Executive Summary

Asthma is a common, chronic disorder of the airways that is complex and characterized by variable and recurring symptoms, airflow obstruction, bronchial hyperresponsiveness, and an underlying inflammation of the lining of the airways. It is characterized by various triggers gradations of severity, and evolving treatment options. Asthma symptoms can be triggered by exposure to allergens or irritants, viral respiratory infections or exercise. For reasons not fully understood, asthma rates in the U.S. have risen rapidly for the past two decades. Asthma is now one of the most common chronic diseases in the U.S., with asthma symptoms experienced by 1 in 12 Americans each year. Asthma is associated with missed school days, missed workdays, disrupted sleep, and symptoms that interfere with physical activity. It can be fatal. Asthma is more prevalent in low-income communities. It accounts for numerous emergency room visits and a total of over $6 billion in annual health care spending.

As illustrated below, asthma is a serious public health problem in Minnesota:

- 1 in 9 Minnesota adults report having asthma at some time in their lives; 8.4% currently have asthma
- 1 in 15 Minnesota children currently have asthma
- Asthma costs $208.6 million in hospitalizations, emergency department visits, office visits and medication and $155 million in indirect costs of lost school and work days in Minnesota in 2003
- Asthma disproportionately impacts women, children, and the poor

Nevertheless, some indicators of asthma's impact in Minnesota have moved in a positive direction in recent years. Asthma hospitalization rates decreased between 1998 and 2005, with the greatest decreases among school children and young adults. Asthma mortality rates have decreased dramatically since 1999, with the greatest decreases among Minnesotans age 65 and older.

The public health community and asthma experts have limited information about the exact causes of asthma or how to prevent it. This limited information brings additional challenges for public health and the medical community in providing high quality care and culturally appropriate education, information, and peer/family support to individuals with asthma from diverse communities. The health and medical community does have access to evidence based disease-management strategies. The National Asthma Education Prevention Program (NAEPP) of the National, Heart, Lung, and Blood Institute (NHLBI), created asthma guidelines to provide health professionals with evidence based information to get asthma under control and greatly improve the quality of life for individuals with the disease.

Recognizing asthma as an important public health issue, the Commissioner of Health in 2001 convened the Commissioner's Asthma Advisory Work Group to provide guidance and direction in developing a 5-year statewide strategic plan to address the increasing health and economic burden of asthma in Minnesota. The Commissioner's Asthma Advisory Work Group was asked to:

- Assess current asthma activities both nationally and in Minnesota

- Identify gaps, trends, and local and infrastructure needs
- Develop a plan of action for the next five years that establishes priorities, sets out clear, measurable short term and long term objectives, and recommends strategies for meeting these objectives, including the roles of various asthma partners

The Commissioner's Asthma Advisory Work Group established the following working groups:

- Data and Surveillance
- Individual/Family/Community Concerns
- Health Professional and Provider Education
- Environment

With input from these groups, the plan was completed in 2002, and the Minnesota Department of Health (MDH) was awarded a 5-year grant from the Centers for Disease Control and Prevention to assist in the plan's implementation.

In 2006 the four work groups were reconstituted under the Minnesota Asthma Steering Committee which was charged with revising and updating the original plan. These groups met between October 2006 and May 2007. The Steering Committee also reviewed the work of the special Work-Related Asthma Advisory work group that had met during 2005 and 2006. They revised the plan using the following Vision Statement**:**

Minnesotans with asthma will have healthy environments and will be able to enjoy life not limited by their asthma because their asthma is appropriately managed and well controlled.

This document includes revisions, with information on data and program activities since 2002. It also presents new recommendations to address the health and economic burden of asthma in Minnesota for 2007 through 2012.

Recommendations:

The five work groups developed several goals and objectives. These were reviewed by the Steering Committee and consolidated into seven goals, each with its own objectives and strategies. The key recommendations are summarized below. The Minnesota Asthma Steering Committee believes these must be acted upon if Minnesota is to continue making significant strides in improving the lives of individuals with asthma and their families.

<u>GOAL #1 – Data and Surveillance:</u> Maintain and expand the current statewide asthma surveillance system toward a comprehensive system that meets the needs of diverse stakeholders through increased data utility and greater communication and collaboration with data users. Objectives towards this goal include monitoring trends in asthma prevalence, in asthma-related health care utilization, in asthma mortality, in asthma control, and in asthma management. Other objectives address determining the costs of asthma care, identifying disparities in asthma among subpopulations, and developing partnerships to share data and identify data needs. An ultimate objective is to use this data to respond to inquiries and to inform policy makers, local public health, and others.

