

Work Group Summary Reports

In 2006 the Minnesota Asthma Steering Committee re-established four technical work groups similar to those which had developed the first strategic plan:

- Data and Surveillance
- Environment
- Individual/Family/Community
- Health Professionals Education

It also reviewed the work of the special Work-Related Asthma Advisory work group that had met during 2005 and 2006.

These technical work groups were created to assess current efforts underway in Minnesota, identify problems and gaps, and then provide recommendations for each priority/issue area. The following presents the summary reports from each of the four technical work groups, as well as the Work-Related Asthma Advisory work group.

I. Data and Surveillance Work Group Summary:

The Data and Surveillance work group was charged with reviewing asthma surveillance data and making recommendations to improve data collection, address gaps in the data, and utilize data to support program activities, evaluation practices, and policy development. The work group considered CDC requirements for asthma surveillance, as well as the needs of data users, in coming up with recommendations for maintaining and expanding asthma surveillance.

The MDH Asthma Program uses all available sources of data to put together a picture of the burden of asthma in Minnesota. We currently track asthma prevalence, hospitalizations, emergency department visits, asthma management, symptoms, and mortality.

Asthma surveillance data is used by a wide variety of stakeholders: local public health agencies request asthma data on a regular basis for use in grant-writing, setting priorities and targeting interventions; the Children's Defense Fund of Minnesota includes asthma hospitalization rates for children in its annual Kids Count Data Book; and asthma hospitalization data has also been used to beta-test software being developed by the CDC and EPA that will allow states to examine links between air quality data and health data. Asthma data is also being used in environmental impact analyses conducted by the Minnesota Pollution Control Agency (MPCA). The Data and Surveillance work group met four times between November 2006 and February 2007. The group was made up of researchers and other representatives from state agencies, the University of Minnesota, a tribal epidemiology center, county public health agency, community organization, school district, medical center, and health plan, as well as the American Lung Association.

Issues specific to work group: gaps, activities, changes since 2002

Since 2002, asthma surveillance has expanded to include most of the data elements required by the CDC. In that time, we have learned more about the strengths and limitations of the data, increased the completeness of the hospitalization/emergency department data to include two major hospitals that had previously not been included in the database, and added more years of data to track trends over time.

A major gap identified in the 2002 state plan was the lack of asthma data on children. Since that time, we have conducted asthma surveys among middle school students, as well as surveys of school nurses to assess the presence of asthma action plans in school health offices. In addition, we have added a question to the Minnesota Student Survey, a survey of students in 6th, 9th and 12th grade in all school districts that takes place every three years.

A second concern identified in the 2002 state plan was the validity of asthma as a cause of death recorded on death certificates of older persons. Asthma rates among older Minnesotans are higher than the national average, however it was thought that some of this excess might be due to asthma being incorrectly coded as the underlying cause of death. To address this concern, we studied deaths among Minnesota residents age 55 and older for whom asthma was listed as the underlying cause of death. We interviewed their next-of-kin (NOK) and with NOK permission obtained medical records, all in an attempt to verify the cause of death. Preliminary results from this study indicate that only a small number of these deaths were probably due to asthma. The results from this study will be available by Summer 2007.

In 2005, Minnesota participated in the National Asthma Survey, along with Michigan and Oregon. The National Asthma Survey runs in tandem with the BRFSS survey. Respondents to the BRFSS survey who indicated that they had ever been diagnosed with asthma were asked to participate in a follow-up interview that included detailed questions on medication use, symptoms, environment, work-related asthma and asthma management. Respondents indicating that they had a child who had ever been diagnosed with asthma were asked to participate in a similar interview about their child's asthma.

Key discussion topics

The data work group identified several key areas to focus on in terms of maintaining and expanding asthma surveillance:

- tracking asthma medication use
- measuring race/ethnicity in the asthma data
- determining costs of asthma care
- linking asthma and environment measures.

There was discussion about how to best track asthma medication use and the fact that tracking asthma prescriptions does not necessarily equate to tracking medication use. The group also discussed the pros and cons of using the HEDIS measure for asthma (appropriate medications for people with asthma) in asthma surveillance and proposed that evaluation of measures to track appropriate medication use be an ongoing strategy.

The work group talked about ways to identify subpopulations that are experiencing increased asthma morbidity within the limitations of the available data, and how best to measure race/ethnicity and country of origin. The group also indicated that determining costs of asthma care and asthma and the environment were priorities. Work on many of these areas will continue within an ongoing asthma data advisory committee. The objectives and strategies from this work group are incorporated under the Data and Surveillance goal.

