as "Press 6 if you have asthma."
- Searching encounter data.
- Performing chart reviews.
- Enlisting enrollment brokers to identify new members with asthma.
- Screening health risk assessments in new member welcome calls.

All of these strategies may present barriers, such as untimely availability of claims data, asthma-related drugs and durable medical equipment used for conditions other than asthma, incorrect use of the 493.xx diagnostic code for conditions other than asthma, inaccurate recording of asthma on encounter data, and high resource commitment. The 11 health plans in the *Achieving Better Care for Asthma* workgroup piloted a combination of ways to increase identification of members with asthma, measured success rates, frequently measured their impact, selected the most useful methods, and discarded approaches with little yield.

Measuring the appropriate identification rate often presents a challenge for plans. For example, if a plan's aim is to identify 100 percent of members with asthma, how would a plan verify that all members with asthma are identified? There are some benchmarks that can be used, including:

- Comparing plan's identification rate to local prevalence estimates.
- Comparing plan's identification rate to the number of acute episodes already known to the plan by prior identification (e.g., ED visit, hospitalizations).

Developing an Asthma Registry

Four plans in the *Achieving Better Care for Asthma* workgroup developed asthma registries as part of their quality improvement projects. A disease registry is a database that contains information about people diagnosed with a specific type of disease. Registries can be used to support information needs for improvement activities, including member identification, stratification, monitoring, and care management. Details of the asthma registries created by workgroup plans are outlined below.

	CareOregon	Network Health	Partnership HealthPlan of California	Community Health Plan of Washington
Purpose of Registry	Identify members and offer a management tool for providers.	Identify and stratify members with asthma to direct out- reach to members and providers.	Central repository for members identified with asthma.	Identify and stratify members with asthma to direct outreach to members and providers.
Principal Use	Create detailed reports for clinics and primary care providers.	Identify and stratify members for phone outreach and maintain record of contact.	Identify the population and establish a prevalence rate.	Create reports for clinics to identify members who bene- fit from outreach.
Is Registry a Stand- Alone Database for Asthma?	Yes. In the future, CareOregon plans to devel- op one electronic database for disease management.	Yes. Network Health plans to integrate other chronic con- ditions into the database.	Yes. Partnership manages separate databases for other chronic conditions.	Yes. Separate databases exist for other conditions, such as diabetes.
Registry Initially Populated by	Running Structured Query Language with asthma case definition.	Pharmacy, medical claims, provider, and member databases.	Membership, medical claims/encounter, and pharmacy data.	Medical claims data, including demographic and utilization data, merged with pharmacy claims data.
Registry Updated	By running the code.	Automatically from databases and manually by care manager.	By running programs and updating with eligibility data.	By running programming code.
Frequency of Update	Quarterly.	Monthly.	At least quarterly.	Monthly.
Software	Customized Structured Query Language code and Crystal reports.	Microsoft Access with Visual Basic.	Microsoft Access.	Structured Query Language- Server.
Accessibility	Health plan and reports sent to providers.	Health plan only.	Health plan only.	Health plan only.
Reports	 Patient lists for clinics and primary care providers. Medication detail report. 	 Stratification summary. Outreach trigger report. Utilization reports. Primary therapy. Pharmacy report. Rescue pharmacy report. BCAP contact rate. 	None currently. Reports are generated from a previ- ously created database.	 Lists of asthma patients for distribution to prima- ry care clinics. High-risk status for tele- phone outreach using inpatient and emergency department use and pre- scription medication fills.
Data Fields	 Member demographics. Pharmacy utilization. Medical utilization: Inpatient. Outpatient. Emergency department. Primary care provider/clinic. Performing physician. 	 Member demographics. Primary care provider. Stratification. Missed school/work days. Missed activity. Night waking. Peak flow meter, spacer. Severity history. Outreach history. Medical utilization. 	 Member demographics. Asthma severity level. Membership eligibility status flag. 	 Member demographics. Primary care clinic. Stratification. Inpatient utilization. Emergency department utilization. Pharmacy utilization.

Table 3: Examples of Asthma Registries

• Pharmacy utilization.

Health

Plan Case Studies

Passport Health Plan: Broadened Asthma Identification Criteria

BACKGROUND: Passport Health Plan is a provider-owned health plan with 118,000 enrollees in Kentucky.

AIM: Identify all members, age two-56, with asthma, estimated at five percent of total plan membership within this same age range.

MEASURE: # of members, age two-56, identified with asthma # of members, age two-56, in health plan

CHANGE: Passport identified members using the following criteria:

- 1. Members, age two-56, and
- 2. One pharmacy claim for an asthma drug within the quarter being measured (for a total of at least four pharmacy claims for an asthma medication within the past 12 months HEDIS), or
- 3. At least one emergency department or inpatient admission within the past 12 months with a 493.xx primary diagnosis, **and**
- 4. Active with the plan in the last month of the quarter being measured.

Prior to this new identification criteria, a member was identified as having asthma only if they met all of the above listed criteria for identification. This change was implemented in the third quarter of 2001 and compared to results from the first two quarters of 2001.

RESULTS/LESSONS LEARNED: Passport increased identification of members with asthma from a baseline of three percent in the first two quarters of 2001 to five percent in the third quarter of 2001. Since the first quarter of 2002, Passport has identified five percent of its members with asthma. This satisfies the plan's goal and reflects the American Lung Association of Kentucky's reported asthma prevalence rate of five percent.

The plan believes that using a combination of pharmacy and medical claims helped increase the identification of members with asthma.

NEXT STEPS: Passport Health Plan will visit high-volume practices to educate office staff and providers on NAEPP asthma guidelines in an effort to identify high-risk members with asthma earlier.



Figure 1: Passport Health Plan Members with Asthma – January 2001-April 2002

Affinity Health Plan: Multi-Tiered Approach to Identification

BACKGROUND: Affinity Health Plan is a non-profit managed care organization serving 83,700 Medicaid and SCHIP members in New York City and the five surrounding counties.

AIM: Identify 100 percent of Affinity Health Plan's members with asthma by analyzing claims, pharmacy, utilization management, and self-referral data.

- **MEASURES:** 1. *#* of members identified with asthma *#* of members in health plan
 - 2. *#* of members with asthma identified from each specific data source *#* of members with asthma identified from all data sources

CHANGE: Affinity standardized the process of identifying members with asthma as early as possible by using a variety of sources and enrolling the members into Affinity's asthma disease management program, AIR. Affinity adopted a multi-tiered identification approach that tapped a variety of data sources to increase the rate of timely identification of members with asthma. Beginning with the identification of members with asthma through the new member Health Risk Assessment (see Appendix B) and inpatient utilization data, additional data sources were developed and now include claims (ICD-9 codes 493.00 – 493.92), pharmacy, and a variety of self-referral or physician-referral forms.

RESULTS/LESSONS LEARNED:

- 1. The new initiative resulted in a four-fold increase in the number of members with asthma identified and enrolled in AIR. The plan increased identification from .7 percent in the first quarter (628 members) to 8.1 percent in the fourth quarter (9,932 members). The source of identification was tracked for members enrolled in the program.
- 2. Each data source was reviewed to enhance its use as a vehicle for effective identification. For example, the Health Risk Assessment form had a poor rate of return until it was updated and placed more prominently in the Member Handbook. As seen in Figure 2, within the first quarter after the change, the return rate for this form tripled, from 140 in the first quarter to 470 in the fourth quarter.

NEXT STEPS: Affinity is creating an asthma registry, which will be automated to collate all data sources each month and to track all members with asthma by initial source of identification, e.g., Health Risk Assessment form, pharmacy data, etc. Affinity will continue to review the effectiveness of each data source and its role in the early identification of members with asthma.



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Community Health Plan of Washington: Tapping Utilization and Pharmacy Data to Identify Members with Asthma

BACKGROUND: Community Health Plan of Washington (CHPW) is a non-profit health plan with 112,858 Medicaid and SCHIP members.

AIM: Identify 100 percent of members, age two-14, with asthma.

MEASURE: # of members, age two-14, identified with asthma # of members, age two-14, enrolled in health plan

CHANGE: CHPW developed criteria to identify members, age two-14, with asthma using utilization and pharmacy data. CHPW identified members with asthma through the following criteria:

- Inpatient, emergency room, or ambulatory claims with ICD-9 code of 493.0-493.9, or
- Any member having filled pharmacy claims in the past 12 months for:
 - Two or more fills of an inhaled beta-agonist.
 - One or more fills of an inhaled steroid.
 - One or more fills of a leukotriene modifier.
 - One or more fills of cromolyn or nedocromil.
 - One or more fills of theophylline and age at least six months.

The information is housed in a newly created asthma registry. The plan updates asthma prevalence rates monthly and compares these rates with those of the Washington State American Lung Association that are published annually.

RESULTS/LESSONS LEARNED: As of June 2002, CHPW reported an eight percent prevalence rate for members with asthma, which is comparable to the Washington State American Lung Association's rate of near nine percent. CHPW has integrated the asthma registry into its business operations. For example, case managers receive daily reports listing members who have been admitted for short-stay hospitalization. The asthma coordinator, a registered nurse, uses this information to monitor members who have been recently hospitalized and to tailor outreach to their needs.

CHPW's initial barrier was the limited availability of a data programmer to produce timely reports. Communicating with the plan's information systems team that the success of the asthma project depended on prompt reports brought an agreement to generate reports every month for the asthma project staff.

NEXT STEPS: The CHPW asthma project staff is creating a multi-departmental task force to streamline report requests and increase coordination with the information systems team. Project staff is improving the registry to produce information about asthma medication prescribing patterns based on HEDIS guidelines. This information helps primary care providers increase their use of maintenance medication through face-to-face provider training sessions and provider profiling.

UCare Minnesota: Redefining Diagnosis Codes to Enhance Identification

BACKGROUND: UCare Minnesota serves approximately 75,000 Medicaid and state-subsidized health insurance beneficiaries, of which approximately 53,000 are eligible for the plan's asthma program. UCare uses an outside vendor to conduct its asthma management services.

AIM: Identify 100 percent of people with asthma who are eligible for UCare's asthma program.

MEASURE: # of members identified with asthma

 # of members eligible for asthma programs

CHANGE: UCare developed the following criteria to identify members with asthma:

- 1. One hospital claim, ICD-9 code 493.xx, or
- 2. Two medical (non-hospital) claims, ICD-9 code 493.xx, or
- 3. One medical claim and one asthma drug pharmacy claim, or
- 4. Two asthma drug pharmacy claims, or
- 5. For members between ages two to five, use above claim combinations but add ICD-9 codes 496, 786.09, 786.2, 491, 491.8, and 491.9.

Previously, other ICD-9 codes (491-chronic bronchitis and 786-respiratory symptom codes) were counted as "asthma" and only one pharmacy claim or one medical (non-hospital) claim was used. This resulted in a 12 percent rate of "denies disease." Investigation of this rate showed it to be primarily due to the use of asthma drugs, particularly inhalers and nebulizer drugs, to treat conditions other than asthma. In other instances, an asthma diagnosis code was used for conditions other than asthma. The revised criteria dropped the 491, 496, and 786 codes for members older than five years of age.

RESULTS/LESSONS LEARNED: UCare Minnesota learned to be cautious when using overly-generalized diagnosis codes. The change in definition resulted in a reduction in the "denies disease" rate from 12 percent to five percent. To date, 5,282 members have been identified as having asthma, representing a prevalence rate of 9.8 percent. The estimated prevalence rate for asthma in similar populations is eight to nine percent, and UCare Minnesota is confident it has identified the majority of plan members with asthma.

ate of 9.8 percent. The estimated prevalence rate for ne percent, and UCare Minnesota is confident it has th asthma.

Health Plan Action Steps for Identification

My health plan's challenges:

3._____

1._____

2._____

Aim:

Develop an Aim Statement that focuses on increasing the number of members identified with asthma. For example: *Identify 100 percent of members, age five-18, with asthma.*

Measure:

Assess your plan's ability to measure your Aim Statement. Avoid outcome measures (e.g., decrease in bronchodilator use) and develop measures that link directly to your Aim Statement. Measure this for the initial time period and on an ongoing basis. For example:

of members, age five-18, identified with asthma *#* of members, age five-18, in the health plan

Change:

Evaluate current methods of identification and change strategies that will effectively fulfill your Aim Statement. To help you brainstorm, review the change strategies included in this chapter.

Next Steps:

Include staffing issues, funding, timeframes, etc.

Stratification



How can a plan obtain and use health risk information about members in need of asthma management services?

Stratification is the process by which a plan determines which subpopulations of members are most at risk for not receiving asthma services. How does the health plan determine which members are at risk for poor health outcomes? How does the plan know which members could benefit from enhanced outreach services that will encourage them to seek care? Chart reviews, member welcome calls, and targeted reminders to families can be used to assess members in need of asthma management services.

Steps to Assess Risk of Members with Asthma:

- 1. Identify specific risk factors (e.g., asthma-related emergency department visits or hospitalizations, smoking, excessive use of bronchodilators, and household pets).
- 2. Classify the member's level of risk as low, moderate, or high.
- 3. Determine which risk factors are modifiable (e.g., inappropriate use of asthma medication, smoking, and household pets).

A common challenge in assessing the status of members with asthma is that risk assessment techniques used by health plans and providers may not capture relevant risk information. For example, if household pets or tobacco smoke in the indoor ambient air are important modifiable risk factors, does the risk assessment tool capture them?

