2. Abstract
Twin Cities Childhood Asthma Collaborative Project
Controlling Asthma in American Cities Cooperative Agreement (PA 0117)
**ABC HEALTH ASSOCIATION  490 Concordia Avenue, St. Paul, Minnesota 55103-2441

** CLIENT NAME HAS BEEN CHANGE TO PROTECT CONFIDENTIALITY

Certification of population: Based on 2000 Census Data, the combined population of Minneapolis and St. Paul is 669,769 -- 287,151 for St. Paul and 382,618 for Minneapolis.

The proposed project will combine and extend the considerable skills, experience, and resources of two existing asthma coalitions, the Twin Cities Metro Asthma Coalition (TCMAC) and the Healthy Learners Board (HLB), to develop a new coalition. During the two-year planning period, the new coalition will develop a coordinated approach to improving pediatric asthma control that will enhance community-wide access to comprehensive population-based asthma care in the Twin Cities of Minneapolis and St. Paul, Minnesota. Expanding and refining successful local initiatives, developing new initiatives when appropriate, and creating an Asthma Care Clearinghouse will accomplish the goals of this enhanced coalition.

A critical asthma care gap exists in Minneapolis and St. Paul. While there are a number of proven asthma programs in place, they are only being provided in localized areas for relatively small numbers of children and families. As a result, to provide a comprehensive approach, there is a pressing need to expand effective programs and to coordinate successful asthma care efforts.

The ABC HEALTH ASSOCIATION (ABC HEALTH ASSOCIATION) is the lead applicant in this request and is the home for the TCMAC. ABC HEALTH ASSOCIATION and the sponsor for the HLB, the Minneapolis Public Schools, will join the efforts of these two coalitions through a well-defined organizational structure. That structure will include a Project Management Team, Leadership Team, professional staff, and work groups organized to implement an effective coalition building and planning process based on the approach of the healthy communities movement. The TCMAC and HLB have the direct involvement, access to, and commitment of the key asthma leaders and key overall health care leaders in the Twin Cities.

Baseline assessment will be performed in several key areas including: 1) asthma care practices in hospital Emergency Departments (ED) and clinics, 2) asthma-specific patient outcomes, 3) provider and patient perception of care issues/barriers to positive asthma outcomes, and 4) program inventories in specific planning areas. The planning teams will develop interventions representing a comprehensive approach to controlling childhood asthma in the Twin Cities. The interventions will include detailed strategies, objectives and protocols; targeted outcomes; and, plans for sustainability related to the school, clinic practice, ED care, community/family outreach, home environment, preschool asthma, and care systems coordination and communication.

The initial intervention ideas include enhancing, expanding, and coordinating three specific, concrete program strategies based on solid program models that already exist or are under development. An Asthma Care Clearinghouse will be developed to coordinate community asthma care resources to meet the needs of children and families. The purpose is to create a coordinated system of care that uses schools to identify children with persistent asthma and helps improve linkages to regular asthma care. This will improve the quality of clinical and ED care, assure written Asthma Action Plans for all children with persistent asthma, use EDs to educate and refer vulnerable children and families to care, and educate and support children and families to follow an effective asthma action plan. During the planning process, specific home environment and preschool asthma intervention strategies will be defined.
3. Project Narrative

**Background:** The objectives outlined below set the framework for an important effort to combine and extend the considerable skills, experience, and human resources of two existing asthma coalitions in the Twin Cities of Minneapolis and St. Paul. The effort will develop coordinated comprehensive population-based pediatric asthma care. The Twin Cities Metro Asthma Coalition (TCMAC) is a young coalition that was formed by the ABC HEALTH ASSOCIATION (ALAM) as a part of the greater Minnesota Asthma Coalition (MAC). Supported by the Minnesota Department of Health (MDH) through a grant from the CDC, this ongoing effort is already implementing several important initiatives. The Healthy Learners Board (HLB) is a coalition brought together by the Superintendent of the Minneapolis Public Schools (MPS) in an effort to promote optimal health and academic achievement for students. The HLB is beginning the third year of an important asthma initiative in the MPS and supporting clinics.

While the missions of the TCMAC and the HLB are complementary, this is the first time they have worked together in a coordinated effort. The proposed project will build a new, enhanced coalition that will implement a planning process to design comprehensive interventions to facilitate community-wide access to effective pediatric asthma care. This enhanced coalition will accomplish its goals by evaluating, expanding and refining successful local initiatives and developing new initiatives when appropriate. The coalition will also develop an Asthma Care Clearinghouse as a mechanism to bridge gaps in care and facilitate participation in asthma programs.

**A. Time framed objectives and timeline**

**Objective #1:** By November 31, 2001, an organizational structure will be established for the Twin Cities Childhood Asthma Collaborative Project, by creating the Project Management Team, hiring staff, and convening a Leadership Team.

**Objective #2:** By August 31, 2002, baseline assessment will be completed of care practices in: 1) emergency departments, hospitals, and clinics, 2) asthma specific patient outcomes, and 3) provider and patient perception of care issues/barriers, as well as 4) program inventories in identified planning areas.
Objective #3: By August 31, 2002, work groups will be recruited in all intervention areas, including key health and civic leaders, parents, and asthma care experts. These groups will represent a broader and deeper group of people working on the coalition.

Objective #4: By May 31, 2003, the work groups will identify the interventions to be implemented in key care areas in the Twin Cities. Implementation strategies will be outlined including detailed objectives, protocols, targeted outcomes, and plans for sustainability in the following care areas: schools, clinic practice, emergency department care, community/family outreach, home environment, preschool asthma, and care systems coordination and communication.

Objective #5: By September 2003, the evaluation team will have developed specific protocols to evaluate the interventions against baseline data. The Project Leadership Team will have defined a sustainable fundraising plan that includes both Phase II CDC funding and additional local and national sources.

B. Understanding of literature. The literature has established a strong consensus that pediatric asthma can be effectively controlled if children receive care according to the National Asthma Education and Prevention Promotion (NAEPP) guidelines; yet, asthma continues to be poorly controlled for a significant number of children. The burden of asthma is five times greater in low-income children (U.S. Department of Health and Human Services, 2000; Evans, et. al, 1999; Minnesota Department of Health, 1998) and is a leading cause of childhood disability (Bussing, et. al, 1995). Attaining optimal asthma control can be difficult because of the many barriers to children receiving effective asthma care and attaining effective self-management management skills (U.S. Department of Health and Human Services, 2000). These barriers include: 1) access to on-going “asthma-friendly” primary care, 2) culturally sensitive asthma education, and 3) communication or coordination between systems that care for these children including physicians and schools.

There is strong evidence that a comprehensive, community-wide approach is needed to attain population-based asthma control in urban settings. This was the conclusion of the Kaiser Permanente/American Lung Association (ALA) National Partnership on Asthma consensus conference, "Asthma Prevention, Management and Treatment: Community-Based Approaches for the New
Millennium", held in November 2000. The conference brought together top asthma care experts from across the country. The conclusions of both the consensus conference and the research literature are supportive of the interventions that are targeted under this proposal. Across settings, asthma education focused on increasing self-management skills has been shown to be the cornerstone of care (Velsor-Friedrich & Srof, 2000; U.S. Department of Health and Human Services, 2000; Liljas, B, 1997).

Evidence suggests that many health care providers do not follow the NAEPP guidelines. This failure to follow the guidelines on the part of providers has been shown to result from lack of knowledge, from attitudes and behavior, as well as from issues of communication and practice skills (Cabana, et. al., 2000; Partridge & Hill, 2000; U.S. Department of Health and Human Services, 2000). With strong research results, the Professional Physician Asthma Care Enhancement (PACE) Program is a solid approach to improving physician practice. PACE is shown to significantly improve physicians’ ability to practice according to the guidelines, their patient teaching and communication skills, and patient outcomes and asthma control, while decreasing the amount of time physicians spend with their patients (Clark, NM et al, 1998).

The literature and the Kaiser Permenente/ALA Conference have established schools as a place where focused efforts to intervene with children with asthma can have a significant impact in improving asthma control. Among the most effective school-based efforts are those that help children and families link with clinical care, monitor and support children to follow an asthma action plan in school, and provide consistent asthma education and support in developing self-management skills (Kaiser Permanente/ALA National Partnership on Asthma, 2000; McEwen, 1998; Kirchner, 1998; Homer, 1998; Christiansen, et al, 1997; Headrick, et. al., 1987).

