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East of the River Wellness Collaborative Childhood Asthma Grant: Prevalence, Barriers and Obstacles to Care, Suggested Intervention

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EAST OF THE RIVER WELLNESS COLLABORATIVE

CHILDHOOD ASTHMA GRANT:
PREVALENCE, BARRIERS AND OBSTACLES TO CARE, SUGGESTED
INTERVENTIONS

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CHILDHOOD ASTHMA GRANT:

PREVALENCE, BARRIERS AND OBSTACLES TO CARE, SUGGESTED INTERVENTIONS

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Preface

Asthma is growing public health concern. Nationally it has been described as an epidemic and in Manchester, Connecticut, a suburb of Hartford, it has been identified as one of 21 priority health concerns for the community.

The East of the River Wellness Collaborative, serving Manchester and East Hartford, Connecticut, another suburb of Hartford, received a grant from the State Department of Public Health to study childhood asthma within their respective communities. The grant was received in late January 2001. The terms of the grant specified data collection by the end of March 2001 and submission of a final report by May 15, 2001.

This thesis documents the approach and the results of the data collection and research conducted within Manchester and East Hartford to fulfill the grant requirements. Based on the research, this thesis also makes recommendations for community based interventions and programs to improve the monitoring and management of childhood asthma.
Acknowledgements

The research conducted for this thesis was funded by a grant from the State of Connecticut, Department of Public Health.

I wish to thank the entire staff of the Health Department of Manchester and Susan Congdon of the East Hartford Health Department for their assistance and support during the conduct of this research.
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I. Introduction

National Trends

Childhood asthma is a growing public health concern and is considered an epidemic. Nationally, asthma is the most common chronic illness among children, affecting 10% of the children of the United States (Hagen, 1999), and can be life threatening if not treated. When asthma is not well controlled, it may severely disrupt the living patterns of the children and their families. Asthma ranks first in hospitalizations and emergency room visits among children with chronic illnesses. In comparison to children without asthma, young people with asthma use three times as many prescriptions, have two times as many ambulatory care visits, two times as many emergency room visits, and are hospitalized three and a half times more often. The national cost for treatment of asthmatic children under 18 years of age is $3.2 billion. The illness causes 10 million lost school days annually and is the leading cause of school absenteeism. (American Lung Association, 1998) This is particularly troublesome because most education experts believe that spending time in a learning environment is essential to succeeding in school.

Many children do not receive adequate asthma care. A child with under treated asthma may experience an episode suddenly and with little warning. The seeming unpredictability of asthma episodes may cause parents to worry incessantly and unnecessarily about their child’s well being. When an asthma episode occurs in school, it
causes anxiety for everyone – the child, teacher and school nurse. Asthma also interferes with after school and extra curricular activities. Breathing trouble during a sporting event not only embarrasses the child, it often brings the unwanted advice to limit physical activities. Such restrictions damage the child’s self-esteem and are rarely necessary.

The reason for the asthma epidemic is unknown. It has been called a quiet epidemic because it has not created bold headlines, large demonstrations or loud calls for public action. One reason is that it’s a childhood illness and there is a convergence of risk factors resulting in greater burdens of the disease among poor families. Children and the poor have little political clout. Another reason asthma doesn’t get much attention is because it can be a manageable condition.

A lot of work and study has gone into establishing and refining the National Institutes of Health Guidelines for the Diagnosis and Management of Asthma, which, if followed, can reduce the severity and frequency of asthma episodes. Still, for many reasons adherence to the guidelines is poor, despite a concurrent improvement in the medical knowledge about treating asthma. (Miller, 1999; Edelson, 2000) Physicians may not be familiar with the guidelines or they may not have sufficient time to devote to patient education. As a result, many children do not receive the appropriate medications, education or equipment to manage their asthma. Failure to recognize early warning signs, poor compliance with monitoring and medication, physician under diagnosis and under treatment, all indicate a need for more coordinated asthma education and special strategies to reach at risk children.
Clinical Knowledge Summary

Although asthma is a disease that has been described for centuries, there is still no universally agreed upon definition. It is a disease caused by increased reaction of the airways to various stimuli, resulting in a constriction of the airways and the increased secretion of mucus. Asthma presents in a wide variety of ways including wheezing, difficulty breathing, and tightness in the chest and coughing, making diagnosis and classification of severity difficult to determine. (Thomas, 1993) However, in order to effectively manage the disease, it is essential to definitively characterize the child’s condition in order to prescribe an individual treatment and maintenance program. The greatest single threat to the patient is complacency about the severity of the disease – on the patients’ part, their caregivers, the doctor, and the medical care system. Failure to recognize the level of asthma severity can lead to unnecessary complications. This requires a strong patient-physician relationship and faithful adherence to the prescribed medication regimen.

Causative Factors

Causative factors may be classified into two broad categories: extrinsic and intrinsic. Extrinsic asthma (also called allergic or atopic asthma) is the most common form of the disease and is caused by some environmental factor, an allergic reaction, or is hereditary. In these cases asthma has most likely been caused by indoor or outdoor air pollution (for example, exposure to tobacco smoke, strong odors, poor ventilation and
exhaust), allergens inhaled from the air (pollen, mold spores, animal dander or dust) or infections of the respiratory tract, occasionally by the ingestion of certain foods (eggs, shellfish or chocolate) and drugs (aspirin), and after exercise, especially in the cold air. Intrinsic asthma (also known as non-allergic or non-atopic asthma) is the classification given to the disease where no external cause of asthma can be found. As examples, the disease may have been precipitated by infection of the upper or lower respiratory tracts or has developed in persons with allergies of unknown causes. (Thomas, 1993)

However classified, recurrence and severity of the asthma are greatly influenced by secondary factors brought on by the environment, exposure to air pollutants, mental and physical fatigue, emotional distress and endocrine changes. Furthermore, these conditions are exacerbated by crowded living conditions and low socioeconomic status.

Risk Factors

Depending on the classification of asthma, the risk factors vary. Increased morbidity is associated with factors that are categorized as environmental, low socioeconomic status, individual characteristics and access to healthcare. The primary risk factor, since there are so many varieties, differs from person to person and, often over time, in the same person. Many factors are interrelated, such as the increased exposure to environmental factors in individuals of low socioeconomic status. Other factors, such as respiratory infections, are important because they trigger expression of asthma in individuals at risk genetically.
Age

While no age is exempt, asthma can be considered a bimodal disease with higher prevalence rates among children/young adults under age 18 and adults over age 75 than among the rest of the population. The incidence of new asthma cases is highest in children younger than five years of age. (American Lung Association, 1998)

Gender

Prevalence rates of asthma are highest in boys and are increasing in both boys and girls. (President’s Task Force, 2000)

Socio-Economic

Poverty is the primary social factor associated with asthma. Those who live in low-income households have higher rates of asthma and more severe asthma attacks than those from middle and high income families. (Grant, Lyttle and Weiss, 2000) Research suggests several reasons to explain this: the poor often have inadequate access to a consistent source of primary care; they are more likely to live in poor housing conditions with increased exposure to indoor air pollutants; and, they live in areas within towns that have facilities discharging ambient air pollutants.

Race/Ethnicity

African-American children have a slightly higher risk of getting asthma than white American children, but have a much higher risk of hospitalization or death due to the disease. (President’s Task Force, 2000) While race/ethnicity has been identified as a risk factor, many of the factors related to the environment and socioeconomic status are also found in many other segments of the population. Attitudes toward healthcare and
disease management, cultural biases that affect the degree of adherence with asthma
treatment, and access to affordable quality health care, may also put certain social/ethnic
groups at greater risk. (American Ling Association, 1997)

Impact on the Individual, Family and Community

Children with asthma often suffer from a decreased ability to function, ranging
from restricted day-to-day activities and lost school and work days, to the high likelihood
of developing psychological problems, which tend to manifest themselves in depression.
Additionally it has been estimated that the expense of treating asthmatics of all ages
accounts for between 1% and 3% of all health care expenditures in the United States, so
the financial effect on a family’s standard of living can be felt as well. (President’s Task
Force, 2000)

Childhood asthma is an expensive disease to treat. A severe asthmatic child
makes frequent visits to doctors, often requires hospitalization or emergency room care,
and is taking prescription medications to control the severity and number of disease
episodes. As already cited, the direct costs for treating children under 18 years of age
with asthma are estimated $3.2 billion.

Treatment Goals

The goals of asthma therapy are to: (a) prevent chronic symptoms; (b) maintain
(near) normal pulmonary function; (c) maintain normal activity levels (including
exercise and other physical activity); (d) prevent recurrent exacerbations of asthma and
minimize the need for emergency department visits or hospitalizations; (e) provide
optimal pharmacotherapy with minimal or no adverse effects; and (f) meet patients’ and families’ expectations of, and satisfaction with, asthma care.

