

HEALTHY LEARNERS ASTHMA INITIATIVE

YEAR THREE: Expansion Across Minneapolis Public Schools

Evaluation Approaches Used and Evaluation Questions to be Answered:

A. December 2001 Survey of Health Office Staff

1. How much time is allocated to students with asthma by health service assistants (HSA), licensed practical nurses (LPN), and licensed school nurses (LSN)? What are staffs' perceptions regarding the expansion of the Asthma Initiative to all elementary and middle schools?
2. What have been the easiest and most challenging aspects of implementing the expectations of the Asthma Initiative? Can these expectations become a manageable part of staffs' on-going jobs?
3. What is the level of staffs' knowledge and confidence in their ability to perform recommended asthma activities? What are their perceived further training needs?

B. Asthma Activities in School Health Offices Reported by LSNs

1. Can school health offices implement the procedures of the Healthy Learners Asthma Initiative as evidenced by documentation on standard forms?
2. What effect does adoption of the Asthma Initiative have on communication with health care providers and parents/guardians?

C. End of the Year Assessments by Asthma Nurses

1. What was the level of adoption of enhanced asthma care activities expected by the Healthy Learners Asthma Initiative during the expansion year?
2. What other "unexpected outcomes" resulted from the Healthy Learners Asthma Initiative?

D. Synthesis of Data and Observations

1. Is the Asthma Initiative sustainable in Minneapolis Public Schools [without special financial support]?
2. What are the lessons learned that have implications for further expansion of the Asthma Initiative and other school-based chronic disease interventions?

Lessons Learned from the Healthy Learners Asthma Initiative Pilot and Expansion

YEAR THREE: Expansion Across Minneapolis Public Schools

A. December 2001 Survey of Health Office Staff

Evaluation Questions:

1. *What is the amount of time allocated to students with asthma by health service assistants (HSA), licensed practical nurses (LPN), and licensed school nurses (LSN)? What are staffs' perceptions regarding the expansion of the Asthma Initiative to all elementary and middle schools?*
2. *What have been the easiest and most challenging aspects of implementing the expectations of the Asthma Initiative? Can these expectations become a manageable part of staffs' on-going jobs?*
3. *What is the level of staffs' knowledge and confidence in their ability to perform recommended asthma activities? What are their perceived further training needs?*

Answers:

School health office personnel allocated about 10% of their time to caring for students with asthma, or about 2 hours and 40 minutes per week. The number of students seen for asthma-related care per week varied greatly among schools from 1 to 40. The average amount of time per student seen was 13 minutes, 20 minutes, and 28 minutes, respectively for LSNs, HSAs, and LPNs.

For HSAs, there was a significant correlation between the number of health service hours worked and time allotted per student with asthma. For LSNs, the more students with asthma they saw, the less time they were able to spend with each student. Less time was allocated per student in schools with higher numbers of students with asthma.

For many, the easiest part of implementing the Asthma Initiative was adopting new forms which were viewed as user-friendly and helpful cues to providing and documenting good asthma care. Having clearly established procedures "all in one place" and the support and reinforcement of asthma resource nurses were important to implementing the key components of the Asthma Initiative. Frequently mentioned challenges were time for paperwork and peak flow checks, the competing demands of other responsibilities, and the difficulty of reaching and involving families.

Overall, 60% of staff thought the recommended asthma activities were reasonably manageable, 24% felt they were partially manageable, and 16% indicated they were not manageable or difficult to implement. These views were very similar for LSNs, HSAs and LPNs..

Over eighty percent of respondents reported high levels of confidence in their asthma care abilities. Exceptions to this were somewhat lower confidence ratings by HSAs in dealing with asthma symptoms and acute asthma episodes, and some LSNs were less confident about care coordination. The primary identified additional training need was how to effectively teach students, families and school personnel about asthma.

Methods:

Health office personnel in all Minneapolis Public Schools (MPS) were surveyed in December 2001 to determine their experiences regarding the expansion of the Healthy Learners Asthma Initiative, time allocated to asthma activities, and their views about its manageability as an on-going part of their job. The survey was designed to measure reactions following four months of implementation. Responses were summarized by position type. Correlations were examined among number of hours employed in health services/week, number of students with asthma seen/week, and the number of minutes allocated to each student seen with asthma. Survey data supplemented the Asthma Activities Monthly Reports completed for each school by LSNs. Findings from the survey were intended to guide intervention efforts during the rest of the expansion year and to inform sustainability issues for future years.

