

Houston Department of Health and Human Services & Houston Independent School District. An In Depth Evaluation of the School-Based/Linked Program



Acknowledgements

My sincere thanks to the students and parents for participating in this study. I am grateful to the principals and teachers for supporting me in their schools in spite of their busy schedules. My gratitude also goes to the Research Committee of Houston Independent School District and Houston Department of Health and Human Services for taking the time to study my proposal and granting me permission to carry out the study.

My sincere thanks goes to George Washington University—Making the Grade for providing me with results of the 1998 National Survey of State School-Based Health Centers Initiatives, and some other relevant materials which have been used in this study.

I wish to thank the volunteers who assisted in administering the questionnaires to students and parents. Without their help, this study would not have been possible. My sincere thanks to Mr. Wayne McGinty, and Dr. Peggy Rogers who read through this document and made valuable corrections. To Dr. Johanna K. DeYoung for the final review of the document, I say a big “Thank You.” I am also grateful to Ms. Oyeba Akyea for her understanding and tireless efforts in working with me to produce this document. I pay special tribute to the economically disadvantaged children who are without health insurance, who without this program, would have been denied health care services.

Table of Contents

I.	Summary	1
II.	History of School Based Health	2
	National Assembly on School-Based Health	
	Texas Initiative	
	Texas Association of School-Based Health Care	
III.	Background of the Houston Program	4
	Medical Component	
	Dental Component	
	Program Administration	
	Funding	
	Barriers Facing the Program	
IV.	Reason for the Study	7
V.	Goals and Objectives	8
	Goals at the Inception of the Program	
	Measurable Outcomes	
	Objectives	
VI.	Methodology	9
	Type of Study	
	Population	
	Sampling	
	Mode of Investigation	
	Ethical Considerations	
	Response Rates	
	Data Analysis	
	Limitations of Study	
	Source of Funding	
VII.	Hypotheses	10
VIII.	Results	10
	Parent Results	
	Student Results	
IX.	Discussion	25
	Access to Primary Care	
	Injury Prevention	
	Social Problems	
	Behavioral Change	
	Association Among SBHC, Absences and Academic Performance	
	Comparison between SBHC and Pediatric Clinic Services	
	Cost of Program for One School	
	Cost Effectiveness	
X.	Conclusion	34
XI.	Recommendations	34
	Bibliography	35
	Table of Appendices	37

Houston Department of Health and Human Services & Houston Independent School District.

An In Depth Evaluation of the School-Based/Linked Program

I. Summary

In Spring 1999, the Houston Independent School District's (HISD) and Houston Department of Health and Human Services' (HDHHS) administered an evaluation survey to 578 parents and students from Easter, Elrod, Bonner and McNamara Elementary Schools.

- When the students were asked if they had visited the School-Based Medical Clinic, the affirmative responses were as follows: Easter (67%), Bonner (68%), McNamara (51%), and Elrod (48%). Furthermore, 75% of Easter students had used the School-Based Dental Clinic. This was the highest rate of utilization among the four schools. The students of Easter had used the dental and medical clinic at the rate of 57%. However, Bonner used the medical clinic more than the dental clinic with 68% and 34%, utilization, respectively. This low usage of the dental clinic by Bonner was due to the fact that many students from Bonner required extensive dental treatment, which ultimately resulted in multiple dental visits. These students' dental needs were addressed and treated prior to taking on new students. McNamara and Elrod had lower utilization percentages because they have community clinics with easy access whilst the School-Based/Linked Program provides medical care within the school once weekly. Bonner and Easter have the highest rate of free lunches of the four schools, with 95% and 96%, respectively. This high rate of free lunches indicates that the school health clinics are meeting the health needs of low-income families.
- The survey asked the parents if they had changed their habits in regards to giving their children fruits and vegetables. Half of them (50%) said they started to do so after they attended the school's health fair. Half of the students, who did not always eat their vegetables, reported that they began eating vegetables and fruits after their parents started serving them. The high rate of parents being influenced by the health fair indicates the fair has a positive impact on changing the behavior of students and parents. Also, another 29% of parents replied that they were influenced by their own child to give vegetables after that child was taught the importance of eating fruits and vegetables at school. School health education influenced 79% of parents to give fruits and vegetables to their children. This indicates that our nutrition education had an impact on behavioral change.
- Texas has the highest rate of children in the country without health insurance. According to the Texas Department of Health, an estimated 24% of children had no insurance in 1998*. Nationally, the US Census Bureau reports that 15% of all children were without health insurance in 1998. In this survey, 47% of all parents said that their family was uninsured. Also, according to the September 1996 issue of *Current Population Reports*, 41% of all people of Hispanic origin were without health insurance. In addition, the non health insurance rate among foreign-born residents in particular was 52% in 1995†. Accordingly, in this survey Hispanics had the highest rate of children without health insurance at 64%. In contrast, African Americans had only 18% of families without health insurance. The large gap between Hispanics not having insurance and African Americans having coverage is due to being covered by Medicaid. Forty-five percent (45%) of all African Americans in the survey had Medicaid coverage, whilst only 7.5% of all Hispanics were covered by Medicaid.
- This low percentage of Medicaid coverage in the Hispanic population (7.5%) is due to non-eligibility. Additionally, those who are eligible do not take advantage of the Medicaid program because they feel it will count against them when they apply for citizenship. However, the

* It is estimated that 24% of Texas children are uninsured. Source: "Report of State Board of Health," April 1998.

† Bennefield, Robert L. "Health Insurance Coverage: 1995" *Current Population Reports: Household Economic Studies*. Census Bureau. September 1996.

- Children's Health Insurance Program (CHIP) is meant to fill the gap of some of the working poor families who are not eligible for Medicaid and do not have health insurance. Those students who have neither Medicaid nor health insurance are still taken care of by the School Health Centers.
- The Dental Clinic has made a positive impact on the dental health of the children in the four schools with preventive care and dental education. One impact is the use of dental sealants, which is a thin plastic-coating put on the chewing surface of the back teeth to prevent cavities. Nationally, only 19% of all children have dental sealants*. Forty-nine percent (49%) of students in the study said that they had received dental sealants. When asked where they received them from, two out of three students with sealants reported that they acquired them at the School-Based Dental Clinic. Also, the program's dental education has made an impact on dental hygiene. The study found that 54% of students who did not always brush their teeth regularly started brushing because they were taught by the clinic's dental hygienist. Even more striking was that 76% of students, who did not always floss, started to do so because the dental hygienist taught them. These strides in dental education and in preventive measures have helped the dental clinic reach its goal of 55% zero caries at recall, that is children returning for re-examination after completion of prescribed dental treatment were found to be without dental caries. The School-Based/Linked Program continues to use dental education to further improve the dental health of these students.
 - Some of the questions in the survey asked the students about problems at school. One third of the students surveyed reported that they were sent to the principal's office. Even though most have been sent only once, one had reported going to the office as many as sixteen times in one year. Also, 28% of those who have gone to the principal's office have also been suspended. These results were used to indicate potential problems, if detected and dealt with at an early age, may prevent crimes later in life. The School-Based Clinic has social workers on staff. The study has revealed that they have counseled 9% of students. The School-Based/Linked Program would like to see a higher rate of counseling. However, the present duties of the social workers have limited their availability for counseling students.
 - Overall, both parents and students are very satisfied with the School-Based Clinic. Eighty-four percent (84%) of students rate the dental clinic as good or very good, and 95% of parents are satisfied with the dental clinic and said it is excellent or very good. Seventy-nine percent (79%) of students rated the medical clinic as good or very good, and 92% of parents said that the medical clinic is excellent or very good.

II. History of School-Based Health

Toward the end of the 19th century, school attendance became mandatory. Large numbers of poor, foreign-born children were enrolled in elementary schools. Because of this, student screenings were initiated to identify and exclude from school children with contagious diseases. Therefore, nursing services in the schools and home visit services to help families take care of health problems were established. By 1910, the Russell Sage Foundation reported that 337 city school systems had instituted some form of medical screenings.^{1,2,3}

In the United States, state governments began to adopt measures mandating actions by schools to protect the health status of children. By the end of World War I, almost every state had enacted legislation related to school health.^{2,4} With the separation of public health (preventive health services) from medical treatment (curative health services), school health followed suit and medical treatment ceased operation in schools. However, restorative dental care continued to be offered in school dental clinics. Dental services had been introduced almost simultaneously with school nursing. Although not a universal practice, providing dental services to low-income school children was not uncommon.^{2,3,4}

Between 1920 and 1970, a period of consolidation in the school health field, the content of school

* Oral Health America. "Efforts to Care for Children."
<http://www.oralhealthamerica.org/OHA%20site/Children.html>. American foundation for dental health: September 10, 1999.

health was defined by three firmly held beliefs:

- Classroom-based health education is the most important function within school health, and physical education is its ally outside the classroom.
- Curative health services should remain within the domain of private medicine.
- School health services should include emergency care, first aid, documentation of student compliance with state or district health requirements, and periodic student health assessments⁵.

These school health services came to be recognized as School Health Nursing Services. Pressure to change school health programs began to mount in the 1960s and 1970s. Increasing documentation of the unmet health care needs of poor children, new legislation and court orders requiring schools to incorporate disabled children into the educational mainstream, and the beginning of a new wave of immigrant children brought demands for additions to the components of school health services. The demand for better schools and school reform brought new dollars to support health and social services for low-income children. In 1966, Medicaid began to provide health insurance coverage for many poor children and specified that insured services should include the Early Periodic Screening, Diagnosis and Treatment (EPSDT) examinations. This benefit created an opportunity to fund additional school health services⁶.

SBHCs began in two cities, St. Paul, Minnesota, and Dallas, Texas, in the early 1970s. The centers grew to fifty in number within the twelve years that followed⁸. In 1976, many of those involved in rethinking the structure of School Health Nursing Services met in Galveston, Texas for a national school health conference supported by the Robert Wood Johnson Foundation.⁷ With support from foundations, as well as federal agencies, a number of new school health service models blossomed. These included the Dallas Children and Youth Project, followed a year later by the St. Paul-Minneapolis Maternal Infant Care Program. Each of these projects was funded by the federal Maternal and Child Health Bureau (MCHB). The MCHB has encouraged state MCH offices to use their MCHB block grant funds to support school-based health centers. A 1994 national survey found that 25 states had allocated \$12 million in MCHB block grant funds to school-based health centers (SBHCs) during the 1994 fiscal year.

2.1. National Assembly on School-Based Health Care (NASBHC)

Over the last 25 years, this expansion of SBHCs led the National Assembly on School-Based Health Care to strengthen the efforts of local communities and schools to establish and maintain quality comprehensive primary health care for children and adolescents. The NASBHC was organized to improve communication and coordination among all who are involved with SBHCs by creating a focal point for national SBHC information sharing and advocacy. Developed by a coalition of individuals dedicated to SBHCs, this new membership organization represents a diverse group of SBHC service providers.

During the 1995-96 school year, SBHCs grew to more than 900. The recent expansion was due largely to state support and the support of a wide range of health professionals⁹. Today the number of SBHCs has increased to more than 1,150. A survey of state adolescent and school health initiatives found 1,157 school-based centers in the U.S. during the 1997-98 school year. "Making the Grade National Program Office" indicates that SBHCs are located in 45 states plus the District of Columbia¹⁰. The ten states with the largest number of SBHCs are: New York (158), Arizona (82), Texas (77), California (64), Florida (64), Connecticut (51), Maryland (43), Michigan (41), New Mexico (40), Oregon (39), and North Carolina (39). These states represent 60% of all SBHCs. Please refer to Figures 1,2, and 3 in Appendix H (Top States for SBHCs and Location of SBHCs by Region of the Country).

With the increasing number of SBHCs, the NASBHC developed "National Principles for School-Based Health Care" (refer to Appendix D). The NASBHC meets once a year at a general conference and workshop, usually in June, to discuss program development, problems,

and ideas.

2.2. Texas Initiative

Early in the 1970s, SBHCs opened in high schools around the country. One of the first was located in Dallas, Texas. The number of SBHCs continued to grow and included more than 25 SBHCs established throughout Texas providing health care to thousands of children and adolescents¹¹. The number has now increased to more than 150 SBHCs. More than 70% of 33 centers questioned in a recent survey of Texas SBHCs also provide mental health services to the students and their families¹². Thirty-three percent of clinics that responded to the survey serve a total of 358 schools. These 358 schools represented a total of approximately 207,000 elementary, middle and high school students. Of these 207,000 students, approximately 51,472 (25%) were served by their campus SBHC during the 1997-98 school year. Close to 75% of the SBHCs serve all grade levels. This suggests that clinics are accessible to the whole school age community within their enrollment zones. One hundred percent of centers surveyed provided physical health care, while 56% provided mental health care and social services. Seventy percent of SBHCs are open 40 or more hours a week. Schedules varied, with the vast majority open only during regular school district hours, as in the case of our HDHHS and HISD program. One hundred percent of the responding SBHCs require parent notification and permission¹³.

2.3. Texas Association of School-Based Health Centers

In 1995 at the National Assembly on School-Based Health Centers (NASBHC), the Texas delegates met and decided to form a state level association to unite all School-Based Health Centers across the state of Texas. An exploratory committee was established, and permission was obtained from the NASBHC to form a state association. As a result, the Texas Association of School-Based Health Centers (TASBHC) was born. The first annual meeting of the TASBHC was held in Austin, Texas with Martee Engel, DDS as its first president. Texas was the first state to form its own association of School-Based Health Centers. At the second meeting of the TASBHC in 1997, the president of the NASBHC addressed this meeting, making it the first time the president of the national association addressed a state association.

In 1998, an annual conference lasting two days was held in Austin, Texas. Mr. John J. Schlitt, Executive President of the NASBHC, was the keynote speaker, and Ms. Jenni Jennings became the second president of the TASBHC. On November 7, 1998, a Texas Coalition of School-Based Health Centers was formed. Its motto was "Texas for Healthy Kids Healthy Schools." Its mission statement was: Texans for Healthy Schools supports the adoption of state policy that assures the provision of comprehensive and preventive health services through School-Based Health Centers. These School-Based Health Center services will be available for all children to enhance their academic and social successes, and promote the wholeness of the family. This coalition worked with the Texas Department of Health and key Texas legislators to pass House Bill 2202, which will continue to fund School-Based Health Center projects across Texas.

III. Background of the Houston Program

Our School-Based/Linked Program is a collaborative effort between HDHHS and HISD. The idea of setting up a school health program arose due to inadequate health coverage for children living in poverty and decreased access to community health care. The declining health status of young children demonstrated the need for a school-based health program. In 1993, HISD and HDHHS conducted a needs assessment survey to evaluate health services for Houston children age six to fourteen*.

* "A plan for the Development of School-Based Clinics," Houston Independent School District. October 1996.

On completion of the needs assessment evaluation, HISD advertised for participation of schools throughout its district. HDHHS and HISD targeted elementary schools for this program.

1. The choice of elementary schools would exhibit the impact of HDHHS' preventive and primary care health programs: Immunization, growth and development monitoring, and screening (audio and visual, etc.) typically takes place in this age group.
2. School-based health services are uniquely able to provide health education because of their setting in educational institutions.
3. Controversy over reproductive health service constrains an SBHC's ability to meet the health needs of adolescents. When the program is restricted to elementary age students, reproductive services are no longer dealt with and the constraints are alleviated.

Forty-five schools applied for the school-based program, and ultimately four schools were selected to start a pilot program. On March 21, 1995, the dental component of the program went into operation. The medical component started later, in February 1996, due to difficulties in finding a nurse practitioner.

Although there are no absolute criteria as qualifications for a school-based health clinic, the original four schools in our program were selected using the following criteria:

- Presence of a full-time school nurse, with availability of space to accommodate a clinic;
- High enrollment of economically disadvantaged students, the index being the percentage of students eligible to participate in the federally-funded Free and Reduced Price School Lunch Program;
- Children not covered by health insurance;
- Accessibility to medical/dental facilities, provided at an affordable cost, and close to primary health facilities in the area; and
- Approval of Shared Decision-Making Committee on campus.

3.1. Medical Component

HDHHS Program employs a medical provider who is currently a pediatrician. The pediatrician provides curative services, preventive services, and some primary care. There is a full-time school nurse at each school, whom HISD employs. The full-time school nurse provides basic care and refers students who need further evaluation to the pediatrician. The program's medical provider visits each of the four schools once weekly. If for any reason there is an emergency case that cannot wait to see the pediatrician, the case is referred to the county hospital (Harris County Hospital District), or to a provider of the family's choice.

The pediatrician provides care for common ailments, immunizations, and growth and development assessments. The program provides medical service at no cost to the family. Every child and even younger siblings are eligible for medical care. Before the pediatrician sees the child, the school nurse confirms that a parent has signed the consent form for medical care. The parent also completes a medical history form. After treatment, the clinic sends the child back to class without being absent from school. The pediatrician consults the Bureau Chief of Family Health Services at HDHHS on problem cases. The program provides health education for students both in the classroom and in the school clinic and for parents at the Parent Teacher Organization meetings.

In the school clinic, the clinic secretary assists the pediatrician by making appointments and by maintaining records and other related paper work. Within the School Based/Linked Program, there are three clinic secretaries. One secretary serves two schools, and the other two serve one school each. HISD employs the secretaries.

Also attached to the School Based/Linked Program are two full-time social workers employed by HISD. Each social worker serves two of the four schools. They deal with social problems of the students and parents.

3.2. Dental Component

The eligible students (those who are eligible for the free lunch program) receive dental services from two of HDHHS' dental clinics. The two clinics each serve two of the four schools on alternate weeks. Between the dentists and dental hygienists at each dental clinic, comprehensive dental care (excluding orthodontics) is provided for the students. Comprehensive dental care consists of head and neck examinations, radiographs, dental prophylaxis, topical fluoride, sealants, amalgam restorations, composite restorations, pulp therapy, stainless steel crowns, extractions and space maintainers. The provider can only see a child in the clinic upon completion of the consent form and the medical history form.

Each child pays a nominal fee of two dollars on each visit. Children with Medicaid coverage simply show a copy of the monthly Medicaid coverage. HISD buses convey the students to and from the dental clinics. One social worker accompanies the students each time they visit the dental clinic. The social workers make home visits when the need arises. The siblings of the eligible school child can also receive dental treatment within HDHHS' dental clinics, if they meet eligibility guidelines (ages 1 through 18 years of age with a City Dental Card, or ages 1 through 20 years of age if Medicaid eligible).