Assessing health risks for members with asthma is complicated because persistent asthma may become more severe or less severe over time. Symptom flare-ups may be relatively mild or very severe, regardless of the severity of the member's asthma.

Strategies to Improve Member Stratification

Improve Risk Assessment Information Received from Providers:

- Perform chart reviews in provider practices with a high volume of asthma patients to identify members requiring enhanced asthma services.
- Offer provider incentives for submission of asthma management plans.
- Stratify providers by specialty, practice affiliation, and number of members to evaluate variations in practice patterns and create a profiling system.

Improve Risk Assessment Information Received from Members:

- Provide online or voice-activated risk assessment for members who visit the health plan website or who call the plan.
- Conduct welcome calls to new members and include questions about the presence of asthma.

Improve Risk Assessment Information Received from Other Sources:

- Standardize health risk assessment tools across health plan departments (e.g., member services, case management).
- Standardize health risk assessment tools across health plan providers.
- Standardize health risk assessment tools across health plans.
- Participate in asthma registries in the area.

Get the Most Out of Data in the Health Risk Assessment:

- Use risk assessment forms and claims, encounter, and pharmacy data to stratify members for key factors, including:
 - Medicaid eligibility category.
 - Number and ages of household members with asthma.
 - Ethnicity.
 - Language spoken at home.
 - Smoking among household members.
 - Household pets.
 - Pattern of use of beta-agonists and inhaled steroids.
 - History of asthma-related hospitalizations and emergency department use.
- Designate one department within the health plan for data collection and distribution.
- Establish a process to evaluate data and determine appropriate follow up.
- Develop a decision tool to highlight members with modifiable risk factors.

Assessing Members with Asthma: The Severity/Risk Mix

Many people in the medical and managed care communities use the term asthma severity to mean different things, leading to much confusion. Asthma severity in the biologic sense cannot be assessed directly; rather, it can be inferred by considering the degree to which symptoms are controlled in the context of specific medical management.

Common Ways to Categorize and Monitor

To classify a member's asthma severity, health plans can use national guidelines or their own administrative data, including claims data, patient surveys, and chart reviews. Health plans in the *Achieving Better Care for Asthma* workgroup found a combination of these approaches to be most effective in their stratification efforts.

Level of Severity	Day Time Symptoms*	Night Time Symptoms**	Beta-Agonist Use	Lung Function
Mild, intermittent	< or equal to two per week	< or equal to two per month	< or equal to two uses per week	> or equal to 80 percent
Mild, persistent	Three to six per week	> or equal to three to four per month	Three to six uses per week	> or equal to 80 percent
Moderate, persistent	Daily	> or equal to five per month	> zero uses, but < or equal to two uses per day per week	> 60 percent and < 80 percent
Severe, persistent	Continual	Frequent	> two uses per day per week	< or equal to 60 percent

Table 4: NAEPP Asthma Severity Categorization Criteria

*Day Time Symptoms: Wheeze, Cough, Chest Tightness, Shortness of Breath

****Night Time Symptoms:** Frequency of Cough, Wheeze, Awakening from Sleep

While the NAEPP asthma guidelines are extremely helpful, there are some disadvantages to keep in mind:

- The NAEPP analysis is designed for patients who have yet to begin treatment; thus, it does not help categorize severity in patients currently on asthma medications, although it does give a good indication of their degree of control.
- A patient may have severe disease, but may have well-controlled asthma with minimal symptoms and relatively normal lung function.
- The information required to use the NAEPP approach must come from patient interviews. While medical records may have such information, it typically is not well recorded.
- Although these criteria are widely accepted, they have not been well validated. In particular, they may not apply well to the care of young children (0-3), who typically have relatively severe exacerbations with viral infections and fewer symptoms in between.

Clearing the Confusion: National Asthma Care Guidelines

A plethora of asthma care guidelines exist from organizations across the country, complicating the task of health plans and providers to identify and follow one standardized set of guidelines for all patients with asthma.

The most widely used national asthma care guidelines were developed by an expert panel of the National Asthma Education and Prevention Program, which is coordinated by the National Heart, Lung and Blood Institute (NHLBI), a part of the National Institutes of Health (NIH). The NAEPP guidelines were established in 1997 and were published in the *Expert Panel Report: Guidelines for the Diagnosis and Management of Asthma*. The guidelines were updated in 2002. These asthma care guidelines are interchangeably referred to as the NAEPP, NHLBI, or the NIH asthma guidelines, or as the NAEPP Expert Panel Report.

The majority of the plans in the BCAP Achieving Better Care for Asthma workgroup used the NAEPP Expert Panel Report as a model for developing asthma guidelines. In this toolkit, we refer to them as the NAEPP asthma guidelines.

The NAEPP Expert Panel Report can be found at: www.nhlbi.nih.gov/guidelines/asthma/index.htm

Administrative Data

Administrative data can provide a tool for determining asthma severity. Indications of poor asthma control include prior hospitalizations for asthma, prior use of oral or systemic steroids, and emergency department visits.

Table 5: Useful Sources of Administrative Data for Classifying Asthma Severity

Medical Facility Usage	Medication Usage
 Hospitalizations There is a 25 percent likelihood that a person hospitalized in one year will be hospitalized in the next year. Emergency Department Visits There is a 15-20 percent likelihood that a person visiting an ED once in a six-month period will visit again within the year. In evaluating ED use, it is important to consider non-clinical factors such as lack of access to appropriate medical care, hours of operation, day of week, time of day, and cultural and social perspectives. 	 Bronchodilators/Albuterol If asthma is well controlled, these medications will ideally be used less than twice per week for brief flare-ups. Increased use of albuterol demonstrates either poor asthma control or poor quality practice. In either event, it is linked to an increase in hospital stays. Oral Corticosteroids Repeated use of oral corticosteroids indicates poor control and is associated with subsequent increase in likelihood of a hospital stay.
 Outpatient Visits Acute and maintenance visits should be evaluated separately. Acute office visits are comparable to ED visits, and likely indicate poor control. Scheduled office visits are likely to be desirable, and associated with better control in some studies. 	

Other Sources of Administrative Data: Patient Surveys and Chart Reviews

Health plans use a variety of approaches to assess asthma control, including patient surveys and chart reviews. What are the most effective tools? The following are a variety of techniques and information about reliability:

- The Asthma Therapy Assessment Questionnaire (ATAQ) survey produced by Merck & Co. can be helpful in assessing degree of control. ATAQ measures five asthma management domains: 1) asthma control; 2) knowledge barriers; 3) patient behavior/attitude barriers; 4) self-efficacy (patient beliefs); and 5) patient/provider communication barriers. The asthma control domain measures four indicators of control within seven of its items: 1) patient perception of control; 2) nocturnal symptoms;
 3) ability to participate in normal activities; and 4) overuse or increased use of reliever medications.
- HEDIS provides a rough estimate of asthma control in a plan's population. The criteria are designed to capture persistent asthma, but the measures reviewed tend to classify any asthma patient with a sudden flare-up in the persistent category. Care can meet the HEDIS quality criteria if a controller medication is prescribed even once.



- Chart reviews alone are generally not a reliable way to assess asthma severity or to review if patient education was provided. Generally, medical charts lack vital information that is relevant to monitoring the changing status of an asthma patient.
- Asthma action plans are an important tool to facilitate provider-guided patient self-management. The NAEPP guidelines identified the following components of an effective asthma action plan:

- A summary of treatment goals, such as freedom from symptoms, no lost days from school or work, etc.

- A summary of daily medications.
- A summary of daily self-monitoring actions, including:
 - Peak-flow measures.
 - Symptoms.
 - Frequency of use of quick-relief inhaler.
 - Actual use of daily medications.
 - Any restriction of activities.
- An Asthma Registry can provide convenient access to comprehensive data for providers and health plans. It also can track patient outcomes and compliance with treatment plans.

Health Plan Case Studies

CareOregon: Medication Analysis to Predict Moderate/Severe Asthma

BACKGROUND: CareOregon is a non-profit Medicaid health plan with 88,000 enrollees.

AIM: Stratify members with asthma, age five-11, as moderate/severe persistent asthma with at least 95 percent accuracy using claims data.

MEASURE:

of members, age five-11, identified by claims and verified by providers as having moderate/severe asthma

of members, age five-11, initially identified by claims as having moderate/severe asthma

CHANGE: CareOregon implemented a family intervention program to improve care for children with moderate/severe persistent asthma. To accurately stratify members who are eligible for the program, the plan developed criteria to identify members with moderate/severe asthma using claims and pharmacy data. Lists of members identified with moderate/severe persistent asthma were sent to providers to confirm accuracy of the stratification level. Providers were given referral forms (see Appendix C), including a symptom checklist, to complete for each member identified with moderate/severe persistent asthma. Completed referral forms were entered into a database. To validate the claims-based stratification, members who are ineligible for the program were compared with those found eligible.

RESULTS/LESSONS LEARNED: By June 2002, CareOregon providers verified 48 percent of the 614 children identified. Of the 292 stratified, 33 percent were found to be eligible for the asthma management program (e.g, have moderate to severe persistent asthma according to NAEPP asthma guidelines).

Disappointed by this low accuracy rate, CareOregon analyzed a sample of 203 children identified by claims with completed referral forms. CareOregon examined emergency department visits, outpatient visits, and medication usage, including short-acting beta agonist use and antiinflammatory use. Hospitalizations were excluded based on low volume.

CareOregon found that having an emergency department visit was not an accurate indicator of severity of asthma, and neither were outpatient visits or high use of Albuterol. The most useful measures for identifying children with moderate/severe asthma using claims are use of an anti-inflammatory medication or a combination indicator that includes either anti-inflammatory medication or six or more Albuterol dispensings in 12 months.. Using only anti-inflammatory dispensings, 74 percent of the children with moderate/severe asthma were identified, compared to 78 percent with the combination indicator.

NEXT STEPS: Care Oregon will continue to use the combination indicator (anti-inflammatory use or six or more Albuterol dispensings) as a stratification method. Providers like the medication analysis report because it provides real-time data (within a month of use) and it effectively identifies members with moderate to severe persistent asthma.

Cimarron Health Plan: Effective Medication Use Can Mask Severity of Asthma

BACKGROUND: Cimarron Health Plan is a for-profit health plan serving approximately 66,000 Medicaid members in New Mexico.

AIM: Stratify 100 percent of members with persistent asthma within one month of identification into mild, moderate, and severe persistent categories using medication.

MEASURES:

- 1. *#* of newly-identified members with asthma stratified within one month of identification *#* of members newly identified with asthma
- # of members stratified into mild, moderate, or severe persistent asthma categories
 # of newly-identified members stratified within one month of identification

CHANGE: Cimarron stratified members with persistent asthma into three levels of severity based on pharmaceutical usage, numbers of office and emergency department visits, and hospitalizations. Prior to this, members were stratified by case managers using only clinical criteria. A total of 4,638 members were identified as having asthma. Of those, 2,708 were stratified as having persistent asthma within one month of identification.

RESULTS/LESSONS LEARNED: In less than six months, Cimarron Health Plan increased its stratification rate from a baseline of 2.51 percent using only clinical information from case managers to 78.2 percent using the new stratification criteria. Members found to have persistent asthma are stratified into mild, moderate, or severe levels of severity. An important, and unexpected, lesson learned in this activity is that effective medication use can mask severity of asthma.

Medication Status	Severe Persistent	Moderate Persistent	Mild Persistent	TOTAL
Medicaid	1,309	121	1,278	2,708
Taking asthma drugs	94.04%	3.31%	61.58%	75%
Not taking asthma drugs	5.96%	96.69%	38.42%	25%
Total	100%	100%	100%	100%

Table 6: Medication Status of Cimarron's Members with Persistent Asthma

The table indicates that stratification based on clinical criteria alone may incorrectly stratify members with severe asthma who are well controlled as mild. This exercise highlights the importance of using pharmacy data in combination with clinical criteria so that the stratification tool does not mask members with severe or moderate asthma whose condition is effectively controlled by medication.

NEXT STEPS: Cimarron will continue to apply the new stratification tool on a quarterly basis to identify members for its asthma disease management program. It will continue to further refine the tool to separate members with mild persistent asthma from those with more severe asthma under control versus those with truly mild asthma.

Community Health Plan of Washington: Accurate Stratification Using Administrative Data

BACKGROUND: Community Health Plan of Washington (CHPW) is a non-profit health plan with 112,858 Medicaid/SCHIP members.

AIM: Stratify 100 percent of members with asthma, age two-14, as high risk or low risk using the plan's asthma registry. Verify accuracy of stratification method with clinical data obtained from a sample survey of patients with asthma in the high-risk category.

MEASURES:

- 1. *#* of members, age two-14, stratified by administrative criteria *#* of members, age two-14, identified with asthma
- 2. # of members, age two-14, with asthma classified as high risk
 # of members, age two-14, successfully stratified by administrative criteria
- 3. *#* of members, age two-14, classified as high risk by both administrative and clinical data *#* of high-risk members, age two-14, as classified by administrative data

CHANGE: CHPW separated its asthma patients into low- and high-risk categories using administrative data from the plan's asthma registry. The plan verified this stratification method by comparing the administrative risk classification with a clinical risk classification in a sample survey of asthma patients who fell into the high-risk category. The clinical risk classification is determined during phone calls with the member.