The survey was distributed at staff meetings and via the Health Related Services Hot Line. Surveys were submitted by 48 Health Assistants, 10 LPNs, and 43 LSNs. While the return rate for nurses was very high, only about 60% of HSA returned forms. Responses from LSNs in non-public schools (n=2) and those serving as Asthma Resource Nurses (n=3) were excluded from the analysis. Responses from high school staff (n=10) are included in these findings.

Key Findings:

Time Allocated to Asthma

LSNs, whose assignment may include multiple schools, see the most students with asthma each week; but on the average, they allocate less time per student (13 minutes). LPNs, who work in a single school, spend the most time per student with asthma (28 minutes). During December of 2001, HSAs, LPNs, and LSNs reported allocating an average of 11%, 12 % and 9%, respectively, of their health-related work hours for asthma. Many HSAs have non-health duties requiring up to 18.5 hours per week (mean = 4 hours). Additional detail and comparison among position types is shown below.

Table 1. Time Allocated to Asthma by Position

Asthma-Related Work	HSA n=48	LPN n=10	LSN n=36
Total Work Hours per Week Mean (Range)	27.2 hours (1.5-39)	30.4 hours (25-39)	34.6 hours (16-40)
Hours for Non-health Duties Mean (Range)	4.0 hours (0-18.5)	2.9 hours (0-12.5)	0.4 hours (0-5)
Health Hours per Week Mean (Range)	23.6 hours (2.75-37.5)	27.6 hours (12.5-35)	34.3 hours (16-40)
Percent of Health Hours on Asthma Mean (Range)	11.4% (0.7-57.1)	11.6% (2.5-62.5)	8.9% (1.4-33.3)
Students with Asthma Seen per Week Mean (Range)	8.3 students (1-25)	6.9 students (1-25)	12.9 students (3-40)
Minutes per Week on Asthma Mean (Range)	162 minutes (10-400)	193 minutes (10-900)	161 minutes (30-480)
Minutes/Student Seen Mean (Range)	19.5 minutes (5-85)	27.9 minutes (3.8-64.3)	12.5 minutes (4.8-80)

For HSAs, there was a positive correlation between the number of health service hours worked and the minutes allocated per student seen with asthma; but a negative correlation between number of students seen and time allotted per student with asthma. For LSNs, the more students with asthma they saw, the less time they were able to spend with each student.

Perceived Manageability of the Asthma Initiative

Answers to the question, “How manageable is it for you to do the recommended asthma activities as an on-going part of your job?” were categorized into three levels of manageability (reasonably manageable, partially manageable, and not manageable, difficult). Over half (60%) of those who answered the question indicated it was “reasonably manageable;” 24% indicated it would be manageable under certain circumstances (e.g., when the office isn’t too busy, or other demands aren’t too great); and 16% indicated it would be very difficult or not manageable. Perceived manageability was similar across position types.

Training and Mentoring

In-service training and one-to-one mentoring by Asthma Resource Nurses (ARN) were systematically planned to prepare staff and support their adoption of best practices for asthma management as incorporated into the Asthma Initiative.

The most helpful aspects of asthma training identified by survey respondents were:

- Learning about asthma medications and inhaler techniques
- The “wealth of information” about asthma
- Procedures and practices for implementing asthma care for students in the health office.

Some mentioned beneficial teaching/learning techniques used in trainings including demonstrations, hands-on training and case studies. A few responses by HSAs revealed personal gains such as confidence, reassurance, and opportunity for new experiences and continued learning.

On-site mentoring by an Asthma Resource Nurse (ARN) was a very important part of the implementation of the Asthma Initiative. Benefits of the ARN visits were expressed as follows.