HDHHS employs the dentists and the dental hygienists. Besides providing direct clinical services, the School-Based/Linked Program's Dental Hygienist provides oral health instruction and oral screening for the entire four school population each school year. The Dental Hygienist also provides oral hygiene education for students and parents at PTO meetings and at health fairs.

3.3. Program Administration

The Dental Bureau Chief employed by HDHHS is the chief administrator of the School-Based/Linked Program. The Administrative Supervisor and an Administrative Aide, whom HDHHS also employs, help the Dental Bureau Chief. The Bureau Chief of Family Health provides medical direction for the program and is available to the medical provider for consultation. The Dental Bureau Chief, the Bureau Chief of Family Health, the Administrative Supervisor, and the Administrative Aide are located at HDHHS' central office.

HISD and HDHHS have an agreement as to which entity is responsible for certain commodities, e.g., provision and maintenance of equipment. The Administrative Supervisor holds monthly meetings with the program staff to discuss problems and successes of the program. A general meeting of principals, the HISD Director of Health and Medical Services, dentists, the program's Dental Hygienist, the Bureau Chief of Family Health, Dental Bureau Chief, school nurses, social workers, clinic secretaries, and Administrative Aide occurs quarterly and is convened by the Administrative Supervisor.

3.4. Funding

There is no uniform dedicated funding for school-based health services in Houston. Traditionally, county, city, private organizations or medical schools sponsor school-based health services^{*†}. The Houston City Council has appropriated funds for the continued support of this program. These funds are generated from local property tax revenue and from state and

* Bureau of Primary Health Care in the Houston Department of Health and Human Services states that 11% of all School-Based Clinics have a school or a school district as the sponsoring agency. It is noted that 89% of all School-Based Clinics are run by a health care organization in partnership with the school. Source: HCFA (Health Care Financing Administration), August 1997

† In Harris County 21.4% are sponsored by HDHHS and Harris County District Hospitals. Of this figure, HDHHS sponsors 44% and Harris County District Hospitals sponsors 56%. Source: HISD's School-Based/Linked Health Centers, May 1, 1996.

federal programs (including Medicaid). Title XIX of the Social Security Act established a Federal-State matching entitlement program, which provides medical assistance for certain low-income individuals.

Besides being eligible for Medicaid services, children under the age of twenty-one are entitled to a mandatory federal Medicaid benefit known as Early and Periodic Screening, Diagnosis, and Treatment (EPSDT). Our program generates revenue by billing Medicaid for EPSDT (known as Texas Health Steps) screenings and immunizations. There are no grant funds involved in the financing of the program at this time.

HISD funds are generated from the education budget.

3.5. Barriers facing the program

The greatest barrier facing the implementation of this program is staffing. Funding, which is an obstacle in many other programs, has so far been adequate for this program. We are fortunate, so far, that both parties of the program have lived up to their financial obligations. However, our plan to expand to more schools will depend on added funds available in the future. Planning and implementation are lead by the Shared Decision-Making Committee on each campus, which includes HISD, HDHHS, and community members.

IV. Reason for the study

School-Based Health Centers (SBHCs) are becoming increasingly important in health care delivery to medically underserved children and adolescents across the United States. A survey of state adolescent and school health initiatives found more than 1,150 SBHCs in the country for the 1997-98 school year, nearly double the number reported four years ago*. Although the number of SBHCs serving elementary students is increasing, the majority of SBHCs are serving high school students.

In Houston, ninety-seven schools participate in school-based health programs. Seven providers operate twenty-three clinic sites, plus mobile units, serving a total of 85,897 students to date†.

There was a debate among legislators whether or not to continue Texas Department of Health's (TDH) funding for SBHCs during the initial start-up period. An act relating to the enabling of cooperative programs between the Texas Department of Health and the Texas Education Agency to promote SBHCs for students was developed by the Texas School-Based Health Centers State Coalition for consideration in the Texas legislative session which began in January 1999. This act was passed by both houses and signed into law by Governor George W. Bush on May 28, 1999. The bill, known as House Bill 2202, provides the following global benefits:

- Places SBHCs in the Education Code;
- Allows expansion of SBHCs throughout Texas;
- Awards grants to SBHCs;
- Permits the procurement of additional state funding during the next legislative session;
- Allows SBHCs to bill for services through Medicaid, CHIP, private health insurance, or health benefit plans;
- Requires parental consent;
- Allows parents to access medical records of dependent children;
- Requires the establishments of local community advisory committee/council by the school district;
- Ensures no reproductive services are provided with grant funding;
- Involves community public health agencies, making SBHCs collaborative in nature;

* Source: Joining Hands, National Assembly on School-Based Health Care, Fall 1998

† Source: HISD School-Based/Linked Health Centers. Appendix C

- Expects coordination of services with physicians;
- Awards grants through the Commissioner of Health with a maximum of \$250,000 per biennium awarded per district. (These grants may not be awarded to any SBHCs providing reproductive services.) A committee under the Health Commissioner's direction will determine rules and regulations for awarding grants. This information should be available by September or October of 1999. And;
- Expects all SBHCs to complete an evaluation (specific areas) annually, and the results must be submitted to the Education Commissioner for a report (refer to Appendix E).

Many school-based health programs are facing funding problems. Advocates across the nation are formulating political agenda for sustaining state/federal financial support. The Lewin Group, Inc, conducted an evaluation of the only federal initiative to develop new SBHCs in economically disadvantaged communities across the nation. NASBH conducted a survey in 1998. This survey has collected accurate and up-to-date information on trends in SBHCs to gain continued support for school-based health programs. With such results as stated above in the 1998 annual meeting in Los Angeles, the NASBH appealed to its members to undertake evaluations of individual programs.

This report is for the funding parties of this program, which are HDHHS and HISD. This is the first evaluation since the inception of the program, which started with the dental component on March 21, 1995, and with the medical component on February 19, 1996. This study intends to establish baseline data and variables for future evaluations. The funding agencies need to have feedback on whether the goals of the program are met together with the described outcomes. Program evaluation is essential if the practice of school health services is to progress and to obtain/maintain funding. In this light, the HISD and HDHHS program has undertaken this study.

The results obtained from this study will provide tools to improve efficiency and effectiveness of not only this program but also other similar programs. An effective school health program should have a positive measurable impact on the children whom it serves. The Investigator of the study has attempted to measure the goals of the program. In so doing, she has redefined these goals and has established set figures and time limits. The resulting data will form the baseline figures for future evaluations.

V. Goals and Objectives

5.1. Goals at the inception of the program

- To improve access to preventive and primary care for children who have no health provider or who have difficulty obtaining health care;
- To assure that every student is in school and is capable of participating to the best of his/her ability;
- To increase health knowledge and promote positive health behaviors that encourage the prevention of diseases and maintenance of wellness; and
- To provide social and mental health services to children and families.

5.2. The above goals have been redefined to reflect measurable outcomes as follows:

- a. To improve easy access to primary and preventive health care for children in need of health services from 70% to 85% of uninsured children in the targeted schools by the year 2004;
- b. To assure that students who participate in the program improve their academic performance from an average of satisfactory to good by the year 2004;
- c. To increase the influence of change in behavioral habits through health and dental education from 75% to 85% of students by the year 2004;

- d. To increase the number of counseling sessions provided by social workers to students and families from 10% to 50%, and to increase the number of home visits from 0% to 30% by the year 2004; and
- e. To provide comprehensive dental services and increase the number of students with zero caries from 55% to 70% by the year 2004.

5.3. Objectives

- a. The program will promote the medical and dental services at the four schools at "open house" events and at all school fairs, in order to increase the number of new patients each school year.
- b. Yearly medical screening will continue to be comprehensive in order to detect problems, which if not treated, might hinder full participation in academic work.
- c. Health, oral hygiene and nutrition education will continue to be our main priority in order to encourage changes in behavioral habits in an increasing number of children.
- d. The social worker will make home visits and increase the number of counseling to parents and students each school year.
- e. Dental screening will continue in the four schools. For children who present with dental pathology, efforts will be made to complete treatment before the end of each academic year.

VI. Methodology

6.1. Type of Study: a cross-sectional retrospective study

6.2. Population

The target population consists of students in the four schools in our program in grades 3, 4 and 5. These children are likely to have been treated in the school medical clinic and dental clinic during the time frame of this study. The total population of the four schools for fiscal year 1998-99 is 3,112. Eighty students were chosen from each school in order to give a fair representation of Easter Elementary which has a school population of 354 whereas that of Bonner is 959, Elrod is 943, and McNamara is 856. The students in this study were representative of the school population and the community in age, sex and race.

6.3. Sampling

Random sampling from class lists was used. For Easter, the first name was randomly chosen and thereafter every 4th name was chosen. For Bonner, every 11th name after the first randomly chosen name, Elrod every 12th name, and McNamara every 11th name. It was the investigator's intention to choose a school outside the program, but this was not possible due to time constraints and lack of funding.

6.4. Mode of Investigation

A closed-ended questionnaire was developed for the students in the study and administered in an interview by volunteers (district-registered volunteers and parents). Parents of students in the study were given a different closed-ended questionnaire by telephone. Additional information was obtained by observation, school records, archival documentation, and literature review. Self-administered questionnaires were given to the four school nurses and two social workers in the program.

6.5. Ethical Considerations

Letters, delivered by the students, were sent to parents to give consent for their children and themselves to participate in the study. Also, before the interview, informed consent was obtained from each participant.

6.6. The Response Rates for the Four Schools from Letters of Consent Were As Follows:

Students

- a. Easter 95%*
- b. Elrod 100%
- c. Bonner 98.75%
- d. McNamara 100%

Parents' response rate by telephone[†]

- e. Easter 70%
- f. Elrod 87.5%
- g. Bonner 90.00%
- h. McNamara 81.25%

6.7. Data Analysis

Data analysis was computerized using the software program Minitab to produce statistical values and spreadsheet functions.

6.8. Limitations of the Study

Of necessity and after a brief period of training, volunteers administered the questionnaires. This method was used in lieu of using trained data collectors. This required a concise data collection. Time limitations for an in-depth evaluation of this type have resulted in obtaining limited information on studies of other evaluations on school-based health programs. The Investigator had to carry out this study along with her normal duties. There was no statistician to consult. However, help was obtained from a sociologist in the HDHHS.

6.9. Source of funding

No grants were awarded for this study. Funds were provided by the project's budget through HDHHS. However, volunteers, parents, and staff members contributed time which, when converted into in-kind value, would be worth thousands of dollars.

VII. Hypotheses

- 7.1. Health care provided in an on-site school clinic has a positive effect on scholastic performance.
- 7.2. Access to School-Based Health Clinic reduces the number of absences of students.

VIII. Results

* 3 students had left the school

† parents were either not at home during the three attempts made to be interviewed or had no access to a telephone

PARENT RESULTS

The questionnaire was designed for 80 students and their parents in four elementary schools. This design gave a total of 320 parents. However, only 263 parents were available to participate in the survey that was conducted via telephone. This gave the parents an overall response rate of 82.19%. The individual school response rate is as follows: Bonner had a 90.00% response rate (72 parents), Easter had a 70.00% response rate (56 parents), Elrod's had a 87.50% response rate (70 parents), and McNamara's had a 81.25% response rate (65 parents).

The questionnaire administered to the parents has been used in this report. The analysis is given on a question-by-question basis.

Parent's Profile

Guardian Type and Gender

Eighty-two percent (82.21%) of the parents questioned in this survey were mothers (n=216). Only 11.79% were fathers, which also accounted for all the males in the study (n=31). The overall female population was 88.21% (n=232) and included mothers, legal guardians (n=6), grand-

mothers (n=9), and one guardian of another type.

Ethnic Background

With 60.84% of the population, Hispanics made up a vast majority of parents (n=160). Another 31.94% were African American (n=84). The remaining 7.22% of parents were either Whites or Asians. See Figure 1.

- ✓ African Americans made up the majority of parents in Easter, with 64.29% (n=36 out of 56), and in Elrod, with 58.57% (n=41 out of 70).
- ✓ Hispanics were mainly in Bonner, with 98.61% (n=71 out of 72), and in McNamara with 80.00% of parents (n=52 out of 65).
- ✓ The remaining 7.22% were made up of Asian (n=10) and White parents (n=9). There were no Native American parents in this survey.

Domicile (place of residence)

According to the U.S. Census Bureau, Houston had a homeownership rate of 59.6% in 1998¹. In this survey, parents reported that only 29.66% of them own their own home

(n=78). However, the place of residence be it an apartment or house, is tied to the different neighborhoods surrounding the schools (chi-square=45.07, p<.01). For example, Bonner residents are 3.5 times more likely to own their home than the parents of McNamara.

- ✓ 29.66% of parents reported that they own their home (n=78). This breaks down to 54.17% of Bonner parents (n=39 out of 72), 35.71% of Easter (n=20 out of 56), 12.68% of Elrod (n=9 out of 70), and 15.38% of McNamara (n=10 out of 65) See Figure 2.
- ✓ 7.60% of parents surveyed reported that they live in a family home (n=20).
- ✓ 58.94% of parents reported that they live in an apartment (n=155). McNamara had the highest percentage of parents living in an apartment, with a rate of 80.00% (n=52 out of 65). Elrod came next, with 78.87% living in apartments (n=56 out of 70).
- ✓ 10 people or 3.80% said they live in another type of residence.

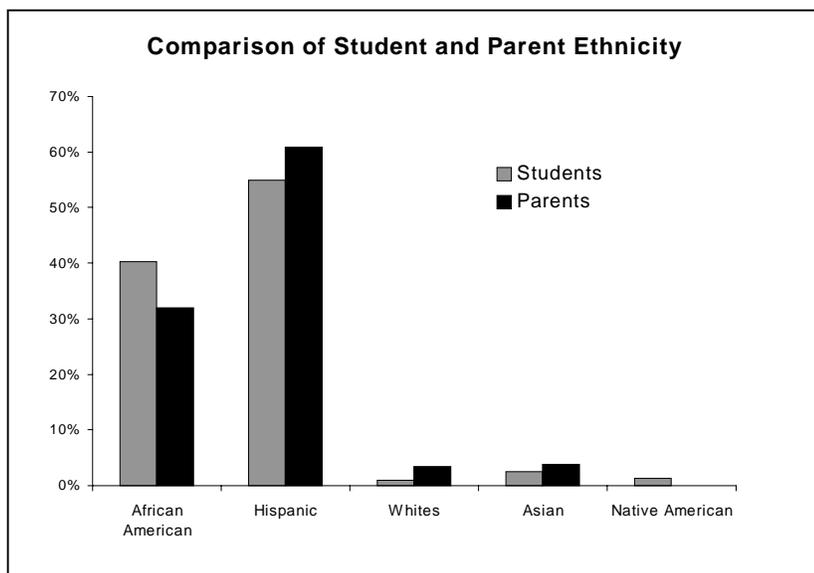


Figure 1

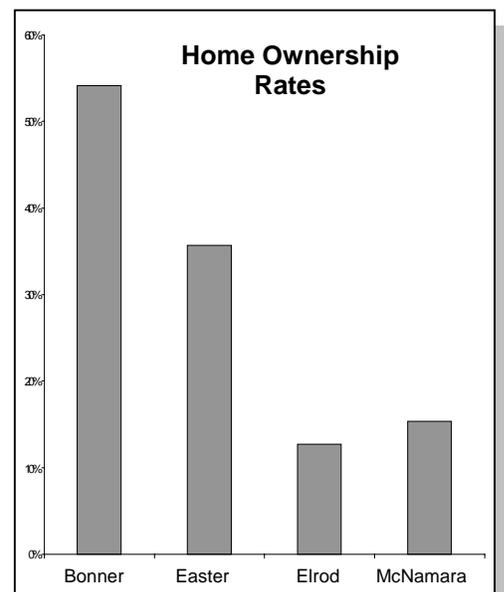


Figure 2

How many persons in the household?

The 1990 U.S. Census found that there are 2.73 persons per household in the Houston area². This survey found an average of 5.13 persons per household. The number of people ranged from 2 to 12, the median number of people was 5, and the standard deviation was 1.56.

Are you gainfully employed?

The majority of parents reported that they are gainfully employed, with a rate of 62.36% (n=164), and only 37.64% are not gainfully employed (n=99).

Is there any other person in the household who is gainfully employed?

A little more than half, or 53.61% of parents said that their spouse was employed (n=141). Sixteen percent (15.59%) had some other relative living in the house that worked (n=41). Another 30.80% said that no other person in the household worked (n=81). Only 6.46% or 17 parents, were unemployed and had no other person in the house who was gainfully employed.

How many different places have you lived in the last year?

Eighty-seven percent (86.69%) (n=228) of participants said that they have lived in one place in the last year; 9.89% lived in two places (n=26); and 3.04% lived in three places (n=8). One parent reported living in seven different places in the last year.

How long have you lived in your present location?

One third of all parents said that they had lived in their present location for more than five years at the time of the survey. Fifty-eight (57.69%) of homeowners fit into this category (n=45 out of 78).

- ✓ 13.69% of all parents reported living at their present location for less than a year (n=36).
- ✓ 23.95% of all parents have lived at their present location for 1 year to 2 years (n=63).
- ✓ 28.51% of all parents have lived at their present location for 3 to 4 years (n=75).
- ✓ 33.84% of all parents have lived at their present location for 5 or more years (n=89).

Access to Primary Health Care

Which of the following best describes your family health insurance coverage?

Texas has the highest rate of children without health insurance in the country. According to the Texas Department of Health, 24% of children were reported to have no insurance in 1998³. Nationally, the US Census Bureau reports that 15.4% of all children were uninsured in 1998. In this survey, 46.77% of all parents said that their family was uninsured. Nationally, according to the September 1996 issue of *Current Population Reports*, 40.8% of all people of Hispanic origin were without health in-

surance⁴. Also, the rate among foreign-born residents in particular was 51.7% in 1995. In this survey Hispanics had the highest rate of no insurance, with 64.37%. In contrast, African Americans have only 17.86% with no insurance. See Figure 3.

- ✓ 23.19% of families were insured with either private insurance or by an HMO (n=61).
- ✓ 20.53% of children are Medicaid recipients (n=54).
- ✓ 45.24% of all African Americans (n=38 out of 84) and only 7.50% of all Hispanics (n=12 out of 160) were insured by Medicaid.
- ✓ 1.52% of parents reported that their child has Medicare (n=4).
- ✓ 7.98% were insured by some other means (n=21).
- ✓ 46.77% of parents said that their family has no insurance (n=123).