In light of the increasing use of Emergency Departments (ED) by children and families with asthma, research has begun to examine and show some promising results related to asthma care interventions in EDs (Haby, et al, 2001; Garvey, et al, 2001; Akerman & Sinert, 1999; Wissow, et al, 1998; Higgins, et al, 1998). The ED Video Education Program proposed in this project is based on You Can Control Asthma. This successful asthma education program for inner city children (Taggart, 1991;
Taggart, 1987) was originally developed for use in the ED, but was published following adaptation for inpatient and clinic use (Taggart, personal communication). The literature suggests that, for many children with asthma, self-management skills and following an asthma action plan are a good beginning. However, this approach must be complemented by efforts to address psychosocial, family, economic, and practical barriers to accessing preventive asthma care (Mansour, et al, 2000). Research has also demonstrated the importance of efforts to reduce or eliminate environmental asthma triggers in the home (Krieger, et al, 2000; Eggleston, et al, 1999; Kattan, 1997).

The National Cooperative Inner-City Asthma Study (NCICAS), the most comprehensive study to date of inner-city children with asthma, revealed that children and families from low-income communities face numerous psycho-social, family, economic, and practical barriers to both accessing preventive asthma care and adhering to an action plan (Kattan, et al, 1997; Wade, et al, 1997). The NCICAS and the Kaiser Permanente/ALA Conference are only two of the many studies that underscore the strong potential of well-designed community and family outreach asthma programs to improve asthma management and control, especially for low-income families of color (Kaiser Permanente/ALA National Partnership on Asthma, 2000; Evans, et al, 1999; Vafiadou & Ranuro, 1999). Such efforts include disease management programs with case management and home visiting components, the social worker model developed under NCICAS, home nurse visiting approaches, and community health workers (Kaiser Permanente/ALA National Partnership on Asthma, 2000; Greineder, et al, 1999; Greineder, et al, 1995; Sperber, et al, 1995; Toelle, et al, 1993).

There is growing consensus on the importance of the issue of preschool asthma. While less research exists in this area, the Kaiser Permanente/ALA recommendations include asthma education for parents and for day care providers and others who care for young children.

C. Minneapolis and St. Paul Community Description

Based on 2000 Census Data, the combined population of Minneapolis and St. Paul is 669,769 -- 287,151 for St. Paul and 382,618 for Minneapolis (United States Census Bureau, 2001). The Twin Cities has a combined total of 246,791 children ages of 0 to 17 years (United States Census Bureau, 2001).
The high rate of child poverty and the significant and growing number of children from racially and ethnically diverse communities in the Twin Cities are important changes since the 1990 census because these children are experiencing a much greater asthma burden. Thirty percent of the child population in the Twin Cities lives in poverty and 57.1% of these are children of color. Children living in poverty tend to be highly concentrated in core areas of the Twin Cities. The 2000 Census shows that children of color now comprise 40 percent of the area's child population, with 99,159 children of color living in Minneapolis and St. Paul. In the Minneapolis and St. Paul Public Schools, 64.5 percent of students qualify for the free or reduced school lunch program indicating they come from families whose income is below 200 percent of the federal poverty level.

The Twin Cities have experienced and will continue to see a major influx of Asian (Hmong and Vietnamese), Hispanic, African (Somali and Ethiopian), and African American people. During the past ten years, the Hispanic population nearly tripled to 51,000, the Asian population grew by nearly 70 percent to 58,603, and the African American population grew by nearly 50 percent to 100,784 (United States Census Bureau, 2001).

A unique feature of health services in Minneapolis and St. Paul is that there is a high level of health insurance coverage for children, but a need to increase coverage for children of color and new immigrants. This coverage is provided by managed care organizations, through Medicaid, and under the State Children’s Health Insurance Plan (Minnesota Care). Despite the high rates of insurance among low-income families, there are huge issues with health disparities in children of color and low utilization rates for preventive care.

In the Twin Cities, there are 8 hospitals that provide inpatient and emergency care for children, with outpatient care provided at a variety of clinics including hospital-based, community-based and "free" clinics. The area’s major providers of pediatric asthma care are Hennepin County Medical Center, Regions Hospital, and Children's Hospitals and Clinics of Minneapolis and St. Paul. A total of 385 family practice physicians and 285 pediatricians live or practice in Minneapolis and St. Paul, supported by 12 pediatric pulmonary specialists and 25 asthma/allergy specialists.
D. Asthma Control and Asthma Care Issues in the Twin Cities

Children 0 to 18 years old with asthma in the Twin Cities experience significant problems with poorly managed and uncontrolled asthma. This conclusion is evident in looking at asthma morbidity and health survey data, together with extensive observations of local asthma experts involved with the collaborating partners in this proposal.

The City of Minneapolis estimates that the city's childhood asthma prevalence is 11 percent (Minnesota Department of Health, 1998) compared to the national average of 7.5 percent (United States Department of Health and Human Services, 2001). Based on MPS survey data from parent self-reporting, 12.1 percent or an estimated 6,100 students have asthma (Minneapolis Public Schools, 2001). Increased asthma rates are noted in a number of schools, especially those in low-income communities, with 19 of the 80 schools in the district having estimated asthma rates above 15 percent. Ten of those schools have rates above 20 percent. In the St. Paul Public Schools, parental reports of student asthma or health care provider explanations for prescribing medication have identified 3,654 students or 8.5% with asthma. These numbers may be low for both cities as asthma is more frequently underdiagnosed in low-income children of color.

Emergency department (ED) visits and hospital admission rates are indicators of poorly controlled asthma and/or lack of access to, or use of, primary asthma care. ED visits and inpatient admission rates for asthma in the Twin Cities are significantly higher than the most recent available national average baseline data provided by the CDC for 1995 (Centers for Disease Control and Prevention, 1998).

Compared to the national average of 150 ED visits per 10,000 children under 5 years, the Minneapolis rate for children under 5 in 1999 was 338 per 10,000 and for St. Paul was 473 per 10,000. ED visits for children ages 5 to 14 were 198.5 per 1,000 for Minneapolis and were 143 per 10,000 for St. Paul compared to a national average baseline of just 81.3 per 10,000. The inpatient admission rate for asthma of 78 per 10,000 and 37 per 10,000 respectively for Minneapolis children under 4 and ages 5 to 14 years are greatly elevated compared to national averages of just 49.7 and 18 per 10,000. In 1999, 3,526
ED visits for asthma for children and youth ages 0 to 19 were reported overall in the Twin Cities. The ED and hospital admissions data for the Twin Cities is for 1999 and is gathered and reported by the Minnesota Hospital and Healthcare Partnership. In keeping with this data, Medica, the second largest health plan in the area, reports that asthma is the fourth most common ED diagnosis and second leading diagnosis for inpatient admissions for children enrolled in their health plan.

Two important health surveys highlight the personal impact of poor asthma control and ineffective asthma management for children. Data from 400 parents through the Healthy Learners Parent/Guardian Asthma survey conducted for children with asthma in the MPS indicates that a significant number experience asthma symptoms that disrupt their sleep, daily functioning, and school attendance. Parents reported that in the past 6 months 24 percent of the children had a serious asthma attack requiring immediate medical care, 57 percent were awakened at night, and 53 percent missed daily activities because of their asthma.

Regional data for Minneapolis and St. Paul from a national health care survey of asthma patients sponsored by GlaxoSmithKline, Asthma in America: a Landmark Study, also points to serious consequences of poor asthma control (GlaxoSmithKline, 2001). That survey revealed that 25 percent of asthma patients in Minneapolis and St. Paul are limited in normal physical exertion and 24 percent miss school or work because of asthma. During the past year, thirty percent of people with asthma reported requiring urgent care including hospitalization and treatment in EDs.

**Care Issues** While there is a need to systematically gather additional information on asthma care issues in our community, asthma experts who are involved with the Healthy Learners Board Asthma Initiative and the Twin Cities Metropolitan Asthma Coalition have identified critical care issues and care gaps. These care issues will serve as the underpinning of this proposal's intervention ideas and approaches.