<u>GOAL #2 - Environment:</u> Increase awareness and understanding of asthma environmental triggers and decrease exposure to asthma environmental triggers for people with asthma. A key objective involves determining target audiences and effective educational materials, and identifying materials to reach various groups. Another objective seeks to increase the number of communities with smoke-free laws, ordinances, and policies. Two other objectives address preventing and reducing exposure to indoor environmental triggers, and preventing and reducing exposure to outdoor environmental triggers.

<u>GOAL #3 – Work-Related Asthma:</u> Increase awareness about work-related asthma (WRA), tailor interventions to address WRA, and reduce exposure to asthmagens. The objectives reflect the work of the Work-Related Asthma Advisory group that met in 2005-06. They include implementing work place control measures by promoting the use of existing resources to identify asthmagens; providing WRA information for health and safety staff who serve Minnesota businesses and workers; providing health care providers with WRA information; and developing tools for workers, employers, and others to identify asthma related to or aggravated by the work environment. A key objective entails creating a State Profile of WRA risk factors using existing data, and another involves promoting data searches and/or needs assessments on WRA by a range of organizations. Two other objectives address developing model policies for reporting WRA to the state, and developing model partnerships to facilitate innovative interventions. Other objectives call for promoting existing product substitution programs; incorporating WRA educational materials into existing education programs, such as occupational training and clinical training; and promoting organization policy changes.

<u>GOAL #4 - Self Management</u>: Ensure individuals with asthma, their families, and other caregivers are well-informed and engaged in appropriate asthma self-management, especially among low-income populations in Minnesota. A key objective involves increasing knowledge about appropriate asthma management by strategies such as developing a patient script with questions for providers, incorporating key messages into information for individuals with asthma, and addressing cultural, ethnic, and literacy factors affecting the understanding of asthma self-management education. Another objective involves increasing successful asthma self-management by promoting smoking cessation programs and encouraging flu shots.

<u>GOAL #5 – Communities:</u> Create communities with comprehensive, systematic, sustainable, culturally responsive approaches to asthma education through partnerships, collaboratives, coalitions, and communication. Objectives include increasing the number of:

- individuals reached through community education
- schools that provide appropriate asthma support
- care providers participating in asthma education programs
- local public health agencies engaging in asthma activities.

Strategies include collaborating with smoking cessation groups, continuing to offer the "Managing Asthma in Minnesota Schools" trainings, targeting providers such as foster care and day care, and developing a public health toolkit drawing from the Washington County "Catching Our Breath" initiative. Other objectives promote a continuum of asthma care by improving communication among professionals, parents, schools, and others; and another expands emergency preparedness education to include respiratory care needs during a disaster.

GOAL #6 - Health Professionals: Utilizing the NAEPP asthma guidelines and best practice methods, ensure that all Health Care Professionals (HCPs) who treat people with asthma assist patients to achieve optimal asthma control, and through self-management education, to effectively manage their asthma. Objectives include increasing appropriate prescribing of inhaled corticosteroids/controller medications and increasing the distribution of asthma action plans. Other objectives emphasize HCPs using the NAEPP guidelines to step up or step down the prescribed therapeutic intensity, encouraging institutions that train HCPs to incorporate the NAEPP guidelines into their asthma curriculum, and championing Certified Asthma Educators by calling for an increase in their numbers.

GOAL #7 – Systems Change: Ensure that health systems and their partners will use best practices (i.e., NAEPP Guidelines) through coordination of systems processes, information sharing, and reasonable reimbursement for optimal asthma care. The first objective addresses disseminating best practice standardized asthma pathways at the individual and community level through local public health. A second objective highlights a chronic care continuum model to ensure coordination of asthma care between clinical professionals and others. A third objective promotes coverage and adequate reimbursement of individual and group asthma education.

To reduce asthma's burden, the public, individuals with asthma, their families, caregivers, health systems, health care providers, schools, employers, childcare providers, community groups and others must all work together in a coordinated approach. No single element of a well-coordinated and comprehensive approach can stand by itself. To combat asthma we must increase community awareness and undertake actions to decrease allergens and irritants inside and outside homes, workplaces, schools, and businesses. Public awareness of asthma's burdens can help ensure that individuals with asthma have the resources needed to manage their disease. Education for individuals with asthma and their families should begin at the time of diagnosis and be integrated into every step of care. Health care providers must obtain the skills necessary to accurately diagnose and treat this complex disease and partner with their patients to provide them with the education and tools they need to manage their condition.