If there were not a School-Based Clinic in your child's school, where would your child go for health care?

Parents were almost evenly divided between taking their child to a private doctor or a community health center if there were not an option of using the School-Based Health Clinic.

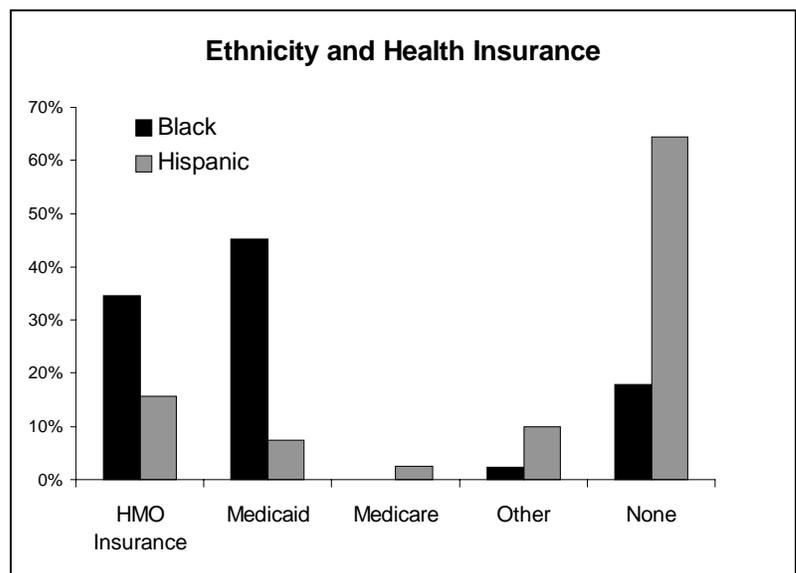


Figure 3 Nationally, as well as in this survey, Hispanics have a significantly higher rate of uninsured people.

- ✓ 41.83% said they would go to a private doctor (n=110)
- ✓ 44.87% said they would go to a community clinic (n=118)
- ✓ 5.70% said they would use their HMO provider (n=15).
- ✓ 6.46% said they would go to an emergency room for care (n=17).
- ✓ 1.14% said they would use some other means to provide health care for their children (n=3).
- ✓ 11.38% of families with no insurance said that they would use the emergency room as a source of medical care if the School-Based Clinic did not exist (n=14 out of 123).

Have you returned a signed consent form for your child to attend the School-Based Medical Clinic?

At 81.75%, a large majority of parents said they signed a medical consent form (n=215). Also, out of those who signed the consent form, 84.65% said their child had visited the clinic at least once (n=182 out of 215) and only 15.35% did not visit the clinic.

- ✓ 90.74% of all parents of Medicaid recipients said they signed the form (n=49 out of 54).
- ✓ 83.74% of all uninsured families signed the consent form (n=103 out of 123).
- ✓ 75.41% of insured families signed the medical consent form (n=46 out of 61).
- ✓ Only 18.25% of all parents said they did not sign the medical consent form (n=48).

In the last year did your child attend the School-Based Medical Clinic?

A vast majority of parents, at the rate of 70.34%, said that their child attended the clinic (n=185). That left only 29.66% who said their child did not attend the clinic.

- ✓ 81.48% of parents who reported that their child is on Medicaid said that the child attended the clinic (n=44 out of 54). This

- group has the highest rate of students who attended the clinic.
- ✓ 71.54% of uninsured children use the clinic (n=88 out of 123). This high rate is second only to the attendance of Medicaid recipients.
- ✓ 71.43% with other types of insurance reported that they attended the clinic (n=15 out of 21).
- ✓ 62.30% of insured children attended the clinic (n=38 out of 61).
- ✓ No Medicare parents reported that their child attended the School - Based Medical Clinic.

If yes, how many visits did your child make?

Parents reported that their child has visited the clinic an average of 1.58 times. The median was 2 times and the standard deviation was 1.32. See Figure 4.

- ✓ 21.08% of parents who said they used the clinic reported that their child made one visit (n=39 out of 185).
- ✓ 44.86% of parents said that their child made two visits(n=83 out of 185).
- ✓ 23.78% of parents reported that their child made three visits (n=44 out of 185).
- ✓ 9.73% of parents said their child made four or more visits (n=18 out of 185).
- ✓ 0.54% of parents said their child had gone to the clinic but did not disclose how many times (n=1 out of 185).

In the last year did your child go to the Hospital Emergency Room (ER) because he/she was ill? How many vis-

its did your child make?

Virtually all of the parents said that they did not use the ER in order to treat their child's illness. Only 9.13% of parents said they used the emergency room in the last year (n=24). The parents who used the emergency room, made an average of 1.17 trips.

- ✓ 79.17% of parents who have used the room reported that they only went once (n=19 out of 24).
- ✓ 16.67% of parents said that they went twice (n=4 out of 24).
- ✓ 4.17% of parents said they went three times (n=1 out of 24).

Did you have to wait long for your child to be seen? How Long?

The parents were evenly divided on their perception of the appropriate length of time it took to be served in the emergency room. About half said the wait was more than one hour and the other half said the wait was less than an hour.

- ✓ 16.67% of ER using parents said the child was treated in a matter of minutes (n=4 out of 24).
- ✓ 29.17% of ER using parents said they waited approximately one hour (n=7 out of 24).
- ✓ 12.50% of ER using parents said they waited approximately two hours (n=3 out of 24).
- ✓ 37.50% of ER using parents said they waited around three hours (n=9 out of 24).

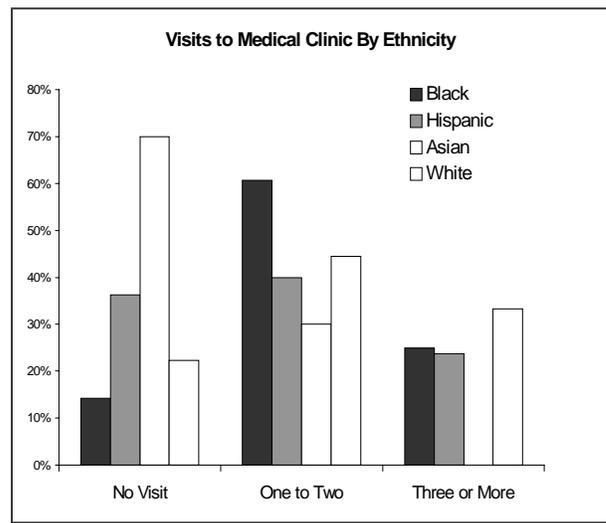


Figure 4

- ✓ One parent, who used the emergency room, did not answer the question (4.16%).

Have you returned a signed consent form for your child to attend the School Dental Clinic?

Almost four out of five parents signed the dental consent form. At 73%, the parents in the survey signed the dental consent form, but also the medical consent form (n=192).

- ✓ 79.09% of all parents said they signed a dental consent form (n=208) leaving 20.91% who did not sign the form (n=55).
- ✓ 6.08% of all parents signed the dental consent form only (n=16).
- ✓ 12.17% of all parents did not sign either the medical or dental consent form (n=32).
- ✓ 8.75% of all parents signed the medical consent form but not the dental consent form (n=23).

If there were not a School Dental Clinic in your child's school, where would you take your child for dental care?

More than half, or 53.99% of parents, said that they would take their child to a community dental clinic if there were not a school dental clinic (n=142).

- ✓ 41.06% said that they would go to a private doctor (n=108).
- ✓ Also, 4.94% said they would take care of their child's dental needs by other means (n=13).

If you had to take your child somewhere else for medical and dental care, would you have to miss a day from work/housework?

A vast majority of parents, 85.55%, said they would have to miss work in order to take care of their child's medical and dental needs (n=225), and 14.07% said they would not have to miss work (n=37). One parent said that the question was not applicable.

If no, who would take your child for health care?

Most parents said that they would have some other relative take their child for health care. Two of the thirty-seven parents from the last question did not answer this one.

- ✓ 28.57% of parents who did not have to miss work said the mother would take the child (n=10 out of 35).
- ✓ 8.57% of parents reported that the child's father would take the child (n=3 out of 35).
- ✓ 11.43% of parents who will not miss work said the child's aunt would take the child (n=4 out of 35).
- ✓ 14.29% of parents said the child's sister would take the child (n=5 out of 35).
- ✓ 5.71% of parents said the child's brother would take the child (n=2 out of 35).
- ✓ 31.43% of parents said another relative would take the child (n=11 out of 35).

If your child was ill, would you keep him/her at home?

Most parents said they would keep their child home when ill 85.55% (n=225), and 14.45% would not (n=38).

If your child complained of not feeling well, would you send him/her to school?

When the child only complains that he or she is not feeling well, almost half or 46.39%, said they would send their child to school (n=122). The remaining 53.61% would not send their child to school (n=141).

If yes, why?

Most parents would send their child to school if he/she was complaining of not feeling well. The parents would send their child to the school clinic.

- ✓ 89.34% said they would send their child because their child can attend the School-Based Clinic (n=109 out of 122).

- ✓ 10.66% of parents said they did not want their child to miss school (n=13 out of 122).
- ✓ 48.37% who signed consent form reasoned that the child could attend the clinic and therefore does not need to miss school (n=104 out of 215).

Is the School-Based Dental/ Medical Clinic your child's usual health care provider?

More than half of the parents said that the school clinic is their usual provider. When the students were asked a similar question, only a third of them consider the School-Based Clinic their usual health care provider. McNamara Elementary School had 4 out of 5 parents saying that the school clinic is their child's usual provider. In contrast, Elrod had 37% consider the School-Based Clinic as their usual provider.

- ✓ 53.99% of parents say that the clinic is their child's usual provider (n=142).
- ✓ 45.63% of parents say that the clinic is not their child's usual healthcare provider (n=120).
- ✓ 0.38% of parents did not answer the question (n=1).
- ✓ 88.62% of uninsured parents considered the school-based clinic their health care provider (n= 109 out of 123).
- ✓ 24.59% of insured parents considered the school based clinic their child's usual health care provider (n=15 out of 61).
- ✓ 38.10% of parents with an alternative type of insurance, considered the school based clinic their primary health care provider (n=8 out of 21).
- ✓ Only 18.52% of Medicaid parents (n=10 out of 54) and none of the Medicare parents considered the school-based clinic their child's usual health care provider.

Access to Preventive Health Care

Has your child been vaccinated?

One hundred percent (100%) of parents reported that their child had been immunized (n=263). However, one parent admitted that their child was missing an immunization shot and therefore not completely immunized.

Where?

Over three fourths of the parents reported that their child had been immunized at the community health clinic.

- ✓ 7.98% of parents said their child was immunized at the school clinic (n=21).
- ✓ 75.67% of parents said their child was immunized at the community clinic (n=199).
- ✓ 15.97% of parents said their child was immunized by a private doctor (n=42).
- ✓ 0.38% of parents said their child was immunized at another location (n=1).

Does your child have a bi-yearly dental check-up?

Eighty-two percent (81.75%) of all parents said that their child does have a biannual dental examination (n=215). The other 18.25% said that they do not take their child for a bi-annual checkup (n=48).

If yes, Where?

The parents whose children see a dentist are more likely to use the school dental clinic to facilitate their child's annual check-up. Most parents, 80.93%, said that their child had their dental examination at the School-Based Dental Clinic (n=174 out of 215).

- ✓ 15.81% of parents said the check-up is done by a private dentist (n=34 out of 215).
- ✓ 2.33% of parents said the child has the check-up at the community dental clinic (n=5 out of 215).

- ✓ 0.93% of parents said the check-up is done by other means (n=2 out of 215).

In the last year, has your child had a tooth extraction?

Approximately one out of five, or 20.91%, of parents said that their child had a tooth extraction (n=55). Most parents, or 78.71%, said that their child did not have a tooth extraction (n=207), and one parent did not answer the question.

Behavioral Changes

Do you supervise or make sure that your child brushes his/her teeth regularly?

An overwhelming 93.16% of all parents said that they supervise their child in brushing his/her teeth (n=245). However, only 53.65% of children said yes when asked a similar question in the student survey.

How many times a day?

Three out of four parents claim that his/her child brushes their teeth twice a day. However, when the children were asked how many times they brushed their teeth, only half responded that they brush twice a day.

- ✓ 15.21% said their child brushes only once a day (n=40)
- ✓ 75.67% said their child brushes twice a day (n=199)
- ✓ 8.37% of parents said their child brushes three times a day (n=22)
- ✓ 2 parents (0.76%) gave no answer

Does your child floss his/her teeth at least once a day?

65.02% of parents said their child flosses at least once daily (n=171). The students answered similarly, with 64.76% saying that they floss their teeth daily.

Do you give your child vegetables and fruits?

Most parents say they give their children vegetables and fruits.

- ✓ 98.48% of them said they do give their children vegetables and fruits (n=259).
- ✓ Only 1.52% said they do not give their child vegetables and fruits (n=4).

Does your child like vegetables and fruits?

Seventy-five percent (74.52%) of parents say that their child likes to eat vegetables and fruits (n=196). Only a quarter (25.48%) of parents said that their child does not like them (n=67).

Have you always given your child vegetables and fruits?

94.68% of parents said they have always given their children vegetables and fruits (n=249).

If no, when did you start giving your child vegetables and fruits?

Only fourteen parents responded that they did not always give their children vegetables and fruits. Half of them (50.00%) said they started to do so after they attended the school's health fair (n=7 out of 14). Half the students who did not always eat their vegetables and fruits reported that they started after their parent started serving them vegetables and fruits. The high rate of parents being influenced by the health fair indicates the fair's effectiveness on ultimately changing student behaviors. Also another four parents replied that they were influenced by their own child to give vegetables and fruits after that child was taught at school (28.57%). Together, school health education influenced 78.57% of parents to start giving their child vegetables and fruits (n=11 out of 14). The remaining three parents had other reasons why they started to feed their child vegetables and fruits.

In the last year have you attended a Health Fair/ PTO meeting?

One of the goals of the program is to promote the School-Based Clinic at PTO meetings, open houses, and school health fairs. A little more

than half of the parents said they attended at least one of such events. Also, the parents with attendance have a significantly higher rate of actually signing a medical consent form (chi-square=9.34, $p < .01$). Seventy-four percent 73.98% of the parents who did not go to such events signed the consent form (n=91 out of 123), while 88.57% of all who went to a PTO meeting or school health fair signed (n=124 out of 140).

- ✓ 53.23% have attended (n=140)
- ✓ 46.77% said they have not attended (n=123)

If yes, how many times? (n=140)

Parents who have attended a PTO function averaged 2.35 events during a year.

- ✓ 24.29% went once (n=34 out of 140)
- ✓ 35.00% went twice (n=49 out of 140)
- ✓ 22.14% went three times (n=31 out of 140)
- ✓ 18.57% went four or more times (n=26 out of 140)

Social Problems

In the last year, did you have to see the Principal because your child was in trouble?

Only 16.35% of parents said that they had seen a principal (n=43), and 83.65% replied that they had not seen a principal because their child was in trouble (n=220).

In the last year, did the Social Worker talk to you because your child had a problem?

Only twenty parents, or 7.60%, said they had met with a social worker concerning their child. The remaining 92.40% had not discussed their child's problems with a social worker (n=243).

Does your child always get into trouble at home?

Seven parents (2.7%) admitted that their child gives them constant prob-

lems at home. The remaining 97.34% answered no to this question (n=256).

Did you have to take your child to an outside doctor because your child was always in trouble?

Ninety-nine percent 98.86% did not have to take their child to a doctor (n=260). And only three, or 1.14%, admitted to this action (n=3).

Academic Achievement

How well does your child do in school?

Sixty-nine percent (69.21%) of parents say that their child is either doing excellent or very good work at school. However, only 44.13% of students rate their own school performance as excellent or very good. See figure 5.

- ✓ 25.48% of parents said their child does excellent work at school (n=67).
- ✓ 43.73% of parents said their child does very good work at school (n=115).
- ✓ 19.39% of parents said their child does good work at school (n=51).
- ✓ 8.37% of parents said their child does satisfactory work at school

(n=22).

- ✓ 3.04% of parents said their child does poor work at school (n=8).

Do you usually help your child with his/her homework?

Ninety-two percent (92.40%) of parents said that they usually help their children with homework (n=243). Only 7.60% said they do not help their children with their homework on a regular basis (n=20).

Parent's Satisfaction

Are you satisfied with the care given to your child at the School-Based Clinic?

Ninety-eight percent (98.38%) of parents were satisfied with the School-Based Clinic (n=182 out of 185). The remaining 1.62% chose not to express their opinion of the clinic (n=3 out of 185).

How would you describe your satisfaction?

Out of the parents who said they were satisfied with the clinic, 91.90% said that the clinic is excellent or very good. No one rated the clinic poor.

- ✓ 36.22% said the clinic is excellent (n=67 out of 185).

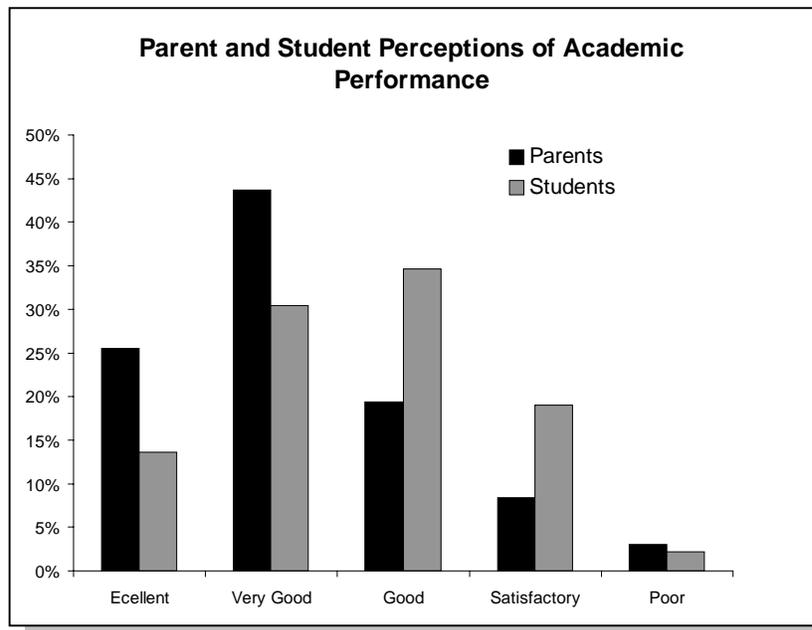


Figure 5

-
- ✓ 55.68% said the clinic is very good (n=103 out of 185).
 - ✓ 5.41% said the clinic is good (n=10 out of 185).
 - ✓ 1.08% said the clinic was satisfactory (n= 2 out of 185).