<i>HSAs valued getting:</i>	<i>LPNs liked:</i>	<i>LSNs found most helpful:</i>
<ul style="list-style-type: none"> • support and reinforcement • supplies and materials • ideas for helping certain students and intervening with families • guidance on using forms and doing peak flow measurements • follow up by ARN on specific students 	<ul style="list-style-type: none"> • reassurance and reinforcement provided by the ARN • getting their questions answered • assistance with forms and paperwork 	<ul style="list-style-type: none"> • discussing challenging cases and doing problem solving • assistance in the use of forms and procedures • suggestions for student asthma education and reaching parents • reinforcement of best practices and getting feedback

Training Needs for the Future

About a fourth of survey respondents identified other areas for training. *How to educate others* including students and parents was mentioned most often. Two LSNs wanted hands on training with breath sounds; LPN indicated interest in reaching parents; and topics mentioned by HSAs included going over the skills sheet (asthma skill validation), hands-on with different dry powder inhalers, and medication updates.

Self-Rated Asthma Knowledge and Confidence

Using a scale of 1 (not at all confident) to 6 (completely confident), health office staff rated their level of confidence in their asthma-related knowledge and abilities. Overall, there was a high level of confidence, however, some felt less confident in their general knowledge of asthma in children and adolescents. Some HSAs felt less confident in dealing with students experiencing asthma symptoms or an acute episode/attack.

Table 2. Percent of Health Office Staff with High Confidence in Their Asthma Knowledge and Abilities (Confidence rating of 5-6)

	Asthma knowledge	Deal with symptoms	Help with medication	Help with peak flow	Deal with episode	Care coordination
HSA	61.7%	61.7%	85.1%	89.4%	74.5%	X
LPN	70.0%	80.0%	90.0%	90.0%	80.0%	X
LSN	70.3%	86.5%	86.5%	97.3%	94.3%	76.3%

Changes Recommendations by Respondents

The final survey question asked, “*If you could change something about the Asthma Initiative what would you change?*” Forty percent of HSAs, 30% of LPNs, and 21% of LSNs identified something they would change. Responses in order of frequency were:

- Suggestions for changing forms
- Have time to do expected asthma activities thoroughly
- Continue the Asthma Initiative
- Decrease paperwork
- Get doctors/clinics/healthcare providers on board
- More training of health office staff
- Get information out to parents/guardians and the public

Discussion:

All staff were invited to participate in the Survey, including those in high schools. Although high school staff had opportunities for asthma training at staff in-services they did not receive mentoring, and implementation of the Asthma Initiative procedures and forms was voluntary. Their were not analyzed separately.

There is concern whether the results are representative of the views of HSAs since their return rate was only 60% in spite of repeated distributions of the survey and numerous reminders to complete it. A comparison of HSA surveys submitted early and late (after much encouragement) found no major differences in the types of responses of early vs. late responders. Verbal reports by HSAs at a later staff meeting confirmed a consensus about the positive value of the Asthma Initiative for themselves personally and for students.

B. Asthma Activities in School Health Offices Reported by LSNs

Evaluation Questions:

1. *Can school health offices implement the procedures of the Healthy Learners Asthma Initiative as evidenced by documentation on standard forms?*
2. *What effect does adoption of the Asthma Initiative have on communication with healthcare providers and parents?*

Answers:

Monthly reports of documented asthma activities in school health offices indicated that procedures of the Asthma Initiative were being implemented in all elementary and middle schools (K-8). Reported numbers varied across schools in relation to the school's rate of asthma and the number of hours of health personnel availability.

Documented communication with parents/guardians regarding their students' visits to the school health office for breathing problems increased to 61% of visits overall, with some schools reporting 100% communication. Exchange of information with health care providers increased greatly compared to past years. Of almost 800 Asthma Action Plans received, 654 were for students in K-8 schools; and licensed school nurses in K-8 schools sent 322 asthma medical requests to health care providers.

Methods:

Licensed school nurses (LSNs) were asked to complete an Asthma Activities Monthly Report for each of their schools throughout the 2001/2002 school year. This includes a total of 75 K-8 schools and 7 high schools that are staffed by a LSN. The information tracked included the numbers of documented visits for asthma episodes, notification of parents, students with asthma medications available and used in the health office, peak flow measurements, Asthma Action Plans (AAP) received, other forms used with students, parents and healthcare providers, and other special asthma activities. To complete the report nurses had to review the Daily Log of visits, the asthma record of medications, records of asthma questionnaires used for students and parents/guardians, and medical request forms sent to healthcare providers.