Administrative criteria for high risk:

- One or more emergency department visits for asthma in last 12 months.
- One or more inpatient admissions for asthma in the last 12 months.
- Four or more prescriptions of an inhaled beta-agonist in the last 12 months (or two or more in the last six months).
- One or more prescriptions of an oral steroid in the last 12 months.
- Four or more clinic visits for asthma in the last 12 months.

Clinical criteria for high risk:

- A member with persistent asthma who is not on a control medication.
- A member with intermittent or persistent asthma who does not recognize symptoms of worsening asthma or know the appropriate steps to take.
- A member with intermittent or persistent asthma who has a history of sudden worsening of symptoms, intubations, or intensive care admissions.
- A member with mild intermittent asthma who uses Albuterol more than twice a week; a member with mild or moderate persistent asthma who uses Albuterol daily or more than three to four times in one day; or a child who uses more than one canister per month.

RESULTS/LESSONS LEARNED: CHPW stratified 100 percent of its members, age two-14, with asthma in the asthma registry. Based on this, 52 percent of the identified asthma population fell into the high-risk category. CHPW then surveyed 79 members who met the criteria for high risk based on the administrative algorithm and found that 100 percent of these members had persistent asthma. Calculation of the proportion of these 79 persons who also meet the criteria for "clinical high risk" currently is underway. At this point, it is known that at least 58 percent of these 79 persons also are "clinically high-risk," because they are not receiving anti-inflammatory medications.

NEXT STEPS: CHPW is pleased with the registry's ability to stratify members into appropriate risk categories. CHPW will continue verifying its registry stratification method by surveying members identified as high risk through the registry.

Network Health: Using Pharmacy and Utilization Data to Build an Asthma Registry

BACKGROUND: Network Health is a provider-sponsored, non-profit Medicaid health plan with approximately 45,000 members in Massachusetts.

AIM: Stratify 100 percent of members with asthma, age two-18, based on pharmacy and utilization data, into categories of low, medium, and high risk of future utilization. Determine whether the members in the medium- or high-risk asthma categories are in or out of control based on the administration of Merck's Asthma Therapy Assessment Questionnaire (ATAQ).

MEASURES:

- 1. # of members, age two-18, with asthma stratified into low, medium, and high risk of future utilization # of members, age two-18, with asthma
- 2. # of medium- and high-risk members, age two-18, "out of control"
 - # of medium- and high-risk members, age two-18, with asthma completing ATAQ survey

CHANGE: Network Health developed an asthma registry (Appendix D) using pharmacy data, medical claims, and provider and member databases. The registry identifies members with asthma and automatically stratifies them into low, medium, and high risk of future utilization. Members who have had one ED visit, with asthma listed as one of the top four diagnoses, and/or have filled five or more beta-agonist prescriptions in a quarter, are classified as medium risk. If a member has an inpatient admission for asthma or two ED visits in a 12-month period, he or she is stratified as high risk. All other members with asthma are classified into the low-risk category. The registry is updated once a month and the Asthma Program Manager may add a member at any time. Medium- and high-risk members are assessed for asthma control by the Asthma Program Manager via telephone using the ATAQ survey.

RESULTS/LESSONS LEARNED: Network Health successfully stratified 100 percent of members, age two-18, with asthma. Most, 85 percent, were stratified into the low-risk category, with 11 percent in medium-risk and four percent in high-risk. Of the 328 members in the mediumand high-risk categories, the ATAQ survey was administered to 68 members, of which 37, or 55 percent, were found to be "out of control."

The ATAQ survey validates the stratification methodology. At the beginning of the project, Network Health estimated that, based on the survey, 50-75 percent of medium- and high-risk members would be measured as "out of control," and 55 percent of members surveyed have been assessed as "out of control."

NEXT STEPS: The goal is to have an asthma action plan in place for every member whose asthma is "out of control." All high-risk members, and any other member found to be "out of control," are offered home visits by a community agency that can provide further education and home assessment. Home visits also are available to other members with asthma at the discretion of the Asthma Program Manager.

Health Plan Action Steps for Stratification

My health plan's challenges:

1._____ 2._____ 3._____

Aim:

Develop an Aim Statement that focuses on increasing the number of members with asthma stratified by the health plan. For example: The health plan will receive completed health risk assessments from 80 percent of new members within three months of enrollment to facilitate early referral to asthma management services.

Measure: Assess your

Assess your plan's ability to measure your Aim Statement. Avoid outcome measures (e.g., decrease in number of asthma-related emergency department visits) and develop measures that link directly to your Aim Statement. For example:

of health risk assessments received from new health plan members within three months of enrollment # of new health plan members

Change:

Evaluate current methods of stratification and change strategies that will effectively fulfill your Aim Statement. To help you brainstorm, review the change strategies included in this chapter.

Next Steps: Include staffing issues, funding, timeframes, etc.

Outreach



How does a plan reach members in need of asthma care?

After members have been identified and stratified by risk level, health plans need effective ways to contact members and encourage use of appropriate health services. Outreach to the Medicaid population is particularly challenging. Health plan activities that often are used to reach members in need of asthma care, as well as potential barriers, are listed in Table 7.

Strategy	Barriers
Telephone Calls to Members	 Inaccuracy of phone numbers for Medicaid enrollees; lack of a phone in the household.¹⁰ Cultural competency and language issues.
Mailings to Promote Asthma Services	 More frequent moves among Medicaid members than among commercial members. Out-of-date mailing addresses. Literacy issues.
Home Visits by Community Outreach Workers	 Difficulty finding members at home; once found, poor success convincing them to come in for services. Problems recruiting plan staff willing to conduct visits to inner city or remote rural areas.
Newspaper/Media Ads and Public Service Radio Announcements	Literacy and language issues.Too diffuse to reach the specific people targeted for services.

Table 7: Common Outreach Strategies – Common Barriers

Successful health plan outreach efforts identify what members need or value. Health plans might link outreach services to risk factors identified in the health plan's stratification efforts. An outreach program designed to help members with social service needs (e.g., housing, transportation, child care) may be more effective in getting members with asthma in for care or self-management education than one focusing solely on clinical care improvements.

Strategies to Improve Outreach to Promote Better Care for Asthma

Member Outreach Strategies

- Ask incoming callers if any household members enrolled in the health plan have asthma. If so, remind them about the importance of asthma control.
- Conduct welcome calls to every new plan member that includes a message about asthma care services.
- Develop outreach programs targeted at grandparents and other relatives who may serve a key caretaking role for children with asthma.
- Maintain up to four alternative addresses and telephone numbers (e.g., grandparents, siblings, cousins) for each member to increase the chances of contacting members during outreach efforts.

 $^{^{10}}$ BCAP workgroup health plans noted phone number inaccuracy in the range of 30-70 percent.

Provider Outreach Strategies

- Offer financial incentives to providers to complete an asthma management plan.
- Reward and recognize providers who prescribe appropriate asthma prevention medications.
- Visit provider offices to educate physicians and staff about teaching patients self-management skills.
- Review performance with high-volume providers.
- Generate reports identifying patient information to providers.

Community or Vendor Outreach Strategies

- Work with churches, synagogues, mosques, and other faith-based organizations to assist with outreach.
- Participate in and/or host health fairs to reach members in need of asthma management services.
- Contract with public health departments to provide outreach.
- Work with school nurses or school-based health centers at schools with high numbers of Medicaid or SCHIP enrollees.
- Contract with enrollment broker to perform initial asthma screening for all new enrollees.

Health Plan Case Studies

CareOregon: Achieving Improvements in Outreach and Enrollment

BACKGROUND: CareOregon is a non-profit Medicaid health plan with 88,000 enrollees.

AIMS:

- 1. Contact at least 80 percent of eligible children, age five-11, who have moderate or severe persistent asthma. A "contact" is defined by CareOregon as reaching a person by telephone to verify that they have received and understand program materials.
- 2. Enroll 80 percent of those contacted. Enrollment is defined by CareOregon as successfully completing the assessment tool in a personal interview.

MEASURES:

- 1. # of children, age five-11, with moderate/severe persistent asthma contacted # of children, age five-11, eligible
- 2. # of children, age five-11, contacted who are enrolled # of children, age five-11, contacted

CHANGE: CareOregon implemented the following changes:

- Added a Spanish-speaking staff member.
- Sent a letter to families upon referral and a follow-up phone call encouraging them to participate.
- Scheduled group sessions in clinics to accommodate family schedules. Reminders are sent by letter and phone calls prior to group sessions.
- Offered incentives for attending group sessions (e.g., phone cards, mattress covers, school supplies, lunch/dinner, childcare services, and peak flow meters).
- Created a database in which unduplicated names of all identified program participants are entered. The plan uses the database to track the percentage of individuals contacted, as well as the percentage enrolled and the percentage retained.

RESULTS/LESSONS LEARNED: In November 2001, CareOregon surpassed its contact aim by reaching 87 percent of eligible children, age five to 11. The plan continues to meet its goal of contacting 80 percent of children verified as eligible. Of those contacted, 64 percent are currently enrolled in the program.

NEXT STEPS: CareOregon will continue to expand its program by working with provider champions in new participating clinics. The health plan is working with the Centers for Disease Control and Prevention to develop a measure for program retention.

Passport Health Plan: Educating Members about Asthma Disease Management

BACKGROUND: Passport Health Plan is a provider-owned health plan with 118,000 enrollees in Kentucky.

AIM: Contact 95 percent of identified members with asthma quarterly, either directly or through their provider.

MEASURE:

of members who are contacted quarterly, directly or indirectly, regarding the asthma program # of members who are newly identified with asthma during the quarter

CHANGE: Passport identifies members who are eligible for the asthma program each quarter. Members, age two-56, are contacted regarding the asthma program by phone and/or mail. All members identified with asthma are sent mailings. Mailings to members include a welcome letter explaining the benefits of asthma disease management, an annual asthma action plan, an annual flu shot postcard, and information about asthma and self-management of the disease. In addition to mailings, high-risk members receive a phone call from the case manager.

Members with asthma receive an educational mailing at least once a quarter. Members identified as not on appropriate medication are sent a targeted mailing twice a year. Passport Health Plan members also are contacted indirectly through mailings to primary care providers (PCPs). PCPs receive a quarterly listing of members who are not on appropriate medications along with information about their asthma patients' use of services (pharmacy, emergency department, admissions, and specialist). PCPs have responded favorably to this information and requested that future lists be customized, e.g., placing information for only one patient on a page so that it could be inserted in the chart. During a recent HEDIS audit, Passport noticed that PCPs included these reports in patient records.

RESULTS/LESSONS LEARNED: Passport Health Plan exceeded its aim by contacting 100 percent of all identified members with asthma for three quarters in 2001 and the first quarter of 2002. The major obstacle was finding current addresses for members. However, contact information is cross-referenced for members. If an address is incorrect, another contact method (e.g., telephone) is used.
Cimarron Health Plan: Reaching Out to Members to Determine Asthma Knowledge and Level of Control

BACKGROUND: Cimarron Health Plan is a for-profit health plan serving approximately 66,000 Medicaid members in New Mexico.

AIM: Receive information on patient understanding and control of asthma from 60 percent of members identified with persistent asthma (mild, moderate, or severe) through the use of Merck's Asthma Treatment Assessment Questionnaire.

MEASURES:

- 1. *#* of members with persistent asthma who returned the baseline ATAQ survey *#* of members with persistent asthma sent the baseline ATAQ survey
- 2. # of members who returned the follow-up ATAQ survey # of members who returned baseline survey and were sent follow-up ATAQ survey

CHANGE: Cimarron mailed an ATAQ survey to all members identified with mild, moderate, or severe persistent asthma to obtain baseline and six-month follow-up information regarding member's asthma knowledge and the level of asthma control. As an incentive to fill out the survey, consumers who returned the survey received a CD-ROM game, "Air Academy: The Quest for Airtopia," that teaches kids how to control their asthma.

The health plan introduced the baseline ATAQ survey to its members with asthma in three groups:

- 1. Patients of physicians with 50 or more patients with asthma (April 2002).
- 2. Patients of physicians with 30-49 patients with asthma (May 2002).
- 3. Patients of physicians with 29 or fewer patients with asthma (June 2002).

The purpose of the baseline outreach effort was to provide members and their PCPs feedback about which areas would benefit from improvement. The purpose of the six-month follow-up outreach effort was to learn if there had been improvement in level of knowledge and/or level of asthma control, as well as areas where further intervention was needed.

RESULTS/LESSONS LEARNED: To date 1,040 ATAQ surveys have been mailed to 23 adults and 1,017 pediatric members. Only 111 surveys have been completed and entered into the database, representing an 11 percent completion rate. The total numbers of surveys returned as undeliverable was under ten percent.

NEXT STEPS: To address the low completion rate of the ATAQ baseline survey, Cimarron is conducting follow-up calls and distributing letters to members.

Health Plan Action Steps for Outreach

My health plan's challenges:

1._____ 2._____ 3._____

Aim:

Develop an Aim Statement that focuses on increasing the number of members and/or providers the health plan contacts. For example: Increase the number of outreach visits by health plan staff to provider offices with low prescribing rates for asthma prevention medication from 20 to 50 percent within one year.

Measure: Assess your plan's ability to measure your Aim Statement. Avoid outcome measures (e.g., decrease in asthma-related missed school/work days) and develop measures that link directly to your Aim Statement. Measure this for the initial time period and on an ongoing basis. For example:

of providers with low prescribing rates visited by health plan staff
of providers with low prescribing rates

Change:

Evaluate current outreach methods and evaluate change strategies that will most effectively fulfill your Aim Statement. To help you brainstorm, review the change strategies included in this chapter.