Are you satisfied with the care given to your child at the Dental Clinic?

Overall, 99.43% of parents whose children have used the dental clinic said they were satisfied with the clinic (n=173 out of 174). Only one parent (0.57%) chose not to express his/her opinion of the dental clinic.

How would you describe your satisfaction?

Ninety-five percent (95.40%) of parents who were satisfied with the dental clinic rate it at either excellent or very good. No one said that the clinic was just satisfactory or poor.

- ✓ 52.87% of parents rated the clinic at excellent (n=92 out of 174).
- ✓ 42.53% of parents rated the clinic at very good (n=74 out of 174).
- ✓ 4.02% of parents rated the clinic at good (n=7 out of 174).

¹ "Housing Vacancy Survey-- Annual 1998 table 14." *US Census Bureau*. (October 21, 1999): <http://www.census.gov/hhes/www/housing/hvs/annual98/ann98t14.html>

² "D-1 General Population and Housing Characteristics:1990; Geographic Area Houston, TX." *US Census Bureau*. (September 7, 1999). <http://factfinder.census.gov>

³ It is estimated that 24% of Texas children are uninsured. Source: "Report of State Board of Health," April 1998.

⁴ Bennefield, Robert L. "Health Insurance Coverage: 1995" *Current Population Reports: Household Economic Studies*. Census Bureau. September 1996.

Student Results

The questionnaire was limited to third, fourth, and fifth grade students. These grades were chosen because the students, ranging from 8 to 13 years old, would be more likely to have actually visited the School-Based Clinic during the time period of the study. Originally a total of 320 students were selected from Bonner, Easter, Elrod, and McNamara Elementary Schools with 80 students in each school. However, due to four selected students moving out of Easter and one leaving Bonner, the survey was able to obtain 315 student participants. As a result, the student survey had an overall response rate of 98.44%.

The questionnaire administered to the students is used in this report. The analysis is given on a question-question basis.

Student Profiles

Gender

Much has been made in other studies about gender differences and clinic use by elementary school children. However, in this study no significant difference was found, even though we expected males to use the clinic more in this age group. A little over half of the participants in this study are male 50.79% (n=160) and females made up 49.21% of the participants (n=155).

Ethnic Diversity

A vast majority of students in the schools are either African American or Hispanic (chi-square=140.12, p<.01). In fact, only fifteen students in the entire study population were White, Asian, or Native American. See Figure 1

- ✓ Hispanics had the highest population in the survey with 54.92% (n=173). Most of them

came from Bonner with 97.47% (n=77 out of 79) and McNamara with 51.25% (n=41 out of 80).

- ✓ African Americans had the second highest population with 40.32% (n=127). They came mostly from Elrod with 80.00% (n=64 out of 80) and Easter with 64.47% (n=49 out of 76) participating.
- ✓ Native American (n=4), Asian (n=8), and White (n=3) students make up only 4.76% of the study population.

Domicile

The neighborhoods that surround the four elementary schools have different characteristics. For example, Easter's neighborhood includes a few homeless shelters while Bonner has a high homeownership rate consistent with the Houston area¹. The different domicile rates between the schools is significant (chi-square=82.68, p<.01). Overall, most students report living in an apartment during the time of the survey.

- ✓ 54.92% live in Apartments (n=173).
- ✓ 35.24% live in their Own Home (n=111).
- ✓ 7.30% live in Family House (n=23).

- ✓ 2.54% live in Other Housing (n=8)

Number of People in Domicile

Only nine students live in Households that have only two people living together. One student reported living with fourteen other people. The average number of persons living together, as reported by the students, is 5.4 persons per household. The 1990 United States Census reported an average of 2.73 persons per household in the Houston area.

Access to Primary Health Care

In the last year did you get Health Care when you were ill?

Most of the students, 65.40% (n=206), said that they received care when they were ill. Only 34.60% said that they did not receive any health care (n=109). Of these students, 93.57% did not report any medical complaints in the last year (n=102 out of 109).

What was your complaint?

In all, students complained of thirteen different medical symptoms in the last year. Forty-seven percent (47.30%) of all complaints were

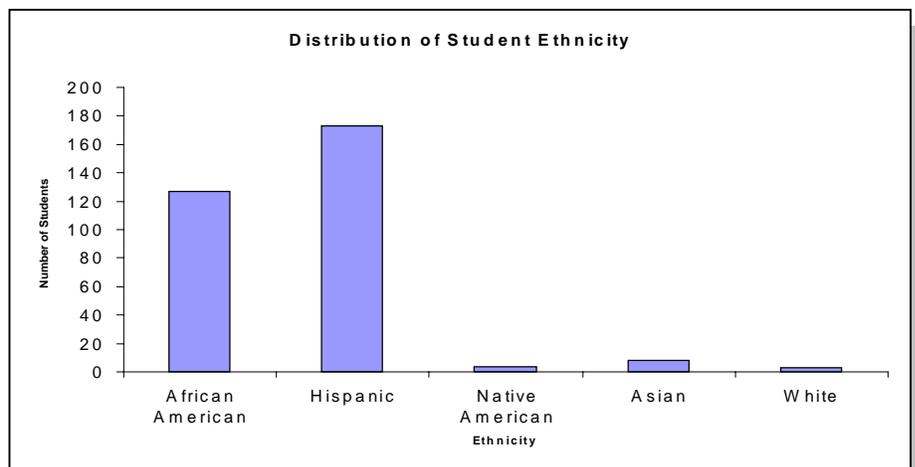


Figure 1

fevers, stomach aches, or colds. However, the highest response to this question was no complaint with 34.29% (n=108); six of them answered that they receive health care when ill but did not disclose their complaint. Only seven students said that they had medical complaints and did not receive healthcare. One said he/she had dermatitis (inflammation of the skin); another complained of a cold; three said they had a fever that was not treated; one had a sore throat; another had a stomach ache; and one complained of an earache. The rest of the complaints are listed in *chart 1*.

Where do you usually go for treatment?

According to the students, they usually go to the community clinic, school clinic, or private doctor for medical care. The highest response given by the students was the community clinic with over a third considering it their primary medical provider. The school clinic and the private doctor each received a quarter of students responding. Later in the survey, the students were asked about their actual School-Based Clinic visits. Over half of them said they had visited the School-Based clinic in the last year even though only a quarter of students considered it their usual health care provider.

- ✓ 35.87% say they usually go to the community health center (n=113)
- ✓ 26.35% usually go to the school health clinic (n=83)
- ✓ 25.40% go to the private doctor (n=80)
- ✓ 4.76% go to the emergency room (n=15)
- ✓ 4.76% usually do not go anywhere (n=15)
- ✓ 2.86% are usually treated by
- ✓ other means (n=9)

In the last year, how many times were you treated at the school clinic?

Over half of the students in the survey have visited the clinic. The students reported that they visited the clinic at least once or twice making an average of 2.19 visits per patient.

See *Chart 2*

- ✓ 58.41% of students used the clinic (n=184); only 131 students said they have not used it in the last year.
- ✓ A significant proportion of students, 74.60% or 235 participants, use the Dental and / or Medical Clinic. (chi-square=29.288, p<.01, r=0.243).
- ✓ 36.51% of students used both clinics (n=115).
- ✓ No significant difference was found between the student's

Number of Times Students Visited School-Based Clinic		
Visited	Number	Percent
Once	74	40.66%
Twice	40	12.70%
Three Times	31	9.84%
Four or more times	39	21.43%
Total	184	

Chart 2

grade level and the number of times treated at the clinic (chi-square= 11.73, p=.16).

Student Medical Complaints		
Symptom	Number	Percent
Fevers/Flu	58	28.02%
Stomach	48	23.19%
Cold	42	20.29%
Dermatitis	17	8.21%
Sore Throat	13	6.28%
Chicken Pox	7	3.38%
Asthma	6	2.90%
Ear Ache	5	2.42%
Tooth Ache	5	2.42%
Fracture	2	0.97%
Seizure	2	0.97%
Facial Palsy	1	0.48%
Headache	1	0.48%
Total	207	

Chart 1

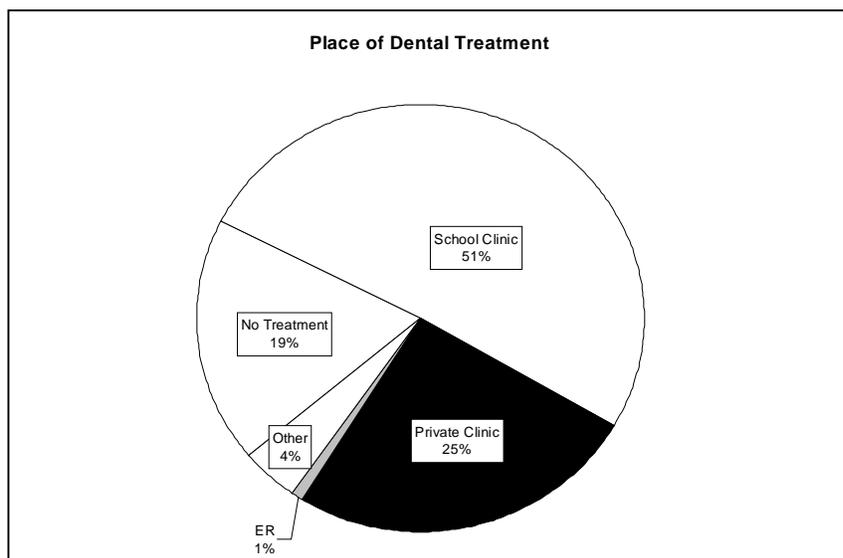


Figure 2

In the last year did you visit a dentist?

Only 69.5% of the national population from ages 5 to 14 saw a dentist during 1989². In this study, 81.90% have seen a dentist in the last year (n= 258), leaving only 18.10% (n=57) who did not.

If yes, where did you go for Dental Care?

The dental component of the program had seen more visits per patient than the school medical clinic. The medical clinic saw 2.19 visits per patient while the dental clinic saw 3.05 visits per patient. When asked where they had their dental treatment, more than half of the students who said they received dental treatment received it at the School-Based Dental Clinic. *See Figure 2.*

- ✓ 50.79% said that they went to the School-Based Dental Clinic (n=159).
- ✓ Bonner had the lowest rate of students being treated at the clinic with 34.18% (n=27 out of 80). Easter had the highest rate with 75.00% (n=57 out of 76).
- ✓ 25.40% of students go to a private dental clinic (n=80).
- ✓ 5.06% of students used another facility for their dental needs (n=13 out of 257).
- ✓ 0.95% of students go to the Emergency Room (n=3).
- ✓ The rest, 18.73%, said the question was not applicable (n=59).

What was your complaint?

3 out of 5 students said that they went to the dentist for a regular checkup (n=189). Also, 19% said the question was not applicable, (n=60). They also said that they did not see a dentist in the last year (n=57).

- ✓ 11.43% complained of a toothache (n=36).
- ✓ 8.57% had other complaints (n=27).

- ✓ 0.95% complained of gum abscess (n=3).

In the last year, how many times did you visit the School Dental Clinic for treatment?

More than half of the students attended the school dental clinic in the 1998-99 school year. Approximately a third of the dental patients went four or more times for dental work. 47.30% did not go to the school dental clinic (n=149), leaving 52.70% who went (n=166). The average number of visits for the school dental patients was 3.05 per student. The median number of visits was three.

- ✓ 16.27% went to the school dental clinic only once (n=27 out of 166).
- ✓ 29.52% went to the school dental clinic twice (n=49 out of 166).
- ✓ 22.29% visited the school dental clinic three times (n=37 out of 166).
- ✓ 31.93% went four or more times (n=53 out of 166).

In the last year, have you had a tooth extraction?

26.98% said they had an extraction (n=85). 73.02% said they did not have a tooth extraction (n=230).

Did you get sealants on your teeth (thin plastic coatings on back teeth)?

Dental sealants are a thin plastic-coatings put on the chewing surface of the back teeth to prevent cavities. Nationally, only 19% of all children have dental sealants³. Almost half the students in this study said that they had dental sealants 49.21% (n=155). 50.79% said they did not have the sealants (n=160).

Where?

The higher-than-national rate of dental sealants in the four elementary schools is due mostly to the efforts of the school dental clinic. Two out of every three students in

the study who have sealants received them from the dental clinic.

- ✓ 65.16% of all students who received the dental sealant received them in the school dental clinic (n=101 out of 155)
- ✓ 23.87% of all students who received the dental sealant had them put in by a private doctor (n=37 out of 155)
- ✓ 9.68% went to a community health center (n=15 out of 155)
- ✓ 1.29% said they received them by other means (n=2 out of 155)

Access to Preventive Health Care

Have you had a medical check-up (height and weight assessment, etc.)?

82.54% of all students reported that they have had a medical examination (n= 260). Only 17.46% said they had not (n=55).

If yes, where?

Almost half of the students reported that they went for their medical examinations at the community clinic with 46.15% (n=120 out of 260). The private doctor came in second with a rate of 35.00% (n=91 out of 260). Only 16.15% say they went to the school clinic for an examination (n=42 out of 260).

- ✓ McNamara had the highest rate of students going to the community health clinic with 53.75%.
- ✓ Easter had the highest rate of students who used the school medical clinic as their place for examination with a rate of 31.58%.
- ✓ 2.69% said they have their examination done by other sources (n=7).

Have you been immunized? (Have you had all your shots?)

Virtually all of the students, or 95.87%, said that they have been

immunized (n=302). Only 4.13% said they are not, in most cases explaining that they are missing one shot (n=13).

If yes, where did you receive immunization?

A little more than half of all immunizations, 52.98%, were done at the community health center (n=160 out of 302). School clinics immunized 23.84% of the students (n=72 out of 302). The private doctor immunized 22.19% making it a close third to the school clinics (n=67 out of 302). 0.99% said that they were immunized at another location (n=3 out of 302).

Injury Prevention

In the last year, were you injured or had an accident on school campus?

Only 23.81% said they were injured on school grounds (n=75).

If yes, what type of injury?

The highest rate of injury on the school campus was abrasion 48.00% (n=36 out of 75). See Chart 3

Type Of Injury		
Injury	#	Percent
Abrasions	36	48.00%
Laceration	24	32.00%
Eye Injury	8	10.67%
Fall	4	5.33%
Fracture	2	2.67%
Heat Exhaustion	1	1.33%
Total	75	

Chart 3

Where did you get help?

The school nurse treated more than half the injuries reported in the survey, with 53.33% of the injured students saying they went to the nurse for treatment (n=40 out of 75).

- ✓ 17.33% of students went to the school clinic (n= 13 out of 75)
- ✓ 12.00% went to their class teacher (n=9 out of 75)
- ✓ 4.00% went to the Emergency Room (n=3 out of 75)
- ✓ 13.33% said that they were treated by another source (n=10 out of 75)

Social Problems

Do you feel happy most of the time?

94.92% said they were happy most of the time (n=299). Only 4.13% said they were not happy most of the time (n=13). The remaining 0.95% did not answer (n=3).

Do you feel sad most of the time?

38.10% reported that they were sad most of the time (n=120). 57.14% said that they were not sad most of the time (n=180). 4.76% did not answer the question (n=15). 33.65% of students answered that they were both happy most of the time and sad most of the time (n=106). This high rate may be due to the lack of the interviewers' experience coupled with the students' misinterpretation of the two questions.

When you feel sad, do you seek help?

In response to this question, a few students pointed out that, since they were happy most of the time, they were not sad and therefore did not need to seek help. 2.54% said the question was not applicable (n=8). Those students were the ones who said they were never sad. Three out of four students seek help when they are sad (n=237). 22.22% of students do not seek help (n=70).

If yes, to whom do you go for help?

An overwhelming majority of students, 73.84%, go to their mother when sad (n=175 out of 237). Fathers are only sought after 8.44% of the time (n=20 out of 237).

- ✓ 11.81% seek help from others (n=28 out of 237)
- ✓ 5.06% seek help from their sibling (n=12 out of 237)
- ✓ 0.42% seek help from a social worker (n=1 out of 237)
- ✓ 0.42% seek help from the school clinic (n=1 out of 237)

How often has your social worker given you counseling?

Most students have not been counseling by the clinic social worker. Only 30 students, or 9.52%, of the study population reported that they have been counseled. A significant number (46.67% of those counseled) has also gone to the principal's office (p<. 01). The survey did not pursue the exact reasons why students were seen by the social worker, nor were they asked why they were sent to the principal's office, only that they had been "in trouble."

- ✓ 80.00% of the students who have had counseling with the social worker only had it once (n=24 out of 30)
- ✓ 10.00% have been counseled twice (n=3 out of 30)
- ✓ 10.00% have been counseled three or more times (n=3 out of 30)

In the last year, has the school doctor sent you somewhere else outside the school clinic for medical care?

Only a few students reported that the doctor referred them to go outside the School-Based Clinic. In all, 9.24% out of all who visited the school clinic had outside referrals (n= 17 out of 184), leaving the remaining 90.76% noting they were not given an outside referral (n=167 out of 184).

Behavioral Change

How many meals do you have a day?

A vast majority of students had 3 meals a day with the rate of 76.51% (n=241). In contrast, only 1 student

said he/she had one meal a day, and 36 or 11.43% said that they had two meals a day. The rest of the students had an average of 4 or 5 meals a day, which comes to 11.75% (n=37)⁴.

Do you eat your vegetables and fruits?

Almost all students (98.41%) say that they eat their vegetables and fruits (n=310). Only 1.59% said they did not (n=5).

Have you always eaten vegetables and fruits?

When asked if they always ate their vegetables and fruits, 78.41% said they always have (n=247), and 21.59% said they have not always eaten them (n=68).

If no, when did you start eating vegetables and fruits?

Half of the students who have not always eaten vegetables were influenced to start by their mother. Another third of students were influenced by the school health fair to start eating their vegetables.

- ✓ 17.65% were influenced by the school doctor (n=12 out of 68).
- ✓ 50.00% were influenced by their mother (n=34 out of 68).
- ✓ 30.88% were influenced by the health education at the school health fair (n=21 out of 68).
- ✓ 1.47% were influenced by another source (n=1 out of 68)

Do you like fast foods?

95.56% of students said they like fast food (n=301). 4.44% said they did not like fast food (n=14).