Data were summarized by K-8 and high schools because they had different expectations for implementation of the Asthma Initiative. All K-8 schools were directed to implement the Asthma Initiative, while doing so was still voluntary for high schools. This summary focuses on activities in K-8 schools. Report forms were submitted for 60 to 73 of the 75 K-8 schools during the months of September to May representing a 93% return rate. Activity counts were summed across K-8 schools and plotted monthly to examine trends in asthma care activities.

Key Findings:

The data indicate that health office staff are implementing the procedures and forms of the Asthma Initiative in elementary and middle schools. Schools with higher rates of asthma had more documented asthma care. Figures on the next page illustrate monthly trends.

Asthma Medications at School

By the end of the school year, 1122 students (28% of an estimated 3975 K-8 students with asthma) were reported to have asthma medications available in the health office. The number with medications in the health office doubled from September to January. Each month, about half of the students used their medications one or more times. Less than 100 K-8 students were known to be carrying asthma medications. It is believed that many more students carry inhalers without reporting it to the health office.

Peak Flow Monitoring

According to monthly reports, an average of 300 K-8 students had peak flow checks done during each month. This is about 7.5% of the K-8 students with asthma.

Episodic Visits and Parent/guardian Communication

There were 4214 episodic visits with asthma distress reported through May, with a peak in October. The reported number is less than that expected based on the pilot. Of the reported visits, parents/guardians were notified 61% of the time.

Figure 1

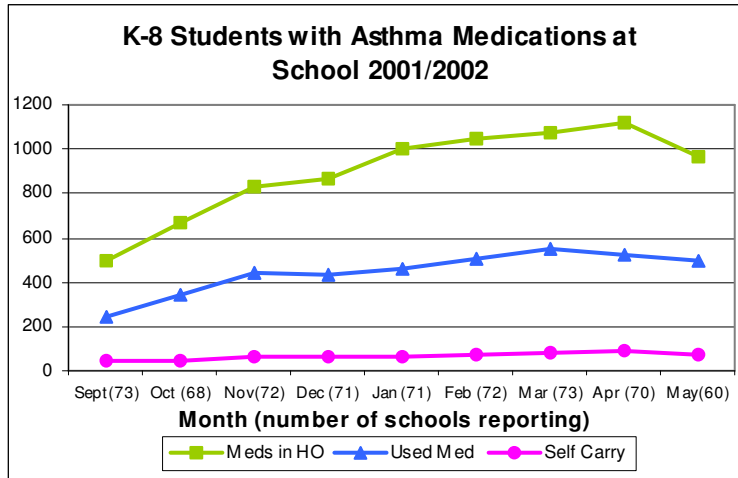
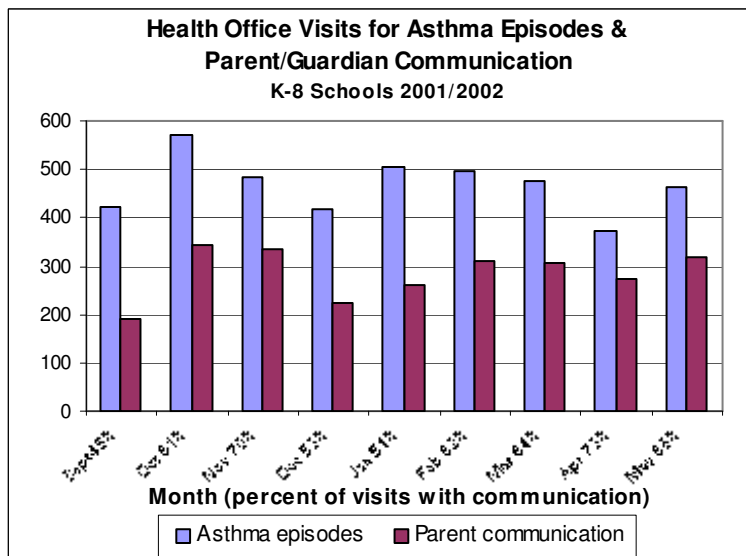