*A critical gap in asthma care in Minneapolis and St. Paul is that while there are a number of proven asthma programs in place, they are only being provided in localized areas for relatively small numbers of children and families. As a result, there is a pressing need to expand effective programs and to coordinate successful asthma care efforts to provide a comprehensive approach to the problem.*
Care Issue #1. *Many children do not have or follow an appropriate written asthma action plan (WAAP).* Data was collected as part of the School Attendance and Asthma Management Initiative (SAAMI) completed in 10 Minneapolis Public Schools in 1998 and it was noted that 7 WAAPs were present in the schools for over 500 children with asthma. In the GlaxoSmithKline study, only 27 percent of asthma patients in the Twin Cities said their doctor had prepared a WAAP for them.

Care Issue #2. *Many children and families lack sufficient knowledge of asthma and understanding of the necessity to follow a preventive approach to treating this chronic illness.* Again, in the GlaxoSmithKline survey, only 15 percent of asthma patients could identify chronic inflammation as the underlying cause of asthma symptoms and 45 percent thought it was possible to treat only asthma attacks and symptoms, not the underlying cause. In that survey, only 19 percent of asthma patients in the Twin Cities took inhaled corticosteroids during the past 4 weeks, the most effective long-term control medication for asthma patients over 5 years of age. In this survey, 68 percent of patients believe there is a "strong need" for patient education.

Care Issue #3. *While schools offer an important opportunity to coordinate effective asthma care for children, they often lack the resources and community support to accomplish these goals.* School provides an important opportunity to educate children about their asthma needs, connect them with regular asthma care at primary care clinics, and support them in adhering to an asthma action plan.

Care Issue #4. *Primary care providers inconsistently follow the NAEPP guidelines and inconsistently teach patient self-management skills.* Health-care Providers need to provide their patients with WAAPs and to prescribe anti-inflammatory medication for their patients with persistent asthma. The obstacles to care may include: provider knowledge of asthma management and guidelines, the need to structure the patient visit around effective communication and family education, or lack of sufficient time available for the patient-provider asthma encounter.

Care Issue #5. *Emergency Departments are over-utilized by children with asthma, with a critical gap in being missed opportunities to provide asthma education to promote asthma self-management.* ED medical providers lack a structure and at times the knowledge to provide patients and families with care
according to the NAEPP guidelines and to educate and motivate families to seek primary asthma care.

This problem is compounded by the impression of patients and families that asthma is primarily an acute illness that only needs to be treated when it “acts up.”

**Care Issue #6.** *A significant number of children with asthma face economic, psychosocial, and cultural barriers to accessing preventive asthma care and gaining adequate asthma self-management skills.*

Families burdened by poverty face multiple challenges to making asthma care and adherence to a medication regime a priority in their lives. A number of overlapping factors come into play -- the daily struggle for economic survival, transportation and childcare issues, ability to afford medicine and supplies, family stress and mental health issues, and the need to access health insurance. While effective localized programs are available, there is a clear need for increased outreach-oriented community and family interventions to help more families cope with stress, provide education and support, and offer practical assistance.

Children from culturally and ethnically diverse communities also face important cultural barriers to receiving care that include language and health beliefs interfering with effective provider-patient communication.

**Care Issue #7.** *A significant gap in local efforts is the need to reach out to preschool age children with asthma and asthma-like symptoms and their families.* These children are the largest group using Emergency Departments in the area. Preschool children with asthma need to be identified either through systematic screening or education of daycare providers. Families need education and support in connecting to appropriate preventive care.

**Care Issue #8.** *Indoor Environment.* An important gap is the need to increase the availability of programs that assist families with the identification of asthma triggers in the home and practical/affordable solutions to environmental changes that need to be made.

**E. Collaboration within the Consortium** A partnership between the Twin Cities Metro Area Asthma Coalition and the Healthy Learners Board will create the opportunity to develop a comprehensive approach to pediatric asthma care in the Twin Cities by combining and building on their considerable
strengths. These coalitions have the direct involvement, access to, and commitment of key asthma leaders and health-care leaders in the Twin Cities. These leaders include top executives and staff from the major health care systems, hospitals and clinics serving children with asthma; local foundations, civic leaders and health commissioners at the city, county, and state levels; School Superintendents, the University of Minnesota, and the MDH; and, parents of children with asthma. The attached letters of support from key leaders indicate not just interest, but a commitment to involvement in the coalition and planning efforts.

A Project Leadership team of asthma experts and health care leaders will bring the key skills and contacts needed to oversee and actively work to assure project success. The Leadership team will work with Project Staff to oversee the recruitment of a community-wide coalition group of asthma care, community, health care, and civic leaders. Using well-established methods of the Healthy Communities movement, the Leadership Team and staff will coordinate a coalition building and planning process that involves the coalition members in work groups that will be responsible for accomplishing identified goals.

Members of the Leadership Team represent or can secure the involvement of the public school systems, the key health care systems, clinics and hospitals, and community-based organizations needed to fully identify and implement interventions. They also have the organizational resources and personal relationships needed to work with project staff to expand the coalition membership and involve additional key organizations. This represents a major expansion and enhancement of the two existing collaborative groups.

The TCMAC, its sponsor the ABC HEALTH ASSOCIATION (ABC HEALTH ASSOCIATION), and the HLB have both demonstrated strong capacity and leadership in coalition building and implementing effective asthma efforts and other public health programs. ABC HEALTH ASSOCIATION is the sponsor of this request and will serve as the fiscal agent. ABC HEALTH ASSOCIATION will be hiring the staff, project consultants and contracting with the HLB and other key partners to support this collaboration.
In early 2000, ABC HEALTH ASSOCIATION initiated the Minnesota Asthma Coalition as a collaborative statewide effort in seven regions, including the TCMAC. The TCMAC brings together key stakeholders to identify asthma needs and take action to improve asthma management and quality of life. The Minnesota Department of Health is a close partner in the coalition and provides funding for a staff position at ABC HEALTH ASSOCIATION through a CDC grant. The goal of the grant is to help organize the statewide coalition effort, develop a statewide asthma surveillance system, and implement a statewide Asthma and Environmental Tobacco Smoke Education Campaign with ABC HEALTH ASSOCIATION and the MAC.

As a young coalition, the TCMAC has brought together a broad-based group of very motivated and enthusiastic members and has a strong initial record of success initiating important asthma interventions through collaborative efforts. With ABC HEALTH ASSOCIATION as the sponsor, TCMAC received a four-year, $400,000 competitive contract from the CDC and Alliance for Community Health Plans to collaborate with four community-based clinics in Minneapolis and St. Paul to implement the Twin Cities Asthma Intervention for Inner-City Children based on The National Cooperative Inner-City Asthma Study (NCICAS) protocol.

As part of a Robert Wood Johnson Foundation Allies Against Asthma program effort, TCMAC has recruited 15 physicians from St. Paul to participate in the Physician Asthma Care Enhancement (PACE) Program developed by Noreen Clark and is involved in providing additional professional asthma education at clinics. TCMAC is a collaborative partner with the University of Minnesota and MDH in a Robert Wood Johnson Foundation proposal to improve ED asthma care, reduce ED utilization, and improve child asthma outcomes for children in four Minneapolis and St. Paul locations.

The ABC HEALTH ASSOCIATION (ABC HEALTH ASSOCIATION) has a long-standing commitment to, and a successful track record of, developing and implementing model education and support programs for children with asthma and their families. In the 1960s, the ABC HEALTH ASSOCIATION initiated the first asthma camp and community-based family asthma education program in the country, now models for effective education and support programs provided nationwide.
HEALTH ASSOCIATION continues to offer a wide range of asthma education and support programs promoting effective asthma management and high quality of life for children.

Initiated in 1998, The Healthy Learners Board is a community-wide collaboration between the Minneapolis Public Schools, health care delivery and public health systems, and community organizations. The HLB has rallied 28 leading business, civic, school, and community-based organizations and their CEOs or high level decision makers around concrete action toward a shared vision of optimal student health and academic success. These organizations have contributed two million dollars over the past three years to support this effort. The HLB has used the Healthy Communities methodology to mobilize community resources to first implement a highly effective model for a child immunization effort and second to develop and pilot test its Asthma Initiative.

The HLB's "No Shots, No School" campaign raised the student immunization rate for MPS students from 69 percent to 98 percent and has sustained that level for three years. The campaign received two prestigious national awards -- the Gold Medallion Award from the National School Public Relations Association and the Innovations in Immunizations Award from the American Association of Health Plans.