Next Steps:

Include staffing issues, funding, timeframes, etc.

Intervention



What works to improve outcomes of members with asthma?

Clearly, there is evidence that asthma care services, such as the use of inhaled steroids, can prevent acute asthma episodes. Other services, such as self-management education and home environmental assessments, can identify key health issues before they reach a crisis stage.

An assumption of all plans in the Achieving Better Care for Asthma workgroup is that there **are** interventions that can make a difference. These tend to focus on improving provider-prescribing patterns; better use of appropriate durable medical equipment, such as peak flow meters; home-based patient education; and increased communication with providers to follow up on asthma-related hospitalizations and ED visits. While this chapter provides examples of some interventions tried by the BCAP plans, many of the activities undertaken in identification, stratification, and outreach also lead to an increase in health plan interventions. For example, the creation of an asthma registry is useful for both identification and stratification of members with asthma, and indicates those members most in need of specific kinds of interventions.

Potential barriers to providing and documenting asthma interventions are listed in Table 8.

Interventions	Barriers
Follow up for members who drop out of routine asthma care.	 Many provider offices that serve primarily Medicaid beneficiaries may function without appointment systems or have no routine procedures for rescheduling missed appointments. Many primary care offices do not track patient caseload by diagnosis.
Reminder calls for scheduled appointments following asthma- related hospitalization or emer- gency department visit.	Incorrect phone numbers or no telephone in the home.Language and cultural barriers.
Invest in developing provider capacity to "make every visit an asthma education visit."	• Getting providers' attention in a complex market is always challenging.
Provide group self-management education for families affected by asthma.	 Lack of child care services and transportation. Members may not see the need to attend "classes." The schedule may be inconvenient, or language/cultural impediments may exist.
Offer incentives to providers to prescribe inhaled steroids for patients with persistent asthma.	Providers may not accept this as a standard of care.Patients/parents may not understand the rationale for inhaled steroids and may routinely resist using them when feeling well.

Table 8: Common Asthma Interventions and Potential Barriers



Intervention Strategies to Achieve Better Care for Asthma

Member Strategies

- ✓ Provide incentives to members with asthma to participate in selfmanagement education, such as a free nebulizer or peak flow meter.
- ✓ Solicit local businesses and non-profits to provide donations to use for member incentives, e.g., movie tickets, pizza coupons, and bus/subway tokens.
- ✓ Use a social worker to conduct family interventions to remove the social and psychological barriers to effective asthma management.
- ✓ Train community-based workers to conduct home assessments and provide guidance on asthma trigger abatement.

Provider Strategies

- ✓ Link provider compensation to improved delivery of services (e.g., prescribing inhaled anti-inflammatory medications for persistent asthma or documenting an asthma management plan) or to document adoption of plan-sponsored asthma care office systems.
- ✓ Educate physician office staff on assessing the level of asthma control over a specified time period before the patient sees the physician.
- ✓ Work with emergency departments to routinely notify primary care physicians when their patients with asthma have been provided emergency asthma-related care.
- ✓ Assign quality management nurses to monitor high-volume provider offices.
- ✓ Facilitate coordinated transition between primary care providers and specialists.
- ✓ Help provider offices implement office tracking systems.

HealthNetwork Health: Using Asthma Action Plans to Improve Member Self-PlanManagement

Plan Case Studies

BACKGROUND: Network Health is a provider-sponsored, non-profit Medicaid health plan with approximately 45,000 members in Massachusetts.

AIM: Develop asthma action plans for 80 percent of members with asthma, age two-18, within three months of being identified by pharmacy and utilization data as medium or high utilizers and who are currently in poor control as determined by the plan's assessment tool (ATAQ survey).

MEASURE: # of eligible members with asthma, age two-18, with completed asthma action plans # of eligible members with asthma, age two-18*

*A member, age two-18, with asthma is eligible for the intervention if he or she is stratified as medium or high risk and is deemed to be "out of control" according to the ATAQ survey.

CHANGE: Network Health hypothesized that the use of asthma action plans increases the likelihood that members will maintain control of their asthma. In order to become eligible for the intervention, members must be stratified as medium to high risk for future utilization and, when assessed by the asthma program manager, are determined to be "not in control" of their asthma based on the ATAQ survey. These members receive a home visit from a qualified asthma educator to develop their asthma action plan. The completed asthma action plan is faxed to the member's provider for approval.

RESULTS/LESSONS LEARNED: As of June 2002, 62.5 percent of eligible Network Health members with asthma had an asthma action plan. Although Network Health was unable to establish a baseline for this activity because asthma action plans were previously not required, the plan is confident that this initial result is an improvement.

Network Health found that it is easier to develop the asthma action plans with members through home visits with an asthma educator, rather than working with the primary care provider. Completed asthma action plans are sent to the member's PCP for signature.

NEXT STEPS: Members will be reassessed one year later using the same survey to determine whether the action plan has helped them remain in control of their asthma as compared to those members eligible for the intervention who did not have a completed asthma action plan.

Health Plus: Focus on Appropriate Pharmacotherapy

BACKGROUND: Health Plus is a non-profit health plan serving 148,000 Medicaid and SCHIP members in the five boroughs of New York City.

AIM: Increase the number of members with persistent asthma who take control medications by 15 percent.

MEASURES: 1. *#* of members with persistent asthma taking control medications *#* of members with persistent asthma taking any asthma medication

2. <u>control vs. rescue medication ratio post-intervention</u> control vs. rescue medication ratio pre-intervention

CHANGE: Using a pharmacy database, Health Plus identified members taking asthma medications over a six-month period. The plan identified two groups of members who were good targets for interventions:

- Members with persistent asthma on no control medication.
- Members who are taking a control medication, but are under-medicated (on four or fewer control medications dispensed in the six-month period), based on a diagnosis of persistent asthma.

For both groups, Health Plus developed a physician letter (Appendix E) to report the findings for individual patients. The physician was asked for an update on planned interventions. Health Plus opted to use a baseline of the average control vs. rescue ratio (0.7) for the year prior to the initiation on the intervention.

RESULTS/LESSONS LEARNED:

- 1. From December 2000 to August 2001, the percent of members with persistent asthma on control medications increased from 65 percent to 71 percent.
- 2. From January to December 2001, the ratio of control vs. rescue medications increased by 39 percent over the baseline ratio, from 0.69 to 0.96 (Figure 3).
- 3. As of June 2002, Health Plus sent 196 physician letters and received 100 letters in response. The response received indicates that the member had been or would be contacted and medications adjusted. Since the program seems to improve both member health outcomes as well as lead to decreases in ED visits and hospital stays, Health Plus plans to continue to track these members to document improvements.

As a result of the above, admission rates for members with persistent asthma decreased. At baseline, 3.2/1,000 members with asthma were hospitalized. One year later, that number decreased to 2.6/1,000.

NEXT STEPS: Feedback received indicates that providers often are unaware of what medications the member is taking — some members may go to the emergency department to get medication, while others never fill their prescriptions. As a result, the plan has decided to share the information in the pharmacy database with the providers. The plan sends a bimonthly letter that includes the names of all the members in the provider's panel who have filled a prescription for four or more rescue medications without any control medication dispensed during the past six months. The disease management nurse will contact the PCP one month after the letter has been sent to follow up, educate the provider on the program, and assist with contacting the member, if necessary.





Figure 4: Health Plus Percent of Members with Asthma Using Exclusively Rescue Medications

University of Oklahoma dba Heartland Health Plan: Using a Collaborative Approach to Improving Asthma Care

BACKGROUND: The University of Oklahoma dba Heartland Health Plan of Oklahoma is a Medicaid IPA model plan owned by the University of Oklahoma with 115,733 members.

AIMS:

- Ensure that 100 percent of members with moderate or severe persistent asthma are using appropriate long-acting anti-inflammatory medication per NAEPP asthma guidelines.
- Ensure that 90 percent of members with moderate or severe persistent asthma have a written asthma action plan.
- Increase by 75 percent the use of peak flow meters at home for members with severe or persistent asthma.

MEASURES:

- 1. # of members with moderate or severe persistent asthma using appropriate long-acting antiinflammatory medication
 - # of members with moderate or severe persistent asthma
- 2. # of members with moderate or severe persistent asthma with a written asthma action plan # of members with moderate or severe persistent asthma
- 3. # of members with moderate or severe persistent asthma using peak flow meters at home, postintervention
 - # of members with moderate or severe persistent asthma using peak flow meters at home, preintervention

CHANGES: Heartland Health Plan, working as part of a collaborative pilot project, including the Oklahoma Health Care Authority and the University of Oklahoma Community and General Pediatrics Clinics, brought about a standardized approach to the care of patients with asthma. The following changes were piloted in one provider clinic:

- Implementation of NAEPP asthma guidelines.
- An assessment and plan of action completed by the medical provider. See Appendix F for Asthma Encounter Form.
- An asthma self-management plan communicated to the patient/guardian. See Appendix G for Breathing Better in Oklahoma Asthma Management Plan.
- Education and instruction regarding triggers and how to monitor asthma status.

RESULTS/LESSONS LEARNED: The results of the measurement period from February 1, 2001 to September 30, 2001 were as follows:

Table 9: Heartland Health Plan of Oklahoma Intervention Results

Measure	Baseline	Goal	Results
Use of long acting anti-inflammatory medications	23.2%	100%	93.5%
Peak flow meter use at home	12.8%	75%	93.8%
Written asthma action plan	3.7%	>90%	100%

Partnership HealthPlan of California: Giving Feedback to Providers to Drive Appropriate Medication Use

BACKGROUND: Partnership HealthPlan of California (PHC) is a non-profit Medicaid health plan in northern California with 77,000 members.

AIM: Ensure that 100 percent of PHC members with asthma are using appropriate prescriptions and that members receive asthma care in the most appropriate location based on severity of their disease.

MEASURES:

- 1. # of members with persistent asthma with one or more controller prescriptions in the measurement year
 - # of members with persistent asthma
- 2. # of members with persistent asthma with eight or less canisters of rescue medication (shortacting beta-agonists) in the measurement year
 - *#* of members with persistent asthma
- 3. *#* of members with persistent asthma with no emergency department visits in prior year *#* of members with persistent asthma
- 4. # of members with persistent asthma with no inpatient hospital stays in prior year
 # of members with persistent asthma

CHANGES: Partnership HealthPlan of California implemented a variety of strategies to assist providers in better monitoring asthma care, including:

- Distributing beta-agonist overuse reports every six months to physician practices (Appendix H). Reports were reviewed at academic detailing visits and practice sites were surveyed regarding usefulness. PHC also proposed to its Physician's Advisory Committee to add the HEDIS asthma measure to the PCP Quality Bonus Incentive criteria for FY 2001/2002. The plan sent full medication profile and a letter to PCPs for members with more than eight canisters of beta-agonist within a one-year period.
- Sponsoring annual physician education updates regarding appropriate management of asthma, training PCP staff in asthma education, and offering enhanced benefits for member asthma education.

RESULTS/LESSONS LEARNED: From 2000 to 2002, PHC achieved the following:

- Increased the percentage of members with asthma using one or more control medications (58.6 percent vs. 67 percent).
- Increased the percentage of members with asthma with eight or less canisters of beta-agonist (83.5 percent vs. 85 percent).
- During this time, PHC also saw the percentage of members with asthma using the emergency room drop from 28.2 percent to 22.5 percent and the members with asthma with no hospital stays remained constant at 97 percent as of first quarter 2002.

Partnership HealthPlan of California found that getting the overuse reports into the practitioners' hands was critical. After reports were mailed in January 2001, follow-up phone calls revealed that more than half of the practice sites had not seen the reports. In response, the plan hand-delivered high beta-agonist reports to 43 practice sites (214 members). The summary report was printed on colored paper and was the first sheet in the report. A follow-up survey showed that practitioners were using the reports appropriately and found them very useful.

Passport Health Plan: A Multi-Layered Strategy to Encourage Appropriate Utilization among Members with Asthma

BACKGROUND: Passport Health Plan is a provider-owned health plan with 118,000 enrollees in Kentucky.

AIMS:

- Increase members with persistent asthma on a control medication from a baseline of 74 percent to 80 percent.
- Decrease current emergency department utilization for uncontrolled asthma from a baseline of 31 percent to 15 percent of total asthma members.
- Decrease current hospital admissions for asthma from a baseline of eight percent to four percent of total asthma members.

MEASURES:	1. # of members with persistent asthma on control medication
	# of members identified with persistent asthma
	2 # . 6

- 2. # of members with asthma utilizing emergency department
 # of members identified with asthma
- 3. # of members with hospital admission for asthma # of members identified with asthma

Passport used the definition of control medication adopted by HEDIS 2001. Emergency department and hospital use for asthma were identified as those members having at least one emergency claim and at least one hospital admission claim with the primary diagnosis of asthma (493.xx).

