Area 1. Comprehensive Asthma Management Program

Statewide Health Plan (SHP) supports our members with asthma and the providers that treat them through a comprehensive asthma disease management program (ADMP). Over its ten-year existence, the asthma disease management program has evolved from a small pilot project to a self-funded program that follows the chronic care model and encompasses innovative partnerships with members, providers, academic institutions, public health departments, community organizations, and others to maximize opportunities for improved asthma outcomes. SHP has programs that address the issues that complicate treatment for our culturally and linguistically diverse, low-income and rural members, as well as programs addressing home, school, and occupational exposures that require environmental management.

SHP’s asthma disease management program is long-standing, comprehensive, and innovative. We embraced environmental management of asthma from the start, and it is included in all of our clinical, outreach, and education activities. Environmental management of asthma is a key component in patient education materials and in asthma action plans. We have developed specific provider education that incorporates environmental management. Our case managers routinely work with providers to ensure that environmental management is included in asthma treatment plans. They provide links to the community’s health department and housing authority, creating a comprehensive network to manage the environmental aspects of asthma. Our outreach to schools and employers has emphasized environmental management. Finally, we participate in activities that advocate for better indoor and outdoor air quality in order to improve the health of our members with asthma.

a. Management Structure and Operating Principles

In 1996, Dr. Alison Erics, Chief of Pulmonology at SHP, championed the formation of a committee to begin planning an asthma disease management program. The Committee developed goals related to identification of the member population, risk stratification, member education, physician registries, education and incentives, clinical practice guidelines, and employer support. SHP implemented the ADMP in 1997, and since then it has continued to sustain and drive best practices in asthma management for our members in order to achieve our goals. The Committee, which Dr. Erics still leads, includes family practitioners and specialists, registered nurses and other health professionals such as respiratory therapists, an asthma educator, and case management coordinators. Hospital managers are represented by the medical director and a quality manager and community stakeholders are also members. The Committee also includes a member with asthma, the parent of a member with asthma, and a representative from our local chapter of the American Lung Association. This Committee meets monthly to assess program status and improvements, discuss problems and solutions, and review pharmacy and utilization claims data and feedback from members and practitioners. The Asthma Committee provides oversight to SHP’s ADMP and all of SHP’s asthma-related activities. Dr. Erics exhorts us all to “gather, analyze, and share data and use it to continue to improve the services we provide to our asthma members.”

SHP implements the major portions of the asthma program designed by our Asthma Committee.
However, we have partnered with a number of organizations that extend our reach into the community, raise community awareness about asthma and how to treat it, provide community- or home-based services, or offer adjunct services to improve our members’ ability to address their asthma. These organizations include several large employers, major medical centers, Community Medical Centers, EDs, local home health agencies, local school systems, and the State Asthma Coalition.

**Distinguishing Program Feature:** Community support. SHP is a member of the statewide asthma coalition. We have representatives on several subcommittees including the environmental committee and the school committee. We routinely provide updates about coalition activities to our member physicians through our monthly e-newsletter, and encourage them to participate with local education and outreach efforts in their communities. We also work with several large employers in the area to provide asthma education and counseling to their employees. We have partnered with local school systems to train school nurses, administrators, teachers, and bus drivers, and we testified before local legislatures regarding legislation for smoke-free restaurants and other public facilities.

**Distinguishing Program Feature:** Employee wellness programs. SHP has a selection of employee wellness seminars that we offer to employers that purchase SHP coverage. For example, “Asthma Management at Work,” includes an SHP-provided expert speaker, educational materials, and incentives and give-aways, all at no charge. We also offer employer-based smoking cessation programs.

SHP recognizes the special needs of members with asthma in Metropolitan City and in the surrounding smaller, rural communities, and provides them with enhanced asthma education and treatment services through a contract with Community Medical Centers. This program has focused on and been successful in providing asthma education and encouraging best asthma practices by local physicians. Staffed with full asthma health care teams, the Community Medical Centers offer evening and weekend hours in neighborhood locations to make it easier for our members to access asthma (and other clinical) services. Moderate and high risk members are also assigned case managers who work with our Outreach Call Center staff to make asthma outreach calls to members who have not seen a physician in a year. These members also receive assistance in setting up doctors’ appointments. Case managers provide individualized telephonic communication to members to address medication changes, depression screening, vaccinations, smoking cessation, trigger management, hospitalizations, and monitoring the member’s condition. Goals and interventions are developed with the member or parent to reduce or remove trigger exposure. Because SHP surveys suggest that members often have difficulty using asthma action plans, especially when their symptoms are frequent, our case managers proactively attempt to help members improve their understanding and use of these valuable self-management resources.