Published Guidelines

Published guidelines for treating asthma were developed by the National Institutes of Health in 1991 and revised in 1997. These guidelines have four components: (1) patient education and partnership in care; (2) control of environmental factors, contributing to asthma severity; (3) comprehensive drug therapy; and, (4) objective measures to assess severity and monitor the course of drug therapy. In addition to the four components described above, I would add a fifth – access to primary and follow-up quality healthcare. I believe that this is actually the most critical component to ensure compliance, following proper diagnosis and development of a personalized treatment. (National Institutes of Health, 1997)

Access to Quality Healthcare

Asthma requires careful diagnosis and classification in order to develop an effective treatment plan. The ability to make an appropriate diagnosis is helped by a strong patient-provider relationship and the time to do a complete history and work up to confirm the presence, classification and level of severity. Unfortunately, the impact of managed care and the increasingly larger role the primary care physician plays in today’s healthcare delivery system, have the potential to limit access to specialty care and jeopardize the all important first step of properly diagnosing the illness.
Patient Education

Ongoing education is an essential component of the asthma treatment plan. Education should address the purpose and proper use of medications, inhalers, nebulizers, and peak flow meters. Complete understanding of the difference between medications that reduce inflammation and medications that relieve symptoms is needed, as is the proper technique for inhaling medications. A peak flow meter should be prescribed and its use demonstrated and explained as the way to monitor and manage the disease on a day-to-day basis. Beyond the use of medicines and equipment, the child and the caregivers must be provided education on how to avoid triggers and ways to modify their physical environment and life styles.

Environmental Factors

Educational interventions alone are unlikely to significantly improve treatment plan adherence. Studies conducted among children have found that adherent children were more apt to be cared for by a parent (as opposed to a guardian or caretaker) and to be in an allergist’s care. Likewise, family conflict and poor family communication patterns contribute to reduced compliance. Cultural perspectives need to be considered and the ethno-medical practices of the family and the community need to be integrated with traditional biomedical treatments. Indoor health hazards associated with asthma include tobacco smoke, cockroaches, mice, mold, water damage, and dust mites. Other environmental control interventions include public health enforcement of building codes and sanitation laws to control allergens and measures designed to improve air quality and mitigate temperature extremes. (Douglas, 2000)
Drug Therapy

Inappropriate drug therapy is one of the strongest contributors to asthma morbidity. Underuse of medications is as dangerous as overuse. Adherence problems are due primarily to not understanding the prescribed treatment plan in combination with economic, environmental, social and personal barriers for the child and/or their parents. (Plaut, 1988) Outreach programs and in-school programs work but are limited because of budget constraints. Rather than one shot, short-lived programs, continuous reinforcement of behavior modification and individual drug therapy tailoring will be more effective but availability is hard to sustain because of lack of funding and priority.

Measuring and Monitoring

Because poor adherence to treatment plans is so common, it is often difficult to determine whether an emergency situation is attributable to underlying severity of the asthma, inappropriate therapy, lack of understanding about the disease, or a misdiagnosis. While there are several inexpensive techniques to measure adherence, such as use of a peak flow meter and routine follow up care, all have limitations. Only through careful interviewing and active listening can a true picture be drawn of the child’s adherence to the plan of treatment. When an adherence problem is identified, one on one education, behavioral counseling and tailoring the therapy have proven to be useful interventions.
II. Background

Changing Demographics of Manchester

Manchester, a suburb of Hartford and a town of approximately 51,000, has experienced significant demographic changes in the last decade, primarily the result of urban out-migration. Public policy initiatives developed in the late 1980s to address some of the conditions occurring in the City of Hartford impacted the suburbs, including Manchester. During the early 1990s, a sudden immigration of low/moderate-income individuals and families moved into subsidized rental units which were concentrated in certain residential neighborhoods in Manchester. This population included African-Americans, Asians, and Hispanics, changing the racial composition of the neighborhoods. In 1998, minority population accounted for 11% of Manchester’s population. (Connecticut Department of Economic Development and Community Development, 2000). Another indicator of this demographic shift is school enrollment. In 1991 the Manchester school system reported a total minority enrolment of 17%; in 1998 minority enrollment was reported at 30%. The percentage of the total school population participating in free or reduced price school lunches, an accepted indicator of the prevalence of poverty, is 25% in Manchester. (Town of Manchester, 1998). These residents, especially their children, often have special social service needs.

While once a solidly middle class community, characterized by neighborhoods of single family homes, Manchester has become more socio-economically diverse with a wide variety of congregate housing, prone to poor indoor air quality. It is therefore not surprising that childhood asthma is significant. It is estimated that the percentage of
students with asthma who attend school in Manchester is 10%. (Town of Manchester, 1998)

**Community Health Needs Assessment**

Keeping people healthy and improving their quality of life have become national, state and local goals. From the environment we live in and the food we eat, to our lifestyles and behaviors, to the habits passed along through generations, good health depends on having access to the right information to make good decisions and access to affordable health care providers and resources. Manchester has recognized the need to begin an ongoing process to monitor the community’s health. The first steps in this process are a community health needs assessment and increasing awareness about health concerns. The assessment effort was begun in January 1998 under the leadership of the Manchester Health Department. To begin this process a Community Health Needs Assessment Committee was established. Its membership was broad based and represented the diverse interests and population of Manchester. The committee met over the course of six months and, from an original list of 450 issues, selected 21 priority health concerns, as well as defined measures and indicators for those concerns. This information was provided to the community in the form of a report card, Manchester Spotlight on Health. (see Appendix A). Each health priority had to meet the following criteria: (1) have meaning and value to the community; (2) be measurable with available (or at least collectible) and statistically reliable data to calculate prevalence, incidence and other relevant measures; and, (3) be responsive to established and effective interventions that could be implemented at the town level. Childhood asthma was
identified as one of these priority health concerns. Local data on asthma have been much harder to obtain than anyone associated with the Community Health Needs Assessment committee anticipated, and that the data that are available are highly variable. Because there is a lack of available data necessary to develop intervention strategies for children with asthma, the Manchester community is at a disadvantage.

**East of the River Wellness Collaborative**

The East of the River Wellness Collaborative is a three year old community coalition building organization, formed to provide comprehensive health programs and services within the Manchester, East Hartford, and Vernon communities.

One of the ways to identify the at risk population for childhood asthma was for Manchester to conduct its own research and use it as baseline data in the development of a strategy and plan that reduces/eliminates barriers to care for Manchester children with asthma. This was the goal when the East of the River Wellness Collaborative applied for a grant to study community health care needs for childhood asthma.

**State of Connecticut Department of Public Health Grant**

The grant was awarded to the town of Manchester, acting as fiduciary for the Collaborative, in late January 2001. The terms of the grant specified that data collection needed to be completed by the end of March 2001 and a final report needed to be submitted by mid May 2001.

The grant had five deliverables: (1) identify, assemble and evaluate asthma data sources for assessment; (2) identify at risk population subgroups; (3) identify barriers and
obstacles to asthma education and treatment adherence; (4) identify current community resources, gaps in resources and needed resources to implement interventions; and (5) develop and prioritize appropriate and attainable interventions. Additionally, four new members to the Collaborative’s Steering Committee were named and two meetings of the expanded committee were held to discuss the issues and findings related to this grant.

Because of Manchester’s interest in childhood asthma from the community perspective and the work being conducted at the state legislative level by the East Hartford Department of Health and Social Services and their work with The Asthma Center at the Connecticut Children’s Hospital, Manchester and East Hartford took the lead in completing the grant. The findings, however, will benefit the health officials of all the Collaborative’s member towns, along with caregivers and the children themselves, and will be used to help children better manage their asthma.
III. East of the River Wellness Collaborative Childhood Asthma Grant

Purpose

The purpose of the grant from the State of Connecticut Department of Public Health was for the East of the River Wellness Collaborative to:

- Complement and enhance Manchester’s Community Health Needs Assessment Committee activities by addressing the community identified health risk indicator of childhood asthma.
- Collect community specific data on the prevalence of childhood asthma, identify available and missing resources.
- Mobilize institutional and community support on the issue of childhood asthma.
- Strengthen the ability of the collaborative to seek additional funding towards the development of a comprehensive childhood asthma management program for each community.

Research Method

Design

The grant provided funds to the towns of the East of the River Wellness Collaborative to conduct preliminary research into the twin problems of identifying and diagnosing at risk children and optimal ways for managing childhood asthma. With limited funds and time the research effort had to be focused. The Collaborative decided to focus on asthma of school-aged children, and collecting information form the schools and parents of children with asthma.
Because of time, money, and resource constraints, relevant secondary data sources were identified and focus groups were organized. Focus groups were selected for primary data collections because the method provides qualitative data, community and professional perspectives, and would allow for the identification of broad themes about the treatment of childhood asthma. Focus groups are also useful for generating an understanding of barriers and facilitators to action.

The research included the collection and analysis of data from the following sources: (a) hospital admissions, emergency room utilization data, and school health records; (b) focus groups with school nurses in both Manchester and East Hartford; and (c) focus groups with parents of children with asthma in both Manchester and East Hartford. Given the constraints of time and resources, it was not possible to conduct as many in depth interviews with Manchester and East Hartford doctors as planned. One phone interview was held with a Manchester doctor, and several short conversations with the office staff of East Hartford doctors to ask their support in displaying the announcement flyer for the focus groups. From the focus groups with the school nurses and the parents, it was possible to obtain their perceptions of physician knowledge, treatment, and patient education.

Parent Participants

Parents were recruited through the schools and physicians. Permission was needed from each town’s school administration to send announcement flyers to parents of school-aged children with asthma. This was received through the head nurse in each town. School nurses in the East Hartford and Manchester communities were then asked to
send the flyers announcing the focus groups for parents to discuss concerns and questions they had about childhood asthma (see Appendix B). A cash incentive of $20.00 and a light dinner were offered to increase the participation rate. Child care was also available for the Manchester group. Three focus groups were held, one in Manchester at the Mary Cheney Library, and two in East Hartford at the East Hartford Community Cultural Center. Eleven mothers attended the focus groups, seven mothers from Manchester and four mothers from East Hartford. Two more participants were expected in East Hartford. However, the husband and wife who indicated they were going to attend did not show on the evening of the group. Therefore, all participants were mothers.