Figure 2



Parent and Student Asthma Questionnaires

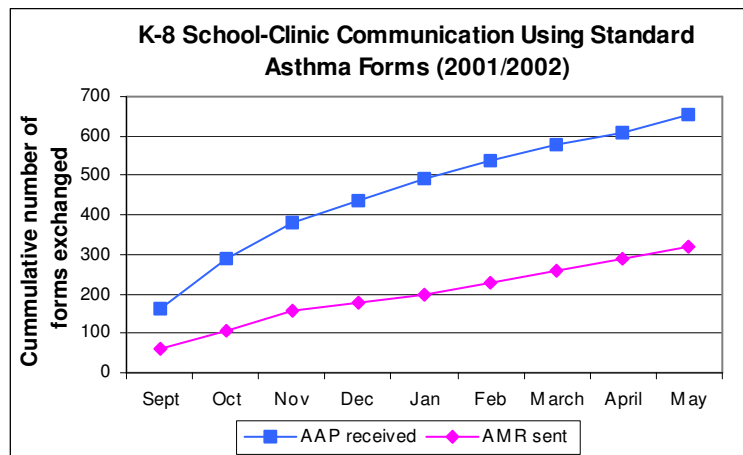
Two asthma questionnaires, one for students in sixth grade and above and one for parents of younger students, were developed to help nurses determine a student’s level of asthma severity and control and to develop an appropriate plan of care. Almost three times as many Parent Asthma Questionnaires (967) were sent out compared to Student Questionnaires (295) used in the health office. However the low return rate of Parent Asthma Questionnaires made it problematic to get current asthma information on students in K-5. The use of these asthma assessment forms peaked in September through November, then fell to lower levels the rest of the year. Some LSNs sent Parent Asthma Questionnaires out in the spring to encourage scheduling of an asthma check up over the summer.

Exchange of Information with Clinics

As shown in Figure 3, over 164 Asthma Action Plans were received in September 2001, 216 more arrived in the next two months, then a steady rate of 45 AAPs were received per month through out the rest of the school year, for a cumulative total of 654 in K-8 schools. This is a large gain over previous years, but still only 16% of students with asthma had a current AAP at school.

LSNs reported a total of 322 Asthma Medical Requests (AMR) sent to health care providers because of concerns about K-8 students. They sent about 50 per month in the fall and about 30 per month the rest of the year.

Figure 3



Implementation in High Schools

Although implementation of the activities of the Asthma Initiative was voluntary for high school health office staff, some LSNs used the new asthma forms, procedures and resources in their high schools. The Student Breathing Questionnaire was used to assess student's asthma status in the fall; and the Asthma Medical Request form was used by some LSNs. High school nurses also benefited from the stream of AAPs flowing to the schools from health care providers in community clinics.

Discussion:

The Asthma Activities Monthly Report relied on documentation throughout the month. To the degree documentation may have been incomplete, the numbers underreport asthma activities. Asthma Resource Nurses periodically reviewed documentation forms and monthly reports. Complete documentation was emphasized so that staff could get credit for the asthma care activities they provided to students. According to Asthma Resource Nurses, schools with higher rates of asthma were actually better at documenting episodes and using other forms to assess the student's asthma status, as well as communicating with parents and healthcare providers.

Completion of the reporting form required that LSNs review students' needs for asthma care and care coordination over the past month. This brought regular attention to asthma concerns of students, the asthma-related services provided through the health office, and the use of standard forms to formally communicate with others involved in the students' asthma management, namely parents/guardians and healthcare providers. Thus, the reporting mechanism served as an intervention to maintain a focus on appropriate care for students with asthma.

C. End of the Year Assessments by Asthma Resource Nurses

Evaluation Questions:

1. What was the level of adoption of enhanced asthma care activities expected by the Healthy Learners Asthma Initiative during the expansion year?
2. What other "unexpected outcomes" resulted from the Healthy Learners Asthma Initiative?

Answer:

By the end of the school year, nearly all K-8 health office personnel were using new asthma forms and enhanced procedures to identify students with asthma and provide appropriate asthma care. However, some were still inconsistent in their documentation and communication of care. They varied in how fast they "got up to speed" and in how committed they were to routine implementation regardless of time and volume of students. Newly employed staff immediately used the new procedures. Staff in the 8 former Intervention Schools increased their consistency and expanded efforts to include more asthma education of students, staff and parents/guardians. Even the resistant or slow adopters were demonstrating knowledge, skill and positive attitudes by the end of the school year. On a scale of 1 to 4 (4 is highest), most staff were at or were approaching adoption level 3 (levels are described below in methods).