What sports do you participate in?

Students enjoy a variety of sports. The most popular sport activity is basketball, with soccer being the favorite of Hispanic students. Almost 10% of students did not specify an activity. See Chart 4.

Do you like PE classes?

A vast majority of students, 95.24%, said that they like physical education

classes (n=300). Only 4.76% of students said that they do not like PE.

How often do you brush your teeth?

Half of the students brush twice a day. Upon closer inspection, it was found that half of the African American students brush their teeth only once a day while an overwhelming majority of Hispanic students brush twice a day. This finding is statistically significant (chi-square =32.13, p< .01). See Figure 3

- ✓ 34.29% of all students brush once a day (n=108).
- ✓ 50.79% brush twice (n=160).
- ✓ 14.92% of all students brush three times (n=47).

Does your mother supervise you in brushing your teeth?

53.65% of students reported that their mother supervises them when they brush their teeth (n=169). 46.35% of mothers do not supervise (n=146). In contrast, 93% of parents reported that they supervise the child's teeth brushing.

Have you always liked brushing your teeth regularly?

88.89% of students say that they like to brush their teeth (n=280). 11.11% do not like to brush their teeth (n=35).

If no, when did you start brushing your teeth regularly?

Most students who did not always brush their teeth regularly started because they were taught by the

dental hygienist, with a rate of 54.29% (n=19 out of 35). 14.29% started after being taught at health fair (n=5 out of 35). The rest of the students made up 31.43% and had other influences to start brushing regularly (n=11 out of 35).

Do you floss your teeth?

Almost two thirds of students reported flossing their teeth. A significant portion of students who floss attend Bonner (74.68%) and Easter (81.58%) Elementary. Also, the upper grade levels have a higher rate of flossing when compared to the lower grades (r=0.152, p< .01)

Sports Preferences		
Sport	#	Percent
Basketball	100	31.75%
Soccer	80	25.40%
Football	30	9.52%
Baseball	23	7.30%
Volleyball	18	5.71%
Track	17	5.40%
Roller Skating	6	1.90%
Swimming	4	1.27%
Bike Riding	4	1.27%
Tennis	2	0.63%
None	31	9.84%
Total	315	

Chart 4

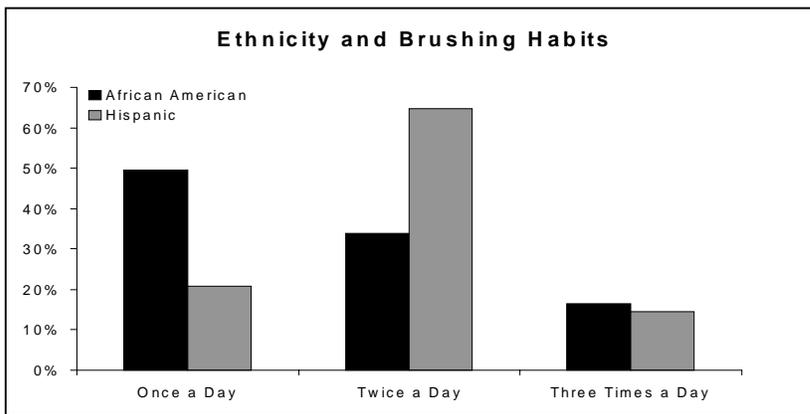


Figure 3

- ✓ 64.76% of students floss their teeth (n=204), and 35.24% of students do not floss their teeth (n=111).
- ✓ 53.40% of students in the 3rd grade (n=55 out of 103) floss.
- ✓ 69.30% of students in the 4th grade (n=79 out of 114) floss.
- ✓ 71.43% of students in the 5th grade (n=70 out of 98) floss.

How many times do you floss?

- ✓ 36.27% once a day (n=74 out of 204)
- ✓ 44.12% twice a day (n=90 out of 204)
- ✓ 19.61% three times a day (n=40 out of 204)

Does your mother supervise you in flossing your teeth?

53.92% of students who floss said that their mothers supervised them while they floss their teeth (n=110 out of 204). The other 46.08% said their mother did not supervise their flossing (n=94 out of 204).

Have you always liked flossing your teeth?

72.55% who floss have always liked flossing (n=148 out of 204). This makes 27.45% who did not always like flossing (n=56 out of 204).

If no, when did you start flossing your teeth regularly?

76.36% of those who did not always floss started to do so because the dental hygienist taught them (n=42 out of 55). 10.91% said the health fair taught them that they should floss (n=6 out of 55), and 12.73% had other influences (n=7 out of 55).

Academic Performance

How well do you do in school?

The students were asked to rate their academic performance. They were given the options of excellent, very good, good, satisfactory and poor to describe their performance. The median answer was good. However,

the parents tended to rate their children as having very good grades.

- ✓ 13.65% of students rated themselves as excellent (n=43).
- ✓ 30.48% of students rated themselves as very good (n=96).
- ✓ 34.60% of students rated themselves as good (n=109).
- ✓ 19.05% of students rated themselves as satisfactory (n=60).
- ✓ 2.22% of students rated themselves as poor (n=7).

How well do you like school?

Three out of 5 students (60%) like school very much (n=189). 37.46% of students like school not too much (n=118) and 2.54% of students do not like school (n=8). There is a positive significant difference between the child's school performance and how well he/she like school (chi-square = 12.40, p=.015).

- ✓ Students who perceive their grades as being excellent like school very much with 79.07% (n=34 out of 43).
- ✓ 65.62% of students who perceive that they do very good work at school like school very much (n=63 out of 96).
- ✓ 48.62% of students who say they do good work also like school very much (n=53 out of 109).
- ✓ 56.67% of students who rated themselves as satisfactory like school very much (n=34 out of 60).
- ✓ 71.43% of the few students, who rated themselves as poor academically, like school very much (n=5 out of 7).

Have you ever been sent to the principal's office because you were in trouble?

One third of the students surveyed have been sent to the principal's office, at the rate of 32.38% (n=102). Also, 71.57% (n=73 out of 102) of students who visit the office are male.

If yes, how many times?

The students reported a wide range of visits to the principal's office. Most said they had gone only once, while one reported sixteen visits. The 102 students who have visited the principal's office made an average of 2.31 visits.

- ✓ 53.92% of those who went have gone once (n=55 out of 102).
- ✓ 19.60% of those who visited went twice (n=20 out of 102).
- ✓ 10.78% of those who visited went three times (n=11 out of 102).
- ✓ 15.69% of those who visited went four or more times (n=16 out of 102).
- ✓ 28.43% of all who have visited the principal's office were suspended (n=29 out of 102).

In the last year, how many times were you out of school because you were ill?

The students answered this question with a wide range of days absent. Some students were never absent, while a few reported that they were absent for as long as 30 days. Analyses showed that the students with long absences also had serious illnesses, such as a case of facial palsy, asthma, and a case of gum abscess with complications. The students were absent an average of 2.68 days during the school year. However, the median number of absences was only two days.

Further analysis of the data was attempted to explore the different variables that determine the relationships between the School-Based Clinic attendance, student medical complaints, and absences from school. It was found that 62.31% of students with medical complaints visited the School-Based Clinic during the 1998-99 school year (n=129 out of 207). Also, the students who visited the School-Based Clinic were absent more than the ones who never visited the clinic. A reason was offered during an inter-

view with the provider of the clinics. He stated that the students with severe and possibly communicable illnesses are advised by the clinic to stay at home as a matter of practice and policy. However, when parents were asked if they would send their child to school if the child were not feeling well, almost half admitted that they would send the child to school. One reason they reported for taking this action was that their child could be seen at the School-Based Clinic⁵. Accordingly, some indication of this practice showed up in some of the more prevalent and basic student complaints. For instance, the 58 students who complained of fever had an average of 2.38 days absent. When School-Based Clinic attendees were isolated, it was found that they made up 79.31% (n=46 out of 58) of all fever patients, with 2.11 days absent and the median number of days absent was only one. The rest of the students with fever complaints were absent an average of 3.17 days with the median number at three days. Stomachaches also showed a lower absence rate when the students used the clinic. Overall, students with stomachaches were absent 3.15 days. When they were treated at the clinic, they were absent an average of only 2.64 days with the median at 2 days. When the student did not use the clinic, they were absent from the school an average of 3.70 days, with the median number at 3.

The data therefore suggests that the presence of a functioning School-Based Clinic has a beneficial effect on school attendance and also meets the needs of the community with respect to public health. The indicators of this are the high parent satisfaction rate (92%), the high consent form rate (82%), and the practice of parents sending their children to school even when the child is not feeling well (46%).

- ✓ 28.57% have never been absent due to illness (n=90)

- ✓ 52.38% have been absent for less than a week (n=165)
- ✓ 19.04% have been absent for more than a week
- ✓ There were significant differences in the number of absences at the various schools attended. Students were absent from Bonner an average of 1.31 days, Easter 2.28 days, Elrod 3.75, and McNamara 3.05.

Patient Satisfaction

Are you satisfied with the treatment you received at the school clinic?

Most clinic patients, 98.38%, said that they were satisfied with the clinic's performance (n=182 out of 184). The rest chose not to express their opinion of the clinic (n=26 out of 184).

If yes, how would you describe your satisfaction?

79.34% of clinic patients rate the clinic as good or very good (n=146 out of 184).

- ✓ 52.17% of students who visited the clinic rated it as very good (n=96 out of 184).
- ✓ 27.17% of patients rated the clinic as good (n=50 out of 184).
- ✓ 5.98% of patients rated the clinic as satisfactory (n=11 out of 184).
- ✓ 14.67% of patients chose not to answer the question (n=27 out of 184).

If you are not satisfied with the School Clinic, why not?

100% of all students said the question was not applicable (n=315).

Are you satisfied with the treatment at the dental clinic?

90.36% of all dental patients said that they were satisfied with the

dental clinic (n=150 out of 166). Also only 9.64%, or 16 dental patients chose not to answer the question.

How would you describe your satisfaction?

84.34% of all students who use the dental clinic rate it as good or very good. The rest said the clinic was satisfactory.

- ✓ Out of those that actually visited the clinic, 9.64% gave no answer to the question (n=16 out of 166).
- ✓ 55.42% of dental patients rated the clinic as very good (n=92 out of 166).
- ✓ 28.92% of dental patients rated the dental clinic as good (n=48 out of 166).
- ✓ 6.63% of dental patients gave the dental clinic as satisfactory rating (n=11 out of 166).

If you are not satisfied, why not?

100% of the students said not applicable to this question (n=315).

Notes:

¹ Homeownership rate for Houston, Texas, is 59.6% for 1998. Source: "Housing Vacancy Survey - Annual 1998: Table 14" <http://www.census.gov/housing/hvs/annual198/ann98t14.html>. U.S. Census Bureau. October 21, 1999.

² National Center for Health Statistics. *Health, United States, 1994*. Hyattsville, Maryland: Public Health Service: 1995.

³ Oral Health America. "Efforts to Care for Children." <http://www.oralhealtamerica.org/OHA%20site/Children.html>. American Foundation for Dental Health: September 10, 1999.

⁴ 4 to 5 meals also includes snack

⁵ See Parent Data, page 14

IX. Discussion

Student questionnaires were administered face-to-face in interviews conducted within four schools (school profile: refer to appendix F). The parent questionnaires were telephone interviews. Both parent and student questionnaires were read to the respondents, and response scales were dichotomous (yes or no). As a part of a pilot study, the questionnaires were first pre-tested in the four schools with a separate group of students that were not part of the study sample. Criteria validity checks were carried out by comparing reported enrollment status with the health center records for each respondent. The average time taken to administer one questionnaire was noted. This gave an estimate for how many interviews could be completed within a specific time. The data obtained were coded, entered into the computer, and analyzed. The results produced the expected outcomes. Survey respondents were similar to the general school and community population in ethnicity, gender and domicile. Bonner and McNamara are predominately Hispanic; and Easter and Elrod are predominately African American. Homeownership is the dominate housing arrangement among the students from Bonner and Easter. One third of the total study population (33.84%) have lived at their present locations for five years or more. Of these, 57.7% are homeowners. In contrast, McNamara and Elrod were noted to have a transient population who have lived in their present domiciles for five years or less, 64% and 80% respectively. Housing-wise, this suggests homeowners have a more stable residency in contrast to apartment dwellers.

Bonner and Easter each having a higher percentage of free lunch, 95% and 96% respectively, have a higher usage of the medical clinic. Easter has a higher usage of both the medical and dental clinics, both schools have few community and private health care services in their area. This demonstrates the ability of the school-based clinic to reach those with the greatest need of health care services.

9.1. Access to Primary Care

The poor health of many children today causes barriers to learning and increased likelihood of risky behavior. It was found that, one child in four in America is at risk of failing in their education, because of social, emotional and health handicaps (Dryfoos, 1994). This program has worked because it provides services where the children are located, in school. It is this accessibility which is the cornerstone of our program. The program has worked because it has taken an integrated and developmental approach to meeting the health care needs of children. It is prevention-oriented, and intervention is initiated at the first sign of a problem by the timely referral of students for specialist care. Where else can children gain 100% access to health care and 0% disparities? Where else can children be readily reached more than in the schools? School-Based Health serves this purpose adequately according to *President Bill Clinton*. Independent of insurance status and other confounding variables, underserved children with SBHC access have better health care access and usage than children without SBHC access. This signifies that SBHC can be an effective component of the health delivery system for uninsured children.

However there can be barriers to access, i.e., teacher fails to permit a child to leave the classroom to attend the clinic, parent declines to sign a consent form for services, etc. It would be interesting to find out why 18% (p 13) of the parents in this study did not submit a signed medical consent form. In a similar study, it was reported that during the 1995-1996 academic year, an estimated 83% of parents gave permission for their child to use the SBHC, leaving 17% of parents who did not give permission¹⁴. This study corroborates results of others studies^{15,16,17} that have shown that health insurance alone is insufficient to ensure access of and use of health care. Access to the SBHC, independent of insurance status and other confounders, was shown to result in improved health care use. Seventy-two percent (71.5%) of the uninsured students within this study had access to SBHC. This was the dominate patient population of the SBHC followed by students with Medicaid benefits (p13). Data supports that the program is preventive 11.4% of uninsured children from visiting the ER (p13). The usage of the ER by the students was lower due to the preventive care received within the SBHC. Having access to an SBHC was associated with a two-thirds likelihood of having received dental sealants. (p20)

Another study has shown¹⁸ that health insurance is not the exclusive mediator of health care access and use. It appears that the SBHC eliminated personal barriers to health access, including user's comfort with clinic staff and waiting time. With SBHC, a student can obtain an appointment quickly and will not miss a day's schoolwork.

However, an obstacle to access could be the parents' permission before service could be given. In this study, 18% of parents did not submit a signed consent form as stated earlier. Also, because children access care independently of their parents most of the time, providers interact with children on the terms the children present. Provider-child interactions may take longer without an intermediary adult. One-fifth of students have used the clinic more than four times (p19) and one-third of students visited the dental clinic more than 4 times (p20) in the last year. This high frequency of use indicates the level of need for services and the children found the SBHC accessible and responsive to their needs. The most common complaints of the children who present to the school clinic, as obtained in this study (p19) and from clinic record, are fevers which may be the cause of Otitis Media, diagnosed by the provider. Tooth ache, which is a symptom of tooth decay (11%), and gum abscess (1%) (p20) are the most common dental complaints. Of the 82% of all parents whose children had biannual dental check up, 81% of them had it done at the school dental clinic. The students benefit from having affordable dental services (\$2.00 fee for non-Medicaid free lunch students) included in our program. According to a 1995 study¹⁹, the average cost of dental services for a child is one-third the cost for a female over age 40. Data shows that tooth decay is the single most common chronic disease of childhood, affecting more than half of second graders²⁰. Tooth decay is disproportionately diagnosed in low-income children. Analysis data show the prevalence of tooth decay in children is inversely related to income level and that the lack of dental insurance is a strong predictor of lack of dental care²¹. Sixty-seven percent (67%) of the study population who were uninsured presented to the dental clinic with dental problems. However, only 34.2% of the students from Bonner used the dental clinic in the past year. This low percentage of utilization is the result of many students requiring extensive and time-consuming treatment which prohibited other students from accessing the dental clinic in a more timely manner. Dental problems were addressed by outside dentists while the Bonner students awaited access to the dental clinic. Although our goal of 55% zero caries at recall was obtained in the last year, it seems to be decreasing since the beginning of the 1999-2000 academic year, i.e., October 43%; and November 42%. Data analyzed by the National Academy of Social Insurance show that 23% of child health expenditures went to dental care²². Yet Medicaid EPSDT dental services are funded at only 2.3% of state child Medicaid dollars²³. Our program collected \$7,991.45 in Medicaid revenue for the 1998-1999 fiscal year; and \$90,994.74 in Medicaid revenue since the inception of the program to the end of 1999.

The program has significantly increased accessibility to and use of health services. The usage rates for the medical clinic and dental clinic are 58.41% (p.19) and 50.79% (p 20), respectively. Eight-nine percent (89.3%) of parents (p14) answered they would send their children to school even if the children were ill. This would be carried out with the expectation the children would receive medical services within the SBHC. Also, data show the program has prevented 11.4% of uninsured children from visiting the ER (p13). Additionally, the program has decreased the number of days absent from school, by 42% and 45% , of students who would be sent to a private doctor or a community clinic, respectively (p13). Also 54% of parents would take their children to the community clinic; and 41.06% to a private dentist for dental care. These visits would affect 86% of parents to miss a day's work (p14). This study, however, does not show any correlation between having a SBHC on site and academic performance among users ($r=0.089$, $p=0.212$). A comparison was not made between users and non-users in the study, because they are not the same population. A control school was not chosen because of time and monetary limitations. Therefore hypothesis I is not valid.

9.2. Access to Preventive Care

Preventive care constituted 82.54% of students who had a medical check-up for height and weight assessment. Ninety-six percent (96%) of all students have been immunized. The low usage of the SBHC for these services was due to the absence of a medical provider during this period. The program was inactive for ten months due to the resignation of the nurse practitioner.