CHANGES: The plan implemented several improvement strategies, including:

- **Provider Report of Members with Asthma:** Lists provider's patients, the number of asthma related emergency department visits and hospitalizations, and pharmacy utilization of rescue and control medications (see Appendix I).
- **Provider Outreach Visits:** Visits to providers by the Asthma Disease Manager to inform them about the Asthma Disease Management Program, program activities (e.g., member educational material, provider asthma member reports), NAEPP asthma guidelines, and services available in managing patients with asthma.
- Member Education: Asthma educational materials are sent to members with asthma quarterly to increase member's asthma knowledge.
- Individual Asthma Disease Management: The Asthma Disease Manager works with members with asthma who are high utilizers of services. The Asthma Disease Manager contacts members by phone, does a complete asthma assessment, and helps the members and their provider to improve their asthma control and management.
- PCN (pharmacy vendor) Intervention Letters: Passport's pharmacy vendor sends letters to providers notifying them of inappropriate use of specific members' medications in relation to their asthma care.

RESULTS/LESSONS LEARNED: As of fourth quarter 2001, Passport increased the percentage of members on control medication from 74 percent to 82 percent (Figure 5). The plan decreased the percentage of members using the emergency department from 31 percent in first quarter 2001 to 18 percent in fourth quarter 2001 (Figure 6). The plan also decreased the percentage of members with hospital admissions for asthma from eight percent in first quarter 2001 to six percent in first quarter 2002.



Figure 6: Percent of Members with Asthma Visiting the Emergency Department



INTERVENTION ALTERNATIVES:

Improving Asthma Care for Children, a national program funded by The Robert Wood Johnson Foundation and administered by the Center for Health Care Strategies, is funding five efforts to improve the management of pediatric asthma in high-risk Medicaid and SCHIP beneficiaries. The projects described here offer additional ideas for asthma intervention that can be applied using the BCAP Typology for Improvement.

Affinity Health Plan: Provider Incentive to Participate in Case-Based Training Affinity Health Plan, based in Bronx, New York, is developing a case-based continuing education program for primary care clinicians to promote adherence to the NAEPP asthma guidelines. The training is performed at pediatric and family practice sites that manage a large number of Affinity members with asthma. Based on provider feedback, one of the changes Affinity implemented is reimbursement for appropriate office-based spirometry and nebulizer treatments. Previously, many practitioners were performing these services as part of their capitation. Once the training program is completed, providers receive four Continuing Medical Education (CME) credits and notification that they may bill for medically necessary spirometry and nebulizer treatments. These services will be paid in addition to capitation.

Contra Costa Health Plan: Use of Asthma Community Advocates

Contra Costa Health Plan, in Martinez, California, is collaborating with the Contra Costa Health Services Department and several community agencies to recruit and train neighborhood residents to provide education about asthma to fellow residents and to provide assessments of environmental triggers for asthma during home visits. The goals of the 36-hour training program are to increase knowledge about asthma and related environmental triggers; to provide the advocate with information to assist a family/child in establishing a medical home; and to demonstrate techniques that will be helpful to the advocate in giving presentations, conducting home assessments, and facilitating group sessions. Each of the trained Community Advocates receives a stipend. Evaluation of the Asthma Community Advocate's work and effectiveness will be monitored by the asthma project team.

Family Health Partners: Provider Incentives for Member Asthma Education Family Health Partners (FHP), based in Kansas City, Missouri, is developing an

Family Health Partners (FHP), based in Kansas City, Missouri, is developing an education program for provider offices that includes incentives for physicians to conduct member asthma education. Family Health Partners arranged to pay for asthma education by assigning a CPT code that the provider would use when the education has been performed. Since there currently is not a code for asthma education, FHP identified two appropriate surrogate codes: 99402 for a 30-minute education session (initial education) and 99401 for 15 minutes (follow-up education). Providers are not eligible to use these codes to charge for services until they complete the asthma education program. The plan is working with the American Medical Association, through the Joint Council of Allergy, Asthma, and Immunology, to get a new CPT code that is specifically for asthma patient education.

HealthNow: Collaborating with Regional Medicaid Health Plans to Improve Asthma Care

HealthNow is overseeing the collaborative efforts of Community Blue, the health maintenance organization of BlueCross BlueShield of Western New York (a division of HealthNow), Independent Health, and Univera Healthcare to improve asthma care for children, age three to seven, in the Buffalo, New York area. In addition to the three Medicaid health plans, project participants include the American Lung Association, Children's Hospital, and a local business health group. Asthma intervention activities of the project include:

- Conducting asthma educational seminars for day care staff.
- Presenting educational programs for parents of children with asthma.
- Developing common pediatric asthma practice guidelines for network physicians.
- Creating an asthma care kit for families of children with asthma.
- Conducting a CME program for pediatricians who may not routinely follow the practice guidelines.

Monroe Plan for Medical Care: Working in the Community to Manage Pediatric Asthma

Monroe Plan for Medical Care, based in Rochester, New York, is working with Rochester-area school-based and community health centers to decrease asthmarelated emergency room visits and hospitalizations. Through Monroe's integrated delivery network partner, ViaHealth, the plan is working to improve asthma care delivered at three urban federally qualified health centers, three school-based health centers, and The Mary Parkes Asthma Center, a ViaHealth Center of Excellence staffed by a multi-disciplinary team of asthma specialists. In partnership with these providers, Monroe Plan is seeking to improve the identification and diagnosis of children with asthma, help patients and their families better manage their disease, and more effectively coordinate care for members with asthma in primary care, specialty, and school settings.

For more information about *Improving Asthma Care for Children*, visit **www.chcs.org.**

Health Plan Action Steps for Intervention

My health plan's challenges:

1._____ 2._____ 3._____

Aim:

Develop an Aim Statement that focuses on increasing the number of members who receive asthma intervention services. For example: *Ensure that* 90 *percent of members with moderate or severe persistent asthma have a prescription for an inhaled anti-inflammatory medicine*.

Measure:

Assess your plan's ability to measure your Aim Statement. Develop measures that link directly to your Aim Statement. Measure this for the initial time period and on an ongoing basis. For example: # of members with moderate/severe persistent asthma with prescription for inhaled anti-inflammatory medication # of members with moderate or severe persistent asthma

Change:

Evaluate interventions that will most effectively fulfill your Aim Statement. To help you brainstorm, review the change strategies included in this chapter.

Next Steps:

Include staffing issues, funding, timeframes, etc.

Improving Asthma Care at the Provider Level



Physicians and nurses are committed to improving the health and well being of the patients they serve. But why is it that study after study documents that children with asthma fail to receive clinically proven therapies that result in fewer symptoms and improved ability to function? Today's practice delivery system is largely to blame for this disconnect. The system is designed to provide short-term, "transactional" care — the patient comes in with a problem, the clinician makes an assessment and provides the treatment. Simply knowing the science about what treatments work best does not result in changes in the processes of care without broader restructuring of the practice delivery system.

Health plans can play a role in helping physician practices change basic practice patterns to improve the quality of asthma care for members. A complete system for improved care should include policies that support patient-centered, evidencebased care. Health plans can distribute best asthma practice guidelines to physician practices, provide education on adhering to the guidelines, and offer incentives for practices that follow the guidelines. The best source for specific recommendations for asthma care come from evidence-based guidelines, such as those provided by NAEPP. NICHQ summarizes these guidelines as follows:

- Classify severity at every contact.
- Use appropriate anti-inflammatory medication, in appropriate dosage, for all patients with persistent asthma.
- Plan treatment with patients and families and give them a written asthma management plan to document medications and guide actions at home, school, and day care.

NICHQ has found that the first step in designing a system that better meets patient needs and more reliably delivers evidence-based care is to clearly envision what that system would look like.^{11,12} Practice systems that meet the needs of patients with asthma have the following characteristics:

- A process for tracking all patients with asthma in the practice and identifying/stratifying patients in need of particular services.
- A method to bring the evidence about best care approaches to the "bedside," i.e., by embedding guidelines in practical tools such as encounter forms and wall charts.
- A team-based approach to care delivery, with each member of the team having a well-defined role and the skills of each profession being best utilized.
- Processes that support the ability of patients and their families to manage their own conditions and enable clinicians to coach patients and families to achieve these goals.
- Close linkages with community resources, such as schools, athletic programs, and day care, to provide a seamless web of care to meet patient needs.

For More Information

This chapter summarizes practice management strategies developed by the National Initiative for Children's Healthcare Quality (NICHQ). The need to promote reorganization of practice systems to improve care and outcomes has led NICHQ to conduct more than half a dozen projects - either on its own or in collaboration with other organizations such as the McColl Institute for Healthcare Innovation, the Institute for Healthcare Improvement, and the Bureau of Primary Care within the United States Health Resources and Services Administration. Visit www.nichq.org for more information.

¹¹ Wagner EH, Austin BT, and Von Korff M. "Organizing Care for Patients with Chronic Illness." Milbank Quarterly, 1996.

¹² Wagner EH. "Chronic Disease Management: What Will it Take to Improve Care for Chronic Illness?" Effective Clinical Practice, 1998.



Health plans can provide physician practices with tools to facilitate and accelerate implementation of these system changes. NICHQ developed and tested tools that assist in making the changes required (Appendices J, K, and L).

"Stellar Practice" Case Study

The Problem

How would the current practice delivery system typically care for a child with asthma? Consider Jesse, a six-year-old boy who has been hospitalized for asthma three times in the past two years, with multiple ED and acute office visits. He visits his physician without taking any control medications regularly. His mother reports that Jesse wakes up three times a week with a cough, and he wheezes almost daily. The first grader is unable to participate in sports because he gets short of breath, and cannot keep up with the other children. Jesse is prescribed a quick relief medicine, and a short course of oral corticosteroids. The physician gives the family a brochure about asthma, and tells them to return if Jesse's symptoms do not improve in a week, and otherwise to come in when it is time for his next check up.

A Potential Solution

How would Jesse's experience differ if he were cared for in a practice that had implemented the system changes reviewed here? Jesse's visit would have been prompted by the practice or Jesse's health plan noting an excessive amount of refill requests for his asthma reliever medicine and requesting that Jesse come in for an evaluation. His family would have completed a brief symptom report prior to Jesse being seen by the clinician, and the office staff would have checked his lung function. Using a color-coded wall chart (also reflected in the encounter form), the medical assistant would have indicated the likely asthma severity. The parent report also would indicate potential triggers for Jesse's asthma. During the physician encounter, the physician would communicate the diagnosis and the severity of Jesse's asthma, and discuss treatment goals with the family. The physician would prescribe a maintenance-inhaled corticosteroid, and perhaps additional medicines (such as a long-acting bronchodilator), and link medication usage to addressing patient goals. The office nurse would provide additional education about inhaler and spacer techniques and complete a written asthma management plan. With Jesse's mother's permission, the nurse would share the plan with Jesse's school nurse and his health plan. The school nurse and the practice would have regular calls to review both patient-specific issues and general policies at the school. The front desk staff would schedule a follow-up phone call within three days, and a follow-up visit in three to four weeks. Jesse's mom would be referred to a state-sponsored smoking cessation program.

Health Plan Role

Health plans can facilitate practice-based improvement by coordinating with others in a geographic area to come up with common guidelines and management plans; investing in the creation of registry software that practices can use; providing data about emergency department encounters and pharmaceutical use; and providing adequate access to specialists for patients and primary care clinicians. Plans can assure that durable medical equipment such as nebulizers and peak flow meters are available at limited charge and hassle, and they can support smoking cessation programs for parents of children with asthma. Health plans also can give physicians updated community resources and plan case managers can provide member education and monitoring. Such activities are synergistic with practice-based improvement activities, and together can lead to better care and outcomes for children with asthma.

Results

What would this mean to Jesse and his family? After four months under the care provided in this rejuvenated "Stellar Practice," Jesse reports he wakes up only once a month coughing, and has no wheezing on a regular basis. He uses his Albuterol once every two weeks. He practices soccer daily and plays in his town's soccer league. He loves gym and prefers sports to TV. Jesse has not missed one day of school this term and his mom has not missed a day of work.

Achieving this level of care takes more than just knowledge about good asthma care, and more than a set of reminders, plans, and other tools. Achieving this level of care requires a fundamental change in the practice system that is supported by physicians, health plans, and families.

Communicate to Create Change



Without effective internal and external communication, even the best quality improvement ideas will falter moving from theory to reality. Good communications strategy can solidify buy-in within your organization and, externally, can facilitate collaboration with states, enhance support from providers and their staff, and increase understanding by, and participation of, members.

A good communications strategy is largely common sense:

- 1. Whom do I need to reach to make this initiative as successful as possible?
- 2. What does the target audience(s) need to know?
- 3. How do I reach the audience(s)?

Successful communications hinges on committing time at the beginning of a project to answer these questions and outline a consistent strategy to deliver your message. A written "communication plan," that clearly outlines each of the three components and how they are addressed, is a useful starting point.

Identify Your Audiences

The first step in developing a communications strategy is to define your audience. Internal audiences are essential to building organizational support for your project. Think beyond the team working on your quality improvement project. You might ask, "Whose cooperation do I ultimately need to keep this project moving?" It might be information services contacts whom you rely on for data extraction, frontoffice staff who answer calls and direct enrollees to case managers, and/or a senior executive whose approval you need for additional staffing support.

Keep your plan's public relations/communications staff aware of your activities. Their support and knowledge of your activities is vital to promoting your accomplishments in established communications vehicles, including internal and/or external plan newsletters, press releases, and media outlets.