In response to the high rate of ED utilization due to asthma exacerbations, SHP partnered with EDs in an urban children’s hospital and a rural county hospital. Our case managers receive a list of plan members seen in the ED with a primary diagnosis of asthma. We follow up by mailing our members asthma education information and a checklist of steps they should take following their ED visit. This includes making an appointment with their primary care physician (PCP) to discuss asthma controller medications, and taking the asthma controller medication daily as prescribed.

SHP understands that there are multiple factors that can contribute to an enrollee not participating in our programs to treat asthma: difficulty in accessing our services due to time or location; low health literacy, language barriers, or differing cultural norms; and psychosocial problems that prevent the enrollee from
focusing on treating his or her asthma. Our asthma program addresses all of these issues through a variety of outreach mechanisms. SHP members are referred to asthma education services by physicians, health plan case management nurses, SHP field office staff, SHP Outreach Call Center staff, health promotion specialists at health fairs and community events, and outreach specialists during visits to members’ homes. Case managers can refer patients for in-home asthma education through our partnership with the State Asthma Coalition. Special situations, such as pregnancy, require special interventions. Asthma is a high risk factor on our obstetrical enrollment and pre-certification form, and all members identified with asthma in their pregnancy are referred either to the Parent-to-Parent program, a home-based maternity program for high risk pregnancies, or to a case manager.

All of our outreach materials are available in English and Spanish, and many are aimed at a low literacy audience. Interpretation of materials is available in other languages through contracted interpreter services. Our contract with local home health agencies for home assessments includes providing Spanish-speaking home visitors.

Targeted mailings are sent to members who are identified through claims data as having a specific need (e.g., overuse of short-acting beta agonists, medication non-adherence, lack of PCP follow-up). Members also receive language-specific and reading level appropriate educational booklets approximately twice per year.

SHP not only reaches out to the community to enroll members, we also actively include them in our programming. The Asthma Committee includes a member with asthma, the parent of a member with asthma, and a representative from our local chapter of the American Lung Association. These members work with the Committee to guide and evaluate our asthma programs.

b. Integrated Health Care Services

SHP’s ADMP is fully consistent with the National Institutes of Health (NIH) Guidelines. Our clinical practice guidelines encourage our clinicians to establish a diagnosis of asthma through the methods recommended in the Revised NIH EPR-3 Guidelines. After diagnosis, identification, and stratification, practice guidelines encourage physicians to apply the chronic care model to all patients with asthma. By creating planned disease management visits and by maximizing self-management, patients and providers are better prepared to focus on chronic illness management to make optimal use of their visits. Moderate and high risk members or their caregivers are also contacted by a case manager. SHP uses registered nurses with training and experience with respiratory diseases. The case manager arranges for a complete assessment. Information is obtained on the member’s current health status and knowledge of their condition and its management, including peak flow readings (if appropriate) and medication use, clinical history including previous testing done, hospitalizations and emergency room care, functional level, caregiver resources if appropriate, mental health status, life planning, and cultural and linguistic needs, preferences, or limitations.

SHP emphasizes accurate assessment and monitoring of members with asthma. SHP uses the data previously listed to identify members with asthma each year, track interventions they receive, and monitor their outcomes.

Our asthma program has a major emphasis on asthma education. One of the primary goals of our asthma
education is to promote effective self-management. Key to this is an asthma action plan. We encourage our physicians to work with all patients to develop a written asthma action plan that includes two aspects: daily management and how to recognize and handle worsening asthma. Case managers and clinicians regularly review the status of the patient’s asthma control and the plan is revised accordingly.

Asthma education is one of the most important interventions supported by SHP. It is made broadly available to members through physicians, pharmacists, the SHP Web site, community agencies, health education classes focused on asthma care and self-management skills, case management, health promotion programming provided by SHP’s Community Medical Centers in major service areas, and asthma education packets. Members also receive health education through outreach and our 24-hour nurse information line. The type and frequency of asthma education materials distributed automatically from SHP depend on the member’s risk level. However, educational resources are available to all members or providers who request them. All members, including those at low risk, are eligible to receive pharmacy point-of-service asthma consultations and to use WebMD asthma tools and education available on the SHP Web site. All members are also eligible to attend on-site classes and receive telephonic outreach. All members are provided a copy of our educational packet that is individualized for either the asthma member or the asthma member’s caregiver. The packet teaches them about the differences between control and rescue medications, how to communicate effectively with physicians, how to use action plans and diaries for asthma control, how to use inhalers and peak flow meters, how to identify and mitigate exposures to indoor and outdoor environmental asthma triggers whenever possible, consideration of other health conditions (co-morbidities); lifestyle issues, and additional resources.