9.3. Injury Prevention

Safety education is given to all classes in the schools. Common injuries and traumas occurring on the school campus are mostly minor abrasions and lacerations. Prompt attention has been given in each case either by the school nurse (53%) who is always on campus during school hours, by the SBHC (17%), or by a class teacher (12%). Among school aged children, safety risks are the most serious health risks. It is documented that accidents and their adverse effects top the crude death rate for children 1-14 years old with 12.3% in 1991, decreasing to 8.7% in 1995.²⁴

9.4. Social Problems

There are no mental health services rendered in the program. Attempts were made to find out if there was a need to include it in future expansion. The social workers assigned specifically to the program have done little social work (9.24%, p21). Nine percent (9.21%) of the students have disciplinary problems (p23). Twenty-eight percent (28.43%) of the students who were sent to the principal's office were subsequently suspended. There was a sex differential of more boys (71.57%) than girls (28.43%) sent to the office. Ninety-nine percent (98.9%) of the parents whose children were sent to the principal's office did not seek the services of a psychiatrist. If not given proper attention/treatment, these children could commit crimes and become prisoners in the future.

9.5. Behavioral Change

Health and Education of children are inextricably linked, and they should not be separated. Therefore SBHC addresses this connection. Medical and dental education is a priority in the school-based program. There is an impact on behavioral change brought about by the program's health education (p 15, 22). The medical provider has influenced mothers and students. Because of the medical provider's health education, children have chosen to have changed/improved their eating habits to prevent certain diseases and to promote good health. Persons, older than two years of age, should follow the seven recommendations that constitute the Dietary Guidelines for Americans²⁵. These guidelines were developed by the USDA and US Department of Health and Human Services and are published every five years. The principles contained in the Dietary Guidelines for Americans should be the primary focus of SBHC nutrition education. Young people need to develop life long patterns consistent with the Dietary Guidelines for Americans and the Food Guide Pyramid. SBHCs nutrition education is particularly important because today's children frequently decide what to eat with little supervision²⁶. The increase of fast-food restaurants inhibits parents to monitor their children's eating habits. In this study the majority of students enjoy eating fast food (95.56%). However, the majority of students also enjoy participation in physical education classes (95.24%) and a variety of sports (p22). The overweight and obese children are given special keep fit classes together with their parents. Overweight and obesity are increasing among US children^{27,28}. The prevalence of obesity among US youths, ages 6-17 years, has more than doubled in the past 30 years; most of the increase has occurred since the late 1970's²⁸.

9.6. Association among SBHC, Absences, and Academic Performance

The program has a comprehensive package aimed at meeting health care needs of the population. It serves comprehensive care in viewing health in its three interrelated dimensions, physical, psychological, and social in accordance with World Health Organization's definition of health: "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."²⁹

The goal of this study was to identify scholastic outcomes associated with use of the SBHC to see whether or not clinic use had an effect on students' absences and academic performances. The second hypothesis states: "Access to SBHC reduces the number of absences of students." The American School Health Association has presented testimony showing that 38% of students in one New York City school reported that their attendance had improved as a result of the clinic³⁰. It was difficult for us to document change as a function of the SBHC. Asserting a causal link between the health center and improvements in attendance and academic performance is problematic because so many factors affect these relationships. However, indicators such as absence due to ill health, easy access to SBHCs, and comprehensive and affordable health care services have been documented. A sick child cannot concentrate well in learning. Poor academic achievement would show an association between health and learning. Caution has been taken to attribute any improvement simply to the presence of the SBHC because there may be other confounding factors, i.e., school environment (dedicated teachers, better ventilation) or school culture (awards/incentives for perfect attendance, HISD funding associated with good academic performance). Although SBHC has been in existence for many years, research has yet to confirm a direct empirical and irrefutable link between SBHC and academic achievement. More time would be needed to evaluate the progress children make as they move from elementary through high school. A longitudinal study of specific children over a period of time may demonstrate that the availability of SBHC will have an impact on the child's health and academic success. This evaluation shows opportunities to impact outcomes with targeted health programs, but the evidence is still not strong. Statistical values obtained in this study for SBHC users and times absent due to illness ($r=0.065$, $p=0.251$) and between SBHC users and academic performance ($\chi^2=1.574$, $p=0.210$) are not significant.

9.7. Comparison between SBHC and Pediatric Clinic Services

The provision of health care services at SBHCs appear to be inexpensive. Quality of services is not provided at the expense of its cost. SBHCs deliver high quality services to students at a relatively low cost, especially when compared to services provided at a pediatric clinic.

However, it is difficult to compare SBHCs to a conventional pediatric care, because both types of practices serve children differently. SBHCs are usually not considered as a medical home for their patients since the majority do not offer services 24 hours a day. It usually complements the conventional health care services in the community rather than serving as an alternative. Also, the average cost of the two services are not really comparable. However, one could compare individual services like physical examinations. The charge for a physical examination of a well child of elementary school age from a pediatric clinic may cost roughly \$125 to \$150 including immunizations. At the same time, a well child examination at the SBHCs takes a longer time than at the conventional pediatric clinic. SBHC cost in the four schools is considerably lower to the provider and cost nothing to the child and the parent. Dental charges are a minimal fee of \$2.00. Medicaid reimburses the program an amount of \$16.25 per visit at the SBHC.

A visit to the SBHC is student or parent initiated. The student is usually not accompanied by a parent. Prior to the appointment, the parent completes a medical history questionnaire. In the SBHC situation when there are significant points of medical history that necessitate clarification, cross questioning cannot be done at the time it is needed. Information needed may be obtained a week later at the same school site. Also, working parents are difficult to contact

by telephone during clinic hours. Whereas at a pediatric clinic parent/guardian determines the need and must accompany the child to visit the pediatrician, it is easier to get the medical history. Preventive, promotive, and health education at SBHC is intensely focused individually and with groups of children. The time spent is usually longer than a pediatric clinic, which addresses preventive and promotive health briefly during visits. At SBHC diagnostic tests are basically screening tests with great emphasis on overall developmental assessment and takes a longer time. At the pediatric clinic, a vast number of diagnostic tests are performed based on benefit coverage. The environment at the SBHC is child-friendly, familiar in a neutral setting, and meets health care standards. The pediatric clinic is provider-friendly, in an unfamiliar setting, and also meets health care standards. Appointments made at SBHCs are on demand, based on patients perceived need. Whereas the pediatric clinics schedule appointments with limited ability to accommodate walk-ins. Length of visits at SBHCs is client-dependent with no time barriers. At the pediatric clinic, a visit is schedule-dependent, lasting 10-15 minutes per visit. Problems that may be lengthy at a pediatric clinic, but are not urgent, may need to be scheduled for additional visit(s). At SBHCs, visit frequency is clinic-dependent. Access to SBHCs is within the school compound and within walking distance. The pediatric clinic is located in the central business area of the community and transportation is usually required. High follow-up rate at SBHC is accomplished with great ease, and is not reliant on a parent for follow-up. Pediatric clinic has a low follow-up rate and is dependent on parental compliance and involvement to provide access for follow-up. There is easy access to dispense medication at SBHCs. However, it may be problematic in explaining the directions for usage without parent involvement. At SBHCs there is emotional support. The schedule permits time to offer individualized, frequent support. At a pediatric clinic, time is limited due to aggressive schedule commitments. Generally, services take a longer time and preventive/promotive health orientated at the SBHC than at a pediatric clinic, which is usually curative health oriented.

9.8. Cost of Program for One School

School-Linked Program Medical Clinic Costs Incurred in Opening One Medical Clinic Established/Historical City of Houston Costs				
Item #	Description		Amount	Subtotal
2000				
20105	Cleaning & Sanitary Supplies		\$ 100.00	
20105	Audio-Visual Supplies		\$ 200.00	
20305	Computer Supplies			
	b	Computer Supplies, I.e., cartridges, diskettes	\$ 300.00	\$ 600.00
20310	Paper & Printing Supplies			
	a	Medical History Form	\$ 29.00	
	b	Medical Record Folder	\$ 67.00	
	c	Medical Consent Form	\$ 15.00	
	d	Office Forms/Medical Forms, referrals forms	\$ 13.00	
	e	Paper	\$ 50.00	\$ 174.00
20315	Publications & Printed Material			
	a	Physicians' Desk Reference	\$ 72.00	
	b	Fact & Comparisons	\$ 45.00	
	c	TX Pharmacy Laws & Regulations	\$ 25.00	
20320	Postage		\$ 100.00	\$ 242.00
20325	Miscellaneous Office Supplies			
	a	Color Coded Labels for Medical Files	\$ 67.00	\$ 67.00
20400	General Laboratory Supplies			
	a	Oxygen Tubing and Mask	\$ 15.00	
	b	Vacutainer Blood Collecting Set	\$ 32.00	
	c	Blood Collection Tubes, i.e. red top, purple top	\$ 200.00	

	d	Disposable Needles for Vac	\$ 27.00	
	e	Luer Lock Syringes (3cc)	\$ 16.00	
	f	Lancets	\$ 100.00	
	g	Butterfly Needles	\$ 40.00	
	h	Specimen Cups	\$ 45.00	\$ 475.00
20405	Drugs & Medical Chemicals			
	a	Medications	\$1,250.00	
	b	Examination Gloves	\$ 70.00	
	c	Plastic Emesis Basins	\$ 42.00	
	d	Disposable Face Masks	\$18.75	
	e	Wooden Tongue Blades/Depressors	\$ 5.00	
	f	Q-Tips	\$16.00	
	g	Cotton Balls	\$11.54	
	h	Band-aids	\$ 30.00	
	I	Disposable Patient Gowns	\$60.00	
	j	Examination Table Paper	\$25.00	
	k	Replacement Ear Tips	\$100.00	
	l	Disposable Probe Covers for Thermometer	\$ 20.00	
	m	Amonia Inhalant, Betadine Scrub	\$12.00	
	n	Medicine Cups	\$ 10.00	
	o	Gauze	\$ 7.00	
	p	Tape	\$ 8.00	
	q	Sharps Containers	\$ 60.00	\$1,745.29
20410	Medical & Surgical Supplies			
	a	Paper Shredder	\$ 91.00	
	b	Metal Medicine Cabinet	\$ 275.00	
	c	Computer: Pentium 133/166MHZ	\$1,087.00	
	d	Monitor	\$ 227.00	
	e	Printer	\$ 500.00	
	f	Lateral File	\$ 145.70	
	g	Date Stamp	\$ 9.00	
	h	Utility Cart	\$ 200.00	
	i	Provider Stool	\$ 200.00	
	j	File - 2 drawer	\$ 60.00	
	k	Toothbrushes (child) X 6 Gross	\$159.84	
	l	Examination Paper	\$ 25.00	
	m	Toothbrushes (adult) X 8 Gross	\$ 219.20	
	n	Dental Floss X 5 Gross	\$ 193.80	\$3,392.54
20415	Small Technical & Scientific Equipment			
	a	Otoscope	\$ 437.00	
	b	Ophthalmoscope	\$ 348.40	
	c	Sphygmometer	\$ 65.00	
	d	Reflex Hammer	\$ 24.00	
	e	Bandage Scissors	\$ 8.00	
	f	Pen Light	\$ 2.34	
	g	Ultraviolet Lamp	\$ 171.00	
	h	Stethoscope	\$ 64.50	
	I	Pillow	\$ 4.00	
	j	Digital Thermometer	\$ 250.00	
	k	ThermoScan Pro I	\$ 174.00	
	l	Fiber Glass Tape Measure	\$ 7.00	
	m	Ear Syringe	\$ 43.20	
	n	Instant Ice Pack	\$ 30.00	

	o	Aerosol Compressor	\$ 72.00	
	p	Nebulizer	\$ 60.00	
	q	Standing Scale	\$ 300.00	
	r	Baby Scale	\$ 306.00	
	s	Height Measurer	\$ 75.00	
	t	Eye Charts	\$ 12.00	
	u	Pharmaceutical Plastic Syring Set for Mixing Medication	\$ 72.00	
	v	Cardiology Stethoscope	\$ 161.25	
	w	3.5 Halogen Diagn Set with Recharg Battery: Fiberoptic Oscope	\$ 396.35	
	x	Pneumatic Oscope Attachment	\$ 16.00	
	y	Tournequet	\$ 4.50	
	z	Tuning Fork	\$ 12.00	
	aa	Examination Screen	\$ 180.00	
	bb	Examination Table	\$ 315.00	
	cc	Utility Stool	\$ 32.00	
	dd	Goose-Neck Lamp	\$ 56.39	
	ee	Oxygen Tank	\$ 150.00	
	ff	B-Hemoglobin Meter	\$ 500.00	
	gg	B-Glucose Analyzer	\$ 67.00	
	hh	Growth Chart	\$ 34.00	
	ii	Glass Containers X 5	\$ 36.00	
	jj	TV/VCR	\$ 650.00	
	kk	Mobile Stand for TV/VCR	\$ 280.00	\$ 5,415.93
20725	Miscellaneous Parts & Supplies			
	a	Miscellaneous Supplies	\$ 200.00	
	b	Blanket	\$ 10.00	\$ 210.00
2412	Conveyance of lab specimen		\$ 1,327.20	\$ 1,327.20
	Subtotal			\$ 13,648.96
				\$15,013.86 (10% inflation)
3000				
30345	Miscellaneous Support Services		\$ 100.00	\$100.00
30410	Xerox copier		\$ 850.00	\$ 850.00
30525	Refuse Disposal			
	a	Medical Waste Pick-up, (Sharps Containers & Medical Waste)	\$ 100.00	\$ 100.00
30615	Computer Equipment/Software Maintenance			
30794	Print Shop Services			
	a	Copying of Forms	\$ 81.00	\$ 81.00
30900	Education & Training		\$ 400.00	
30910	Travel - Training Related		\$1,000.00	
30950	Travel - Non-Training Related		\$1,500.00	\$2,900.00
	Subtotal			\$4,031.00
				\$ 4,434.10
				(10% inflation)
	Grand Total			\$17,679.96

List of Supplies Needed to Open One Medical School-Based Clinic

Medical Instruments

- Otoscope
- Ophthalmoscope
- Sphygmometer
- Reflex Hammer
- Bandage Scissor
- Pen Light
- UltraViolet Lamp
- Stethoscope
- Pillow
- Digital Thermometer
- ThermoScan Pro I
- Fiber Glass Tape Measure
- Ear Syringe
- Instant Ice Pack
- Aerosol Compressor
- Standing Scale
- Nebulizer
- Baby Scale
- Height Measurer
- Eye Charts
- Pharmaceutical Plastic Syringe Set for Mixing Medication
- Cardiology Stethoscope
- 3.5 Halogen Diagnostic Set with Recharable Battery: Fiberoptic Otoscope
- Pneumatic Otoscope Attachment
- File - 2 drawer
- Tournequet
- Tuning Fork

Disposable Medical Items

- Examination Gloves
- Plastic Emesis Basins
- Disposable Face Masks
- Wooden Tongue Blades/Depressors
- Q-Tips
- Cotton Balls
- Band-aids
- Vacutainer Blood Collecting Set
- Specimen Cups
- Disposable Patient Gowns
- Blood Collection Tubes, i.e. red top, purple top
- Disposable Needles for Vac
- Luer Lock Syringes (3cc)

- Examination Table Paper
- Replacement Ear Tips
- Disposable Probe Covers for Thermometer
- Butterfly Needles
- Amonia Inhalant, Betadine Scrub
- Lancets
- Medicine Cups
- Gauze
- Tape
- Sharps Containers

Office Equipment

- Utility cart
- Refrigerator
- 2 Office Desks
- 2 Office Chairs
- Book Case
- Dust Bin Plastic
- 2 Desk Trays
- 2 Rotary Card Holder
- First Aid Kit
- Metal Pencil Sharpener
- Secretary's Table 24"x48"
- Stacking Chairs Ctn. Of 4 x 3Ctn
- Clip Boards 2Ctn
- Filing Cabinet
- Wall Tray
- Paper Shredder
- Medicine Cabinet
- Computer
- Monitor
- Printer
- Batteries for refrigerator thermometer for Vaccine temp control
- Lateral File
- Date Stamp
- Utility Cart
- Provider Stool

Services

- Medical Waste Pick-up (Sharps Containers & Medical Waste)
- Conveyance of laboratory specimen

Reference Books

- Physicians' Desk Reference
- Fact & Comparisons
- TX Pharmacy Laws & Regulations

Miscellaneous Items

- Examination Screen
- Examination Table
- Utility Stool
- Goose-Neck Lamp
- Oxygen Tank
- Oxygen Tubing and Mask
- B-Hemoglobin Meter
- B-Glucose Analyzer
- Medications
- Glass Containers X 5
- TV/VCR
- Mobile Stand for TV/VCR
- Blanket
- Office Forms/Medical Forms, referrals forms
- Computer Supplies, i.e., cartridges, diskettes
- Paper
- Copying of Forms
- Growth Chart
- Medical History Form
- Medical Record Folder
- Medical Consent Form
- Color Coded Labels for Medical Files
- Toothbrushes (child) X 6 Gross
- Toothbrushes (adult) X 8 Gross
- Dental Floss X 5 Gross
- Miscellaneous Supplies
- Postage
- Audio-Visual Supplies
- Cleaning & Sanitary Supplies

Cost Analysis of School- Based Program

Personnel of School-Based Program

City of Houston Employees		
1 Pediatrician	part-time	\$ 35,000.00
1 Administrative Aide	full-time	\$ 24,400.00
1 Program Administrator	full-time	\$ 38,500.00
3 Employees	Total	\$ 97,900.00
City of Houston, Dental Clinic Employees ¹		
1 Chief Dentist	full-time	\$ 64,140.00
2 Dentists	part-time	\$ 64,140.00
1 Dental Hygienist	full-time	\$ 34,000.00
4 Dental Assistants	full-time	\$ 68,416.00
8 Employees	Total	\$230,696.00
HISD Employees		
1 Social Worker (MSW)	full-time	\$ 35,000.00
1 Clinic Secretary		\$ 20,000.00
1 Registered Nurse	full-time	\$ 33,286.00
3 Employees	Total	\$ 88,286.00
14	Total Employees	\$416,882.00

Total Cost of Program

City of Houston, Medical	
Supplies, Services & Training	\$ 17,680.00
Capital Expenses (1x purchase)	\$ 4,615.00
Personnel	\$ 97,900.00
Total	\$ 120,195.00
City of Houston, Dental	
Dental Supplies	\$ 14,966.00
Dental Services	\$ 6,414.00
Capital (1x purchase)	\$ 85,520.00
Personnel	\$ 230,696.00
Total	\$ 337,596.00
Houston Independent School District	
Supplies	\$ 2,500.00
Transportation	\$ 5,000.00
Clinic Space and Utilities	\$ 4,500.00
Personnel	\$ 88,286.00
Total	\$ 100,286.00
Grand Total	\$ 558,077.00

¹ 1995 prices adjusted 6.9% for inflation to project prices in 1998.