II. Environment Work Group Summary:

The Environment work group was charged with updating the 2002 State Plan by re-establishing goals that address environmental issues affecting asthma, developing short-term and long-term objectives, and outlining strategies for achieving these objectives. The environment, both indoor and outdoor, plays an important role in the exacerbation of asthma symptoms in people who already have asthma. See “Causes of Asthma” on page 12 for more information.

The Environment work group met four times between November 2006 and March 2007. The membership included representatives from federal, state, and local agencies; school districts; non-profit agencies; the University of Minnesota; and the private sector.

The first meeting began with a review of the work group’s charge and the current state of knowledge about the role of various environmental agents in causing or exacerbating existing asthma. The remainder of this meeting was spent reviewing the environment goals from the 2002 Minnesota State Asthma Plan and similar goals from other state asthma plans, and in drafting new environmental goals for Minnesota.

The second and third meetings focused on objectives and strategies. The members decided to recommend separate objectives for indoor asthma triggers and outdoor asthma triggers because the strategies and partners may be significantly different. During the fourth meeting, work group members finalized the strategies, added potential partners and supporting organizations, and recommended their priorities for strategies.

The Environment work group recognized information on asthma prevalence in Minnesota is available, and that evidence-based educational materials and strategies for reducing exposure to environmental asthma triggers already exist. Evidence-based programs from other states should be evaluated and modified to address Minnesota specific issues and needs including tribal nations and racial and ethnic populations, and state specific environmental triggers.

The work group’s highest priorities for action include:

- Creating a state profile that identifies target audiences and needed activities
- Increase the number of communities with smoke-free laws, ordinances and policies
- Establishing a committee of experts to evaluate existing, replicable and evidence-based programs, policies, strategies and best practices
- Developing a list of recommended actions to improve Minnesota specific educational materials and methods
- Recommending actions that decrease exposure to environmental asthma triggers in Minnesota

The objectives and strategies from this work group are incorporated under the Environment goal.

III. Work-Related Asthma (WRA) Advisory Work Group Summary:

The WRA Advisory work group was charged with assessing the issues, determining priorities, and making recommendations to deal with WRA including strategies to support asthma self-management and minimize exposures in the work environment.

According to the National Institute of Occupational Safety and Health, “WRA is asthma that is caused or made worse by exposures in the workplace.”¹ According to the CDC, “WRA includes new-onset asthma caused by workplace exposure to sensitizers or irritants and preexisting asthma exacerbated by workplace exposures.”² The CDC Morbidity and Mortality Weekly Report on WRA published in 1999 states that WRA encompasses two major categories of asthma that are described below. “These guidelines are not intended as the sole criteria for establishing clinical diagnoses; additional clinical, exposure, and laboratory data might be needed to establish a diagnosis of WRA”²

WRA can be divided into two general categories:

- Work-Aggravated Asthma - preexisting asthma exacerbated by workplace exposures
- New-Onset Asthma - asthma that develops after exposure to sensitizers or irritants in the workplace.

For purposes of this document, WRA encompasses both of the above.

According to the American Thoracic Society, “15% is a reasonable estimate of the occupational contribution to the population burden of adult asthma.”³ In one out of every six adults with asthma, their asthma is made worse by workplace exposures or develops after exposure to agents in the workplace.

In 2005, the CDC recommended that Minnesota incorporate work-related asthma into the existing state plan in order to have a complete and comprehensive asthma program. MDH staff convened and facilitated an external advisory work group called the Work-Related Asthma (WRA) Advisory work group, consisting of 17 members and including union representatives, physicians, nurses, industrial hygienists, the University of Minnesota, the private sector and state agencies. The work group came together for six meetings between September 2005 and October 2006 to discuss WRA in Minnesota.

The priorities identified by the WRA work group were:

- Develop and promote tools for community organizers, workers, employers, unions and others to identify asthma related to or aggravated by the work environment
- Create a State Profile of risk factors for WRA using existing data to guide strategic plan activities
- Promote use of existing resources to identify asthmagens in order to implement control measures in the work place, and
- Develop model partnerships to facilitate innovative interventions

The objectives and strategies from this work group are incorporated under the Work-Related Asthma goal.