Education is broadly available to asthma members, and their caregivers, throughout the continuum of care. Education is built into every encounter with an asthma member from the initial diagnosis, through well visits, to ED or hospitalizations, should that occur. Information is reinforced frequently during nurse-member interactions. SHP also promotes asthma education throughout the communities in which we operate.

Educational materials are reviewed and revised on an annual basis to ensure consistency with current evidenced-based guidelines. Materials are available in English and Spanish, and are provided on the SHP website. Materials encourage patients to communicate with their physicians about their health conditions and treatment, especially at times of increased symptoms.

High risk members receive all resources offered to both low and moderate risk members. If they have not visited a physician, or they have a combination of asthma-related outpatient, emergency department (ED), or hospitalization services in the past year, they also receive asthma outreach calls and education. They may be referred to case management on their own or by their physician's request, or if they indicate significant impairment in their quality of life due to asthma. Case management also includes a strong educational emphasis. Members receive asthma education from their providers during orientation to planned disease management visits. When members understand that they are receiving focused asthma management, and that they are expected to prepare ahead for these visits, they become better consumers of medical care, and more informed with respect to maximizing their asthma outcomes.

SHP also provides physician education opportunities and targets physicians with data, information resources, and incentives to encourage improved asthma practices. Utilization, services due, goal development, and self-management tools are provided on-line. Physicians receive an annual asthma fax
with member-specific data that they may not have, such as risk level, asthma-related ED and hospital usage, presence of co-morbid conditions (as evidenced in claims data), and utilization of asthma medications. This data alerts physicians to illness severity, treatment compliance, and other patient-specific issues, and helps them improve their services. SHP provides physicians with updated National Heart, Lung and Blood Institute clinical practice guidelines for asthma, opportunities for asthma-related Continuing Medical Education, asthma education materials for their patients, and suggestions for how to implement asthma action plans.

SHP staff also team with provider office staff to make evidence-based process and system improvements. For example, one of our PCP offices with otherwise high performance demonstrated a clinical weakness in asthma management. Representatives from SHP and The Pediatrics Clinic met to review the office’s practice for managing asthma patients. We trained them using the State Asthma Resource Kit, a guide SHP helped to develop to help practitioners treat asthma patients. We also provided partial reimbursement for their office staff to attend an asthma education course. The case manager assigned to this office became an integral part of the team, facilitating referral of their asthma patients to the SHP case management program. This was a key part of the plan as it provided sustainability for ongoing management of these patients. After identifying key improvement strategies and implementing these process improvements, The Pediatrics Clinic was able to increase their asthma Physician Incentive Program (PIP) score from 67 percent in 2005 to 82 percent in 2006.

SHP emphasizes the importance of optimal pharmacotherapy for members with asthma. To maximize appropriate use of long-term asthma controller medications in place of short-term reliever or rescue medications, SHP encourages physicians to follow clinical practice and medication guidelines for asthma. SHP does this by highlighting appropriate medication practices as a component of the physician performance bonus program. In accordance with NIH guidelines, SHP recommends vaccination for members who have asthma, because they are considered to be at risk for complications from influenza.

Pharmacy claims are regularly tabulated and analyzed for identification of asthma management issues, such as excessive use of short acting beta-agonists or steroid dosing. Strong emphasis is placed on evidence-based treatment with the appropriate types of medications, as well as optimal use of inhalers and spacers, for both children and adults based on the severity of their asthma. All asthma members are screened for pharmacological therapy. When treatment is not consistent with national guidelines or results in sub-optimal control, SHP sends an alert to the PCP.

SHP also rewards pharmacists who participate in improving asthma chronic care. Pharmacists in the state who have contracted with SHP receive computer pop-up screens from SHP at point of service when verifying member eligibility for asthma medications. Members are screened every six months through pharmacy claims. Those using three or more rescue medications and two or fewer control medications are likely in poor asthma control and their names appear on the pop-up as eligible for a pharmacy consultation. The prompted ten-minute pharmacy medication consultation is more substantial than routine consultations about new medications. If the consultation occurs and is documented, the pharmacist receives a bonus payment.