Besides increasing the consistency of current efforts, the unmet adoption challenges are 1) to do more thorough assessments of asthma status using student and parent questionnaires, and 2) to implement more systematic asthma education of students, staff and parents.

The Asthma Initiative had wide ranging impacts encompassing personal growth, confidence, improved practice, positive impacts on students' asthma control, and national recognition of the Asthma Initiative. These are listed under 20 Great Unexpected Outcomes of the Healthy Learners Asthma Initiative at the end of this section.

Methods:

During the last six weeks of school, the four Asthma Nurses systematically assessed K-8 health office personnel at their assigned schools to determine the level of adoption of Asthma Initiative activities by each staff member. They developed and used an End of the Year Health Office Summary Sheet for Asthma based on the Core Components of Asthma Management in the School Health Office and a pre-established calendar of behaviors to be learned and adopted. Levels of adoption were organized in four stages: organization for asthma care and skill in use of equipment and forms; routine case finding and care prioritization; in depth case finding, assessment and care coordination; and reaching out to provide asthma education to students, staff and parents. The core tasks assessed were differentiated by position (HSA, LPN, and LSN). This assessment complemented the asthma skill validation that was done during the winter and spring visits.

Of the assessment reports for 82 schools, a subset was summarized and analyzed for comparison. This included 14 new expansion schools, selected from elementary and middle schools with low, moderate, and high asthma rates; and the 8 former Control Schools and the 8 former Intervention Schools. Comparisons were made between new expansion schools and those from the Asthma Initiative pilot study to determine the effect of longer awareness of and exposure to the enhanced asthma care expectations.

Qualitative observations of Asthma Nurses and others were also discussed at the June 2002 Asthma Initiative Retreat. Participants were asked, "What have you seen happen in the schools as a result of the Healthy Learners Asthma Initiative that you never imagined or expected?" The purpose was to capture outcomes of the Asthma Initiative that go beyond those explored with structured "objective" data collection procedures.

Key Findings:

Asthma Resource Nurses, who visited health offices monthly, were able to monitor each staff member's progress over time and at the end of the year draw conclusions about the quantity and quality of the implementation of the Asthma Initiative by each staff member.

Adoption of Core Asthma Management Activities of the Asthma Initiative

The following table contrasts the adoption of Asthma Initiative enhanced asthma management activities by newly exposed schools, schools that served as controls during the pilot year, and schools that had a full year of previous experience with the expectations of the Asthma Initiative.

New schools were trying to integrate core asthma activities into their routine, but inconsistency over time and across schools was common. Schools that participated in the pilot test had greater implementation during the expansion year, with former Intervention Schools being most complete and consistent with their implementation of enhanced asthma management activities of the Asthma Initiative. This progression is reflected in the average adoption score for each group of schools (reported on last line of table).

Table 1. Adoption of Core Asthma Management during the Expansion

Core Asthma Management Activities in the School Health Office	“New” Schools (n=14)	Former Control Schools (n=8)	Former Intervention Schools (n=8)
Identify students with asthma (case finding)	Various sources used	All used all the recommended sources	HSAs and LSNs work together for thorough search
Distribute Parent & Student Asthma Questionnaires	Only 2 of 14 have used questionnaires	Used for newly diagnosed student	Used for newly diagnosed & others
Provide episodic care to students with asthma symptoms and document on the Daily Log	Schools with lower asthma rate are less likely to document	All indicate documentation on the Daily Log	All routinely use the Daily Log
Check peak flow on all students coming to the health office with asthma symptoms	Most report doing	6 yes, 2 most of time unless too busy	“Faithfully” per protocol
Notify parent/guardian of health office visit with asthma symptoms	8 most of time, 6 inconsistently	5 consistently, 3 some	Notify 90-100% of time
Use asthma record form to document medication, symptoms, education, etc	Yes, 3 of 14 “still getting used to it”	Yes, but education not documented	More symptoms & education doc.
Provides student asthma education and counseling	Doing but not documenting	4 doing	1:1 with students using resources
Communicate with and educate parents	2 of 14 mention parents	2 of 8 mention parents	4 of 8 mention parent education
Initiate medical request forms	8 of 14 do when needed	6 of 8 do as needed	All contact health care providers
Develop individual health plans and emergency care plans as indicated	4 of 14 yes	3 of 8 yes	1 of 8 yes
Develop care coordination plan if indicated	Not mentioned	Not mentioned	4 of 8 had initiated referrals
Summarize status and care in pupil health record	1 mention	Not mentioned	Some do but “quarterly updates are not feasible”
Mean adoption score (scale 1-4)			
Health Assistant/Licensed Practical Nurse	2.5	3	3.4
Licensed School Nurse	2.7	3	3.6

Unexpected Outcomes identified by Asthma Nurses and others the June 2002 Asthma Retreat

See the following Twenty GREAT, Unexpected Outcomes of the Healthy Learners Asthma Initiative.