¹ Department of Health and Human Services (DHHS), National Institute for Occupational Safety and Health (NIOSH). Worker Health Chartbook, Publication No. 2004-146: 2004. Retrieved from: <http://www.cdc.gov/niosh>

² Centers for Disease Control and Prevention (CDC). Morbidity and Mortality Weekly Report Surveillance of Work-Related Asthma in Selected U.S. States Using Surveillance Guidelines for State Health Departments – California, Massachusetts, Michigan, and New Jersey, 1993-1995; MMWR 48 (No. SS-3) 1999. Retrieved from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss4803a1.htm>

³ American Thoracic Society. American Thoracic Society Statement: Occupational Contribution to the Burden of Airway Disease. Am J Respir Crit Care Med 2003; 167: 787-797.

IV. Individual/Family/Community Work Group Summary:

The Individual, Family and Community work group was charged with developing new or revised goals, objectives, and strategies pertaining to improving asthma awareness and management within and among individuals, families, and communities. The work group explored individual, community, and systems level, population-based interventions.

The work group met four times between November 2006 and March 2007. The membership included representatives from philanthropy, local public health, state government, MAC coordinators, health care, the University of Minnesota Schools of Nursing and Public Health, community agencies, the School Nurse Organization of Minnesota, the private sector, and health plans. Individuals were from urban and rural communities. They represented agencies that served individuals across the lifespan, and many members had asthma themselves and/or had family members with asthma.

The work group began by reviewing the accomplishments and data trends since the first state plan. They agreed that much has been accomplished over the past five years, yet much more can be done. They also reaffirmed that the following things must come together for an individual's asthma to be adequately controlled:

- The individual or his/her healthcare provider must recognize that they have asthma
- The individual must have access to and financing for appropriate healthcare, including medications, and for education on self-management; and an environment free of asthma triggers
- Interventions at the individual, family, and community level are necessary to adequately control asthma

At the first meeting participants identified what they believed were the most important needs or gaps related to asthma awareness and management within and among individuals, families and communities. At the following meetings, based on the gaps identified, the group formulated goals, objectives, and strategies that would address these gaps. Potential supporting organizations were suggested, and members encouraged MDH to have measurable objectives in the state plan or in their annual work plan.

During the same time period, a group of MDH employees called "INHALE" was meeting to give input to the planning process. These employees work with external partners in areas that contribute to improving the lives of people with asthma. Their comments were brought to the Individual, Family, Community work group and thus are incorporated into this summary.

The following summarizes key discussions on each gap:

Gap: Policies and law

The discussion focused on creating healthy and safe environments for people with asthma in three main areas. The work group recognized the importance of both state and local initiatives to increase the number of Minnesota communities with smoke-free laws, ordinances and policies, and they expressed support for several current initiatives such as smoke-free parks and housing. They discussed increasing the availability and awareness among the public and insurers of

health, property, and car insurance incentives offered to non-smokers. A third area of discussion focused on increasing awareness of resources about housing issues related to asthma among both housing organizations and asthma partners. These ideas are included in the goals related to the environment.

Gap: Individual, family, caregiver and provider responsibility

The work group recognized that individuals with asthma, their families, and other caregivers need to be engaged, well informed, and active in appropriate asthma care, or self-management or both. Discussion focused on the individual, the importance of family involvement, and the need for other caregivers to be informed, with these issues best addressed in relation to the community. The group recognized that individuals need access to key messages based on the NIH/NAEPP guidelines. Such messages should address asthma self-management including environmental asthma triggers and the importance of asthma action plans, with consideration for cultural, ethnic, and literacy factors that could affect patient understanding. Educational resources (materials and programs) containing these Minnesota core messages would be disseminated to individuals with asthma, their families, and caregivers. It was also suggested that a patient “script” with questions to ask health providers be developed. The group also reaffirmed the need for educating providers, including pharmacists with consistent key messages.

Other opportunities for individuals to successfully manage their asthma were also discussed, such as promoting existing asthma disease management programs. The work group also recommended increasing accessibility to smoking cessation programs, and activities that encourage individuals with asthma to get yearly flu vaccinations.

The group recognized that asthma surveillance data should be used to identify and then target those groups of individuals disproportionately affected by asthma. They suggested a focus on low-income Minnesotans.

Gap: Asthma Education Systems and Community Awareness

Communities need a comprehensive, systematic, sustainable approach to asthma education that supports universal awareness of asthma signs and symptoms, triggers and self-management. The group recognized that:

- Partnerships, collaboratives, coalitions, and communication play a major role in accomplishing this goal
- A state-level, multi-disciplinary group of the partners currently involved in the state plan update is needed to provide advice and guidance and to participate in implementing the revised state plan
- Support is needed to strengthen the MAC as a statewide organization to assist with implementing many of the objectives in Minnesota communities

Both the work group and INHALE recommended that the MDH asthma program continue to work with other programs within MDH and other state agencies. They specifically discussed identifying or creating information on asthma and genomics, including family history, as well as collaborating with maternal and child health programs and other chronic disease programs.