A common discussion guide was used for all the groups and permission was asked to tape the discussions (see Appendix C). For the East Hartford groups, the guide also included a question about pharmacies and pharmacists, and one group was not taped because it was attended by only one participant.

The children of the attending mothers ranged in age from 15 months to 18 years old. Several mothers had two children with asthma and several mothers were asthmatics themselves. Most children were diagnosed with asthma as infants or toddlers. Some of the major findings included:

- Asthma triggers varied – cold weather, allergies, exercise
- Children were on a variety of drug regimens.
- All had health insurance plans that cover prescriptions; most plans required a co-pay
- The majority used a specialist for their child’s asthma.
Two participants were Hispanic Americans.

All Manchester parents appeared to be middle class; East Hartford parents appeared to be of a lower socio-economic status.

Two participants admitted to having a smoker in the house; one had two dogs and one had a guinea pig.

Most of the participants’ children attended public schools; two sent their children to an elementary parochial school.

Nurse Participants

In both East Hartford and Manchester, school nurses are at the front line in providing primary care to their students during the school day. The head nurse in each community identified a group of nurses to discuss childhood asthma in the school system. In Manchester an open invitation was sent to the nurses inviting them to attend the discussion group; nine nurses (a sample) expressed interest and attended the group. In East Hartford, the discussion was part of a regularly scheduled staff meeting; about 20 (nearly all) attended the meeting.

The same questions were used for discussion in both nurses’ groups and permission was asked to have the discussions taped (see Appendix D). In the East Hartford group an additional question was included on whether residents take their children to a hospital emergency room, clinic, or their primary care doctor to receive acute care. Manchester nurses were very enthusiastic about the topic and were eager to participate in any future programs. East Hartford nurses seemed less interested. This may have been due to the discussion occurring as part of a required staff meeting, covering many administrative
issues, and the fact that there was no decision making opportunity to participate based on interest in childhood asthma. Both group of nurses made similar assessments of the disease within their schools.

Results

Evaluation of Childhood Asthma Data Sources

We identified several sources where we thought we could retrieve data on childhood asthma. This list included hospital and emergency rooms, schools, doctors' offices, clinics and the Department of Health. Because of time constraints we were only able to obtain data from the Department of Public Health, Eastern Connecticut Health Network, and the Manchester schools.

In Manchester, the school nurses were asked to provide the asthma prevalence data on a school-by-school basis. These data were obtained from school records with permission from the administration. These data can be used as a baseline for future work. As shown in Table 1, there were 9,229 children in school, and 1,113 or 12% had been diagnosed with asthma. These numbers include both public and non-public school enrollments. A breakdown shows:
Table 1

Childhood Asthma within the Manchester School System

<table>
<thead>
<tr>
<th>School Type</th>
<th>School Enrollment</th>
<th>Number of Children with Asthma</th>
<th>Percentage of Children with Asthma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>3,700</td>
<td>442</td>
<td>12%</td>
</tr>
<tr>
<td>Middle School</td>
<td>1,807</td>
<td>221</td>
<td>12%</td>
</tr>
<tr>
<td>High School</td>
<td>2,028</td>
<td>275</td>
<td>14%</td>
</tr>
<tr>
<td>Non-Public (All grades)</td>
<td>1,694</td>
<td>175</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>9,229</td>
<td>1,113</td>
<td>12%</td>
</tr>
</tbody>
</table>


The Manchester nurses reported that they were concerned about the validity and reliability of the data. These concerns are due to two major factors: over reliance on using episodes of wheezing in making the diagnosis; and, diagnoses are not always current, especially for older children who may still carry a diagnosis from the pre-kindergarten physical. Despite these limitations, this is a fairly comprehensive source of information that is maintained over time.
Comparable data was not available from East Hartford for this project. The relationships between town officials and the school administration are not as well developed as Manchester, making the data less accessible.

Additionally, we collected recently compiled data from the Department of Public Health on childhood asthma hospital admissions and emergency room visits from East Hartford and Manchester. These data may be found in the Appendix.

Identification of At Risk Population Subgroups

The school nurses indicated that among the children who have been diagnosed with asthma, those most at risk were involved in sports and not using their inhalers as prescribed, those with seasonal triggers, and those with psycho-social or physical stressors. In addition, the nurses felt that children from low socio-economic households and minorities were at greater risk of acquiring the disease and for being untreated.

Identification of Barriers and Obstacles to Care

By far, the most common themes that emerged from the focus groups and the conversation with the doctor was the need for more education and more communication. In conducting the research, it was made clear that barriers to care exist within all groups who are affected by this disease – parents, doctors and other medical providers, children, and school personnel. These barriers are magnified by the insurance industry and the financial ramifications that impact access and payment for care. Lack of reliable data and the inability to access available data are also barriers.
Parents

The school nurses and the mothers in both communities agreed that parental barriers included lack of success in fostering adherence to the treatment plan, ignorance about the disease and its triggers, and confusion over how to use/monitor their child’s use of an inhaler and peak flow meter. The one doctor we spoke to was not complimentary about what he called “lazy parents.” He reported parents in his practice who still use tobacco products around their children. He also has parents who “don’t want to listen” and will only treat their children when there is an acute episode, rather than taking time to learn how to help their children manage their asthma. Many mothers indicated they have conducted their own research about childhood asthma. All acknowledged they still had questions about the disease, its management, and how to treat it with prescribed medications and equipment. One mother spoke for many when she said, “there is a lot to know, a lot of drugs to be taken and I just don’t know why my son is taking one drug versus another.” Their knowledge levels varied, along with their confidence in their ability to advocate for their children.

Doctors and Other Medical Providers

Mothers reported that their primary care doctors are sometimes reluctant to diagnose asthma, prescribe medications and equipment, “use it if you want to and see the need”, and refer their children to specialists. Nurses, too, thought there was “some bias in diagnosing, especially in high school boys.” When this happens, parents and nurses thought that the children were at a disadvantage because their treatment was either delayed or they were not benefiting from the latest in treatment options. Most of the
mothers who did not have a specialist caring for their child indicated they would like to have a doctor who knew more about asthma and who was more willing to discuss care and treatment options. Nurses report “few” children with asthma in both the Manchester and East Hartford school systems have action plans from their doctors. This suggests the doctors are not following the established National Institutes of Health guidelines for treating asthma. Furthermore, the nurses indicated, “Kids with plans rarely use them or their peak flow meters.” They attributed this to missed opportunities for education and lack of direct communication with the parent and the child during the doctor visit. In East Hartford the nurses felt “there is not a lot of follow up” after the initial diagnosis, other than automatic renewals of the medication.

In two of the mothers’ groups, pharmacists were also singled out for not being current on the latest asthma medications and equipment. One mother shared that for financial reasons she will often ask for samples. Her pharmacy often dispenses medications that have exceeded their expiration date. Another mother, who has researched a new medication for her son, recounted that she felt she had clearly communicated with her pharmacist the equipment she had at home and yet, when she brought the medicine home, she found out that it was not compatible with her equipment.

Children

Nurses feel “kids need to take responsibility for their inhalers” – for carrying them, keeping them handy, not losing them, and knowing how to use them. Rather than being made to feel “different,” they need to feel comfortable and supported in the school environment so they are not embarrassed to ask for help or to be excused from activities
and class. Children need to know their triggers, when to use their inhalers, when to take a
drink of water, and when to slow down. Education and regular reinforcement about
controller drugs and reliever drugs and how to use a peak flow meter were identified as
very important in empowering children to be active and engaged in caring for themselves.

School Personnel

According to several mothers, many in the school system do not take asthmatic
children seriously. Teachers and physical education teachers have not been educated
about the disease. According to several mothers, many in the school system do not take
the disease, seriously and have not been trained to deal effectively with children with
asthma. In the Manchester group (although the sentiment also applies to East Hartford),
one mother said,

“They don’t seem to know how serious the disease can be – teachers don’t want
to give kids permission to go to the school nurse when they are in trouble, they
will open windows during the cold weather, and gym teachers make the kids run
longer than they are able. It seems there is more focus on the acute illnesses, the
broken bones and even lice than on asthma.”

Asthmatic children miss many days of school and often find themselves having
trouble keeping up and catching up with schoolwork. Mothers want the schools to
acknowledge that absences may be lengthy and plan accordingly for tutors and time to
complete missed lessons. They want their children to be able to carry water bottles and
their medications. Mothers want the physical education teachers to know that on any
given day, an asthmatic child may not be able to exercise or participate in gym and on
sports teams, especially if the asthma is exercise induced. Mothers feel children with
asthma need to be encouraged, while following their individual regimen of drugs and exercises, to participate in activities that will increase their cardio-respiratory endurance.

Mothers expressed they want the school nurses to be advocates for their children within the school system. Mothers look to the nurses to be the intermediaries between the children, the teachers, and the administration in explaining the disease and how it's treated. Additionally, nurses should educate parents and older children about the low cost insurance available through the HUSKY plans.

Insurance and Financial Issues

Mothers are concerned about the cost of treating asthma. Medications are expensive and there is the cost of lost work and lost wages for parents who stay home when their kids are too sick to go to school. Financial limitations of the working poor and long work hours may result in parents not knowing if their kids are adherent because they are often not home to monitor treatment. In East Hartford, in particular, lack of insurance was identified as a barrier to receiving proper care. Both the nurses and mothers reported that even under a HUSKY plan, medical care and prescriptions were “still too expensive.”