Discussion:

Since Asthma Nurses evaluated the same persons they visited and mentored, they may be biased, and overly positive, in their assessments. However, observations made at schools by Area Health Leaders and comments made by health office staff themselves verify that significant changes have occurred.

Twenty GREAT, Unexpected Outcomes of the Healthy Learners Asthma Initiative Identified at the June 2002 Asthma Initiative Retreat

Participants: Asthma Coordinator, Asthma Nurses, Area Health Leaders, and Evaluator

1. Teachers, staff and principal are ready and willing to be part of committees to address asthma-related issues in the school (e.g., busing, smoking).
2. On the north side, with its high asthma rate, kids with asthma seem to be in good control and are not coming to the health office with asthma distress.
3. Health office staff express very positive feelings regarding their increased knowledge of asthma and the confidence it instills. They feel a sense of confidence in caring for kids with asthma and they LIKE feeling more comfortable with this responsibility.
4. Surprised with how much it meant to them to increase their skill and see what a difference it made for kids. Over half of health office staff talked about this at the staff “Bring and Brag” session this spring.
5. Excited to see an LSN, who for years has struggled with prioritization, and who was frustrated with asthma and did not do much with it at the beginning, actually fit the asthma components into her practice. By the end of the year she was coordinating care for two kids with asthma.
6. Many of the outcomes that happened were expected—I’m not surprised with all the good things. What was surprising was that there wasn’t an observable increase in student achievement for students who went to the health office.
7. At first, there were some issues with health office, but people DID come through. Most did wonderfully. It was surprising that so many schools got on board.
8. One person said, “We never do peak flows.” However, by end of year, she was doing some and she indicated that she, “probably should be doing more.”
9. The students' readiness to learn about asthma was surprising.
10. A very significant finding was the depth of value of the Asthma Resource Nurse. Their role as coach, expert resource, role model and problem solver was important to fostering adoption of asthma components into day to day practice. By the end of the year some staff indicated their confidence by saying, “You don’t have to come any more.” Another remarked, “sorry you won’t be doing this anymore.”
11. Some of the “laggard” [adoption term for resistant or slow starters] schools did start to make changes at the end of the year.
12. The continued funding, by the Healthy Learners Board, CDC through ALAMN, etc. is recognition of the things that the Healthy Learners Asthma Initiative has been able to do. The fact that they stepped up to the plate and extended funding is terrific.
13. We have the health office staff speaking a common language. They know, for example, when a student may need a controller med. This is evidence of their increased understanding and their ability to apply what they have learned.
14. From a healthcare providers point of view: Families are coming to the health care provider with an Asthma Visit Notification (AVN) form from the school nurse. Kids and parents now expect to have a peak flow measurement at the clinic. Parents know about green and yellow zones from the Asthma Action Plan. Many come to clinic because of notes(s) sent from school.
15. The actual number of health offices that adopted the asthma initiative is surprising. More resistance in using the forms, etc. was expected.
16. A strength of the approach used was “practice following the structure.” Well-designed forms gave structure to people’s practice.
17. Many were talking in acronyms at the end of the year. [Early on, there was criticism of “all the acronyms.”]
18. The national recognition from the National Association of School Nurses is unbelievable. The Healthy Learner Asthma Initiative and Cecelia Erickson has been selected to receive the 2002 Key/Shering Award recognizing best practices for management of allergies and asthma in school settings. This national recognition opens greater opportunity to share the successes of the Healthy Learners Asthma Initiative on a national level.
19. It is so cool to see how changing the system for delivery of care to students can be done. St. Paul colleagues say, “WOW, you’re really doing this in schools!”
20. It really works. Well, that is not a surprise. It is evidence of the systematic, sustained, carefully planned and monitored approach used by the Health Related Services leadership team.