Communication among our health care teams is supported by our master asthma registry, first implemented in 2002. The registry includes extensive patient information, including asthma severity, utilization data (specific records of visits to PCPs and specialists, ER visits, hospitalization),
medications, home assessment results, treatment plans and outcomes, education provided, referrals by clinicians and social workers, self-management actions. The registry does more than simply collect data. It identifies members who need additional support, assesses clinical performance, and generates reports for our asthma care teams. The registry is accessible to PCPs, case managers, specialists, and all members of our asthma care teams. For pediatric members, with permission from their parents, SHP shares certain information in the registry with school nurses.

We use a variety of reports to monitor and manage members with asthma and coordinate their care. Standard reports include a case management report sent to the PCP periodically to assist with outpatient management in the physician’s office; a copy of a visit report from asthma educators who conduct individual counseling sessions; pharmacy history reports; and updates on asthma guidelines for our practitioners. Doctors use these reports to identify members who need to make asthma-only visits to evaluate their asthma and review treatment and self-management plans. Case managers send clinical information (e.g., pharmacy or medical claims, summary of case management telephonic contact) to PCPs or specialists prior to members’ appointments.

- **Distinguishing Program Feature:** Clinician support tools. Prior to a scheduled asthma visit, SHP sends the patient’s medical record, in the form of an update to the physician, that includes health care and pharmacy utilization information. A section of the update highlights the patient’s asthma triggers, and any special instructions that were provided at a previous visit.

By routinely reviewing the registry and conducting follow-up contact, asthma case managers can determine whether and how patients are responding to therapy. Case managers notify PCPs and specialists when there is evidence of inadequate control of the member’s asthma so that treatment can be adjusted. In assessing control, we follow practice guidelines looking at the member’s impairment level (i.e., the degree to which present quality of life may be affected) as well as the risk of future adverse events, considering both when determining appropriate treatment. Case managers also assess for other medical conditions and intervene in treatments that may be contributing to sub-optimal asthma management, such as obesity, gastroesophageal reflux disease (GERD), or chronic obstructive pulmonary disease (COPD). Co-morbidities identified through case management are managed by the case manager in collaboration with other appropriate medical professionals. Case managers also review pharmacy claims to identify recent asthma prescription refills before making telephonic case management contacts.

SHP has daily utilization management meetings in which all the utilization review nurses, case managers, and the Medical Director share new admissions, special needs cases, coordination of care, and referral authorizations.

Physicians are provided with pharmacy utilization reports to support member follow-up. To further encourage follow-up, SHP developed a component for the physician bonus program (Physician Incentive Program or PIP) that rewards excellence in asthma care. The quality measure related to asthma is the ratio of long term controller medication to short acting medication. Physicians receive an incentive (per member per month) if this measure is met. We also contact PCPs to discuss prescribed treatment plans vs. actual treatment for inclusion in the patient registry. Discussion of environmental triggers, interventions, and results is included in this care coordination.

c. **Tailored Environmental Services**
Since our Committee was formed in 1997, SHP recognized the significant impact that environmental conditions can have on the health of our members with asthma. Dr. Eric's championed this issue to ensure that environmental management of asthma became a fully realized component of our asthma disease management program. SHP has fully integrated environmental management throughout our practice guidelines and program implementation, from initial intake through treatment and follow-up. SHP’s goals related to environmental management are to:

-- Assess individual sensitivities to environmental triggers in 50 percent of our members with asthma;

-- Educate 100 percent of our members with asthma about environmental asthma triggers and how to mitigate exposures;

-- Develop action plans to facilitate self-management for 100 percent of our members with asthma;

-- Maximize health improvements attributable to a reduction in environmental exposures; and

-- Foster the development of asthma-friendly environments in homes, schools, workplaces, and other public facilities in our community.

SHP recognizes the necessity of addressing both indoor and outdoor environmental asthma triggers for successful management of asthma, and has included both in our educational materials since the advent of the ADMP. Our environmental management programs have grown from simple messages in educational materials, to developing in-depth provider education on environmental management, to performing home assessment and home-based education for high risk members.