Based on this initial success, the HLB launched an Asthma Initiative (HLBAI) to improve the health of MPS students suffering from asthma, now beginning its third year. The initiative coordinates and involves school health offices, students, parents, and asthma care providers working together to jointly manage asthma using personalized WAAPs based on the NAEPP guidelines. The first year of the project was used for collaborative planning by bringing together leaders from health care practice clinics, the MPS, asthma care experts, and others to develop and pre-test asthma intervention strategies. The second year involved launching and pilot testing the HLBAI in eight intervention schools in conjunction with four clinics and establishing eight control schools for comparison. Described in detail in section F below, the program supports student success by following the guidelines through school-based asthma education for students and provider asthma education and Clinic Quality Improvement efforts in clinics used by students. The program also supports the monitoring of children's asthma by health office staff.
F. Initial Twin Cities Pediatric Asthma Control Intervention Ideas

A planning group comprised of asthma experts who are members of the HLB and the TCMAC came together in July 2001 to develop initial intervention ideas and approaches. The intervention approaches are designed to create a community-wide, comprehensive and coordinated response to the critical pediatric asthma control and care issues in the Twin Cities. The intervention approaches are grounded in national peer-reviewed literature and the consensus of national asthma experts on what works in effective asthma control interventions.

The intervention ideas include evaluating, expanding, and coordinating four specific, concrete program strategies based on program models that already exist or are under development for: 1) schools, 2) clinic providers, 3) community, and 4) Emergency Department settings. These four key areas of focus are the cornerstones for creating a strong population-based approach to improving asthma care; yet, they do not address the important issue of access to, or knowledge of, available asthma programs. To bridge this gap, an Asthma Care Clearinghouse will be established to facilitate patient and family access to all asthma-related programs in the Twin Cities community. Such programs would include asthma education classes in languages other than English, cockroach abatement assistance, referrals to community-based asthma support programs such as the NCICAS project, and smoking cessation programs.

The purpose is to create a coordinated system of care that uses schools to identify children with persistent asthma and helps improve linkages for children to regular asthma care, improves the quality of clinical and ED care, assures WAAPs for all children with persistent asthma, uses EDs to educate and refer vulnerable children and families to care, and educates and supports children and families to follow an effective asthma action plan and address home environment issues.

1) School Intervention. School interventions will be developed to reach all school-aged children with asthma. These interventions will be tailored to the specific needs in each school system by evaluating and refining existing efforts.
The HLB asthma initiative will be completing its evaluation within the next year and expanding the interventions to reach all children in the Minneapolis Public Schools. The effort will continue to coordinate and involve school health offices, students, parents, and asthma care providers working together to jointly manage asthma using personalized WAAPs. The model will continue to provide training for all school staff to recognize asthma symptoms and refer students in need of asthma care and education. Parent health surveys will continue to serve as an important means to screen for children with asthma.

Health office and project staff will provide referrals and follow-up to increase the likelihood that children access asthma care, keeping with the NAEPP guidelines. Mechanisms are being developed to facilitate communication between care providers and schools, including the written or electronic transfer of WAAPs from providers to health office staff.

Health office staff will receive in depth asthma training to improve their ability to support effective asthma management during the school day. The staff will play a key role in supporting adherence to prescribed medications and proper monitoring of children's asthma through the use of Peak Flow Meters. Asthma education will be provided on a one-to-one and small group basis for students with asthma (and their families) in order to improve their asthma self-management skills. Students will learn how to use effective interactive asthma education tools on the Internet.

The St. Paul Public Schools (SPPS) have developed a system for identifying all children with asthma in the schools. Parent interviews occur for all students prior to kindergarten or upon initial entrance to the school system. When asthma or key symptoms of asthma are identified, an asthma-specific questionnaire is initiated. Based on the parent’s perception of the level of the student’s asthma severity, an individual health-care plan is developed. Building on its current asthma efforts, the SPPS will develop methods tailored to the needs of the students and schools in St. Paul. As in Minneapolis, the SPPS interventions will be guided by the overall goals to significantly increase the number of children who are connected to a regular medical asthma home, who receive clinical care according to the NAEPP guidelines, and who have and follow asthma action plans in school and at home.
A plan will be developed to work with private schools in the Twin Cities who serve low-income children to develop similar school asthma interventions. These efforts will be tailored to the needs of these schools and their students. The school interventions in all settings will contribute to a significant decrease in lost school days, asthma symptoms, and ED use and hospitalizations.

2) Intervention with Care Providers/Systems. This intervention approach will expand the Physician Asthma Care Enhancement (PACE) Program to significantly increase the number of children who receive asthma care according to the NAEEPP guidelines, receive and follow an asthma action plan, and who have effective asthma control. It will also contribute to a decrease in ED visits and hospitalizations.

PACE: The nationally demonstrated PACE program will be expanded and refined if necessary to reach primary asthma care providers across the Twin Cities, including physicians and nurse practitioners. A partnership with the Institute for Clinical Systems Improvement (ICSI) will provide a mechanism for the coalition to reach providers across both cities. With funding from 5 major health plans, ICSI is a collaboration of health care organizations dedicated to helping its members identify and accelerate the use of the best clinical practices for their patients. ICSI provides health care quality improvement services to 27 medical groups across the Twin Cities and the state representing over 4,000 physicians, including organizing care improvement action groups. Richard Sveum, the P.I. for this project, sits on the ICSI Board of Directors.

The PACE protocol will provide a five-hour interactive multi-faceted seminar teaching asthma care providers how to optimize clinical practice based on the NAEPP guidelines and develop the patient teaching and communication skills needed for effective asthma care. The seminar content and approach have been evaluated as having a significant impact in improving long-term patient asthma outcomes (Clark, NM et al, 1998).

3) Community/Family Intervention for Vulnerable Children and Families. Several good program models for community/family asthma outreach are available in specific parts of Minneapolis and St. Paul. These programs include: strong disease management programs within two of the major health plans,
Medica and U Care, that include case management and care improvement approaches that have been successfully evaluated; nurse home visiting for child asthma provided through the Minnesota Visiting Nurses Association; the NCICAS protocol provided by the TCMAC; and, several other community-based outreach programs. The Neighborhood Health Care Network and a network of community clinics are implementing the Community Access Program (CAP) with funding from HRSA. The local CAP model provides intensive community outreach and education for children and families to help assure access to health insurance and preventive care, and reduce health disparities.

In addition to coordinating existing efforts through the clearinghouse, the leadership team will evaluate the need to expand a specific community/family outreach intervention or interventions for vulnerable children and families. To determine the need for and potential approach to the interventions, a systematic and in-depth inventory will be taken of child and family needs and the existing local and national community outreach and family asthma interventions. The focus will be on developing an effective, community-wide approach to help vulnerable children with asthma and their families deal with stress in their lives and cope with and overcome barriers to accessing care.

4) Intervention in Emergency Departments. This intervention will be expanded from an ED Asthma Care model that will soon be pilot-tested in two Minneapolis EDs with funding from Allina Health Care and possibly the Robert Wood Johnson Foundation. Building on demonstrated approaches, this intervention will significantly increase the number of children who receive: 1) asthma care in EDs according to NAEPP guidelines, 2) culturally sensitive asthma education, and 3) referrals for primary asthma care.

The ED Intervention will provide asthma education to children and families being seen in the ED for acute asthma as well as professional asthma education updates for emergency care providers in EDs across the Twin Cities. Patients will view a culturally appropriate asthma education video (currently being developed in four languages: Hmong, Somali, Spanish, and English) with the focus on teaching children and families to identify symptoms of acute asthma episodes, improve asthma self-management skills, and learn the importance of receiving prevention-oriented primary care. In addition, quarterly Care
Quality Improvement meetings will be held with ED staff to review asthma performance data in relation to the guidelines and repeat ED visits, as well as identify strategies for care improvement. The Robert Wood Johnson demonstration proposal expands on the ED intervention by adding home visits by a public health nurse and/or social worker.