Regarding the health disparities experienced by tribal populations and racial and ethnic groups, the work group said that these groups must be deliberately considered and addressed in program planning and implementation. They also recognized the importance of reaching those individuals who are hard to reach, underserved and low-income. Concern was also expressed that in rural areas, there is a lack of medical specialists and people qualified to provide asthma education.

The work group discussed a wide variety of strategies to reach more individuals through community awareness and education programs, and they recognized the need for asthma resources across the lifespan. Many of the suggested activities and programs could be presented in local communities by MAC coalition members. Strategies were discussed to educate more caregivers of children and adults with asthma, to help schools provide appropriate support for individuals with asthma, and to educate staff in care provider settings (e.g., foster care, crisis nurseries, senior day centers, camps, licensed child care facilities, out-of-school time programs) about asthma self-management and environmental triggers of asthma. They suggested continuing to offer the “Managing Asthma in Minnesota Schools” training, including information on mental health and asthma.

The group called for the necessary collaboration between asthma partners, particularly the MAC, and smoke-free community groups in addressing secondhand smoke and asthma. They thought it was very important to promote to businesses model policies for conducting meetings and conferences in smoke-free cities or counties, not just smoke-free facilities.

In order to help local public health agencies play key roles in raising community awareness about asthma and implementing other state plan activities, a local public health toolkit will be developed and promoted. This toolkit will be based on Washington County Public Health and Environment’s 2006 countywide asthma initiative. Local public health agencies will be encouraged to take an active role in providing asthma self-management including incorporating interventions to reduce environmental asthma triggers into home visits.

How to best meet the needs of individuals with asthma during emergency situations was also discussed. Assuring the availability of needed medical care and medications was of concern.

Gap: Care Resources and Coordination

The work group discussed the need for health professionals to utilize best practices (i.e., NAEPP Guidelines and evidence-based research), for improved coordination of patient care, and for improved access by people with asthma to needed medical and health education services. The Chronic Care Model was discussed as a framework for caring for people with asthma because it is patient and family centered, and it recognizes the importance of collaboration between the health system and community, especially schools. (Figure 3, Page 32) The work group also suggested developing a comprehensive performance measure for optimal asthma care based on the NAEPP guidelines. They recognized the importance of working with health plans to further implement best practices of asthma care and education and deferred to the “Health Professional Education” work group on issues related to professional education.

The increased use of electronic health records was discussed in the context of improving knowledge sharing and information management among health professionals who care for people with asthma such as health care providers, public health staff, and school nurses.

Because many local public health agencies in Minnesota use the Omaha system for documentation and information management, the group supported the development of individual and community level asthma pathways for the Omaha system based on NAEPP guidelines.

The Omaha System is a research-based, comprehensive and standardized taxonomy designed to enhance practice, documentation, and information management. It provides a structure to document client needs and strengths, describe multidisciplinary practitioner interventions, and measure client outcome. The Omaha System allows software systems to incorporate practice standards in the form of intervention pathways, thus disseminating best practices to all users. Because many local public health agencies utilize software based on the Omaha System, incorporating asthma intervention pathways within the software systems will support the agencies in adopting asthma intervention strategies.

Much time was devoted to discussing ways to promote coverage and adequate reimbursement of appropriate individual and group asthma education, smoking cessation programs, and home-based programs that address asthma self-management including environmental asthma triggers. Support was expressed for reimbursement for services that are delivered in clinic, community and home-based settings or through disease management programs, by certified asthma educators and others who provide education and case management. They expressed a need for health payors to be educated about the cost effectiveness of evidenced-based home intervention programs for improving asthma self-management and reducing asthma triggers through the provision of education and product interventions.

The objectives and strategies from this work group were primarily incorporated under the Environment goal, the Self Management goal, the Community goal, and the Systems Change goal.

V. Health Professional Education Work Group Summary:

The Health Professional Education work group met four times from December 2006 through February 2007. Work group members included physicians, nurse practitioners, respiratory therapists, licensed school nurses (LSN), an emergency department registered nurse, a pharmacist, pharmaceutical company representatives, and a representative from the health plans.