9.9. Cost Effectiveness

The total cost of implementing this program during FY 1998-1999 is \$467,942. To analyze the cost effectiveness would be to obtain the rates of cost input (including in-kind) to outcome for each individual student who attended the SBHC and the number of visits of each student made in FY 1998-1999. The medical clinic was inactive for 10 months. The Dental clinic was also affected for 4 weeks due to fire outbreak in one of the clinics, Ripley, and transportation troubles (bus overhauling) during the same period. Some of the expenses for the materials in the Dental Clinic, e.g. amalgam, is not only used for the School-Based Program recipients, but also for community patients. The input which is partly the cost incurred in implementing the program, is rarely analyzed. However, it is difficult to define and measure the output. This requires a longitudinal study in order to produce a better outcome. The investigator recommends that this be taken as a project for a graduate masters program in the health or economics field of study.

X. Conclusion

This study has shown that the SBHCs have made great strides towards full participation in providing health care services for the students at the four schools in the program. This has been demonstrated by the high rates of usage of both the medical and dental clinics. The clinics are accessible to the students and responsive to a wide range of the students' needs. The clinics are valued by both the students and parents. Students can seek and receive services independently of their parents, provided that the parents have a current medical history and consent form on file. Basic ailments can be treated and health problems, which cannot be handled at the clinics, are referred before developing into greater problems. Health education made a great impact on behavioral change. Children with general behavioral problems have been identified, however there does not appear to be students who need psychiatric help. SBHC mediated and coordinated with school principals, students, school nurses, and other school personnel.

This evaluation has documented and demonstrated an extensive level of work to create a resource for child health in geographically and ethnically diverse communities challenged by poverty and medically underserved. Uninsured children have been given access to health care services, which otherwise would have been denied to them.

XI. Recommendations

- 11.1.** The social workers need to be engaged in more social work (i.e. counseling, home visits, etc.).
- 11.2.** Attention should be given to those students with general behavioral problems.
- 11.3.** More medical clinic hours are needed in the four clinics instead of six hours a week per school clinic.
- 11.4.** Two LVNs need to be employed to help the pediatrician in the clinics. Additionally, these LVNs can accompany the students to the dental clinics, instead of using the social workers.
- 11.5.** A midterm review of the program should be done by the HISD Research Department in two years.
- 11.6.** An independent, in-depth evaluation should be done in 4 years by an outside evaluator.

Bibliography

1. Allen-Meares P. Social work services in schools: a national study of entry-level tasks. *Soc Work.* 1994; 39:560.
2. Kort M. The delivery of primary health care in American public schools 1890-1980. *J of School Health.* 1984; 54:453.
3. Wood TD, Rowell HG. *Health supervision and medical inspection of schools.* Philadelphia: W.B. Sanders, 1927.
4. Hoag EB, Tenman LB. *Health Work in Schools.* New York: Houghton Mifflin, 1914.
5. Adolescent medicine. *State of the Art Reviews.* 1996 June; 7(2).
6. Graham JL. School-based services and adolescent health past, present and future.
7. Cronin GE, Young WM. *400 novels: the future of school health in America.* Bloomington, IN: Phi Delta Kappa, 1979.
8. Schlitt JJ, Rickett KO, Montgomery LL, et al. State initiative to support school-based health centers: a national survey. *Journal of Adolescent Health.* 1995; 17:68-76.
9. Dryfoos JG, Schlitt JJ. *Making the grade: school-based health centers.* Program office administered by George Washington University.
10. *Joining Hands: News from the National Assembly on School-Based Health Care.* Fall 1998.
11. *The Texas Department of Health School-Based Health Centers Website.*
12. *Texans for Healthy Kids Healthy Schools.* January 30, 1999.
13. Ramos V, Jennings J. A survey of Texas SBHCs. *Texans for Healthy Kids Healthy Schools.* Fall 1998.
14. Kaplain DW, et al. *Arch Pediatr Adolesc Med.* March 1999; 153(3): 235-243.
15. Fielding JE, Cumberland WG, Peltit L. Immunization status of children of employees in a large corporation. *JAMA.* 1994; 271:525-530.
16. Himmelstein DU, Woolhandler S. Care denied: US residents who are unable to obtain needed medical services. *Am J of Public Health.* 1995; 85: 341-344.
17. Newacheck PW, Hughes DC, Stoddard JJ. Children's access to primary care: differences by race, income, and insurance status. *Pediatrics.* 1996; 97:26-32.
18. Andersen RM, Giachello AL, Aday LA. Access of Hispanics to health care and cuts in services: a state-of-the-art overview. *Public Health Rep.* 1986; 101: 238-252.
19. Milliman and Robertson. *Dental Cost Guidelines.* 1995.
20. Brunelle JA. Caries attack in the primary dentition of US children [abstract]. *J of Dent Res.* 1990; 69 (special issue): 180: 575.
21. Edelstein B. Fact sheet on children's dental care in CHIP. *American Academy of Pediatrics.* 1998.
22. Evans A, Friedland. Financing and delivery of health care for children: Background paper for the NASI Advisory Committee on Reforming American Health Care financing policy and administrative choices. *National Academy of Social Insurance.* May 1994.
23. *American Academy of Pediatrics' annual analysis of HCFA 2082 data.*
24. *West end health services area and citywide data.* Bureau of statistics.
25. Cross B. *Annotated bibliography: nutrition management for children with special needs.* 2nd ed. University of Mississippi: National Food Service Management Institute, 1993.

26. Crockett SJ, Sims LS. Environmental influences on children's eating. *J of Nutr Educ.* 1995; 27(5):235-249.
27. CDC prevalence of overweight among adolescents- United States, 1988-1991. *MMWR.* 1994; 43(44): 818-821.
28. Trolando RP, Flegal KM, et al. Overweight prevalence and trends for children and adolescents: The national health examination surveys, 1963-1991. *Arch Pediatr Adolesc Med.* 1995; 149: 1085-1091.
29. WHO: the first 10 years of WHO in the constitution of WHO. Geneva: The World Health Organization, 1958: 459.
30. American School Health Association testimony on the year 2000 objectives for the nation: recommendation for the School Health Program. Dayton, OH: April 1988.

Table of Appendices

Appendix A School-Based Health Centers by State	i
Appendix B State Guidelines for School Based Health Centers	iii
Appendix C Houston Independent School District School-Based Health Centers	ix
Appendix D National Principles for School-Based Health Centers	xii
Appendix E Texas House Bill 2202	xiii
Appendix F SBHC School Profiles 1998-1999	xvii
Appendix G School-Based/Linked Health Program Evaluation Tables	xxi
Appendix H School-Based/Linked Health Program Charts	xlvi

Appendix A

School-Based Health Centers by State¹

School-Based Health Centers Oct. 1994						Financing for 1994 Fiscal Year				
State	High School	Middle/ Junior	Elementary School	Other ²	Total	State Money	Title V	Medicaid	Site Specific ³	Planning Activities
Alabama	2	0	0	0	2		Local	X ⁴	X	
Alaska	1	0	0	0	1				X	
Arizona	2	0	10	0	12		65,000		X	50,000
Arkansas	9	5	4	4	22	930,000	52,000	X		
California	9	2	5	10	26	100,000	300,000	X	X	155,000
Colorado	7	4	14	1	26		175,000	X	X	150,000
Connecticut	13	7	11	1	32	3,662,000	376,000		X	100,000
Delaware	12	0	0	0	12	1,486,000	130,000			
District of Columbia	2	0	0	0	2					
Florida	9	5	5	1	20	1,370,000		X	X	40,000
Georgia	2	2	1	0	5	X	X	X	X	150,000
Hawaii	0	0	0	2	2	500,000	50,000			
Idaho	0	0	0	0	0					
Illinois	5	2	0	1	8		1,400,000	X	X	
Indiana	8	2	2	0	12		434,000	X	X	
Iowa ⁵	3	0	0	0	3	50,000	160,000		X	8,500
Kansas	2	0	0	0	2	117,000	46,000		X	115,514
Kentucky	0	0	0	0	0					
Louisiana	4	3	1	1	9		1,100,000	X	X	475,000
Maine	3	0	0	2	5	50,000	100,000	X	X	
Maryland	11	7	4	1	23	125,000	371,000	X	X	100,000
Massachusetts	21	2	3	5	31	1,422,000	67,252	X	X	645,000
Michigan	11	1	0	7	19	2,600,000		X	X	
Minnesota	13	1	1	3	18	60,000	500,000	X	X	
Mississippi	5	3	0	0	8		68,000	X	X	
Missouri	2	0	0	1	3	220,000		X	X	450,000
Montana	0	0	0	0	0					
Nebraska	0	0	0	0	0					
Nevada	0	0	0	0	0					
New Hampshire	1	0	0	0	1				X	

¹ Source: Making the Grade: State and Local Partnerships to Establish School-Based Health Centers (1994)

² Other includes K-12, K-7, K-8, 7-12, Head Start, and Teen Parent Schools

³ Site Specific may include support from local public funds, private foundations, patient revenues, the United Way, and community

⁴ X= sites receive funds from these sources, but the amounts are unknown

⁵ In 1994, the Iowa legislator appropriated funds to the State Education Agency for 13 new multi-service centers for youth and four existing centers. Some of these centers will add on-site primary care in 1995

State	High School	Middle/Junior	Elementary School	Other ⁶	Total	State Money	Title V	Medicaid	Site Specific ⁷	Planning Activities
New Jersey ⁸	3	0	0	0	3	750,000		X	X	
New Mexico	23	5	1	0	29	91,242	122,657		X	
New York	34	26	74	12	146	6,500,000	3,500,000	X	X	
North Carolina	14	3	0	3	20	910,000	Local	X	X	100,000
North Dakota	0	0	0	0	0					
Ohio	1	0	1	0	2		Local			
Oklahoma	0	1	1	1	3		Local	X	X	
Oregon	19	0	0	0	19	664,000	10,000	X	X	100,000
Pennsylvania	6	6	17	0	29	50,000	600,000	X	X	10,000
Rhode Island	1	1	0	0	2	69,000	60,000			100,000
South Carolina	1	0	0	0	1		Local	X	X	
South Dakota	0	0	0	0	0					
Tennessee	3	0	2	1	6		Local	X	X	124,000
Texas ⁹	5	4	10	0	19		2,000,000	X	X	
Utah	0	0	0	0	0				X	50,000
Vermont	0	0	0	1	1			X	X	100,000
Virginia	1	0	1	0	2	300,000		X	X	300,000
Washington	5	0	0	0	5				X	
West Virginia	6	5	3	0	14	250,000	X	X	X	300,000
Wisconsin	2	0	0	0	2	38,000	320,000	X	X	
Wyoming	0	0	0	0	0					
Totals:	281	97	171	58	607	22,314,242	12,006,909	29	37	3,623,014

Note: The figures included in this chart are estimates of the number of school-based health centers and their financing as reported by state agency representatives. The Making the Grade National Program Office urges cautious interpretation of this information due to the imprecise definition of school-based health centers across states and communities and some state's inability to track independent community-based programs

⁶ Other includes K-12, K-7, K-8, 7-12, Head Start, and Teen Parent Schools

⁷ Site Specific may include support from local public funds, private foundations, patient revenues, the United Way, and community

⁸ Does not include 27 school-based youth service centers

⁹ Does not include 41 school-linked sites

Appendix B

School Guidelines for School-Based Health Centers (1994)ⁱ

Colorado	
Primary Goal	To remove financial and organizational barriers that inhibit establishing and sustaining school-based health services which will ultimately facilitate universal access to basic primary preventive physical and mental health care services for the school-age population.
Sponsoring Agency	Ideally, SBHCs will be linked with Community Health Centers, local health departments, and county nursing services which are permitted reimbursement without a physician on-site.
Site Specifications	Located on the school site.
Service Definitions	Varies based on school type. Elementary: well child care; Middle school: well child/adolescent care, reproductive health, and optional contraceptive services; High school: well adolescent and preventive health services and substance abuse services. All centers offer acute care, lab tests, medicines, acute care for chronic conditions, dental care, mental health, and health education
Staffing	Guidelines suggest school nurse practitioner or physician assistant, mental health practitioner, student health technician (or secretary), and health educator. At the middle and high school levels, substance abuse and violence prevention specialists may be added.
Community Participation	Must provide evidence of relationships with public and private health providers, teachers, school health personnel, community-based organizations, service clubs and other community groups, parents, students, and others determined to have a state in the health of the community's children.
Parental Consent	Parents should be allowed to choose whether their child may use the SBHC services by having the option to sign a consent form.
Continuum of Care	Case management and follow-up to ensure that all health concerns are adequately addressed. After hours coverage and linkages with all appropriate levels of care is required.
Evaluation & Quality	Information on the quantity and quality of services delivered will be collected by sites using School HealthCare Online!! Data and outcome accountability requirements will be defined.
Connecticut	
Primary Goal	To expand comprehensive health services for school-aged children and adolescents.
Sponsoring Agency	A medical provider who delivers services at the community level will be selected by the community advisory board based on ability to meet state agency and RWJ model requirements, willingness to form a partnership with the school system, and ability to meet state licensure standards for an out-patient clinic.
Site Specifications	On-site availability of adequate clinic space is mandatory. The SBHC should be located in a fairly visible area of the school. It must be made appealing to the students, both in terms of aesthetics and accessibility. The center must be designed to ensure privacy and confidentiality and meet state licensing standards.
Service Definitions	Primary health care, social services, mental health, health education, prenatal and post-partum referral and follow-up. Encourage dental services where need is indicated.
Staffing	Includes a center manager with training in mental health/health systems management, at least one nurse practitioner with adolescent health experience, one MSW with consultant backup, additional allied health professionals as needed, and clerical support.
Community Participation	Linkages to the community medical and social service providers (local health departments, community health clinics, and medical schools/hospitals) must be established and maintained.
Parental Consent	Parent consent is required to receive center services.
Continuum of Care	Must define back-up for center non-operating hours and linkage to services beyond clinic scope through letters of agreement. Ideally, the center staff would have privileges at the back-up site(s) in order to enhance the continuity of care.
Evaluation & Quality	Both components are site specific and site determined. State department of health services monitors plans and outcomes.

Delaware

Primary Goal	Provide primary prevention and early intervention for health problems among the student population, and assure that each student has a medical home.
Sponsoring Agency	Health care delivery organization, and the local school districts and board of education must approve the project's planning and implementation.
Site Specifications	Open 5 days a week and operational year round (with provisions for reduced summer hours).
Service Definitions	All Service components will be approved by local school board based on needs of student population. Service to be provided include medical health assessments, diagnosis and treatment, social services, health and nutrition education, and community service referral. STD and HIV services may be provided, and reproductive health care is prohibited.
Staffing	Recommended core staff: nurse practitioner, with physician back-up, a minimum of 3 days a week; physician available a minimum of 2 days a week; masters prepared social worker a minimum of 2 says a week; nutritionist a minimum of 1 day a week; clerical support on a daily basis; one project coordinator (may be the responsibility of professional staff). The school nurse serves as a link between the center and the school.
Community Participation	Local advisory council for both planning and implementation is required.
Parental Consent	Written parental permission required prior to providing medical services.
Continuum of Care	Plans for provision of services during non-operational hours and reduced hours during summer months must be clearly identified. Memoranda of understanding required for referrals, support services and 24 hour coverage. Referral network/plan between family physician, HMO, or other medical group must be stated.
Evaluation & Quality	State public health division serves as manager to assure compliance with accepted model and standards. Programs are required to participate in School HealthCare On-Line!! data collection system.

Illinois

Primary Goal	Improve the overall physical and emotional health of students.
Sponsoring Agency	
Site Specifications	May be in or adjacent to a school. A minimum of two examination rooms is desirable. State provides specs for clinic equipment and lab utility room.
Service Definitions	Devoted primarily to performance of preventive medical, educational, counseling and/or diagnostic procedures. May include routine medical care, exams, lab screenings, STD, and reproductive health services.
Staffing	Minimum staff shall include a medical director (primary care physician) a registered nurse, a school nurse, and a clerical support person. May include OB/GYN, ARNP, RN, school counselor, and/or dentist.
Community Participation	Each clinic shall have an advisory board consisting of school administrators, medical community, school nurse, parents, clergy, youth agency reps, and community leaders; clinic shall have a written plan for community involvement
Parental Consent	Must provide parental consent form including description of the clinic, scope of services offered, and option to select which services will be provided
Continuum of Care	To further broaden resources, SBHCs should link services with other health and social services in their area. A communication system for emergency and non-emergency services referral shall be available during non-clinic hours.
Evaluation & Quality	Internal review team is responsible for continual monitoring of services that may be performed through random sample of monthly chart audits. Service standards must meet those of AAP and ACOG.

Louisiana

Primary Goal	Meet the physical and emotional health needs of adolescents at schools.
Sponsoring Agency	Shall be private or public institution locally suited for administration/operation of SBHC (i.e., health center, hospital, medial school, health department, youth serving agency, school or school system). Non medical agencies must contract medical component with a qualified medical provider.
Site Specifications	Must function as an integral component of school(s) and work cooperatively with school nurses, classroom teachers, coaches, counselors, and school principals. Local grantees are subject to 20% financial match. Must be a Medicaid provider.
Service Definitions	Should include but not limited to: preventive health care and medical screenings, treatment for common simple illnesses, referral and follow up for serious illness and emergencies, mental health, alcohol and drug abuse services, immunizations and preventive services, and preventive services for high-risk behaviors such as pregnancy, STDs, drug and alcohol, abuse, violence and injuries.
Staffing	Should include, at minimum: a nurse (or nurse practitioner or physician assistant), one or more part-time physicians, a social worker or mental health professional at least part-time, and a medical office assistant. The school nurse should work with SBHC personnel to develop health education messages.
Community Participation	Must provide evidence of planning process involving a broadly representative community group. Must form community advisory board.
Parental Consent	Must assure parents execute written consent form approved by school authorities.
Continuum of Care	
Evaluation & Quality	Required to submit plan for monitoring and evaluation. Required to participate in School HealthCare On-Line!! data collection system.