5) Asthma Care Systems Communication and Coordination. An Asthma Care Clearinghouse (ACC) will be designed to create a community asthma care resource to meet the needs of children and families. This ACC will contain information about all of the asthma-related programs available in the Twin Cities including (but not limited to) smoking cessation, environmental, disease management and educational programs. The information will be updated regularly and be made available to families, health-care providers, schools or anyone interested. The ACC will help children with asthma and their families to link with effective programs and support to gain health insurance coverage, access to providers, receive patient asthma education, and/or receive assistance from community and family interventions.

6) Home Environment Intervention. A specific Home Environment Intervention approach will be identified as a result of a systematic and in-depth inventory of needs along with local and national approaches. This could potentially include a mechanism to provide home assessments with methods for dealing with dust, mold, and cockroach problems in the home environment.

7) Preschool Asthma Intervention. A specific Preschool Asthma Intervention approach will be identified as a result of a systematic and in-depth inventory of child and family needs and the existing preschool resources on a local and national level. The focus will be on asthma education for those who work with preschool age children and parents, possible asthma screening, and a mechanism to support young children to receive early clinical asthma care.

G. Process of creating comprehensive intervention strategies, including protocols from the initial intervention ideas

A Project Management Team will be formed comprised of Richard Sveum, M.D., the P.I., Gail Brottman, co-P.I., Sarah Mullet, Director of Health Services with the Minneapolis Schools, Penny Fena,
Senior Director of Children's Lung Disease and Asthma Programs with ABC HEALTH ASSOCIATION, and the Project Director. The Project Management Team will have project oversight.

A Project Leadership Team comprised of a core group of 10 to 15 asthma/health care leaders will be formed. This team will work together to create a shared vision that merges the two organizations around the goals and outcomes stated in this proposal. The focus will be on all children with asthma having optimal health and academic success.

The Leadership Team members have been selected based on their ability to provide expert advice and guidance during the initial planning process and to take key leadership roles in work groups that will be formed to fully develop and refine intervention strategies. The team members will create an overall work plan that sets the direction for the coalition effort with specific benchmarks related to the time-framed objectives stated earlier. Project staff and key consultants in coalition building and evaluation will be hired with the skills to effectively support the efforts of the coalition.

Baseline assessments will be done, which will focus on gathering information that is both key to evaluate outcomes in the Phase II implementation phase and to inform a successful planning process. The information gathered will deepen the coalition's understanding of the issues and strengthen the proposed intervention strategies. The baseline assessment and planning process will define and assess patient outcomes and the asthma care needs of patients, care practices in emergency departments, hospitals, and primary care clinics in relation to the NAEPP guidelines, provider and patient/family perception of care issues and barriers, as well as systematic and in-depth program inventories in appropriate planning areas.

Work groups will be recruited in all seven intervention areas as described in section G and will be chaired by members of the Leadership Team to better facilitate communication throughout the process. The work groups will fully develop intervention work plans representing a comprehensive approach to controlling childhood asthma in the Twin Cities.

The Project Leadership Team and work groups will take an inventory of and carefully examine local and national program approaches and their effectiveness; compare these programs to specific child and family asthma needs defined through the baseline assessment; and, identify what is working and what
needs to be improved. The work groups in each area will develop specific approaches and implementation strategies that refine and enhance existing programs or introduce new program approaches to meet gaps in services. The work groups will also define a plan for and build community partnerships that are essential to the project’s success.

As an example of how a work group will function to expand a core strategy, the school intervention work group will build on the Healthy Learners Board Asthma Initiative in Minneapolis. It will work to define specific school intervention approaches individually tailored to the needs of the Minneapolis Public Schools and develop methods that build on existing efforts in the St. Paul Public Schools. This will occur through a careful review of the process and results of the HLBAI in Minneapolis and school asthma programs in St. Paul, including a determination of what is working well and areas for improvement; reviewing program models and elements from national programs; and, reviewing relevant baseline assessment data. Through this process, the work group will determine a specific action plan to expand and enhance the HLBAI in Minneapolis and to expand and enhance asthma efforts in the St. Paul Schools.

As an example of how a work group will function to approach a new initiative, the Preschool Asthma Work Group will use its network to identify any existing preschool asthma efforts in the community and determine their nature, scope, and impact. The group will also determine available preschool programs and resources that could serve as partners. With staff assistance, they will review the most successful program models for addressing preschool asthma nationally. Based on the inventory of programs and resources and a review of baseline assessment results, they will work with local experts to determine the best way to utilize existing local resources and integrate national models to establish specific protocols and approaches. The focus will be on educating those who work with preschool age children and parents and providing a mechanism to help young children receive early clinical asthma care.

H. Plans for an evaluation of the 2-year planning period

The ultimate measure of success of this new community coalition will be the ability to mobilize, structure, refine, and sustain an organized community response to define and implement critical pediatric
asthma care strategies. Well-accepted methods to evaluate coalition building and planning will be implemented by staff with the guidance of expert evaluation consultants.

In defining the progress of the coalition, key measures, adapted from Francisco, Paine, and Fawcett (1993), will be linked to coalition development stages as suggested by Kreuter and Lezin (1998). The table “Twin Cities Childhood Asthma Care Collaborative Coalition Evaluation Measures” (following this section) illustrates how these measures will be used along with the specific evaluation measures to evaluate the process. The proposed methodology consists of monitoring several key processes and outcome measures using observational procedures. Multiple reinforcing qualitative data sources will be used that complement the project’s overall monitoring/evaluation system. A participatory or action research method will be used to understand how the coalition functions and to improve the coalition efforts (Patton, 1997; Francisco et al, 1993). Additional key evaluation methods include: interviews of key leaders at the outset to determine understanding of the coalition and its process and goals and set evaluation goals; reviews of attendance rosters and meeting minutes; and, detailed event/activity logs.

This approach will engage coalition member, staff, and other key informants in setting goals for the evaluation, identifying information needs, and collecting and interpreting data. It encourages regular discussion of the coalition effort, increases the likelihood that coalition members will be aware of deviations from expectations, and establishes a means to adjust activities and evaluation approaches as needed. Key leaders will be re-interviewed at the midpoint and near the end of the phase to assess progress toward goals and to make mid-course corrections as needed. A distinguishing feature of the evaluation will be the use of logs by key staff to record coalition-initiated actions, planning, and community changes for which the coalition is responsible. The event logs will be completed by staff and key leaders and will include detailed information about the program or objective, what was done (actions), date of action, target of action (to or with whom), actors’ names (by whom), and the location of the action. The log charts will be reviewed monthly with the evaluation consultant to track and depict changes in levels of activity and outcomes and produce a record of unfolding events contributing to a descriptive and analytic story of the project (Francisco et al., 1993).
To determine if community mobilization has occurred, coalition actions that are generated by and relevant to the project goals will be tracked. In addition to the evaluation of coalition development and the planning process, the evaluator will assess the degree to which specific expected deliverables are produced by the end of the planning period. These deliverables include implementation of the baseline assessment; development of specific protocols and strategies for key intervention areas, and development of specific evaluation protocols and outcome indicators for outcome evaluation using the baseline data to evaluate the success of the intervention protocols during Phase II.

### Twin Cities Childhood Asthma Care Collaborative Coalition Evaluation Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>Desired Quality</th>
<th>Evaluation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. PROCESS MEASURES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Pre-formation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community structures and beliefs related to asthma, consequences and potential for improved asthma management; Community’s and target organizations’ readiness and capacity to act; History of working together, and; Political climate, policies/laws/regulations, and resources</td>
<td>Understanding of potential participants and the context for coming together</td>
<td>Environmental Scan/asset mapping</td>
</tr>
<tr>
<td><strong>2. Identification and recruitment of member organizations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attract and involve all relevant organizations</td>
<td>Log of contacts, messages and incentives, and responses</td>
<td></td>
</tr>
<tr>
<td><strong>3. Formation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number and type of members</td>
<td>Substantive representation with accountability</td>
<td>Membership roster</td>
</tr>
<tr>
<td>Members’ participation and activity levels</td>
<td>Level of commitment and involvement</td>
<td>Records of attendance and involvement in coalition activities</td>
</tr>
<tr>
<td>Resources generated</td>
<td>Sufficiency of resources (including financial, in-kind and human)</td>
<td>Records of resources promised and received</td>
</tr>
<tr>
<td>Meeting effectiveness</td>
<td>Quality of decision making</td>
<td>Participant observation at</td>
</tr>
</tbody>
</table>
conflict resolution, and communication processes

| Planning products produced (e.g., issue specification, vision and goal, defined roles and expectations for members, written goals and objectives, selection of priority strategies, plan of action with realistic timetable) | Appropriateness and timeliness of products | Checklists
Level of agreement | Ratings from coalition members, funding agents and other key informants

| Shared values and goals | Solidarity among members, trust | Member survey and/or key informant interviews

| Ratings of satisfaction with the coalition processes by members | Perceived values, contributions, and level of satisfaction |