Potential Audiences

Internal:

- Health Plan CEO
- Information Services
- Claims Department
- Quality Improvement
- Public Relations/Communications
- Marketing
- Member Services

External:

- Members
- Providers
- State health purchasers
- Other health plans
- Consumer organizations
- Media
- Accrediting bodies

External audiences include anyone outside your plan whose cooperation is necessary to achieve pilot program goals, as well as anyone who would be interested in the successful outcome of the initiative. For example, clear communication with providers and their office staff is critical in successfully identifying members, assessing risk, and implementing interventions. Outreach activities for members require communications tactics geared specifically toward their specific needs and desires. State Medicaid and SCHIP contacts should not be overlooked as an audience. Keeping states aware of plan quality initiatives and accomplishments will go far in building collaborative partnerships toward a common goal of quality care for Medicaid beneficiaries.

San Francisco Health Plan: Communicating to Build Internal Support Building the support of colleagues is the first step in getting a new quality initiative off the ground. After attending a BCAP workshop on *Improving Preventive Care Services for Children* in March 2002, Rowena Tarantino, MPH, Manager of Health Education, and Michelle Persha, MPH, Quality Improvement Analyst at San Francisco Health Plan (SFHP), developed a quality improvement strategy to identify overweight child and adolescent members and create provider and member education activities to help these children. After the workshop, the two coordinated brown bag lunch seminars at the plan inviting key colleagues, including representatives from Medical Management, Member Services, Information Systems, and Human Resources, to explain the BCAP process and their proposed quality pilot. Their focus on communication from the onset of the program was worth it.

Working with its Information Systems department, the plan analyzed data over a three-year period and calculated the body mass index for a sample population of children and adolescents. The plan then stratified by age, sex, ethnicity, neighborhood, and clinic site. The analysis revealed a high prevalence of overweight children among the ethnic groups primarily served, specifically Latino, African American, and Asian populations. SFHP identified target clinics in priority neighborhoods and is collaborating with providers to develop tools to assist with screening and assessment, member education materials, as well as to identify community resources for patient referral and care.

"From the beginning, our Health Education, Quality Improvement, and Information Systems departments worked as a team and used the BCAP process to quickly build internal support and a strong foundation for our intervention," says Ms. Tarantino.

Define Your Messages

Once you identify audiences to reach, the next step is crafting a compelling message to reinforce at every opportunity. In most cases, you will start with your overall Aim Statement linked to your quality initiative and reframe it slightly for each audience depending on their perspective. Internally, you may use the same message with different gradations based on your audience. To help revise the message for each audience, answer the following: *Why do they care?* and/or *How will it help them?* The message should be simple and easy to remember. For example:

- Internal Increase identification of members with asthma within ABC Health Plan by 25 percent in 2002. This is important for ABC Health Plan because it will potentially improve the health of members with asthma and improve HEDIS scores.
- Providers Submit asthma management plans to ABC Health Plan and *receive a \$25 incentive*. This is important for providers because reimbursement will increase and patients will receive more coordinated care.

- Members Does asthma keep you or your child from doing what you enjoy? Visit your doctor now to keep your asthma in control. This is an important message for members and their parents to hear.
- State ABC Health Plan is working to decrease the asthma-related hospitalization rate by identifying members in need of services. This is important for the state because these members will ultimately receive higher quality, more responsive, and more cost-effective care.

Partnership HealthPlan of California: Using the Personal Touch to Communicate with Providers

Partnership HealthPlan of California, a member of the Achieving Better Care for Asthma workgroup, developed a multi-prong quality improvement strategy to enhance communications with providers to increase the effectiveness of asthma disease management in provider offices. The plan created personalized beta-agonist overuse reports (Appendix H) for physician practices. But after the reports were initially sent out, the plan found that many providers had not even seen the document. For the second distribution of the report, Partnership created a summary sheet that clearly outlined how providers could use the information in the beta-agonist overuse reports. The summary sheet and the first page of the report were printed on brightly colored paper and the reports were hand-delivered to 43 practice sites. A follow-up survey revealed that providers appreciated the reports and were responding to the information. (See the Intervention section for more information about this project.)

Use Communications Tools Creatively

Effective communications need not break the budget, or require intensive time commitment. A successful communications strategy could entail tactics as simple as distributing a clearly written e-mail status report on a monthly basis to important internal contacts. Posting graphics in a public location showing ongoing results of your project provides recognition for team members and can build support and enthusiasm throughout the organization. The key to employing communications tools effectively is consistent use, reinforcement, and gearing tools for specific audiences. Your communications strategy will guide the specific tools or tactics that you use.

Samples of communications tools include:

- Letters, memos.
- Quarterly internal updates.
- Quality improvement status meetings.
- Quality improvement e-mail updates.
- Newsletters (print or e-mail).
- Website.
- Posters, flyers.
- Standardized presentation.
- Press releases.
- List-servs.

Evaluate Effectiveness of Communications

Evaluate the effectiveness of your communications strategy to determine what works and does not work for your target audiences. Define the desired response of your communication up front (e.g., consistent use of a new form, cooperation with a new procedure, referrals, etc.). Then, when you review overall outcomes of your quality initiative, devote time to examine how your communications strategy met the overall goal of the project. If the target audience did not respond appropriately, you may want to rethink your communications strategy to reach them more effectively.





Achieving Better Care for Asthma Improvement Documentation Form

Category:	Identification	Stratification	Outreach	Intervention	

Aim Statement:	
Measure(s):	
Change:	

Implementation Plan:

Who:	
What:	
When:	
Training:	
Communication:	
Troubleshooting:	

Appendix B

tient's	DOB Age
1	When were you (or your child) diama and with underna?
2.	How many days have you (or your child) had problems with comobing wheeping SOB or chest
	tightness?
	≤2xWcck>2xWeek but <1xWeekEvery day
	Continuously
э.	How often are you (or your child) awakened during the night with symptoms?
	Eremently
4.	How often do you (or your child) have symptoms after exercise, play, or other physical activity?
	RarelyMay affect activityAffects activity
	_Limited physical activity
5.	Do you (or your child) have a peak flow meter?YesNo Frequency of use Personal Best
6	PEF Do you (or your child) use a nabulizar? Yes No. Spaces? Yes No.
7.	What medications, if any, do you (or your child) take for your sething? [iteoucocy]
	Steroids:
	 Aerobid (flunisolide)
	Azmacort (triancinolone)
	D Elogent (Dectomethasone)
	 Pulmicort (budesonide)
	Q Vanceril (beclomethasone)
	 Advair (fluticasone propionate 100 mcg / salmeterol 50 mcg inhalation powder)
	Nonsteroidal Anti-inflammatory:
	Devicer: Receibeler (bydeconide)
	Crolom(cromolyn)
	Beta, adrenergic Agonists: Others:
	Albuterol Albuterol Accolate (zafirlukast) – leukotrienne
	inhibitor
	Maxair (pributeral) Atrovent (pristropium) – anticholenergie Proventi (albutato) Dipinge (esingebrine) – summathemismetie
	Severent (salmeterol) Theophylline/dyphylline – bronchodilator
	Ventolin (albuterol) Zyflo (zilcuton) – leukotrienne inhibitor
	Alupcot (metaproterenol) Singulair (montelukast) leukotrienne
	inhibitor
	Bupcrol (soproterenol) Der
8.	In the last six months, how often did you (or your child) seek medical care for asthma ?
	Name: Doctor School-based Clinic
	ER Hospital
9.	How many times a week do you (or your child) miss school, play or work due to asthma?
10	Do you snote? If one How more circulate nor due? How more node nor made? An new interacted in a
200	sucking cessition program or medication? (Offered? Yes No)
tional	I for levels one and two, Required for levels three and four: Offer a referral to the appropriate Asthma
ialia	 A revensione and two, responsed in revensionee and tour. Oner a reventation the appropriate ristinga d.

Appendix C

CareOregon				
currente	CareOregon	Asthma Program Referral	Form	
Hospital/Clinic	Date:	Attendir	ng Physician:	
Patient Name:		Guardian Name:		
Date of Birth:		Patient F	Phone:	
Asthma Action Plan?	Yes No	Insuranc	e:	
5-11 y/o patient's with	<u>asthma,</u> as defined be ad Severe Persistent /	clow, should be referred to th Asthma:	he intervention progra	am.
solerate Symptoms: • Daily symptoms	oms.		>1 time a week	• FEV, or PEF >60% ≤
 Daily use of 	inhaled or short activ	ng beta ₂ agonist.		80% predicted
 Exacerbatio 	ms may affect activity			 PEF variability > 30
Exacerbatio	$ns \ge 2$ times a week:	may last days.		PEL DEL AGR
ere Continual s	ymptoms.		Irrequent	 FEV, or PEP ≤00%
Frequent ex	acerbations.			 PEF variability > 30%
Please check all appli []Pt has moderate/se [] Pt is 5 – 11 years o [] Pt on OHP/ no im [] Caregivers English	<u>cable</u> : vere asthma old surance v or Spanish speakers	Patient not [] Pt does not hav asthma [] Pt caregivers d [] Could not loc [] Other	referred because: ve moderate/severe leclined rate	
Medications: Short Acting Beta	Agonists	(Albuteral, Ventolin,Prov Pirbuterol, Maxair)	entil, Metaproternaol	, Alupent,
	Agonists	(Salmeterol, Serevent)		-1
Long Acting Beta	side	 (Beelomethasone, Vanceri Pulmicort, Flunisolide, Ae 	ii, Becloveni, Budesor robid, Fluticasone, Fl	ovenl,
 Long Acting Beta Inhale Corticoster 	19415	Triamicinolone, Azmacort	-)	
 Long Acting Beta Inhale Corricosten Oral Steroids 		Triamicinolone, Azmacort (Prednisone)	0 Adukan Analas 7	ilautan 7.fla)
 Long Acting Beta . Inhale Corticosten Oral Steroids Leukotriene Inhibi Mathelmathline 	tors	Triamicinolone, Azmacort (Prednisone) (Montelukask, Singulair, Za (Theoreholling, Sh. Physica)	firlukast, Accolate, Z 5. Elizophullin, Amir	ileuton, Zyflo)

Appendix D



Appendix E

Health Plus Asthma Member Medication Usage Letter to Practitioners

John Doe, MD FAMILY PHYSICIAN HEALTH CENTER 5616 6th Avenue Brooklyn, NY 11220

Dear Health Plus Participating Physician:

As part of our asthma disease management program, Health Plus identifies members who are taking rescue medications but have no record of receiving control medications. Our goal is to assure that all asthmatics who meet the NIH Expert Panel's guidelines for getting control medications are receiving them. As you may know, these guidelines have recently been revised to include the use of leukotriene modifiers and long-acting bronchodilators. A schematic of the guidelines published by the National Institute for Children's Healthcare Quality (NICHQ) is enclosed. The full description may be found at the web site of the National Asthma Education and Prevention Program at www.nhlbi.nih.gov/ guidelines /asthma/index.htm.

The following attachment lists members of your panel who have been identified as having received more than 34 prescriptions for rescue medications without any control medications, during the past six months.

Please contact these members as soon as possible and evaluate them for the need for control medications. A Health Plus disease management nurse will contact your office within a reasonable period of time to ascertain the results of these evaluations. If you need assistance or wish to enroll a member in the asthma disease management program please contact the program at (718) 630-0123.

We appreciate your help with our asthma disease management effort.

Very truly yours,

Arthur L. Levin, MD Medical Director

Appendix F

HEARTLAND

Heartland Health Plan of Oklahoma Asthma Encounter Form

The Asthma Encounter Form is designed as a tool that enables the medical provider to see numerous components involved in the treatment and monitoring of a patient with asthma.