East Hartford nurses reported when the “symptoms are bad, many of the kids go to hospital emergency rooms because they don’t have a family doctor.” They also felt that the hospitals and clinics in Hartford were utilized more than Manchester Memorial Hospital because the Eastern Connecticut Health Network doesn’t offer a sliding payment scale.
School nurses and mothers we spoke with felt managed care has limited educational opportunities between the doctor and patient and compromised the ability to build long-standing relationships with doctors and other medical providers. By extension, a few mothers expressed “skepticism” about the drug treatment plans because of suspected influence by the pharmaceutical industry.

**Lack of Data**

There is no one source for definitive data on the prevalence of childhood asthma. Prevalence indicators of childhood asthma come from a variety of places: (1) the Department of Public Health and the Connecticut Hospital Information Exchange (CHIME) compile town by town data on hospital admissions and emergency room visits among children (see Appendixes E and F); (2) the Eastern Connecticut Health Network whose service area encompasses both East Hartford and Manchester compiles data comparable to the state and CHIME; and (3) Manchester school nurses were able to document childhood asthma within the schools based on the “disability sheets” they are required to maintain by the American Disabilities Act (see Appendix G). These sources have different criteria for what is reported, use inconsistent age group classifications, and lack up-to-date diagnoses.

The ease of acquiring data is another variable. Without a credible source of data, the ability to establish monitoring and surveillance programs to evaluate the effectiveness of new interventions is compromised.
Identification of Community Based Resources

Most resources are offered through the schools. Nurses do what they can with the limited resources available. Both groups of nurses indicated that the lack of support and financial resources within the schools prevents them from being able to coordinate programs throughout the entire system or to fund them on an ongoing basis. The American Lung Association's "Open Airways" program has been used successfully within both the Manchester and East Hartford school systems. Over the last two years the program has been held in five schools in Manchester and in seven schools in East Hartford. In East Hartford, asthma has been a topic in after school enrichment programs and a bilingual Sesame Street program has been offered. Within the last month, the Manchester Health Department sponsored a seminar, "A is for Asthma," on childhood asthma for day care providers and pre-school teachers. ("Education," 2001)

East Hartford has three school-based clinics—one to serve the nine elementary schools, one in the middle school, and one in the high school. In the middle school clinic, a three-lesson program on asthma, presented by a respiratory therapist who conducts assessments and provides instructions on how to use a peak flow meter, is reported to have been well received. ("EH School Nurses," 2001)

Specific providers were mentioned in the focus groups, both by parents and the school nurses, as being particularly well regarded for treating pediatric asthma. These were: the Kids Station Pediatrics (Dr. Donald Mordavsky) in Manchester; and the Connecticut Asthma and Allergy Center (Drs. Louis Mendelson and Marshall Grodofsky) with offices in Manchester and several other Connecticut towns.
The American Lung Association has its Connecticut office in East Hartford and is very helpful in providing materials and educational services. The Asthma Center at the Connecticut Children’s Hospital in Hartford is also very active in studying childhood asthma. The center has developed the “Easy Breathing Program,” a community based asthma diagnosis and treatment program, which has been implemented in Hartford with primary care providers and Medicaid managed care (HUSKY) insured children. The program incorporates provider training on the national asthma treatment guidelines and how to make asthma diagnoses, educational materials for children and family members, additional education for children who are hospitalized with asthma, and home visits by outreach workers to advise parents on environmental causes of asthma. Results to date suggest the program does improve the treatment of children with asthma and reduces the use of emergency rooms and hospital beds. This indicates the management of asthma in disadvantaged children can be greatly improved with a community-based program that facilitates the identification of children with asthma and assists providers in implementing the established national treatment guidelines. (“Asthma Training,” 2001) Discussions have begun between the East Hartford Department of Health and Social Services and the Connecticut Children’s Hospital about replicating this program in east of the river communities.
IV. Suggested Interventions

This research supports the development and implementation of programs to increase awareness about the accepted treatment guidelines from the National Institutes of Health and the availability of community based services, such as the “Open Airways” program. The research also suggests these programs, in order to be as effective as possible, must be multi-faceted and designed to reach all stakeholders. The content of these programs should be focused on conveying new facts, altering attitudes, changing behavior, and encouraging participation in the health care decision making process. Important design elements are the clarity of the messages, the consistency in which the information is being presented, the tone and appeal, the credibility of who is presenting the information, and the relevance to the target audience. Equally important will be assessing the need for bilingual material and the literacy level at which the material is written. For these reasons, additional research with members of the target audiences will be required to ensure that the programs have been appropriately designed.

Because of the availability of school collected data, it is recommended the goal of these programs should be to achieve a one-to-one ratio of all children with asthma having a complete and current asthma treatment plan. Based on the ideas generated from the focus group discussions, a list of suggested community based interventions, program elements, some specifics, and target audiences was developed (Table 2). These suggestions apply to both Manchester and East Hartford.
Table 2
Integrated Community Based Programs

<table>
<thead>
<tr>
<th>Program</th>
<th>Some Program Specifies</th>
<th>Target Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar on Childhood Asthma</td>
<td>Sponsored by collaborative speakers to include - recognized authority on childhood asthma - pharmacist to discuss latest in medications - parent - child Education materials available Peak flow meters available</td>
<td>Doctors Parents/Caregivers Daycare providers School nurses</td>
</tr>
<tr>
<td>Open Airways, American Lung Association</td>
<td>Hold in all elementary schools Supplement with parents sessions Present with school nurses, pharmacists, and Health Department personnel</td>
<td>Children Parents/Caregivers</td>
</tr>
<tr>
<td>Teacher In-Service Asthma Awareness Program</td>
<td>Present information on asthma - the disease, its triggers, how to treat Present with school nurse</td>
<td>Teachers Coaches</td>
</tr>
<tr>
<td>Low Cost/No Cost Peak Flow Meters and Sample Medications</td>
<td>Seek funding to purchase and make available at seminars and schools Work with pharmacists and drug companies</td>
<td>Parents Children</td>
</tr>
<tr>
<td>PTA Asthma Awareness Program</td>
<td>Present with school nurse</td>
<td>Parents/Caregivers</td>
</tr>
<tr>
<td>&quot;Disability Sheet&quot; Reporting</td>
<td>Require completion on every child with asthma</td>
<td>School nurses</td>
</tr>
<tr>
<td>Smoking Cessation Program</td>
<td>Promote availability Provide vouchers to encourage attendance Work with pharmacists and drug companies to provide low cost/no cost medication (gum, patch, etc.)</td>
<td>Parents/Caregivers who smoke Siblings who smoke</td>
</tr>
<tr>
<td>Education Material</td>
<td>Purchase, develop material including action plan, fact sheet, check list, etc. Make available through school and pharmacies Deliver to doctors</td>
<td>Children Parents/Caregivers Doctors Pharmacists</td>
</tr>
<tr>
<td>HUSKY Outreach</td>
<td>Promote and explain program Provide assistance in enrolling</td>
<td>Parents/Caregivers</td>
</tr>
<tr>
<td>Support Groups</td>
<td>Use doctor's office, hospital and clinics and pharmacies to link parents of children with asthma</td>
<td>Parents/Caregivers</td>
</tr>
</tbody>
</table>
Finally to measure effectiveness of both program content and process, evaluation activities are required. A five-step plan is proposed:

Step 1: Develop goals and objectives

Step 2: Select evaluation measures

Step 3: Design data collection and analysis methodology

Step 4: Develop schedule and plan for managing the evaluation activities

Step 5: Determine and communicate how results will be used and shared.

Healthier communities can be achieved through collaboration in pursuit of the shared goal of reducing the burden placed on the community because of poorly treated childhood asthma. Improving the health status of Manchester and East Hartford will require collaboration to develop an integrated approach that leverages available resources and the influence of community leaders and local institutions, civic and faith based organizations, government agencies and departments, schools, health care professionals and facilities, and families. (“New Jersey,” 1999)
V. Appendix

Appendix A. Manchester Spotlight on Health, Community Health Needs Assessment, Manchester

Appendix B. Announcement Flyer for East Hartford and Manchester Focus Groups with Parents

Appendix C. Discussion Guide – Focus Groups with Parents of Asthmatic Children in East Hartford and Manchester

Appendix D. Discussion Guide – Focus Groups with School Nurses in East Hartford and Manchester


Appendix G. Childhood Asthma in Manchester – School Nurses Worksheet
Special thanks to the following Manchester businesses for helping with the expenses to provide this information.

- Highland Park Market
- Savings Bank of Manchester

For more information, call the Manchester Health Department at 647-3173
Background
Keeping people healthy and improving their quality of life have become national, state and local goals. From the food we eat, to our lifestyles and behaviors, to the habits we pass along to our children, good health depends on having the right information to make good decisions.

Manchester has recognized the need to begin an ongoing process to monitor the community’s health. The first steps in this process are a community health needs assessment and increasing awareness about health concerns. The assessment effort was begun in January 1998 with the Community Health Needs Assessment Committee. Its membership was broad based and represented the diverse interests and population of Manchester.

A community health needs assessment reflects the health concerns of the community. It collects useable data and information to provide focus to the community’s planning process and use of resources. This assessment process includes collection of “point-in-time” data and comparison or trend data to measure changes to the health of the community.