An asthma questionnaire is included in the welcome package for new members identified with asthma, to complete and return in a postage paid envelope. The questionnaire is age-specific, and assesses for common triggers, co-morbidities, and obstacles related to environmental management. In the initial telephone assessment that takes place following a diagnosis of asthma, members are asked about potential asthma triggers. This information is maintained in our asthma patient registry. Interventions, educational mailings and follow-up case management calls are planned based on the intensity and severity of the member's individual case, and all include information on managing environmental asthma triggers. Members are regularly assessed for the need for a referral to an allergist for allergy testing, or for treatments such as immunotherapy, antihistamines, or inhaled nasal steroids to better control their allergies and asthma.

The environmental management aspect of our asthma program is comprehensive. It provides education for both members and providers. Members with special needs receive social service referrals. High risk members receive additional services, such as home visits, case management, and equipment. We also recognize the importance of working with the wider community, so we have instituted outreach programs to raise asthma awareness in the community and developed partnerships with other organizations that work on asthma issues related to environmental management. When we review providers’ asthma care, environmental management is an important focus. SHP staff ensure that clinicians understand the importance of environmental management and the science supporting it, know what potential triggers are and how to mitigate them, and know what tools and resources are available to
their patients through SHP.

At the individual practice level, SHP encourages providers to help patients identify indoor and outdoor environmental asthma irritants and allergens to which they are sensitive. These include dust mites, cockroaches and other pests, mold, secondhand smoke, chemical fumes, smog, and other triggers. During asthma treatment planning, members are given resources to help them avoid or mitigate exposures. For example, they are informed about how to eliminate pests, remove mold and other allergens, minimize strenuous exercise outdoors on days where there is a high pollen count or significant air pollution, and avoid chemical fumes while using household cleansers. They are educated about ways to stop smoking, and are given referrals to smoking cessation programs as needed. Members whose asthma is associated with allergy triggers receive hypo-allergenic pillow and mattress casings free of charge so that they can reduce exposure to environmental asthma triggers like dust mites in their homes. SHP encourages providers to order home environmental assessments for moderate and high-risk members with persistent asthma. Case managers may also refer members for home assessments, based on their treatment needs. Through our partnership with the State Asthma Coalition, SHP contracts with local home health agencies to provide home assessments using EPA’s Home Environmental Assessment Checklist.

Home visitors may visit as many times as they believe necessary; the average is four visits. Visit frequency may range from once every 2–3 months to 2–3 times a week. Once the member is effectively self-managing his or her triggers, case managers stop making home visits but continue to follow up by phone, more frequently at first, to ensure continued compliance with the treatment plan and with trigger avoidance. Case managers define self-management as successful use of the treatment plan, successful behavior or lifestyle changes, and decreased use of high-cost services. Phone calls continue for at least one year after the completion of home visits; if asthma severity changes for the worse, case managers may reinstitute home visitation. SHP’s case managers are registered nurses who work with members to address environmental factors that contribute to a worsening of symptoms. Additionally, case managers work with the providers to develop customized asthma management plans, provide social service assistance with every referral, and educate school and day care personnel on the asthma management plan, so that the entire care continuum for the member is educated about asthma in general, and that member’s asthma in particular.

In addition to arranging for home visits and making phone calls to members, case managers may contact members’ schools or employers to encourage them to take steps to reduce levels of environmental triggers in their buildings. Case managers also communicate with enrollees’ primary care physicians and specialists regarding possible triggers and the need for changes to prescriptions and treatment plans.

When necessary, case managers work with local health departments and housing authorities to address exposure to asthma triggers and other environmental hazards such as carbon monoxide. SHP’s social workers monitor ongoing situations to ensure appropriate follow-up and resolution of the member’s concerns.

SHP monitors outdoor triggers such as pollens, weather, and airborne pollutants. We receive daily notification of ozone and particulate levels. We incorporate this information on our Web site, and encourage and support our practitioners to include this information in asthma education sessions and during ED visits that may have been precipitated by these triggers.
Outdoor triggers, especially particulates and ozone due to vehicle exhaust, are a special problem for our members in urban areas. In order to better address the problem, SHP is part of a statewide consortium of government, healthcare, advocacy, academic, and other organizations that joined together to improve urban air quality in the state. As part of the consortium we provide outreach and education statewide and support state legislation and regulatory initiatives to improve air quality.

As described earlier, we have a variety of mechanisms to ensure that clinicians receive feedback on their patients. These include access to the asthma patient registry, routine and special reports, and contact by case managers.