			Astl	nma En	counter F	orm				
Name	0.000		PI	hone			Dat	te	0.94	
Add. Allerg	ies:									
Parental C	oncern	s:			Current	Thera	apy:			
				Quick Relic	ſ					
					Anti-inflam	matory				
	6215156		185335235	0023835	Other	122052				
Peak Flow:	: Persor	al Best	Ex	pected	Today	in offi	ice	Re	cent low	vest
Trmt. Hx.:					Self-Assess	ment (questions:	Since	e your cl	hild's last vi
Previous re	eferral to a	isthma specialis	4		YES NO	Do you	a feel your child	's asthm	a is well co	ntrolled?
Interval E Interval H	amergency ospital adv	visits # of	davs	□ NONE	TESU NOU	or sel	mere oeen any hool environme	ent? (Si	es in your moking or	pets)
Interval He	ome Healt	h visits # 01	uays	D NONE	VES D NO D	Regul	lar asthma med	ication	dosages n	nissed?
	office a result		838866886 8		NONE Set	hool/ day	y care days mis	sed #	+	
Current Sym	ptoms (p	lease circle appro	priate answer in	each column)	D NONE Sid	le effects	s from asthma i	meds		
	Day	coughing, when	zing, SOB or	Night: coug	ghing, wheezing,	Sympto	oms with activit	у	Peak Exp	piratory Flow (P
Classification Severe Percistent	ches	t tightness in pa he time	st two weeks?	SOB, or ch	est tightness?	in past Interfer	two weeks.	ity	PEE <60% modiated	
Moderate Persist	ent Dail	y		>5/month	Contraction of the second	Interfer	es with mod acti	vity	PEF >60%	%<80% predicted
Mild Persistent	3-6/	week	e de la Massia	3-4/month		Only w	ith a lot of activi	ty	PEF > 80	%% predicted
Mild Intermittent	1 ≤ 2/	week		2/month	000000000000000000000000000000000000000	Not at a	ill unless an atta	ck	PEF >809	% predicted
Kesp. Hx:	D Prei	mature 🗆 C	hronic Lung Dis	sease (BPD)	RSV (Date	8885) [J Age	first dx'd	
Physical E	xam.	Ht.	↑ !	Wt.	Circle ↑↓	T.	Р.	RR.		BP
General:				KERRAR A						
Lungs:	Clear		ENT:	Sinus tender	ness	3300				
S 2 4 5 7 3 4 6 11 0	Wheezing		Cardia	1C:		3332	222323	4352	12222	
	Poor air movement Abdom		<u></u>							
	Poor air mo Ratio	wement	Abdor	nen:		<u></u>	<u></u>		<u>5 5 112 508</u>	1.1210000000000000000000000000000000000
	Poor air me Ratio	Prolonged	Abdor GU:	nen:						
E I:E Re	Poor air me Ratio Normal tractions	Prolonged Moderate	Abdor GU: Muscr	aloskeletal:						
LE Re	Poor air me Ratio Normal tractions None Mild	Prolonged Moderate Severe	Abdor GU: Muser Neuro	iloskeletal:;						
Teaching:	Poor air me Ratio Normal tractions None Mild	Prolonged OModerate Severe	Abdor GU: Muscr Neuro	aloskeletal: ations due	e todav:		ssessment /	Acti	ion Plan	
Teaching: Needed	Poor air me Ratio Normal tractions None Mild	Verment Prolonged Moderate Severe Done	Abdor GU: Muscr Neuro Immuniz	ations due	e today: efits discussed	A	ssessment /	Acti	ion Plan	1 erity
Teaching: Needed	Poor air mc Ratio Normal tractions None Mild	Moderate	Abdor GU: Muscr Neuro Immuniz NONE Influenza_Lo	aloskeletal: :: ations due Risks/bene n#	e today: efits discussed		ssessment / lassification of Severe Persist	Action f Cur	ion Plan rrent Sev	l erity d Persistent
Teaching: Needed	Poor air mc Ratio Normal tractions None Mild bout asthma ronment	A Done	Abdor GU: Neuro Immuniz NONE InfluenzaLo	aloskeletal: ations due Risks/bene t#	e today: efits discussed		ssessment / lassification Severe Persist Moderate Per	Action of Cur ent sistent	ion Plan rrent Sev Mile Mile	erity d Persistent d Intermittent
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Teaching: Reded General info al Smoking/Envi Peak Flow/Mo Use of MDI a Management I Management I	Poor air mc Ratio Normal tractions None Mild bout asthma ronment mitoring nd Spacer Plan ith	A Contraction of the second se	Abdor GU: Muscr Neuro Immuniz □ NONE Influenza_Lc Pneumococcal Signature: Relationship:	aloskeletal: ations due Risks/bene #Lot#	e today: efits discussed	As C Do Ifs Ifs	ssessment / lassification Severe Persist Moderate Per- es current severi everity rating is everity rating is	Action of Cur ent sistent ty match lower th higher t	ion Plan rrent Sev Mile Mile h current the tan current to han current	erity d Persistent d Intermittent crapy? []Yes []Th therapy, step dow therapy, step up
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Appendix G

Heartland Health Plan of Oklahoma Asthma Management Plan

Breathing Better in Oklahoma!						
Peak Flow Record for(month)						The second
Sunday	Monday	Tuesday	Wed.	Thurs.	Friday	Saturday
Date						
AM			- 1933		1223	1924
PM				1000	3363	
Date						
AM				12.58	See a	1.41.61
PM						
Date						
AM	0.01915				2016	
PM						
Date					the state	
AM						
PM						
Date						
AM						옷을
PM						
Date						
AM						
PM						
BE SURE	TO FILL	IN THE E	BLANKS	FOR THE	ZONES: RED-Bel	ow

Breathing Better	r in Oklahoma!
Asthma Manage	ement Plan•••
Physician:	Date:
Take this and your peak flo	ow record to your doctor at each visit.
Your asthma management like traffic light colors.	plan comes in three zones that look
Your goal is to stay in the is stable and under control the instructions for medic	Green Zone, where your condition I. To try to stay in this zone, follow ines below.
The Yellow Zone shows y goal is to get back into the instructions your doctor fi	our symptoms are getting worse. Your : Green Zone by following the illed out in this plan.
The Red Zone shows you attack. You need treatmen for taking medicines and s the Red Zone instruction so you can act quickly to p	may be near or having an asthma t <u>now!</u> You should have a plan in place eeking care. Have your doctor fill out s, plus emergency telephone numbers, revent serious problems.
Contact List •••	• • • •
Physician:	Phone:
Pharmacy:	Phone:
Hospital/Urgent Care Cer	nter Phone:
Address:	
Taxi:	Phone:
Friends/relatives to call	in case of emergency;
Name:	Phone:
Name:	Phone

Appendix H

Partnership HealthPlan of California Provider Feedback Letter



Appendix H

Partnership HealthPlan of California Provider Feedback Report

artnersh sthma/A	ip HealthPlan of Co Worgy Prescriptions	ulifornia - PCP Quarterly Feedl Filled for Asthmatic Members	back Report With >8 Beta Agonist Canisters in	12 months	2012	BRR
PCP:	autoinet, konneg		Affiliation # 🛲	0004	Obar	
Men	aber ANT	IONET DOB: 9/28/1954	Sex F ID: Management -01	Member #	00009569300	
al Date	Drug Class	Sneelfic Therapeutic Category	Generic Description	NDCA	Prescriber	1. N. 1.
21/1999	ASTHMA	ORAL INHALED CORTICOSTERCIO	BECLOMETHASONE DIPROPIONATE	0085-0798-04	D/	مرديقة فرتيج بمكتبون
21/1909	ASTRIMA	BETA ADRENERGIC AGENTS	ALBUTEROL	59930, 1683,01	Dr	
3/1999	ASTHMA	BETA-ADRENERGIC AGENTS	ALBUTEROL SULFATE	00451-0508-50	n n	
16/1999	ASTHMA	BETA-ADRENERGIC AGENTS	ALIELITEROL	59030-1500-01	D.	Construction of the
10/1589	ASTHMA	GRAL INHALITO CORTICOSTEROID	BECLOMETHASONE DIPROPIONATE	00085-0735-04	B	 nontingen
V1958	ASTHMA	BETA-ADRENERGIC AGENTS	ALBUTEROL	50230-1585-01	n i i i i i i i i i i i i i i i i i i i	ليوه سيتليم ال
A1999	ASTHMA	ORAL INHALED CORECOSTEROID	TRIAMCINOLONE ACETONICE	00075-0080-37	1	والمراجع والمراجع المراجع
2/1969	ASTHMA	BETA-ADRENERGIC AGENTS	ALBUTEROA SULFATE	00451-0308-50	and the second	. Salapurada
7/1993	ASTHMA	DETA-ADRENERGIC AGENTS	AL PLITERCA	40030-1565.01	and the second	
19/1999	ASTHMA	DETA-ADRENERGIC AGENTS	AL BLITERON	\$0330-\$502-05	0	
25/1099	ASTHMA	BETA ADRENERGIC AGENTS	ALBUTHICK TRUPATE	60451-0308-00	0	
10/1009	ASTIMA	ORAL INHALED CORTICOSTEROID	TRAMONOLONE ACETOMOE	00075-0520-37	5	
10/1999	ASTHMA	BETA-ADRENERGIC AGENTS	ALBUTTERON	58930-1660-01	0	بالبوارية فتنجب الرار
29/1989	ASTHMA	ORAL INHALED CORTICOSTEROID	BECLOMETISASONE DIRROPIONATE	00086.0736.04	D	فنجيته بتتباري ال
5/1999	ASTHMA	BETA-ADRENFINGIO AGENTS	ALDUTEROU	59930,1563,01		
26/1999	ASTHMA	BETA-ADRENERGIC AGENTS	ALBUTEROL	50030-1563-01	D	
28/1999	ASTHMA	RETA-ADRENERGIC AGENTS	ALDUTERON SUITATE	00451.0398.50	0	
28/1099	ASTHWA	CRALINHALED CORTCOSTERDID	DECLOMETHASONE DIPROPIONATE	00086-0739-04	Dr	
9/2000	ASTHAA	BETA-ADRENERGIC AGENTS	AI BUTEROI	59930.1563.01		,
9/2003	ASTHMA	ORAL INHALLID CORTICOSTEROID	RECLOHEDIASONE DIPROPIONATE	00085-0738-04	0	
4/2000	INFLAMMATORY DISEA	GUICOCORTICOIDS	PPENNONE PROPERTY PROPERTY INC.	00000010000	81	
4/2000	ASTHMA	RETA ADRENERGIC AGENTS	ALBUTEROL STREATE	05651-0305-50		
5/2050	ASTHMA	RETA ADRENERGIC AGENTS	ALEUTERO	45403-0503-17	8	
6/2010	ASTHMA	ORM INHALED CORTICOSTERCIO	BECLOMETHARONE PORPROVATE	01035-0238-04	B .	
0/2000	INFLAMBLATORY DISEA	CH UCOCOECTICATE	UDGENALCHART IN THE REPORTS	00084-0481-04		a de la companya de l
1/2020	ARTHMA	ORAL INHALED CONTROLSTEROOD	NECT CALETUASCINE DIDOCOLONIATE	00005-0236-64	in the second	. Andreas
2/2000	ACTINIA	BETA AODENEDGIE AGENTS	ALDITEDOI	46603.0323.47	EV.	
0/2/100	ACTINA	DETA_ADDENEDOUS ADENTS	ALDUIEDOL SIA CATE	42002/0203/17	D	
1/2000	ACTINA	PETA ADDENEDOVC ADDATS	ALDVIEROL OUPTRIE	49602-0302-42	D/	
2000	ASTEMA	BETA ADDENERGIC AGENTS	ALES (TEO/L	40502-0303-17	D	
6/2030	ASTUNA	BETA ADDENEDOV ADENTS	ALLOW LOTOL	+1302-0302-11 ///////////////////////////////////	TH I	
12000	APTALIA	BETA ADDEVEDOUS ASSEVTS	ALBUICHD, BULFAIL	50401-0300-30 80855 4840 84	TV	والأخافية المتعاقب المراجع
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are/www.	Part 11366, the starters of Carrier	SHOW INCOMENCING STREET	DOGOWERTHOUSE OF TRAVELOR TE			the second second

PHC Asthmatic Members with >8 Canisters of Beta-Agonist Dispensed in Report Period

PCP: 🐺	12000	E, Groupetti				Affiliation #:	0004	
MEMBER		DOB	Sex	MEM#	ID	# CANISTERS		
ANTIONET	1.1	9/28/1954	F	00009568300	SECONDARIA -01	15		
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*** Members listed on this report are those asthmatics who received more than 8 canisters of a beta-agonist medication over a 12 month period. A detailed medication list is in the attached report for each member shown above. The detail report shows asthma, allergy, and preduisone prescriptions filled for the reporting period, plus the most current pharmacy data available at run time. ***

Appendix I

Passport Health Plan Asthma Member Report



Appendix J

National Initiative for Children's Healthcare Quality Provider Office Strategies for Improving Asthma Care

Desired Characteristic of Practice	Gap to Eliminate or Opportunity to Improve Care Identified	Goal	Tool/Strategy	Tips for Implementation
Track Patients	No system to identify patients with asthma in practice.	90 percent of patients with asthma will be identified.	Database registry.	 Begin with most severe patients and enter informa- tion from chart. Start with patients who come to office for a sched- uled visit.
Prompt Appropriate Care	A consistent diagnosis is not used in our practice.	95 percent of children with asthma have a diagnosis in the chart.	Pediatric Asthma Promoting Best Practice – Guide for Managing Asthma in Children – section on Diagnosis.	 Have a meeting with clinical staff and discuss the advantages and disadvantages of using the common term "asthma." Review criteria in guide-lines.
	Severity is not classified and documented.	Classify and document asthma severity in chart for 95 percent of	Living with Asthma Survey.	• Use Living with Asthma form to collect information needed to classify severity.
		patients with asthma.	Severity chart.	 Remind clinicians that classification of severity is an important first step in prescribing appropriate therapy. Review link between sever- ity classification and medi- cation dosage.
			Encounter form.	• Implement a flow sheet or encounter form to provide prompt for provider to classify and document severity at every visit.
	Children with persistent asthma are not prescribed appropriate anti-inflam- matory medication. 95 percent of children with persistent asthma are prescribed appropri- ate anti-inflammatory medication.	Medication wall poster or pocket card.	 Review link between sever- ity classification and medi- cation dosage. Review Executive Summary of the NAEPP Expert Panel Report Guidelines for the Diagnosis and Management of Asthma – Update on Selective Topics 2002 about long-term management of asthma and evidence about safety of inhaled corticosteroids in children. 	
			Pharmacy/Formulary Resource list.	• Post list of drugs on formu- lary or covered by various insurance plans.
Maximize the Efficiency of the Care Team			Living with Asthma Survey.	• Use Living with Asthma form to collect information from patients prior to provider interview. Nurse can review data as patient prepares for visit.