Charge to the Committee
The committee met to select a short list (15 to 25) of priority health concerns, to define measures for those concerns, and to report this information as a Report Card to the community. Each priority met four criteria: (1) meaning and value to the community; (2) measures with available and statistically reliable data; (3) responsiveness to local interventions designed to assist in change and improvement; and (4) interventions available which produce measurable results.

Next Steps
This packet contains the following information about the initial health concerns chosen by the committee; why they are a concern, their measures and available data; what can be done to reduce risk; and what resources are available in the community. This information will help guide the Health Department’s activities to improve the health and quality of life of Manchester’s residents. It will also prioritize the collection of data to evaluate the success of prevention, intervention and health service programs.

For more information, call the Manchester Health Department at 647-3173
Ms. Debra Bilodeau, *Commission on People with Disabilities*
Mr. Theodore Brindamour, *Advisory Board of Health*
Ms. Joanne Cannon, R.N., *Health Department*
Mr. Christopher Cavanna, *Advisory Board of Health*
Ms. Joanne Donaghue, *Eastern CT Health Network*
Ms. Bridget Donovan, *Advisory Board of Health*
Ms. Joy Dorin, *Resident*
Ms. Joyce Epstein, *Century 21 — Epstein Realty*
Ms. Lorana Fallone, *Head Start*
Ms. Ann Marie Gauvin, *Manchester Area Network on Aids*
Ms. Lynne Gustafson, R.N., *School Health Services*
Ms. Ellen Jones, *Resident*
Ms. Shirley Juran, *Resident*
Mr. Ronald Kraatz, *Health Department*
Ms. Lyn Lanoue, *Resident*
Dr. John Malone, *Advisory Board of Health*
Ms. Hanna Marcus, *Human Services Department*
Ms. Neftersi (Nancy) Martinez, *Resident*
Ms. Joan Nassiff, *Nassiff Camera Shop*
Mr. Loc Nguyen, *Resident*
Ms. Diane Novak, *Highland Park School*
Ms. Belinda Plummer, *Resident*
Ms. Roanne Robbins, *Savings Bank of Manchester*
Ms. Mary Roche, *Youth Service Bureau*
Sgt. Joe San Antonio, *Police Department*
Ms. Mary Savage, *Planning Department*
Mr. Joseph Thompson, Jr., *East Side Block Watch*
Ms. Joyce Trainer, *Savings Bank of Manchester*
Ms. Diane Wilson, R.N., *Visiting Nurse and Home Care of Manchester*

Ms. Susan O’Hara, R.N., *Project Coordinator*

For more information, call the Manchester Health Department at 647-3173
Tobacco
• Number and percent of Manchester teenagers (13 to 17 years old) who smoke.

Substance Abuse: Alcohol and Other Drugs
• Number, percent, and list of Manchester primary medical care providers who screen and provide counseling or referrals for alcohol and other drug use problems.
• Number and percent of driving while intoxicated/driving under the influence (DWI/DUI), and suspended licenses among Manchester residents.

Family Planning
• List of Manchester outreach programs for pregnant teens.
• Number and percent of births to Manchester teenagers (13 to 17 years old).

Children’s Health
• Number and percent of Manchester children (3 to 17 years old) who are treated for depression and Attention Deficit Disorder.
• Number and percent of Manchester children (3 to 17 years old) who have chronic conditions by type; e.g. asthma.

Intentional Injuries
• Number and percent of Manchester residents who have been injured intentionally.

Educational and Community - Based Programs
• List and attendance at community health promotion programs offered during the last available two calendar years through the Eastern Connecticut Health Network.
• Number and percent of Manchester residents, 65 years and older, who participated in health promotion programs.

continued on next page

For more information, call the Manchester Health Department at 647-3173
Environmental Health
• Water quality at source and after passing through distribution system.

Mother and Infant Health
• Number and percent of Manchester pregnant women who receive prenatal care in the first three months of pregnancy.
• Number and percent of newborns, born to Manchester residents, who receive care in the Intensive Care Unit (ICU).

Cancer
• Number of deaths and death rate in Manchester due to cancer.

Preventive Services
• Number and percent of Manchester residents who have received recommended, age appropriate immunizations.
• Number and percent of Manchester residents who have received recommended, age appropriate routine medical and dental check-ups and screenings.

Access to Health Care
• List of transportation alternatives in Manchester for visits to the doctor.
• Number, percent, and listing of Manchester healthcare providers who offer bilingual/multilingual services.
• Number and percent of Manchester families who are eligible for assistance through WIC (the supplemental food program for women, infants and children) and Title 19 (Medicaid).
• Number and percent of Manchester patients in Manchester Memorial Hospital who are underinsured and non-insured.
• List of Manchester doctors and dentists who accept HUSKY A and B, the free/low cost health insurance for children under the age of 19 years old.
Why is this a concern?
Alcohol is a factor in about half of all motor vehicle fatalities and many severe disabling traffic accidents. Because small amounts of alcohol affect judgement, reaction time, and physical coordination, no person has a safe limit for driving. Even though the driver may not be legally intoxicated, just one drink will cause mental and physical impairment. Teenagers are particularly at risk for drinking and driving.

About the measure
Number and percent of driving under the influence (DUI) and suspended licenses among Manchester residents.

All DUI offenders receive temporary license suspensions. Less than 1% of Manchester drivers were charged with a DUI offense in town. 12.5% of all DUI offenses were committed jointly with other offenses, and 91% were committed by men. Nearly 90% of these men were aged 40 or younger. Data on out of town offenses was unavailable.

What can be done?
• Avoidance of driving after drinking
• Use of a designated driver or calling a cab
• Enforcement of laws against selling alcohol to minors
• Adults setting examples for minors
• Educating adolescents and young adults about the dangers of alcohol

Selected Resources
Community Prevention and Addiction Services 645-0487
Alcoholics Anonymous 646-2355

Updated 6/99
For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
Children with Attention/Deficit/Hyperactivity Disorder (ADD or ADHD) suffer lower functioning at school, at home, and with peers. The problems cause lower grades and test scores. Siblings, parents and peers often reject ADHD children due to their aggression, impulsiveness, and noncompliance with rules. Children with ADHD are more likely to experiment with drugs and have significant substance abuse problems.

About the measure
Number and percent of Manchester children (grades K-12) who are treated for ADD/ADHD.

414 public school children in Manchester have been diagnosed with ADD or ADHD, representing 5.4% of the public school population. An additional 87 children (5.2%) who attend parochial or other regional schools in Manchester also have this diagnosis. Nationally 3-5% of school aged children are estimated to have ADD/ADHD.

(Manchester School Health Data, AACAP Summary of Practice Parameters)

What can be done?
• Early recognition of symptoms (e.g., inability to sit, lack of concentration, impulsive behavior, inability to listen well) and diagnosis
• Consistent medical and psychosocial treatment
• Access to specialized needs services in schools
• Developing education and support networks for families

Selected resources
Manchester Board of Education 647-3486
Children & adults with ADD (CHADD) (301) 306-7070, www.chadd.org

Updated 6/1/99
Why is this a concern?
Teenage births represent an important measure of the health of the community. The rates reflect behaviors and conditions such as early and unprotected sexual activity, violence against women, and youth drug and alcohol use. Teenage births often lead to the mother's inability to fully pursue her educational and employment opportunities and this may also affect the health of the next generation.

About the measure
Number and percent of Manchester teenagers who give birth (13-19 years old).

Manchester has remained very close to Connecticut's goal for teen births. From 1990-1997, only 6 Manchester teens under 15 years of age gave birth. An average of 37 teens (3%) aged 15-19 gave birth. Nationally, the percentage of births to teens declined. In Manchester, the percentage of births to older teens increased.

What can be done?
• Parental education at home
• Health education in school
• Abstinence from sexual activity
• Practicing safe sex

Selected Resources
Planned Parenthood, Manchester 643-1607
Eastern Connecticut Health Network (888) 299-3676

Updated 6/22/99

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
Pregnant teenagers, due to their financial and psychosocial status, may not know where to turn for help or have access to traditional health care resources. This can lead to increased problems like late prenatal care, untreated sexually transmitted diseases, repeat pregnancies, low parenting skills, all of which impact a community. Women who receive prenatal care have improved pregnancy outcomes.

About the measure
List of Manchester outreach programs for pregnant teens.

Current Programs Available

- Medical assistance - Husky Outreach Program 646-1222 ext. 2751
- Low income/homeless resources or advocacy for age 17+
  –Manchester Outreach Program 645-0487
- Teen child birth, parenting preparation and parenting support
  –ECHN Welcoming Baby Program for parents under 21 years 647-4790
  –MMH Family Support and Resource Center 646-1222 ext. 2458
- Domestic violence - Domestic Violence Outreach Team 643-3334

What can be done?
- Public and private sector community outreach and planning
- Preventing initial and repeat teen pregnancies
- Counseling families and teens on reproductive and primary health care
- Promoting self-sufficiency among teen population.

Other resources
Healthy Mothers/Healthy Babies Coalition
Manchester Health Department 647-3173

Updated 6/99

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
The depressed child may consider suicide and may use alcohol or other drugs to feel better. Depression in a child very often leads to serious emotional consequences later in life. Children under stress, who experience loss, and who have attention, learning, or conduct disorders are at higher risk for depression.

About the measure
Number and percent of Manchester children (grades K-12) who are treated for depression.

28 children in public, parochial and other regional schools in Manchester have this diagnosis. They comprise .03% of the school age population. About 2% of children and 4-8% of adolescents suffer from clinical depression nationwide. Although the Manchester rate is low, 30 additional children suffer from other conditions that may be associated with depression such as suicidal tendencies and bipolar disorder.