D. Synthesis of Data and Observations

Evaluation Questions:

1. *Is the Asthma Initiative sustainable in Minneapolis Public Schools [without special financial support]?*
2. *What are the lessons learned that have implications for further expansion of the Asthma Initiative and other school-based chronic disease interventions?*

Answers:

The Healthy Learners Asthma Initiative has produced significant changes including staff practices, office organization and operating systems, and communication and collaboration between schools and clinics and parents. Associated with these changes is evidence that students are taking greater responsibility for their asthma resulting in better control and fewer repeat visits to the school health office for asthma distress. Students with asthma who used the health office also experience fewer school absences. Resources to sustain these accomplishments and extend the adoption of enhanced asthma care in all schools will be considerably less, but not insignificant in future years.

A strength of the Asthma Initiative, and possibly the primary reason for its success, was the systematic and deliberate approach used to develop and implement it. The Asthma Initiative was carefully planned and systematically pilot tested. Evaluation feedback loops helped streamline and focus core components and procedures without compromising the expectation of best practice. The program was not top down. Many players were involved in all stages of the development, piloting and implementation. The systematic and deliberate approach that was used has established a strong foundation for the Asthma Initiative that will help sustain it in the future. The value of a carefully planned and systematic approach is an important lesson for application to other initiatives.

Methods:

Objective data collected during the expansion year were merged with qualitative impressions reported and discussed by many people in several situations including regular staff meetings and committee meetings, and the February and June 2002 Asthma Retreats. The synthesis incorporates many recommendations and conclusions that emerged over the three year project and were “verified” during the expansion year.

Key Findings:

Sustainability of the Asthma Initiative in Minneapolis Public Schools (K-8)

In several training sessions over two years, health office staff received extensive background information about asthma, its signs and symptoms and management; and training in the use of peak flow meters, asthma medications, proper inhaler technique, assessment, education, case management/care coordination and documentation. Asthma procedures were updated and expectations made explicit in the Health Services Manual and Asthma Supplemental Manual. Asthma supplies, equipment and resource materials were made available to all health offices. During the expansion year, regular on-site mentoring by Asthma Nurses, who visited once or twice per month, clarified questions and fostered problem solving, skill development and adoption of best practices for asthma. This represents a great investment of resources to build capacity for enhanced asthma care consistent with National Institutes of Health Asthma Guidelines.

The initial investment has been made, and now fewer resources will be necessary to sustain the Asthma Initiative in K-8 schools. The challenges will be to provide for reinforcement and support of existing staff, training of new personnel, on-going monitoring, and updating of procedures and resource information, as needed, to keep up with best evidence and best practices for asthma management.

Further evaluation into the next school year will be helpful to determine the on-going level of enhanced asthma care and the resource investment necessary to maintain and expand the good levels of care and communication that have been achieved in K-8 schools.

While some enhanced asthma management activities have been initiated in high schools, further work is necessary to tailor the Asthma Initiative to the needs of high schools and the older adolescents. Resources will need to be allocated for systematic planning, implementation and evaluation in high schools.

Lessons Learned from the Healthy Learners Asthma Initiative Pilot and Expansion

Lessons Learned:

A number of lessons were learned in Minneapolis from the Healthy Learners Board Asthma Initiative implemented in public schools and clinics that are generalizable to other school-based, chronic disease management initiatives. Some of those lessons are listed.

Operations Level

- Best practices in the care of students occur when staff and their supervisors share clear expectations and those expectations are introduced through in-service training, reinforced regularly, and are accessible for reference in a policy and procedure manual.
- Care coordination and communication between students, families, community health care providers and school health office staff are critical to improving student health.
- The quality and consistency of care and its documentation and communication are facilitated with relevant, easy to use forms with defined procedures for their use.
- Monitoring activities through monthly reports keeps attention focused on core tasks and expected performance.
- Having a resource expert available for periodic visits and contacts allows problems to be identified, questions to be addressed, and increasing knowledge, skill and confidence to be reinforced.
- Staff experience personal satisfaction from being successful participants in an important, well designed initiative that has visible benefits for students.

Policy and Systems Level

- Consensus about appropriate practice, such as national, evidence-based guidelines, form a strong foundation for initiating action, and a common base for school and health care cooperation and collaboration.