SHP pays for the ADMP, including the environmental component. Disease management programs are standard practice at SHP as a cost-effective approach to treating chronic diseases. SHP’s commitment to disease management allows us to sustain a quality level of service delivery.

**Area 2. Getting Results – Evaluating the Program**

Recognizing the need to validate and document the results of our asthma program initiatives, SHP implemented a centralized asthma registry in 2002. The registry includes patient information, utilization data, and clinical metrics. We use the registry not only to track patient needs and outcomes, but also to generate clinical reports, track clinician performance, and document health outcomes.

To measure the success of these initiatives SHP tracks four key metrics:

-- HEDIS® use of appropriate medications for people with asthma;
-- Percent of members with a 2:1 ratio of LTC medications to short-acting beta agonists;
-- Number of ED visits per 1000 members; and
-- Number of hospitalizations per 1000 members.

Table 1 shows our achievements in 2007. We set goals annually and compare our rates to baseline numbers taken in 2002.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Commercial Members</th>
<th>Medicaid Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of LTC meds in 2007</td>
<td>94 percent</td>
<td>91 percent</td>
</tr>
<tr>
<td>Adolescent use of LTC meds in 2007</td>
<td>96 percent</td>
<td>96 percent</td>
</tr>
<tr>
<td>Members with 2:1 ratio of LTC medications to short-acting in 2007</td>
<td>76 percent</td>
<td>72 percent</td>
</tr>
<tr>
<td>ED visits per 1000 members with asthma in 2007</td>
<td>40</td>
<td>189</td>
</tr>
<tr>
<td>Hospital admissions per 1000 members with asthma in 2007</td>
<td>18</td>
<td>36</td>
</tr>
</tbody>
</table>

SHP is in the 90th percentile nationally for use of LTC medication for adolescents (10-17 years) in both
the commercial and Medicaid populations. Appropriate use of medications represented a 12-percentage point improvement over the baseline measurement taken in 2002.

An additional objective of the ADMP is to ensure that all program participants understand how to use their asthma action plans (AAP) to provide guidance when asthma symptoms are exacerbated. At baseline in 2002 the majority of SHP members did not have an AAP. However, in 2007, 80 percent of SHP members reported having an AAP and 75 percent of those were able to demonstrate to their case managers an understanding of how to implement their AAPs, including being able to identify their environmental asthma triggers and steps they take to eliminate or mitigate exposures.

In 2007, we conducted home assessments for 75 percent of our high risk asthma patients. We are working now on a methodology to determine whether these patients experienced better health outcomes than other high risk patients.

Area 3. Sustaining the Program

Our asthma registry collects billing information from our providers, utilization information for our members, and internal cost data. This allows us to track and analyze our costs, which provides us with the necessary information to become more efficient, reducing expenses and conserving resources for the following year (and years to come).

Continued development of innovative solutions for our patients is one of the keys to the program’s sustainability. As a result of SHP’s asthma interventions, medical costs incurred by members with asthma were reduced by an estimated $1.7 million when actual costs were compared with expected trended costs. The return on investment (ROI) for the asthma program is 2.7:1. ROI is defined as total health plan cost savings divided by total program costs, which includes materials, mailing costs, contract costs, and asthma management staff. One interesting note is that the ROI for the asthma program was 8:1 in 2002, and has declined yearly since then. This is a reflection of our strong efforts to identify asthma members early, educate them about appropriate medication usage and environmental triggers, and follow up aggressively to support self-management and monitor the efficacy of and adherence to treatment plans. Our members with asthma are now better able to control their asthma without repeated visits to the ED, thus avoiding those costs.

Cost decreases occurred in spite of increases in costs associated with case managers, home-based education and assessment, and visits to specialists. Prescription costs increased with improved adherence to inhaled steroid medication, but this was more than offset by the decrease in utilization costs. These savings help pay the administrative costs of the program. We have initiated an effort to identify costs and benefits associated with environmental management of asthma. However since all of our members with asthma receive, at a minimum, education about asthma triggers, these numbers have been difficult to segregate from total asthma program costs and benefits. We are assessing different means to compare medical costs for members receiving home visits with members receiving just education, taking into account the severity of their asthma.

SHP has also been able to save our members money. Within the past year our formulary changed from a brand name to a generic medication. This yielded Plan-wide savings of $42,000 for the year. Members also paid less for the medication, saving approximately $300 a year in medication costs per member.
with asthma. This information has been used in outreach to asthma patients as one reason to participate in our ACP.