Appendix J (continued)

Develop Linkages With

Support From the Health

Care System

Community Partners

Asthma management

Improved delivery

designs are not reim-

partners.

bursed.

plan is not used or is not shared with community

Desired Characteristic of Practice	Gap to Eliminate or Opportunity to Improve Care Identified	Goal	Tool/Strategy	Tips for Implementation
Support Patient/Family to Manage Asthma as a Chronic Disease		50 percent of patients will agree to group visit for maintenance planned care and edu- cation.	Group visits.	 Offer group visits as alternative design for planned care. Collaborative team provides care.
	Asthma management plan is not used consis- tently across providers.	95 percent of patients with persistent asthma have a written asthma management plan in the chart.	Asthma Management Plan – copy to school and daycare.	 First assure severity classification and appropriate use of medications implemented so management plans will include appropriate medications. Use preprinted forms to facilitate filling in medications and doses – eliminate redundant documentation

	 facilitate filling in medica- tions and doses – eliminate redundant documentation. Plan strategy for how to provide access for provider at time of visit.
95 percent of patients with persistent asthma have a written asthma management plan; copy is provided to school and/or daycare facility.	 Plan strategy for distribution by provider or parent. Obtain parent consent for sharing management plan with community partners. Plan strategy to identify school if direct faxing of forms is planned. Include office phone/fax to provide the strategy of the strategy to the strategy to the strategy to the strategy forms is planned.

facilitate communication.

visit (group and individu-

al) and non-visit (phone and e-mail) care.

• Health plan covers both

75

Appendix K

National Initiative for Children's Healthcare Quality Classification of Asthma Symptom Severity and Therapy

80 S. C.	SEVEDITY	⇒ DAYTIME SYMPTOMS ∞ NICHTTIME	LONG TERM	I CONTROL
	SEVERITY	SYMPTOMS LUNG FUNCTION: PEF is % personal hest; FEV, is % predicted	AVTIME SYMPTOMS GETTINE WITOMS LONG TERM CONTROL Older Than 5 Years of Age encode bert, FFV, is % free recense side for drags and doage) Children 5 Years of Age and Younger Control recense side for drags and doage) Children 5 Years of Age and Younger Preferred treatments 0 of PFS 260% Fredicate + schipped and the schi	
MEDICATIONS Inhaled Corticosteroids	Severe Persistent 2 2 2 2 2	⇔Continual, Limited physical activity. Frequent cxacerbations Ø Frequent FEV, or PEF ≤ 60% Predicted. PEF validation >3/96.	Consider referral to asthma specialist Preferred treatment: • High-dose inhaled corticosteroids AND • Long-acting inhaled belag-agonists	Refer to asthma specialist Preferred treatment: • High-dose inhaled corticosteroids AND • Long-acting inhaled beta ₂ -agonists
Systemie Corticosteroids Methylprednisolone	Madaut	D.D.D.D.D.D.	AND, if needed, Corticosteroid tablets or syrup 2 mg/kg/day generally not to exceed 60 mg/day (attempt to wear oral med)	AND, if needed, Corticosteroid tablets or syrup 2 mg/kg/day not to exceed 60 mg/day (attempt to wean oral med)
Prednisolone Prednisone Long-Acting Inhaled Beta2- Agonists	Persistent	short- acting B_t agonist. Exnecrbations affect activity. Exacerbations ≥ 2 times/wk, may last days @ > 1 night/week	Contado regerrat to astrona specialist Preferred treatments: Low-to-medium dose inhaled corticosteroids AND Long-acting inhaled betag-agonists	Preferred treatments: Low-dose inhaled corticosteroids and long-acting inhaled beta-agonists, OR Medium-dose inhaled corticosteroids
Salmeterol Formoterol Combined Medication	the developer Automation	FEV1 or PEF >60%-<80% Predicted. PEF variability >30%	Alternative treatment: • Increase inhaled corticosteroids within medium-dose range, OR Low-to-medium dose inhaled corticosteroids and either leukotriene modifier or theophylline	Alternative treatment: • Low-dose inhaled corticosteroids and either leukotriene receptor antagonist or theophylline
Fluticasone/ Salmeterol Cromolyn and Nedoeromil Cromolyn Nedoeromil	Class		If needed (particularly in patients with recurring severe exacerbations): Preferred treatment: • Increase inhaled corticosteroids within medium-dose range and add long-acting inhaled betag-agonists	If needed (particularly in patients with recurring severe exnoerhations): Preferred treatment: • Medium-dose inhaled corticosteroids and long-acting inhaled beta ₂ -agonists
Leukotriene Modifiers Montelukast			Alternative treatment: • Increase inhaled corticosteroids within medium-dose range and add and either leukotriene modifier or theophylline	Alternative treatment: • Medium-dose inhaled corticosteroids and either leukotriene receptor antagonist or theophylline
Zalirlukast Zileuton	Mild Persistent		Preferred treatment: • Low-dose inhaled corticosteroids	Consider referral to asthma specialist Preferred treatment: • Low-dose inhaled corticosteroids
Methylxanthines Theophylline		Ø >2 nights/month FEV ₁ or PEF ≥ 80% Predicted. PEF variability 20 - 30%	Alternative treatment: • Cromolyn,leukotriene modifier, nedocromil OR sustained release theophylline to serum concentration of 5-15 mcg/mL	Alternative treatment: • Cromolyn OR leukotriene receptor antagonist
	Mild Intermitten	⇒ Symptoms ≤ 2 days/wk. Asymptomatic and normal PEF between exacerbations. Exacerbations brief (hrs- days), variable intensity Ø ≤2 nights/month FEV, or PEF ≥ 80% predicted. PEF variability <20%	None	None
 Minimal or no chron Minimal or no exact No limitations on act Minimal or no advert Children 5 Years of inhaled beta-agonis Older Than 5 Years (80% personal best (GOALS OF THE ASTHMA CON ic symptoms day or ivaties; no school/w se effects from me /Age and Younger (<1x per day, <1 c s of Age:Maintain (<1x per day, <1 c	ERAPY: TROL night ork missed dications : Minimal use of short-acting canister/month) near) normal pulmonary function mister/month)	OUICK RELIEF Older Than 5 Years of Age Short-acting bronchodilator: 2-4 puffs short-acting inhaled beta ₂ -agonists as needed for symptoms. Intensity of treatment will depend on severity of treatment will depend on severity of exacerbation; up to 3 treatments at 20-minute intervals or a single nebulizer treatment as needed. Course of systemic corticosteroids may be needed. Use of short-acting beta ₂ -agonists >2 times a week in intermittent asthma (daily, or increasing use in persistent asthma) may indicate the need to initiate (increase) long-term control therapy.	QUICK RELIEF Children 5 Years of Age and Younger Bronchodilator as needed for symptoms. Intensity of treatment will depend upon severily of exacerbation. Preferred treatment: Short-acting inhaled beta-agonists by nebulizer or face mask and space/holding chamber Alternative treatment: Oral beta-agonist. With viral respiratory infection – Bronchodilator q 4–6 hours up to 24 hours (longer with physician consult); in general, repeat no more than once every 6 wks – Consider systemic corticosteroid if exacerbation is severe or patient has history of previous severe exacerbations Use of short-acting beta-agonists >2 times a week in intermittent asthma (daily, or increasing use in persistent asthma) may indicate the need to initate (increase) long- term control therapy.

Adapted from NAEPP Expert Panel Report Guidelines for the Diagnosis and Management of Asthma-Update on Selected Topics 2002, National Institutes of Health, National Heart, Lung, and Blood Institute.

For infants and children, use MDI with spacer with or w/o mask or nebulizer.

If a patient has seasonal asthma on a predictable basis, daily, long-term anti-inflammatory therapy (inhaled corticosteroids, cromolyn, or nedocromil) should be initiated prior to the anticipated onset of symptoms and continued through the season.

Appendix L

National Initiative for Children's Healthcare Quality Usual **Dosages for Long-Term Control Medications**

NICH ():

Medication	Dosage Form	Adult Dose	Child Dose*
Inhaled Corticosteroids (S	See Estimated Comparative Daily L	Dosages for Inhaled Corticosteroids.)
Systemic Corticosteroids		(Applies to all three cortic	costeroids.)
Methylprednisolone	2, 4, 8, 16, 32 mg tablets	 7.5–60 mg daily in a single 	 0.25 2 mg/kg daily in single dose
Prednisolone	5 mg tablets,	dose in a.m. or god as needed	in a.m. or god as needed for
	5 mg/5 cc,	for control	control
	15 mg/5 cc	 Short-course "burst" to 	 Short-course "burst": 1–2
Prednisone	1, 2.5, 5, 10, 20, 50 mg	achieve control: 40-60 mg	mg/kg/day, maximum 60 mg/day
	tablets;	per day as single or 2 divided	for 3-10 days
	5 mg/cc, 5 mg/5 cc	doses for 3-10 days	
Long-Acting Inhaled Beta	2-Agonists (Should not be used for	r symptom relief or for exacerbation	ns. Use with inhaled corticosteroids.)
Salmeterol	MDI 21 mcg/puff	2 puffs q 12 hours	1-2 puffs q 12 hours
Formoterol	DPI 50 mcg/blister	I blister q 12 hours	1 blister q 12 hours
and the second second	DPI 12 mcg/single-use capsule	1 capsule q 12 hours	I capsule q 12 hours
Combined Medication			
Fluticasone/Salmeterol	DPI 100, 250, or	1 inhalation bid; dose depends	I inhalation bid; dose depends on
	500 mcg/50 mcg	on severity of asthma	severity of asthma
Cromolyn and			
Nedocromil			
Cromolyn	MDI I mg/puff	2-4 puffs tid-qid	1-2 puffs tid-qid
Nedocromil	Nebulizer 20 mg/ampule	1 ampule tid-qid	I ampule tid-qid
	MDI 1.75 mg/puff	2-4 puffs bid-qid	1-2 puffs bid-qid
Leukotriene Modifiers			
Montelukast	4 or 5 mg chewable tablet	10 mg qhs	4 mg qhs (2-5 yrs)
	10 mg tablet		5 mg qhs (6–14 yrs)
			10 mg qhs (> 14 yrs)
Zafirlukast	10 or 20 mg tablet	40 mg daily (20 mg tablet bid)	20 mg daily (7-11 yrs) (10 mg
Zileuton	300 or 600 mg tablet	2,400 mg daily (give tablets qid)	tablet bid)
Methylxanthines (Serum)	nonitoring is important [serum con	centration of 5–15 mcg/mL at stead	ły state]).
Theophylline	Liquids, sustained-release	Starting dose 10 mg/kg/day up	Starting dose 10 mg/kg/day; usual
	tablets, and capsules	to 300 mg max; usual max 800	max:
		mg/day	 < 1 year of age: 0.2 (age in
			weeks) $+ 5 = mg/kg/day$
			 ≥ 1 year of age: 16 mg/kg/day

Estimated Comparative Daily Dosages for Inhaled Corticosteroids

	LOW DA	ILY DOSE	MEDIUM	DAILY DOSE	HIGH DAILY DOSE	
DRUG	Adult	Child*	Adult	Child*	Adult	Child*
Beclomethasone CFC 42 or 84 mcg/puff	168-504 mcg	84-336 mcg	504-840 mcg	336672 mcg	> 840 mcg	> 672 mcg
Beelomethasone HFA 40 or 80 meg/puff	80-240 mcg	80160 mcg	240480 mcg	160-320 mcg	> 480 mcg	> 320 mcg
Budesonide DP1 200 mcg/inhalation	200-600 mcg	200-400 mcg	600-1,200 mcg	400-800 mcg	> 1,200 mcg	> 800 mcg
Inhalation suspension for nebulization (child dose)		0.5 mg		1.0 mg		2.0 mg
Flunisolide 250 mcg/puff	500- 1,000 mcg	500-750 mcg	1,000 2,000 mcg	1,000-1,250 mcg	> 2,000 mcg	> 1,250 mcg
Fluticasone MDI: 44, 110, or 220 mcg/puff DPI: 50, 100, or 250 mcg/ inhalation	88-264 mcg 100-300 mcg	88-176 mcg 100-200 mcg	264-660 mcg 300-600 mcg	176-440 mcg 200-400 mcg	> 660 mcg > 600 mcg	> 440 mcg > 400 mcg
Triamcinolone acetonide 100 mcg/puff	4001,000 mcg	400800 mcg	1,000-2,000 mcg	800-1,000 mcg	> 2,000 mcg	> 1,200 mcg

*Children less than 12 years of age. Adapted from NAEPP Expert Panel Report Guidelines for the Diagnosis and Management of Asthma-Update on Selected Topics 2002, National Institutes of Health, National Heart, Lung, and Blood Institute.
Appendix M

Recommended Readings

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Appendix M

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Appendix N

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The BCAP Network

The BCAP Network is an alliance of health plans joined by the common goal of furthering the quality and cost-efficiencies of Medicaid and SCHIP managed care. BCAP Network activities include:

- BCAP Workgroups Up to 15 Medicaid/SCHIP health plans collaborate to develop replicable best practice models for targeted clinical and administrative areas.
- **BCAP Workshops** Hands-on workshops allow attendees to develop quality improvement initiatives for their Medicaid/SCHIP populations.
- **BCAP e-News Update** Bi-monthly electronic newsletter containing updates on health plan best practice activities. To subscribe, e-mail Im@chcs.org.
- BCAP Network Exchange Calls Lively teleconference discussions about current issues in health care with experts in the field.
- CHCS Website Features current updates on BCAP projects, resources for Medicaid and SCHIP health plans, and CHCS Managed Care Best Practices Publications. www.chcs.org
- **Best Practices Grants** Grants of up to \$100,000 are available to Medicaid and SCHIP health plans that want to develop, test, or refine "best practice" programs to improve delivery of managed care in the public sector.



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