**Implementation and Maintenance**

| Coalition effectiveness | Sustained energy of members toward shared goals | Review of meeting minutes and coalition documents
Participant observation |

| Implementation of planned activities—actions and results | Progress and successful accomplishments | Event logs
Key informant interviews |

| Institutionalization | Coalition permanence | Institutionalization scale |

| Ratings of satisfaction with the coalition processes by members | Perceived values, contributions, and level of satisfaction | Member survey or key informant interviews

### 4. OUTCOME MEASURES

| Activities and services initiated as a result of coalition initiatives | Intermediate outcomes with potential of affecting desired outcomes | Surveys of member organizations, clients served and community members
Service counts |

| Community actions | Meaningful, sustained actions | To be determined |

| Community changes | System, health status, or health care utilization changes | To be determined |

---

**1. Detailed plan to obtain a comprehensive baseline assessment of asthma-related morbidity and care practices in the communities involved in this project.**

Baseline data collection will involve five methods, to include: focus groups, surveys, medical record audits, health care utilization data, and a community resource inventory.

1) **Focus groups.** Focus groups will be conducted separately with patients (children and their parents/guardians) and providers to identify expectations and concerns regarding self/home asthma care and medical care, perceived barriers to health care access, and factors affecting compliance with self-management. At least twelve focus group sessions will be conducted with various subgroups of the
patient and provider populations in Minneapolis and St. Paul. Focus group participants will be identified from schools, health plans, clinics and EDs. Established methods of focus group planning and conduct will be used (Morgan and Krueger, 1998). Special attention will be given to recruiting participants from patient groups and provider sites experiencing higher rates of asthma and conducting focus groups in a way to assure cultural sensitivity. In addition to providing a rich understanding of concerns and expectations of patients and providers, the themes emerging from the focus groups will be used to construct survey questions.

2) **Patient and Provider Surveys.** Survey instruments will be identified and adapted to incorporate locally identified themes as well as items found to be significant in similar surveys. For example, the Chicago Asthma Surveillance Initiative (CASI) is an instrument that would be strongly considered. The new patient survey will include questions to address asthma-related morbidity, self-care practices, asthma triggers at home, exposure to patient education, satisfaction with health care, health care utilization, and missed days from school and work. Provider surveys for physicians, nurse practitioners and nurse educators will address asthma management knowledge and practice (based on NAEPP guidelines), teaching and communication skills, and perception of clinic and patient barriers. The patient and provider surveys will include some similar questions, designed to contrast patient views with health care provider views. Mailed surveys (Dillman 1983) will be completed in 2002 by a contracted survey research organization.

3) **Medical record audits.** These audits will be conducted in collaboration with health care organizations participating in the Coalition. A stratified sample of sites will be selected to represent family practice, pediatric, and specialty clinics (allergy and pulmonary specialists) serving children with asthma in the Twin Cities and records will be selected randomly at each site. The audit will assess the appropriateness of asthma care delivered over the previous 12 months compared to the NAEPP Guidelines and the local ICSI guidelines for asthma. The audit will determine the asthma severity and morbidity as documented in medical records. A total of 400 records will be audited in at least 15 sites.
addition, medical records from emergency department care will also be audited. Findings from audits will be shared with participating clinics and EDs using the quality improvement approach.

4) **Healthcare Utilization Data.** Using secondary data from hospital discharge files is a cost-efficient method of tracking changes in healthcare utilization. Asthma epidemiologists at the MDH are working with the Minnesota Hospital and Healthcare Partnership (MHHP) to quantify and track asthma-related hospitalizations and ED use in the Twin Cities and across the state. We plan to use MHHP as a source of data to establish a baseline and measure changes over time. The advantage of the MHHP database is that it includes discharge data for all hospitals in the community and provides an accessible, standardized data source for tracking asthma-related health care utilization.

5) **Resource Inventory.** Numerous public and private health, educational, social service, and voluntary health organizations are involved in providing or supporting quality asthma care and self-management education in the Twin Cities. Their goals, services, target population, success in reaching their targeted population, and contributions and effectiveness have not been systematically mapped. Further, the degree of overlap and unfilled gaps has not been identified. A comprehensive inventory of these activities and organizations will be compiled to facilitate the creation of a resource directory and Asthma Care Clearinghouse. This will be done using the technique of community assets mapping (Kretzmann and McKnight, 1993).

Throughout all the above community assessment processes, efforts will be made to examine socio-demographic factors related to disparities in access to and utilization of care, quality of care provided, self-reported morbidity and other outcomes related to asthma.

In addition to the evaluation methods just described, findings from the monitoring and evaluation of on-going asthma interventions and programs in the community will be reviewed. Existing evaluation efforts will be extended or expanded as needed. For example, the HLB Asthma Initiative’s monitoring of asthma care provided by school health office staff and the use of the MPS attendance database for measuring the impact of asthma on school absenteeism are of special interest.
These methods will be undertaken simultaneously under the oversight of the evaluator and in consultation with the Leadership Team and in cooperation with Coalition members.

Findings from each of these methods will be summarized and reported to the Project Leadership Team to enable the development of a comprehensive understanding of asthma morbidity and care system assets and gaps in Minneapolis and St. Paul. The data will indicate the local community’s status in relation to the Healthy People 2010 asthma objectives, provide a starting point for establishing objectives for future intervention activities, and establish baselines for measuring change over time. The following chart shows how the baseline assessment data will be used to evaluate the impact of the intervention.

### Progress Toward Healthy People 2010 Asthma Objectives in Minneapolis and St. Paul

- **A Community Assessment**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Desired Outcome*</th>
<th>Evaluation Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of children with asthma covered by health insurance</td>
<td>Lack of insurance reduced as a barrier to regular asthma care</td>
<td>Parent/guardian survey</td>
</tr>
<tr>
<td>Proportion of children with asthma receiving appropriate asthma care</td>
<td>Increase by 25% in two years and 50% by 2010</td>
<td>Medical record audit</td>
</tr>
<tr>
<td>according to the NAEPP Guidelines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of children with asthma receiving formal patient education</td>
<td>Increase by 25% in two years and 50% by 2010</td>
<td>Medical record audit in medical clinics and emergency departments Parent/guardian survey HL Asthma Initiative school health office monitoring</td>
</tr>
<tr>
<td>Proportion of households with asthmagenic living condition</td>
<td>Increase by 25% the number of households reducing or eliminating asthma triggers</td>
<td>Parent/guardian survey</td>
</tr>
<tr>
<td>Proportion of children with activity limitations due to asthma</td>
<td>Reduce by 30% in two years</td>
<td>Parent/guardian survey</td>
</tr>
<tr>
<td>School absence due to asthma</td>
<td>Reduce by 20% in two years and 50% by 2010</td>
<td>Parent/guardian survey</td>
</tr>
<tr>
<td>Parent work days lost</td>
<td>Reduce by 25% in two years</td>
<td>Parent/guardian survey</td>
</tr>
<tr>
<td>Emergency Dept. visits for asthma</td>
<td>Reduce by 25% in two years and 50% by 2010</td>
<td>Yearly hospital discharge data</td>
</tr>
<tr>
<td>Hospitalizations with primary diagnosis of asthma</td>
<td>Reduce by 30% in two years and 50% by 2010</td>
<td>Yearly hospital discharge data</td>
</tr>
<tr>
<td>Healthcare provider knowledge of appropriate asthma care</td>
<td>Increase to 80%</td>
<td>Health care provider survey and PACE evaluation</td>
</tr>
<tr>
<td>Quality of asthma care delivered by health care providers</td>
<td>Increase the proportion of sites delivering appropriate</td>
<td>Medical record audit in medical clinics and</td>
</tr>
<tr>
<td><strong>J. Other ABC HEALTH ASSOCIATION Programs Related to But Not Supported by this Cooperative Agreement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>As indicated earlier, ABC HEALTH ASSOCIATION continues to offer a wide range of asthma education and support programs that promote management and quality of life for children. ABC HEALTH ASSOCIATION's asthma camps reach 400 children each year including many inner-city children. Additional school- and community-based asthma education reaches more than 1,000 children annually. Professional asthma education programs reach several hundred health care professionals each year. ABC HEALTH ASSOCIATION provides smoking cessation classes and actively promotes a smoke-free home and community environment.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>4. Identification of Project Personnel</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The Principal Investigators, administrator, project staff, and consultants will bring the key skills and experience needed to successfully develop an effective coalition and fully design comprehensive, coordinated pediatric asthma care interventions. The project has a PI and Co-PIs with extensive asthma clinical care expertise and leadership experience in developing and implementing community, family, and school-based asthma care programs. The administrator has extensive experience developing, managing, and evaluating asthma programs for children including grant administration experience and national leadership in children's asthma camps and education. The PIs and administrator have been closely involved in asthma coalition building efforts and numerous collaborative asthma projects. The Project Staff bring the project management, coalition development, group facilitation, communication, planning, and health services experience needed to take a central role in coordinating and implementing the coalition building and planning process. Consultants to the project in coalition building and evaluation bring extensive expertise to support and facilitate the successful coalition building, intervention planning, baseline assessment, and process evaluation activities that are proposed.</td>
</tr>
</tbody>
</table>
Biographical Overview for Richard Sveum, M.D., Principal Investigator