(AACAP Summary of Practice Parameters 5/28/99, Manchester School Health data)

What can be done?
• Recognizing that children and adolescents can and do become clinically depressed
• Seek professional help for early diagnosis and treatment
• Parent-child-doctor-school involvement and support

Selected Resources
Community Child Guidance Clinic 643-2101
Eastern Connecticut Health Network (888) 299-3676

Updated 6/16/99

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
Lack of transportation limits access to health care for many persons, especially people with lower income, disabilities, or frailties. Even when public transportation exists, trips are often inconvenient, difficult, and time consuming. These problems inhibit full access to health education, preventive, support and treatment services.

About the Measure
List of transportation alternatives in Manchester for visits to the doctor.

Although 86% of Manchester health providers are located along public bus routes, only 45% of all town properties are within 1000 feet of the bus routes. Most are in the center and north side of town. The bus takes 52 minutes, on average, from one end of town to the other. Volunteer-staffed services are not always available. Several services below require advanced booking, at least 1 day ahead of time.

If you are:
• Age 60+ traveling within Manchester
  Dial-A-Ride (860) 870-7940
• Age 60+ and unable to use Dial-a-Ride
  FISH at Manchester Elderly and Family Services 647-3096 (volunteer)
• Disabled traveling from Manchester to Greater Hartford
  ADA Transportation Services (860) 724-5340
• Disabled traveling within Manchester, Vernon, Tolland or Ellington
  ADA Transportation Services (860)872-9905
• A veteran and traveling to the VA Hospital
  VA Hospital Service (860) 666-6951 ext. 6321
• Either HIV positive or an AIDS patient - MANA 646-6260
• A cancer patient - American Cancer Society  643-2168 (volunteer)
• Able to ride the bus - CT Transit (860)525-9181
• On Title 19 (Medicaid) or SAGA and not ambulatory - 1(888)743-3112

Transportation continued next page

For more information, call the Manchester Health Department at 647-3173
Transportation continued

• On Medicaid or Husky health plans—
  Physician Health Services 1-800-818-1141;
  Community Health Network 1-800-859-9889;
  Anthem Blue Care 1-800-554-1707;
  Kaiser 1-800-0725; Preferred One 1-800-925-3606.

Commercial medical transportation services are listed in the Yellow Pages

**What can be done?**

• Publicizing alternatives that are available
• Developing a community strategy to increase alternatives

**Manchester Properties within 1000 Feet of Bus Routes**

![Map showing properties within 1000 feet of bus routes]

Property adjacent to bus lines
Bus lines

*Updated 6/99*

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
People who begin smoking at an early age are more likely to develop severe nicotine addiction than those who start at a later age. Cigarette smoking during adolescence causes health problems such as respiratory illness, heart disease and lung disease. Tobacco acts as a “gateway drug” to alcohol, marijuana, and other drugs.

About the measure
Number and percent of teenagers (13 to 17 years old) who smoke.

Nationwide in 1997 the percent of high school students currently using cigarettes was 36% and cigars 22%. For Connecticut in 1995, 30% of high school students reported using cigarettes in the past 30 days. Manchester information is being gathered.
(American Lung Association, CT Department of Public Health)

What can be done?
• Health education and smoking prevention programs in schools
• Adult awareness and adult support for non-smoking by teenagers
• Enforcement of laws against selling tobacco products to minors
• Smoking cessation programs for teens

Selected resources
Manchester Board of Education 647-3486
Manchester Council on Substance Abuse Concerns 647-3062
American Lung Association, E. Hartford 289-5401 or (800) LUNG USA

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
The use of alcohol and other drugs poses a serious threat to the safety and well being of individuals, families and the community at large. Often persons suffering from substance abuse have other physical and psychiatric problems. Medical care providers have opportunities to identify substance abuse in their patients and can influence the patient to get treatment. Treatment reduces use of health services, psychiatric illness, traffic violations and criminal arrests.

About the Measure
Number, percent, and list of Manchester primary medical care providers who screen, and provide counseling, or referrals for alcohol and other drug use problems.

Primary medical care providers include pediatricians, nurse practitioners, obstetricians/gynecologists, internists, and family physicians. Manchester information is being gathered.

What can be done?
• Awareness and educational programs for medical care providers
• Knowledge of the signs and symptoms of alcohol and other drug abuse
• Referrals for counseling and treatment

Selected resources
ERASE Regional Action Council 568-4442
Eastern Connecticut Health Network (888) 299-3676

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
Chronic illnesses in children include asthma, diabetes, seizures, ADD or ADHD, cancer, Tourette’s Syndrome, cerebral palsy, mental retardation, genetic disorders, developmental disabilities, spina bifida, hemophilia, mental illness, and health related educational and behavioral problems. A child with chronic illness is at risk for psychological problems. The conditions have major impacts upon families, school systems, treatment costs and medical facilities.

About the measure
Number and percent of Manchester children (3 to 17 years old) who have chronic conditions.

Nationally, 15 percent of all children (nearly 10 million) have some chronic health problem. An estimated 46,315 Connecticut children under the age of 20 years (about 5%) have special health care needs caused by chronic conditions. Manchester information is being gathered.
(CT Children with Special Health Care Needs Program)

What can be done?
• Early and consistent prenatal care
• Early detection and diagnosis
• Access to highly specialized, interdisciplinary services

Selected resources
CT Children with Special Health Care Needs Program (860) 509-8074
Connecticut Children’s Medical Center (860) 545-9000

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
Asthma is the leading serious chronic illness among children. It is caused by increased reaction of the airways to various triggers and stimuli. It can be life-threatening and is the leading cause of pediatric emergency room visits. Asthma ranks first in hospitalizations among children with chronic illness. The national estimated annual treatment cost for asthmatic children is $1.9 billion, and the illness causes 10 million lost school days annually.

About the measure
Number and percent of Manchester children (grades K-12) who have asthma.

In Manchester public schools, 492 students (6.5%) have asthma. In Manchester parochial and regional schools, 3.9% of the students have asthma. In Manchester, rates for hospital admissions and emergency room visits for asthma are declining.

(ChIME Inc., Manchester School Health Data)

What can be done?
• Reduction of exposure to smoke, other allergens, respiratory infections, cold air and stressful situations
• Early symptom recognition and diagnosis
• Consistent treatment including medication use
• Developing asthma education and support networks

Selected resources
Eastern Connecticut Health Network (888) 299-3676
American Lung Association, E. Hartford 289-5401 or (800) LUNG USA

Updated 6/22/99

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
Intentional injuries are either self-inflicted or perpetrated by another person. They include suicide, homicide, rape, assault, and domestic violence. They produce extensive physical and emotional consequences for the victims and the community. Little attention has been directed at preventive activities which change attitudes and behaviors contributing to these injuries.

About the measure
Number of Manchester residents who have been injured intentionally.

In 1996, Connecticut reported 286 suicides, 170 homicides, 7,000 aggravated assaults, and nearly 1,100 rapes of women 12 and over. Manchester information is being gathered.
(State of Connecticut Department of Public Health)

What can be done?
- Public service campaigns to increase awareness
- Additional education, counseling, and referral services
- Improving health care providers’ methods for identifying, treating, and referring
- Enforcing gun laws
- Positive youth development programs

Selected resources
Manchester Police Department 645-5500
Crisis Intervention Infoline (800) 203-1234

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
Individuals can have an enormous impact on their own and their family’s health. Good health depends upon being informed and making good choices. The role of health promotion is widely accepted as a low cost, effective, and convenient way to prevent and control health problems.

About the measure
List and attendance at community health promotion programs offered during the last available, two calendar years.

<table>
<thead>
<tr>
<th>Service</th>
<th>1996</th>
<th>1997</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screenings</td>
<td>305</td>
<td>285</td>
</tr>
<tr>
<td>Programs for Older Adults</td>
<td>127</td>
<td>557</td>
</tr>
<tr>
<td>Personal Development and Health</td>
<td>735</td>
<td>1425</td>
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<tr>
<td>Stress Busters</td>
<td>141</td>
<td>206</td>
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<tr>
<td>Women’s Health</td>
<td>342</td>
<td>195</td>
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<tr>
<td>Nutrition and Weight Management</td>
<td>170</td>
<td>268</td>
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<tr>
<td>Fitness and Exercise</td>
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<td>554</td>
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<tr>
<td>Wellness Walks</td>
<td>647</td>
<td>744</td>
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<tr>
<td>Safety and CPR</td>
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<td>86</td>
</tr>
<tr>
<td>Family Health</td>
<td>360</td>
<td>535</td>
</tr>
</tbody>
</table>

What can be done?
- Bilingual/multilingual programs to reach specific populations
- Coordination with other programs in the community

Selected resources
Eastern Connecticut Health Network (888) 299-3676

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
With rapid increases in life expectancy, older adults are a fast growing segment of society and use a large percentage of the community's health care resources. Although it is commonly believed that health problems in old age are inevitable, many can be prevented or controlled. Older adults need information that will help them maintain their health and independence.

About the measure
Number and percent of Manchester residents, 65 years and older, who participated in health promotion programs.

Manchester information is being gathered.