The work group was asked to assess the current status of issues, determine priorities, and recommend specific goals, objectives, and strategies to address issues that impact the health professional's ability to assess, diagnose, treat, and educate people to manage their asthma appropriately. The work group focused on the educational needs of all health care professionals which include but are not limited to physicians, nurses, nurse practitioners and clinicians, physician assistants, pharmacists, and respiratory therapists.

The following issues were discussed during work group meetings:

Asthma Guidelines

The revision of the NIH/NAEPP (*National Institutes of Health/National Asthma Education Prevention Program*) Asthma Guidelines is almost complete. While a number of different national and statewide guidelines are available, with most based on the NAEPP guidelines, there are enough variations between guidelines to create confusion and inconsistency of practice patterns. In this plan, for consistency, “best practice of care” is defined to mean care that follows the NIH/NAEPP Asthma Guidelines.

Previous NIH/NAEPP asthma guidelines focused on the initial severity assessment but the newly revised guidelines shift the focus toward assessing control with each clinic appointment. Shifting the practitioner’s focus to frequent re-assessment of the patient’s control level will require health professionals to rethink how they assess, prescribe, and provide education to their patients and their caregivers.

Competing Priorities & Patient Education

There are definitely variations in asthma care provided to patients. Some differences occur across specialties such as pulmonary, asthma and allergy, family and pediatric practice. Some of the variation is due to the providers’ knowledge of the guidelines and of optimal asthma care. Some of the variation is due to the clinic or work site, e.g., limits or restrictions on appointment length, the training of clinic support staff, or availability of spirometry testing within the clinic. *Competing priorities in the clinical setting diminish the clinician’s ability to focus, with asthma being only one of many disease conditions.* A primary care practitioner’s schedule often allots insufficient time to assess, test, treat, and educate on proper asthma self-management. The variation in asthma care and the reasons for the variation are complex and necessitate a multifaceted approach.

Many clinic systems/offices do not use an integrated, coordinated team approach to caring for and educating asthma patients and their families/caregivers. Work group physicians voiced their perceptions that they generally are alone in the responsibility of providing patient and caregiver asthma education. Because patient education should begin at the time of diagnosis and be integrated into every step of medical care, nurses, pharmacists, respiratory therapists, and other health care professionals should be available to support and expand patient education using a *team approach*.

Patient education is an integral part of asthma. At every possible opportunity, patients should be informed about the basic facts of asthma, the role of medications, environmental control factors, and how to manage asthma exacerbations. In addition, patients should be instructed in the skills necessary for self-monitoring (e.g., inhalers and peak flow meters) and taught strategies for controlling exposure to environmental irritants and allergens. Asthma action plans (AAP) are strongly recommended as tools to assist patients with asthma, yet they are not routinely provided to other caregivers (schools, daycare, coaches, etc.) nor are all clinicians convinced they are effective. The 1997 NAEPP and 2007 updated guidelines both recommend the use of AAPs.

Interactive Asthma Action Plan

Clinicians need access to tools and information that can assist them with assessment and treatment plan selection. The work group identified a need for customized, easy-to-use NAEPP Asthma Guidelines tools that are accessible in the exam room. These tools include clinician prompting programs that could be developed and integrated into the EHR (Electronic Health Record) and would most likely rely on one guideline that is generally accepted by all levels of practice and across regional and state borders. The MDH Interactive Asthma Action Plan (IAAP), developed four years ago is a computerized program/tool that assists the clinician to determine the patient's severity level and treatment plan. Work group members suggested the IAAP be updated, modified and integrated into electronic health record (EHR) systems currently being used by major hospital and clinic systems. Multiple organizations are currently using the IAAP or are adapting it for use in their state/systems.

Work group members stated that a government mandate would be the most likely way to compel all clinicians to comply with many aspects of care, including distribution of AAPs to school health offices, and to provide appropriate medication instructions.

Certified Asthma Educators (AE-C)

Minnesota has an inadequate number of Certified Asthma Educators (AE-C) statewide, even though, with 108, this state has the most AE-C per capita of any state in the country. Those providing asthma education are not always certified asthma educators (AE-C), creating concerns of consistency and information accuracy.

The cost of taking the AE-C course and the AE-C certification test are prohibitive for many health professionals, and most health care institutions do not reimburse their employees for these costs. There currently is no reimbursement linked to asthma educator certification, and most employers and many health professionals do not see the value of employing a certified asthma educator.