Dr. Richard Sveum, M.D., will serve as Principal Investigator and be responsible for providing direction and oversight to assure successful implementation of the project. Dr. Sveum is an Allergist affiliated with the Asthma and Allergy Research Center of Park Nicollet Institute and is a Clinical Professor in the Department of Medicine and Pediatrics at the University of Minnesota Medical school. Dr. Sveum has extensive research experience and very strong asthma expertise. Dr. Sveum is highly committed to the success of the project and will put in the time necessary to fill his role, projected for 20 hours or more per month (the number of hours will be increased if need be). Please see the attached curriculum vitae and list of research publications for Dr. Sveum.

Dr. Sveum has over 20 years of experience in pediatrics, including over 15 years clinical experience as an allergy and asthma specialist treating both children and adults. Dr. Sveum has carried out and published extensive clinical research studies in allergy and asthma, including publishing widely on pediatric asthma. Dr. Sveum has also been involved in health services research related to pediatric asthma. Dr. Sveum authored the Minnesota Department of Health's “Guidelines for Children with Special Healthcare Needs: Asthma” in 1998 and “Park Nicollet's Living with Asthma: A Practical Guide to Understanding and Managing Asthma” in 1997.

Dr. Sveum has taken an active leadership role in asthma and other health issues in the community. Dr. Sveum has worked with ABC HEALTH ASSOCIATION since 1986, both as Medical Director of Camp Superkids and serving on ABC HEALTH ASSOCIATION's Board of Directors. Dr. Sveum has also taken a leadership role in education and support for children and families with asthma through his role as Chair of the National Consortium on Children's Asthma Camps. This included involvement in the development and research on the Family Roadways Program, a unique family asthma education program. Dr. Sveum sits on the board of the HLB and has been involved in the planning and implementation of the HLBAI.

Biographical Overview for Gail Brottman, M.D., Co-Principal Investigator
Gail Brottman, M.D., will be one of the Co-Principal Investigators. Dr. Brottman is the Director of Pediatric Pulmonary Medicine at Hennepin County Medical Center in Minneapolis with over 10 years of experience providing specialty pediatric asthma care, as a Pediatric Pulmonologist. She has practiced pediatrics for 14 years in urban settings serving inner-city populations and families of color. Dr. Brottman is Co-Chair of the TCMAC and has been extensively involved in the development and implementation of asthma programs in the community including a number of inner-city initiatives through ABC HEALTH ASSOCIATION and the HLBAI. Dr. Brottman brings a very strong understanding of child asthma needs, solid experience in implementing community, school, and family asthma interventions, and strong leadership skills to the project. Dr. Brottman's curriculum vitae are attached.

Dr. Brottman was involved in the development and implementation of the Family Roadways Program. She is the Project Director for the Twin Cities Asthma Intervention for Inner City Children that is implementing the NICICAS protocol in Minneapolis and St. Paul through a contract with the CDC and Alliance for Community Health Plans. Dr. Brottman is taking an active role in the HLBAI by serving on the advisory board and played a central role in the School Attendance and Asthma Management Initiative (SAAMI). SAAMI preceded the HLBAI in developing an asthma education program for teachers and school staff that was piloted in ten Minneapolis Public Schools. Dr. Brottman is involved with Dr Cabana’s effort to implement the Physician Asthma Care Enhancement (PACE) Program for 15 physicians in St. Paul. In addition, she is involved in the ED initiative described earlier, directing the effort to develop an educational video in four languages, and is a principal player in the Robert Wood Johnson Foundation proposal. Dr. Brottman took a key role in the development of the consortium represented through this proposal.

As Co-Principal Investigator, Dr. Brottman will support the PI in oversight and directing the implementation of the overall efforts, with a major focus on coalition building. Dr. Brottman will commit 20 hours per month of her time to the project.

Biographical Overview for Janny Dwyer Brust, M.P.H., Co-Principal Investigator.
Janny Dwyer Brust, M.P.H., will be the second Co-Principal Investigator. Ms. Brust is the Director of Community Health and Medical Issues for the Minnesota Council of Health Plans. As such, she provides professional support for Minnesota’s health plans’ medical directors and public health representatives. She has over 15 years of experience working in community and public health. This experience includes positions as a vice president at Allina Health System, an epidemiologist for a City of Minneapolis, and a researcher for the University of Minnesota’s maternal and child health program.

At Allina, Ms. Brust designed and managed a two million dollar initiative focused on improving the health of low income and minority populations through support of community and clinical initiatives. SAAMI was one of 70 projects funded under this initiative. Currently, she is providing leadership for a statewide initiative whose goal is to get every child health care coverage and preventive services. Ms. Brust has provided leadership for numerous community-based coalitions and has recently completed a Community Health Fellowship with the Health Forum. She has published and presented on a wide variety of health topics including chronic illness in children, access to care, health status of children, community benefit, gun violence, fetal alcohol syndrome, and youth hockey injuries. Recently, she became Co-chair of TCMAC with Dr. Brottman.

As Co-Principle Investigator, Ms. Brust will support the PI and Dr. Brottman in an advisory function on community health, coalition building, and research. Ms. Brust will commit 6 hours quarterly to this project.

Project Administrator and Staff

Project Administrator Penny Gottier Fena, Senior Director, Asthma and Children's Lung Disease at ABC HEALTH ASSOCIATION will be responsible for administering the grant. She will spend .25 FTE in this role. Ms. Fena has strong experience in program and personnel administration, grants administration, and program development and implementation. Ms. Fena has more than 21 years experience with ABC HEALTH ASSOCIATION including extensive experience in directing, developing, implementing, and overseeing the evaluation of children's asthma and lung disease programs and asthma camps. Ms. Fena's curriculum vitae are attached.
Ms. Fena designed and directed the successful launch of the Minnesota Asthma Coalition and seven regional coalitions. Ms. Fena has served as Executive Director of the Consortium on Children's Asthma Camps for 12 years, working to develop national parameters and guidelines for the effective operation of asthma camps. She spearheaded the national development of Asthma Roadways, a community and family based asthma education program model. Ms. Fena administers the current contract with CDC and the Alliance for Community Health Plans described above. Ms. Fena also has extensive experience in developing and implementing effective tobacco cessation and community-based anti-tobacco programs on a local and national basis.

Project Manager The Project Manager, to be hired, will take a central role in facilitating the building and development of the coalition, in the coordination and implementation of baseline assessment efforts, and in the implementation of the planning process to fully develop and design asthma care interventions. This position will be full-time. The Project Manager will have a Masters in public health or public health planning or a related degree, with five years or more experience in coalition building, networking and relationship building, project management, and community planning in the health field. The individual to be hired will have knowledge of and strong relationships with the health care community in the Twin Cities. They will be a highly organized and experienced project manager, have strong personal relationships, networking, and coalition building skills, and a strong understanding of, and preferably previous experience with, asthma care issues.