What can be done?
- Programs provided at senior centers, housing complexes, medical care facilities and other locations
- Programs and materials that recognize limitations of older adults such as hearing and vision problems
- Free transportation and a sliding fee for participation

Selected resources
Manchester Senior Center 647-3211
Manchester Health Department 647-3173
Eastern Connecticut Health Network (888) 299-3676

For more information, call the Manchester Health Department at 647-3173
**Water Quality**

**Why is this a concern?**
Drinking water can carry pollutants, bacteria and viruses to a large number of people very quickly. The public water system uses both surface reservoirs and groundwater wells for sources. This public water is treated prior to entering the distribution system. Private wells, which serve about one fifth of the residents, depend upon the quality of the groundwater.

**About the measure**
Water quality at the source and after passing through the distribution system.

The Town supplied public water meets all the requirements of the federal Safe Drinking Water Act. The public water sources are mostly high quality and require only standard treatment. Some public groundwater sources require special treatment to reduce volatile organic compounds. Private well water must pass limited testing requirements at the time of initial completion.

**What can be done?**
- Extending the public water system to more areas of Town
- Testing private wells for a larger number of chemicals and getting the results of any previous tests
- Regulations that protect reservoirs watersheds and groundwater aquifers

**Selected resources**
Manchester Water Department 647-3115
Manchester Health Department 647-3173

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For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
Early prenatal care is key to promoting a healthy pregnancy and delivery of a healthy baby. Women who receive late or no prenatal care are three times more likely to have a low birth weight baby. Low birth weight can contribute to disabling conditions and infant death. A healthy diet and lifestyle, vitamin supplements, and identifying maternal risk factors need to begin early in pregnancy to have the greatest impact.

About the measure
Number and percent of Manchester pregnant women who receive prenatal care in the first three months of pregnancy.

During the period 1989 to 1994, women in Manchester (89.3%) began prenatal care in the first three months of their pregnancy. This rate is higher than the rate for Connecticut as a whole. However, black Manchester women were twice as likely to have late or no prenatal care as white Manchester women.
(CT Department of Public Health)

What can be done?
• Identifying and addressing barriers to early prenatal care for black women and other minorities
• Assuring access to prenatal care for all women
• Enrolling low income, pregnant women in Medicaid (HUSKY A)

Selected resources
Eastern Connecticut Health Network (888) 299-3676
HUSKY Information Line (800) 656-6684

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
A newborn admission to a neonatal intensive care unit (NICU) indicates a high need baby. The newborn may have seizures, significant birth trauma, genetic problems, heart problems or other complications. This emotional, physical, and financial burden affects the newborn, mother, family and community.

About the measure
Number and percent of Manchester newborns who receive care in the ICU.

This measure includes the newborns cared for in a “special care nursery” as part of a Level I/II system like Manchester Memorial Hospital’s newborn service and newborns transferred to a Level III nursery like John Dempsey (UCONN) Center or the Connecticut Children’s Medical Center. Manchester information is being gathered.

What can be done?
• Early and complete prenatal care
• Evaluation and clinical intervention for the neonatal infant
• Adequate resources for the family and hospital to ensure high quality special care nursery and access to Level III services

Selected resources
Eastern Connecticut Health Network (888) 299-3676
Connecticut Children’s Medical Center (860) 545-9000

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
Cancer is the second leading cause of death for Manchester residents. Developing cancer causes great emotional, physical and financial distress. Early detection and treatment greatly improve the chances of surviving cancer.

About the measure
Number of deaths and death rate in Manchester due to cancer

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Deaths</th>
<th>Age Adjusted Death Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1988</td>
<td>131</td>
<td>188</td>
</tr>
<tr>
<td>1989</td>
<td>133</td>
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</tr>
<tr>
<td>1994</td>
<td>179</td>
<td>231</td>
</tr>
</tbody>
</table>

(Manchester Health Dept)
Further Manchester information is being gathered.

What can be done?
• Funding and promoting community education and screening programs
• Diets low in fat and high in fruits, vegetables, and fiber
• Avoiding excessive and unprotected sun exposure
• Limiting alcohol use

Selected resources
Eastern Connecticut Health Network (888) 299-3676
American Cancer Association 643-2168

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
Immunizations are one of the most cost effective ways to protect children and adults against many communicable diseases. Children can be protected against 10 diseases, all of which can have serious impact on the child and family. Elderly and high risk adults should receive pneumonia and flu vaccine. Immunizations reduce the number of deaths each year due to these preventable diseases.

About the measure
Number and percent of Manchester residents who have received recommended, age appropriate immunizations

Based upon a sample of school health records in 1994, almost all Manchester children are appropriately immunized on the recommended schedule. Every child is given any missing vaccines upon entering school. Further Manchester information for children and adults is being gathered and updated.

What can be done?
- Public clinics at little or no cost to provide vaccines for children and adults
- Enrolling more children in HUSKY A and B insurance
- Public awareness campaigns on the importance and availability of vaccines

Selected resources
Manchester Health Department 647-3173
Well Child Clinic, Visiting Nurse Health Services 872-9163

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
Undetected illness and disease can lead to severe financial, physical, and psychosocial problems in all age groups. Routine medical and dental check-ups and screenings may prevent illness or allow early treatment to reduce the impact on the person or family. Counseling and health promotion information during routine visits can lead to healthier lifestyles.

About the measure
Number and percent of Manchester residents who have received recommended age appropriate routine medical and dental check-ups and screenings.

Nationwide in 1991, 74% of adults had a routine medical check-up and 56% had at least one counseling service. For Connecticut, 70.3% of adults in 1993 had cholesterol checked in the last 5 years, 77.2% of women 40 years and over had a mammogram in the past 2 years and 88.9% had a pap test. Manchester information is being gathered.

What can be done?
• Enrolling more children in HUSKY A and B insurance
• Extension of sliding fee programs like the Manchester Dental Program
• Additional medical and dental providers accepting Medicaid patients
• Implementation of the recommendations of the U.S. Preventive Services Task Force by primary care providers

Selected resources
Manchester Health Department 647-3173
Eastern Connecticut Health Network (888) 299-3676

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
The health of the entire community is affected if members with education or health care needs are faced with a language barrier. Health and psychosocial issues as well as cultural beliefs differ greatly among persons of different ethnic backgrounds. The effects of inaccurate or incomplete communication during health education and treatment impact the person and the whole community.

About the measure
Number, percent, and listing of Manchester health care providers who offer bilingual/multilingual services

Manchester information is being gathered

What can be done?
- Information about bilingual/multilingual services
- Creating a list of translators and services
- Providing bilingual/multilingual education programs and materials

Selected resources
Hispanic Health Council, Hartford 527-0856

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
All mothers and children need proper nutrition and health care to ensure healthy growth and development. This is especially important for pregnant women and newborns. Persons with limited or absent financial resources may not be able to provide their children or themselves with a proper diet and medical or dental care.

About the measure
Number and percent of Manchester families who are eligible for assistance through WIC (the supplemental food program for women, infants, and children) and Title 19 (Medicaid).

During 1993, a total of 65,734 women, infants and children participated in the Connecticut WIC program. As of March 1998, 1501 Manchester school-aged children were enrolled in Medicaid managed care. Further Manchester information is being gathered.

What can be done?
- Enrolling more children in HUSKY A and adults in Medicaid
- Assistance to enroll in programs
- Community education about WIC and HUSKY programs

Selected resources
Infoline of Connecticut (800) 203-1234
WIC, East Hartford 291-7323
CT Department of Social Services 647-1441

For more information, call the Manchester Health Department at 647-3173
Why is this a concern?
When people have inadequate or no health insurance they often postpone routine medical and dental check-ups, screenings and immunizations. Undetected health problems may worsen and may require emergency or hospital treatment. The cost of treatment is thus higher and the impact on the person far greater. The hospital and emergency cost to treat uninsured persons is shifted onto other patients and society as a whole.

About the measure
Number and percent of patients in Manchester Memorial Hospital who are underinsured and non-insured patients.

In a 1993 survey by the Manchester Health Department, about 13% of Manchester adults were either uninsured or underinsured. This equals about 5400 adults. About 9.5% of the respondents reported that within the past year someone in their household did not receive needed dental or health care. Information specific to Manchester Memorial Hospital is being gathered.

What can be done?
- Promotion of HUSKY A and B insurance plans for children
- Providing information on insurance alternatives for families
- Developing low cost medical and dental programs such as the Manchester Dental Program

Selected resources
Manchester Health Department 647-3173
CT Department of Social Services 647-1441

For more information, call the Manchester Health Department at 647-3173
Doctors and Dentists Who Accept Husky A and B

Why is this a concern?
Connecticut created the HUSKY A and B plans so that all children under 19 years could have insurance and thus get medical and dental care. However, some medical providers limit the number of participants they will serve. Most dentists are not accepting the HUSKY plans or severely limit participation. They often cite low fees, administrative burdens of the managed care companies, and patient behavior as problems. Access to dental care for children has actually gotten worse.

About the measure
List of Manchester doctors and dentists who accept HUSKY A and B.

Manchester information is being gathered.

What can be done?
• Information for parents on how to find doctors and dentists signed up with the managed care company that serves the family
• Collaboration with doctors and dentists to increase participation in the HUSKY Plans
• Ensuring that the HUSKY managed care companies meet their obligations to provide services

Selected resources
Children’s Health Council 548-1661
To learn about HUSKY, (877) 284-8759
To enroll in HUSKY, (800) 656-6684

For more information, call the Manchester Health Department at 647-3173
Does your child have asthma?
Do you have issues or concerns regarding your child's asthma? How has asthma affected your family?