Reimbursement for asthma education is inadequate and complex depending upon the payor. Efforts to seek reasonable reimbursement have not been particularly effective. Some health plans are offering reimbursement for asthma education but the programs are not utilized to their full capacity. Work group members stated that successful and reasonable reimbursement for providing asthma education tied to the AE-C certification would encourage clinical offices to hire appropriate health professionals for the task of providing patient education to all patients, their families, and other caregivers.

Communication, Collaboration, & Coordinated Care

Lack of communication and information exchange between emergency departments, urgent care, primary care practitioners, specialty physicians, pharmacists, and hospital systems create an ineffective approach to providing continuity of quality care. Depending on the clinical system and available communication ties to other offices and care levels, many clinicians don't know when their patients are seen in the emergency department (ED), urgent care (UC) or other health clinics. Without this information, a clinician is unable to chronicle their patient's asthma exacerbations and to establish, step up, or step down a patient's treatment plan. With this in

mind, work group members supported establishing communication pathways in which visits to the emergency or urgent care center are automatically sent to the primary care practitioner.

Referrals to asthma specialists (pulmonologists or allergists) require a collaborative communication effort between the primary care practitioner, the specialist, and the patient and/or caregiver. This type of partnership requires a two way exchange of information with all parties involved -- clinician, patient/caregiver, educator, etc. -- sharing records and treatment plans.

A clear, consistent, compelling message with associated support and education from health plans is lacking. Many health plans and other payors have developed comprehensive asthma management programs. Some of these are still active but concepts and delivery of case management, clinician education, and associated tools may not be well known or utilized to full capacity by primary care providers or the patient themselves.

Programs that utilize quality measurement/performance with financial incentives for clinicians became a frequent topic of discussion. This will require a collaborative effort between payors, practitioners, patients/caregivers and the community. See Figure 3, The Chronic Care Model, with possible strategies listed in the systems change section of this plan.

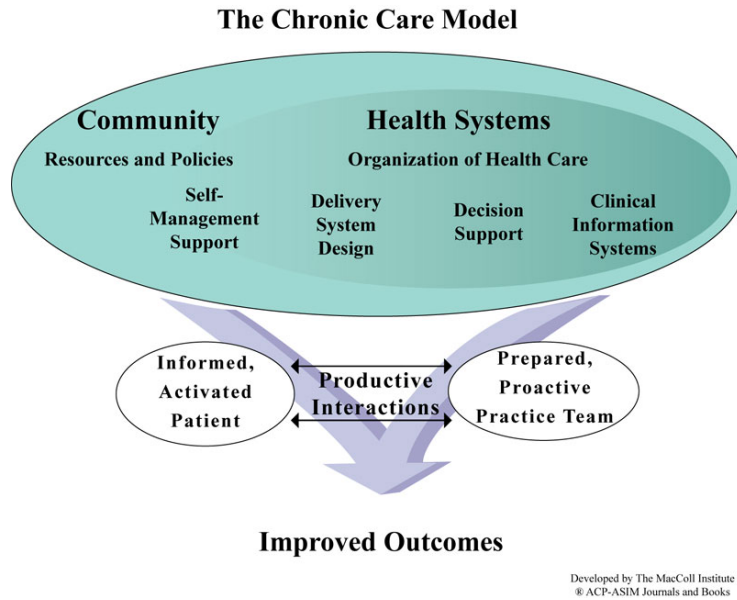
Professional Education Curriculum

Secondary institutions that educate the various health care professionals are lacking a curriculum focus specific to the guidelines. Physician residents and other health student professionals may learn their asthma management skills from individuals whose knowledge of asthma management is outdated or based on personal preference rather than evidence based best practice.

Work group members felt, in collaboration with key decision makers from secondary institutions, the development of a curriculum template specific to asthma based on the NAEPP guidelines would provide a good start toward integrating comprehensive asthma management education into secondary institutions' curricula. Utilizing the Chronic Care Model concept and NAEPP guidelines as a baseline, this specially developed curriculum would expand the repertoire of knowledge and skills using a "patient-centered" concept. In addition to asthma basics, content would need to include teaching self-management and educational techniques, and determining the learning readiness of patients and/or their caregivers. Curricula would need to provide methods for eliciting asthma patients' understanding of their illness, strategies for identifying and bridging different styles of communication, skills for assessing decision-making priorities, and the role of family/caregiver.

The objectives and strategies from this work group were primarily incorporated under the Community goal, the Health Professionals goal, and the Systems Change goal.

Figure 3:¹



¹ Improving Chronic Illness Care – Chronic care model diagram. www.improvingchroniccare.org