Project Associate The Project Associate, to be hired, will serve full-time in taking a direct and active role in implementing the coalition and planning process, including the baseline assessment, and support the overall efforts of the project. The Project Associate will have a Bachelors Degree in community planning or health planning. The Project Associate will be full-time in the position. The Project Associate will have three to five years experience in health care planning, health care research, and group and meeting facilitation. The Associate will also have solid skills in writing and planning and preferably in database management as well.
Healthy Learners Board Coordinator. Stephanie Bisson, a Pediatric Nurse Practitioner with a specialty in asthma began working in November 1999 as the full time Asthma Program Coordinator for the HLB. She will work with the coalition to determine the best methods to expand the asthma initiative to all the schools in Minneapolis and provide input on planning for the St. Paul Schools’ asthma program. She most recently worked at Children’s Hospital in Oakland, CA where she: helped develop and evaluate a multidisciplinary inpatient asthma education protocol; educated residents, staff physicians, nurses and respiratory therapists about asthma management; developed the framework for an online asthma action plan; and led the design of an Asthma Care Unit and follow-up system in the Emergency Department. She also initiated a school and community based asthma program in the Oakland Unified School District. Preliminary results of the school/community project demonstrated an increased quality of life and decreased number of hospitalizations and emergency room visits for participating students with asthma. Prior to her time in Oakland, Ms. Bisson worked at Children’s Hospitals and Clinics in Minneapolis as a Pediatric Nurse Practitioner in the primary care clinic.

Project Consultants

Coalition Building Consultant. Deanna Mills brings to the project more than 25 years of experience in the delivery of health services. Most recently, Deanna served as the Executive Director of Fremont Community Health Services, a federally funded community health center. Her leadership in developing Minneapolis' North East Neighborhood Early Learning Center demonstrates her understanding of the essential nature of building collaborations to address complex health and social problems. She also served as the first Board Chair of the Neighborhood Health Care Network, which includes 16 safety net community clinics in the Twin Cities. Ms. Mills currently provides expert advice as a staff consultant to the Healthy Learners Board. Ms. Mills received her Masters of Public Health from the University of Minnesota in 1989. Her program of study was Maternal and Child Health, specializing in cross-cultural health and community development.

Evaluation Consultant(s) The evaluator(s) to be hired to consult will have a minimum of five years experience in health care evaluation and research. The evaluator(s) will bring a successful track record of
designing and implementing studies using qualitative and quantitative methods, conducting data analysis and interpretation, and preparing reports for a range of scientific and lay audiences. An ability to work with multiple constituents and oversee several concurrent evaluation efforts is required, with a Ph.D. preferred.

5. Facilities and equipment

The key facilities will be the office space to be provided for staff at the ABC HEALTH ASSOCIATION office and meeting rooms for planning on the part of coalition members. Adequate meeting space is available at ABC HEALTH ASSOCIATION’s office and through a number of coalition members. On occasion, meeting space will be rented when a very large meeting is required. ABC HEALTH ASSOCIATION and its coalition partners in this proposal have the copying, computer, and other equipment needed to implement the project either on hand or included in the budget to the proposal.
6B. Budget Justification: Year 1

a. Personnel. The personnel line item reflects the cost of personnel that are essential to implementing the project activities as described in the proposal. The Project Manager, 1 FTE, $59,375 annual salary, and the Project Associate, 1 FTE, $35,165 annual salary, will coordinate and implement key coalition building and planning activities reflected in the proposal. The salary levels are in keeping with the skill level and experience required for each position as described in section 4 above.

The Healthy Learner Board Asthma Initiative Coordinator, Stephanie Bisson, is included at 1 FTE, or 59,375, paying for time involvement in supporting the development of the school intervention component and toward further HLBAI program development for replication of the initiative in Minneapolis and potentially St. Paul.

The Project Administrator, Penny Gottier Fena, is included at .20 FTE based on an annual salary of $59,375, or $11,875 in the budget. The Project Administrator's salary reflects her time in managing the project.

An Administrative Assistant position is included at .33 FTE, based on an annual salary of $25,000 or $8,250 in the budget. This position will provide administrative assistant support to core project staff - the Project Administrator, Project Manager, and Project Associate.
The Data Collection Manager is included at .25 FTE, based on an annual salary of $50,000 or $12,500 in the budget. The Data Collection Manager will work with the evaluation consultant to set up data management procedures and collect and analyze data related to implementing the baseline assessment. The Principal Investigators and Co-Investigators will receive an honorarium of $5,000 each for a total of $15,000. Since the PIs will put in significant time beyond what is paid for in the honorarium, this fee is to acknowledge their extensive time commitment and involvement in the project.

Please note that extensive in-kind personnel time will be contributed by the coalition members.

b. Fringe benefits. The fringe benefits line of $52,231 represents ABC HEALTH ASSOCIATION's standard 28 percent for fringe benefits in relation to the Project Manager, Project Associate, Project Administrator, Administrative Assistant, and Data Collection Manager Positions.

c. Travel. The $4,028 budgeted here includes $3,500 for out-of-state travel and $528 for local travel. Out-of-state travel is for the Project Manager and Project Associate to attend training sessions and conferences that will contribute to their role in implementing the project. The $528.00 represents 200 miles local travel per month reimbursed at 22 cents per mile.

d. Equipment. The $4,500 budgeted here is to purchase two computer systems for use by the Project Manager and Project Associate at $2,250 each.

e. Supplies. Not included.

f. Contractual. The total of $180,000 reflects key involvement of consultants and a survey research firm in providing the expert consultation to support the coalition building and planning effort and implement the baseline assessment. An Evaluation Consultant or Consultants, to be hired, will receive $55,000 for their role in final development of, coordination, and implementing the baseline assessment, including analyzing and reporting on the data, working with the coalition's evaluation team in the review of evaluation results of existing community asthma programs, and assisting in the evaluation of the HLBAI. This represents 440 hours at a $125.00/per hour fee.
The Coalition Building Consultant, Deanna Mills, will receive $25,000 for a projected 172 hours of involvement at a $145.00/per hour fee. The coalition consultant will provide expertise in implementing an effective coalition building and planning process.

A highly qualified survey research firm will receive a total of $100,000 to plan, implement, and report on the survey research and focus group components of the baseline assessment. This estimate is based on past experience of two local health research and evaluation and health consultants advising the coalition.

**g. Construction.** Not applicable.

**h. Other.** The other category totaling $10,250 reflects costs for printing, postage, and meeting space and food and beverage for meetings. The printing cost of $4,500 is for outside printing for brochures, reports, communication documents, and other documents directly related to the project. A cost of $1,250 is included for postage for the project. A cost of $4,500 is included for renting meeting space for occasional meetings not held at coalition member locations and for the cost of food and beverages for coalition members during meetings.

**Budget Summary: Year 2**

The estimated budget for the second year of the project is $350,000. This estimate is based on an initial analysis of the second year costs for personnel, fringe benefits, consultants, and other budget items required for the additional coalition building and planning work. The Project Manager (1 FTE), Project Associate (1 FTE), and Project Administrator (.20 FTE) will continue to be centrally involved during the second year. The HLBAI Coordinator will continue to be involved at a lower level of time commitment (.33 FTE).

Several consultants will continue to play key roles in supporting the planning process and development of evaluation protocols during the second year - the Coalition Building Consultant at the same level of time commitment and an Evaluation Consultant at a reduced level of time involvement. The involvement of fundraising consultation is proposed to help broaden the potential funding base for the implementation phase. The second year budget will reflect cost items in the areas of travel, printing, postage, and meeting space and food and beverage that are similar to items in the first year's budget.
budget estimate takes into account a miscellaneous budget category since the coalition expects that some unanticipated second year costs will be identified during the first year of planning.

Appendix A: Reference Notes


Greineder, DK, Loane, KD, parks, P. "Reduction in resource utilization by an asthma outreach program", Archives of Pediatric and Adolescent Medicine, 149 (4), pp. 415-20, 1995.


Minneapolis Public Schools (a), Asthma Prevalence in Minneapolis Public Schools, Parent Report on Annual Health information Form, October 2000.


Vafiadou, M, Ranuro, R. "Managing asthma: a pediatric program that works", Caring, 18 (11), pp. 16-21, 1999.