Come and speak out at an
Asthma Focus Group

Wednesday, May 2, 2001
6-8 p.m.
East Hartford Community Cultural Center
50 Chapman Place Room 11
Sponsored by:
East Hartford Department of Health and Social Services

All participants will receive a light dinner and a cash payment!

SPACE IS LIMITED.

To register, call Joy at 547-4618 by May 1st.

All callers will be entered into a drawing for a cash prize!

Sponsored by funds received by the CT Department of Public Health.
CHILDHOOD ASTHMA – PARENT/GUARDIAN DISCUSSION GUIDE
March 26, April 25, May 2

• Introductions, purpose of discussion, how results will be used, permission to tape

• Explanation of the focus group format – no right or wrong answers, want to hear from you on your experiences caring for an asthmatic child and ways to make it easier for children and their families to control their asthma

• Introduction of participants.
  Age of child/children with asthma; age at diagnosis
  School
  Primary provider of asthma care – doctor, hospital, clinic
  Insurance – does it cover doctors’ visits, hospital visits/admissions, drugs/other meds
  Medications prescribed

• Knowledge of asthma
  What is asthma? What are your child’s triggers? What happens when you have an asthma attack?
  What were the symptoms that led to the asthma diagnosis?
  Did you bring these to the doctor’s attention/did the doctor bring them to you
  Where do you go to find out information about asthma? Whom do you rely on for the information?

• What’s been your experience when you go to the doctor, clinic, hospital
  Thoroughness
  Time spent with you and your child
  Individualized care/education
  Explanation and discussion of alternatives

  What do the providers do right; what should they be doing differently

• Asthma Treatment
  Was an asthma action plan prepared? What do you see as the benefits in following the plan? Does the plan make sense, is it understandable? What is your experience in following it – has it been easy, difficult? What are the obstacles? What are some ways to make it easier to follow? What’s your child’s reaction to the plan?

  Are you familiar with a Peak Flow Meter? What’s been your experience with it?
  What’s your knowledge of zones?
Asthmatics are often required to take medications. What's your child's reaction to taking the meds? What has been your experience with administering the medications – has it been easy, difficult? What do you know about the medications – do you feel you know enough about how to administer them, their side effects, etc.? Have you noticed a difference? Do you believe they will make a difference? What can be done differently to make the meds easier to administer?

What kinds of asthma education materials have you been provided with? Is there anything in particular that stands out? Do you find the material helpful? In what ways can the material be improved?

- What impact does asthma have on your family? What can be done to lessen the impact on your family?

Community resources
Providers
Schools

- What impact does asthma have on the child?

Self-esteem
Schoolwork and attendance
Activities

What can be done to lessen the impact on the child?

Community resources
Providers
Schools

- Community Resources – awareness level and opinions

School nurses
Open Airways program
Other

- What ONE THING will make it easier for you to take care of your child?

- Is there anything we have forgotten to discuss?

- Thank you.
CHILDHOOD ASTHMA - CARE PROVIDERS (NURSES) DISCUSSION GUIDE

- Introductions.

- Explanation of grant and what we are trying to accomplish.

- Has percentage of school-aged children (K through 12) been increasing/decreasing over the last two years? What do you believe are the contributing factors to this trend?

- About how many children in your schools have been diagnosed with asthma? How would you classify this number with regard to asthma severity- mild intermittent, mild persistent, moderate persistent or severe persistent?

- Do you/have you offered any special asthma educational programs? How would you describe their effectiveness? What has been the feedback from their intended target audience? How would you change?

Note: Copies of the program materials/any educational materials used will be helpful.

- Do you use the NIH guidelines? As written? With modifications? What do you see as the major problems, if any, with the guidelines? How would you improve them to better meet the needs of the children you see and care for.

- What percentage of children with asthma has self-management plans? What percentage has asthma action plans? Have these percentages been increasing/decreasing and why? What is your assessment of these plans? What is your role is ensuring compliance with these plans? In what ways do the schools support you in fulfilling your responsibilities?

- Explain the Theory of Reasoned Action and how it relates to asthma care and compliance rates.

    External Variables (demographics, personality traits)
    Attitudes toward the Behavior (beliefs that the behavior leads to certain outcomes and evaluations of the outcomes)
    Subjective Norms (beliefs that specific individuals/groups think the behavior should/should not be performed and motivation to comply)
    Behavior Intention
    Target Behavior
• What's been your experience with asthmatic children/their caregivers in following the self-management programs and action plans? What do you feel are the attitudes and norms that influence the rate of compliance with recommended interventions? What do you feel are the negative and positive consequences asthmatics hold with regard to complying with their treatment plan? How have you had to modify your approach to improve compliance?

• What are the issues/barriers/gaps you see in providing asthma care and education? What can be done to improve/change attitudes and intentions to comply?

• How can the schools, the Health Department, the hospital and clinics, parents and patients make it easier to care for asthmatic children? What is your number one priority? And why?

• Discuss research plans with care seekers. Ask for names of parents.

  What about two groups – one with parents of younger children, one with parents of older children/older children themselves

• Next steps and THANK YOU.
East Hartford Summary of Hospital Admissions with Primary Diagnosis of Asthma 1992-1998

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<tr>
<td>all residents 0-14</td>
<td>8255</td>
<td>14</td>
<td>16.90</td>
<td>22</td>
<td>26.60</td>
<td>21</td>
<td>25.40</td>
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65% Admissions-Male
48% Admissions-Payor Listed as Medicaid

East Hartford Summary of Emergency Room Visits with Primary Diagnosis of Asthma 1995-1998

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<td>under 5 years</td>
<td>3196</td>
<td>43</td>
<td>134.54</td>
<td>46</td>
<td>143.93</td>
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<tr>
<td>5-9</td>
<td>2366</td>
<td>32</td>
<td>135.25</td>
<td>34</td>
<td>143.7</td>
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<td>2693</td>
<td>32</td>
<td>118.83</td>
<td>21</td>
<td>77.98</td>
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<td>All residents 0-14</td>
<td>8255</td>
<td>108</td>
<td>130.80</td>
<td>101</td>
<td>122.4</td>
</tr>
</tbody>
</table>

White

| White | 6267  | 15             | 23.935         | 15             | 23.935    | 24       | 38.30  | 17       | 27.13  |

Black

| Black | 1118  | 29             | 259.39         | 24             | 214.67    | 15       | 134.17 | 18       | 161.00 |

Hispanic

| Hispanic| 776   | 39             | 502.58         | 34             | 438.14    | 23       | 296.39 | 41       | 528.35 |

Other

| Other   | 25    | 28             | 20             | 20             | 43       | 43       | 43     | 43       | 43     |

64% Er Visits-Male
49% ER Visits-Payor Listed as Medicaid

EAST HARTFORD 8255
### Hospital Admissions with Primary Diagnosis of Asthma, Children Age 0-14

<table>
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</thead>
<tbody>
<tr>
<td>Connecticut</td>
<td>631519</td>
<td>1243</td>
<td>19.68</td>
<td>1537</td>
<td>24.34</td>
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### Emergency Room Visits with Primary Diagnosis of Asthma, Children Age 0-14

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<td>103.99</td>
<td>5884</td>
<td>93.17</td>
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** all rates reported per 10,000
HOSPITALIZATIONS AMONG CHILDREN 0-14
MANCHESTER  10234  22 21.50  28 27.36  20 19.54  16 15.63  14 13.68  17 16.6112957  21 20.52

EMERGENCY ROOM VISITS AMONG CHILDREN 0-14
MANCHESTER  10234  102 99.67  82 80.13  109 106.51  106 103.58

All rates per 10,000

The Connecticut Hospital Information Management Exchange, Inc (CHIME) is the original source of this data. CHIME maintains a state-wide data base of clinical and financial data submitted voluntarily by Connecticut's acute care, non-governmental hospitals. CT DPH analyzes this data as part of their pediatric asthma surveillance efforts.
## Childhood Asthma
### School Nurses Discussion - March 15, 2001

<table>
<thead>
<tr>
<th>Public School</th>
<th>D- Diagnosed</th>
<th>I- Inhalers</th>
<th>#Asian - American</th>
<th>#African - American</th>
<th>#Caucasian</th>
<th>#Hispanic</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary (all)</td>
<td>(D)</td>
<td>(I)</td>
<td>(D)</td>
<td>(I)</td>
<td>(D)</td>
<td>(I)</td>
<td>(D)</td>
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<tr>
<td>(Name)</td>
<td>6</td>
<td>2</td>
<td>99</td>
<td>39</td>
<td>266</td>
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<td>Middle Bennet/Illing/MBA</td>
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<td>Non Public School</td>
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<tr>
<td>Elementary Statistics combined</td>
<td>(St. James/St. Bridget/St. Barts Assumption/Cornerstone)</td>
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<td>91</td>
<td>40</td>
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<tr>
<td>Middle for Elementary &amp; Middle</td>
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<td>1</td>
<td>2</td>
<td>1</td>
<td>83</td>
<td>37</td>
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<tr>
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<td>2</td>
<td>0</td>
<td>79</td>
<td>14</td>
</tr>
</tbody>
</table>

Please list and describe asthma programs currently provided at the school. Please include information about programs' objectives, effectiveness, etc.

- **Total Diagnosed** - 1,113
- **Total Inhalers in School** - 395
- **Headstart (3 & 4 year olds)** - 0 - Asian/11 - African/9 - Caucasian/1 - Hispanic (diagnosed - only)

**Open Airways program offered** - Spring 2000 & Spring 2001
VI. References