Maine

Primary Goal	Establish strong community, school and parent support and involvement in SBHCs; to assess and evaluate the health care needs of the students; to coordinate delivery of comprehensive primary health care within an educational framework and school setting; to monitor the health care provided to students; and to evaluate the health status of students by specific outcome criteria.
Sponsoring Agency	Eligible sponsor includes school system or medical provider.
Site Specifications	Must be convenient and centrally located to the students. Space must be adequate in size to provide sufficient room for a waiting area and privacy for physical examinations and counseling. Space is required for laboratory services, equipment, secure storage for supplies, and placement of records. The floor plan should be about 2600 gross square per 4000 school population.
Service Definitions	Core services determined by community indicators include physical exams, diagnosis and treatment of minor injuries and illnesses, immunizations, EPSDT screenings, lab tests, chronic illness management, and pediatric care of students' infants. Dental, reproductive and mental health primary care services may be offered but are not required.
Staffing	Recommend nurse practitioner or physician's assistant, physician consultant, a counselor or social worker and receptionist. The school nurse should serve as liaison on the advisory committee and assist in program development.
Community Participation	A community-based advisory council should include consumer and provider groups, professionals with special skills, community groups with clout, school administration, school staff, students, and others.
Parental Consent	Parent consent form must be signed, returned, and on file in order for a student to receive all or indicated center services.
Continuum of Care	Medical consultant or provider group will be available for follow-up services after hours.
Evaluation & Quality	Participate in School HealthCare On-line!! Primary outcome indicators include mental health status, chronic or acute illness, injuries, nutritional problems, pregnancy, drug and alcohol abuse, and tobacco use. The state conducts site visits and provides instructional workshops. Periodic chart reviews are conducted to assure adherence to protocols and policies.

Massachusetts

Primary Goal	Ensure that children and adolescents will have access to early, comprehensive and competent health care.
Sponsoring Agency	Joint venture between primary care provider (e.g., community hospital or neighborhood health center) and host school. Health care provider serves as lead agency; must have formal agreement with host school district.
Site Specifications	Must demonstrate a floor plan for clinic location. Must be licensed by state health department. Must be accessible for outreach and after-school and summer use.
Service Definitions	Must offer comprehensive primary care. Service elements include: screening and assessment, preventive health services, exams, diagnosis and treatment, health education, substance abuse services, mental health services, and reproductive health.
Staffing	Under medical supervision of physician. On-site staff must include one of the following: physician, nurse practitioner or registered nurse. Must also include a student health services coordinator to serve as case manager. The SBHC program is meant to enhance the existing school nursing staff.
Community Participation	Shall establish an advisory committee with student representation.
Parental Consent	Written parental consent, usually obtained at beginning of school year, is required for all services except those deemed emergencies.
Continuum of Care	Shall include strong referral systems to ensure students receive a continuum of health care. A linkage plan should be established with clear identification of what will be provided on site and what will be referred. Must be able to offer 24 hour back-up.
Evaluation & Quality	Must participate in statewide SBHC data collection system; must use standardized registration and encounter forms to provide core data set; state health department conducts periodic site visits to monitor quality.

New York

Primary Goal	Bring direct access to comprehensive primary and preventive health care to medically underserved children.
Sponsoring Agency	Provider must be certified under public health law or be a private and/or group physician licensed to practice medicine in New York. Must enter into a memorandum of understanding with school, school district, or board of education.
Site Specifications	
Service Definitions	Clinics must provide: mass screening services, physical exams, health and psycho-social counseling, diagnosis and treatment of medical conditions both acute and chronic, immunizations, lab tests, and reproductive health care on site or by referral.
Staffing	Providers must be mid-level practitioners with physicians as supervisors. Must meet state DOE requirements for professional licensure and experience. Additional staff may include a social worker, psychologist and nutritionist.
Community Participation	
Parental Consent	Parental consent is required unless student is 18 years or older, or otherwise qualified to give consent.
Continuum of Care	Must agree to provide follow-up services for children in need of health care who lack a primary care provider. Requires linkage with hospital or diagnostic and treatment center for 24 hour, 7 days-a-week continuous comprehensive care.
Evaluation & Quality	Required to participate in School HealthCare On-line!! data collection system; Required to participate in state-wide quality assurance program: Program Effectiveness Review Tool (PERT)

North Carolina

Primary Goal	Increase students' access to health care; provide early identification of health problems and on-going treatment and prevention of disease and injury. Encourage students to take personal responsibility for their health care.
Sponsoring Agency	In cases where applicant is not a health services institution, a qualified medical provider must be identified to contract for the delivery of medical services. Letter of commitment from superintendent and board of education is required.
Site Specifications	Primary site must be located within the school setting and operate full time while school is in session.
Service Definitions	Must be comprehensive in nature including primary care, mental health, preventive health care, and health risk reduction services. Must interface with existing health and human services and resources in the school.
Staffing	Must be provided by a multi-disciplinary team including nurses, physicians, physician extenders, clinical social workers, and nutritionist. At a minimum, on-site staff must include a registered nurse (this may be the school nurse), nurse practitioner/physician's assistant, with physician back-up, mental health professional and clerical staff.
Community Participation	Must be governed in concert with formal community advisory board comprised of parents, community leaders, health care providers, and youth agency representatives for the purpose of planning and oversight. Must demonstrate high degree of community ownership and support.
Parental Consent	Must assure that no student will receive services without parental/guardian consent form on file.
Continuum of Care	Must clearly identify plan for provision of services when the center is not in operation to assure continuity of service delivery and a continuum of care.
Evaluation & Quality	Must establish criteria for evaluation and measuring success and impact expressed as process and outcome measures. Required to participate in School HealthCare On-Line!!

Oregon

Primary Goal	
Sponsoring Agency	All sites will establish a partnership with the local school district and local health department. Other partnerships may include: psychologists, social workers, public and private health care providers, family planning clinics, and hospitals.
Site Specifications	On the school campus.
Service Definitions	A model center will provide accessible, comprehensive, culturally-sensitive services to students, including age-appropriate physical and mental health promotion, prevention, intervention, and treatment services. Referrals to appropriate sources will be made for services that cannot be provided on-site.
Staffing	One full-time nurse practitioner or physician's assistant, an MD as medical director and consultant, nurse with adolescent experience, clinical social worker, a drug and alcohol specialist, and a receptionist and/or health assistant. Other allied health professionals as needed.
Community Participation	Must demonstrate evidence of community input from parents, teachers, students, health care providers, business leaders, managed care and private insurance's, and community religious leaders for SBHC planning and implementation. The SBHCs will collaborate with the school district parent-teacher organizations, and the local school site to establish SBHC role within the school system.
Parental Consent	Students aged 15 and older can consent to receive health care services and persons of any age can obtain family planning and STD related services without parental consent. Some local communities have developed enrollment policies that require parental consent for specific services.
Continuum of Care	Provide integrated services to decrease fragmentation and assure that students receive care and guidance. At the local level, 24-hour coverage must be provided by a community health care provider/sponsor.
Evaluation & Quality	Chart audits of presenting problems and problem resolution are suggested by the state. Site visits are conducted by the state through the county health departments every two years. State Health Division Annual Report is produced annually with data collected by the SBHCs.

Pennsylvania

Primary Goal	Improve the health care status of children through the expansion of health services currently available in selected pilot schools and improved integration of school health services within a community-based primary care system.
Sponsoring Agency	School districts serve as the lead agency in coordination with the community-based primary health care system.
Site Specifications	On the school site.
Service Definitions	Must provide a package of primary preventive, child/family health services including physical assessment, immunizations, growth measurements, developmental and behavioral screening, clinical screens, routine cultures, and lab tests, child/family health education services. And referrals for specialty care.
Staffing	Require certified registered nurse practitioner, physician's assistant or physician. School nurse involvement is encouraged; school nurse may serve as the center manager.
Community Participation	Encourages the involvement of other community-based health and social services providers in program planning and implementation.
Parental Consent	Require written parental consent for all enrollees
Continuum of Care	Provide care coordination for follow-up and referrals; assist in accessing needed health, social, nutritional, or other services; track referrals to determine service status; conduct home visits when necessary; guarantee assurance of 24 hour on-call services and consultation for referral of problems not treatable on site.
Evaluation & Quality	Require collection of encounter and enrollment data to participate in statewide evaluation system. Assure mechanisms are in place to evaluate the quality and appropriateness of patient care.

Texas

Primary Goal	Establish collaboration of families, schools and community. Assure medical home for student. Provide access for specialized medical care. Promote health and use of health systems.
Sponsoring Agency	Eligible providers may be civic or charitable organizations, community health centers, public health agencies, hospital districts, school districts, medical schools, or private providers. Full support of school district must be evident.
Site Specifications	At site or near school grounds.
Service Definitions	Core services, which must be available include: maintenance of health record and health plan, screenings, exams, immunizations, diagnosis and treatment of simple illness and minor injuries, education and counseling, and mental health.
Staffing	May be scheduled full or part-time: physician/medical director or an appropriately trained licensed nurse practitioner under physician direction, mental health counselor, social worker, registered nurse and clerk. The existing school health personnel and SBHC staff work as a team.
Community Participation	Advisory council of parents, youth, churches, youth and family services, physicians, nurses, other health care providers, business, school nurses, school administrators, and faculty to: set policy, identify services, oversee budget, evaluate program. Assist in generating community resources.
Parental Consent	General consent form that identifies all of the services available. Parent must be offered opportunity to identify specific services that they do not consent to being provided.
Continuum of Care	Must provide written agreement for provision of after hours and summer care. Must provide protocol for communicating with child's medical/health providers. Must describe mechanisms for exchange of medical, social and financial eligibility information.
Evaluation & Quality	Must participate in statewide data collection. Must provide protocol for physician involvement in record review and consultation. State health department conducts technical assistance and quality assurance site visits.

ⁱ Source: Making the Grade: State and Local Partnership to Establish School-Based Health Centers

Appendix C

Houston Independent School District School-Based / Linked Health Centers*

Provider Information	On-Site Clinics	# of Students
Baylor College of Medicine Department of Pediatrics Sheron Robinson (713-349-1800)	The Rice School/ La Esquela Rice	1,248
Baylor College of Medicine Teen Clinics Dr. Peggy Smith (713-793-3601)	Austin High School Cavalcade Clinic/ LBJ Clinic Cullen Pediatric & Adolescent Center Lawn Street Clinic (Osborne Elementary)	2,916 541
Baylor College of Medicine/Texas Children's Hospital Dr. Raquel Bauman (713-917-3565)	Osborne Elementary School [†] TH Rogers Education Center	711
Houston Department Of Health and Human Services Dr. Leonoara I. Lartson (713-794-9044)	Bonner Elementary School Easter Elementary School Elrod Elementary School McNamara Elementary School	907 346 944 839
Comm. In School-Houston/UT School of Dentistry Angelica Guidry	Project MOVE Mobile Dental Clinic	
Community Partners[‡] Donna Bryant or Ruthie Mitchell (713-222-8788 or 713-222-8782)	Hogg Middle School H.P. Carter Alternative School Southeast District Mobile Clinic	1,263 185 6,934
Harris County Hospital District Susan Rodgers (713-525-4894)	Burrus Elementary School Grimes Elementary School Jackson Middle School "Clinica Nuestra" Scarborough Elementary School Sherman Elementary School "Robert Curasco Clinic"	504 529 1,240 790 746
Memorial Herman Healthcare System Deborah Ganelin (713-776-5982)	Burbank Middle School/North District Jane Long Middle School	1,399 1,717
Rusk School Health Promotion Project[†] Laura Kennedy (713-776-5982)	Rusk Elementary School	504
Total of 23 sites		24,779

* Source: HISD, September 1998

[†] See Baylor College of Medicine Teen Clinic for Contact Information

[‡] Additional children are either transported to provider sites or served by a mobile clinic.

Additional Schools Served by Community Partners

Hogg Middle School Clinic *

School (North Central District)	# of Students
Brock Elementary School	280
Browning Elementary School	674
Crockett Elementary School	370
Eighth Avenue Elementary School	301
Field Elementary School	525
Hamilton Middle School	1,153
Harvard Elementary School	635
Helms Elementary School	387
Hogg Middle School	1,263
Love Elementary School	436
Memorial Elementary School	359
Milam Elementary School	440
Reagan High School	2,242
Stevenson Elementary School	451
Travis Elementary School	619
Total of 15 Schools	10,135

Medical Mobile Clinic

School	# of Students
Crespo Elementary School	833
Deady Middle School	1,543
Milby Senior High School	3,511
Sanchez Elementary School	1,047
Total of 4 Schools	6,934

H.P. Carter Alternative School†

School	# of Students
Atherton Elementary School	526
Barbara Jordan High School	1,237
Bruce Elementary School	462
C. Martinez Elementary School	708
Crawford Elementary School	329
Dogan Elementary School	40
E.O. Smith Middle School	576
Fleming Middle School	697
Frances Scott Elementary School	449
Henderson Elementary School	798
Jefferson Davis High School	1,773
Jefferson Elementary School	773
Kashmere High School	1,013
Key Middle School	965
Looscan Elementary School	436
Marshall Middle School	1,111
McReynolds Middle School	767
Ross Elementary School	535
Ryan Middle School	878
Terrell Middle School	85
Wheatley High School	989
Total of 21 Schools	15,147

* Students are transported daily by HISD bus through a grant from Memorial Hospital Northwest.

† Students are transported by van provided by Community Partners.

**Additional Schools Served by
Rusk School Health
Promotion Project***

Rusk Elementary School Clinic	
School (East District)	Number of Students
Anson Jones Elementary School†	383
Briscoe Elementary School	628
Bumet Elementary School	886
Cage Elementary School	772
Carrillo Elementary School	818
Clinton Park Elementary School	210
DeZavala Elementary School	768
Edison Middle School	1,154
Frank Elementary School	887
Gallegos Elementary School	719
Holland Middle School	914
J.P. Henderson Elementary School	798
Jackson Middle School	1,240
Lantrip Elementary School	956
Oates Elementary School	782
Pleasantville Elementary School	543
Port Houston Elementary School	306
Project Chrysalis	105
R.P. Harris Elementary School	1,046
Rusk Elementary School	504
Tijerina Elementary School	882
Whittler Elementary School	573
Total of 24 Schools	15,874

**Additional Schools Served by
Baylor College of Medicine
Teen Clinics‡**

Cavalcade and LBJ Hospital Clinics	
School (Northeast Adolescent Program)	Number of Students
Burbank Middle School	1,493
E.O. Smith Middle School	576
Terrell Alternative School	85
Davis High School	1,173
Furr High School	1,469
Houston High School	3147
Kashmere High School	1,013
Wheatley High School	989
Yates High School	2,118
Key Middle School	965
Total of 10 Schools	13,028

**Seven different providers operate 23 fixed or mobile sites
serving a total of 85,897 HISD students.**

* Students are served on an as-needed basis by the Rusk School Health Promotion Project with transportation provided by their school or parents

† While not in the East District, Anson Jones is close to Rusk

‡ Northeast Adolescent Program Schools are transported by HISD buses

Appendix D

National Principles for School-Based Health Care¹

PRINCIPLE #1: The school-based health center and the school must be committed to operating with mutual respect and a spirit of collaboration. The school/school district should facilitate and promote the utilization of the center's services. Each school-based health center should form and maintain an advisory committee to provide input into the development and operation of the program. Advisory committee membership should include school staff, community members, health providers, and especially parents and students.

PRINCIPLE #2: School-based health services should be developed based on local assessment of needs and resources. Schools having students with the highest prevalence of unmet medical and psychosocial needs should receive the top priority for the establishment of the centers. Once the center is open, the services should be available to all currently enrolled students, including children with special health care needs, and, if possible, to out-of-school youth.

PRINCIPLE #3: School based health centers should be organized through school, community, and health, mental health, social service, and legal service provider relationships. School-based health centers should provide services in keeping with state and local laws, regulations, and community practice.

PRINCIPLE #4: The school based health center should provide comprehensive primary medical, social, mental health, and health education services designed to meet the psychosocial and physical health needs of children and youth, including children with special health care needs in the context of their family, culture, and environment.

PRINCIPLE #5: School-based health center services should be provided by a multidisciplinary team which may include providers from the fields of medicine, nursing, social work, psychology, health education, nutrition, and law.

PRINCIPLE #6: The school-based health center must arrange for 24-hour/12-month coverage to ensure access to services when school or the center is closed. This may be done through an on-call system staffed by its own staff or through a backup health facility.

PRINCIPLE #7: The school-based health center must be integrated into the school health program, which includes environment and curriculum. The school-based health center should plan and coordinate its programs and services with school personnel, including nurses and counselors, as well as with other community providers that are co-located at the school.

PRINCIPLE #8: The school-based health center; in partnership with the school and other co-located service providers, should develop policies and systems to ensure confidentiality of services.

PRINCIPLE #9: The school-based health center should be designed to complement services provided by existing health care providers or to serve as a medical home. For managed care plans, the school-based health center can function as the principal provider of primary care.

PRINCIPLE #10: The school-based health center must coordinate care with the students' medical homes, including managed care providers, as well as with other medical providers, social service agencies, mental health providers, and other agencies, programs, and organizations.

PRINCIPLE #11: The school-based health center must inform the community and the school, concerning the health needs of youth and children. The school-based health center should participate in the use of data collection instruments and distribute information on the who, what, and why of services provided.

¹ Quoted from the NASBHC website (<http://www.nasbhc.org/principles.htm>).

Appendix E

Texas House Bill 2202

Signed into Law on May 28, 1999

1-1 AN ACT
1-2 relating to health centers on public school campuses.

1-3 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:
1-4 SECTION 1. Chapter 38, Education Code, is amended by adding
1-5 Section 38.011 to read as follows:
1-6 Sec. 38.011. SCHOOL-BASED HEALTH CENTERS. (a) A school
1-7 district in this state may, if the district identifies the need,
1-8 design a model in accordance with this section for the delivery of
1-9 cooperative health care programs for students and their families
1-10 and may compete for grants awarded under this section. The model
1-11 may provide for the delivery of conventional health services and
1-12 disease prevention of emerging health threats that are specific to
1-13 the district.

1-14 (b) On the recommendation of an advisory council established
1-15 under Subsection (g), a school district may establish a
1-16 school-based health center at one or more campuses in the district
1-17 to meet the health care needs of students and their families. A
1-18 district may contract with a person to provide services at a
1-19 school-based health center.

1-20 (c) A school-based health center may provide services to a
1-21 student only if the district or the provider with whom the district
1-22 contracts obtains the written consent of the student's parent,
1-23 guardian, or other person having legal control of the student on a
1-24 consent form developed by the district or provider. The student's
2-1 parent, guardian, or other person having legal control of the
2-2 student may give consent for a student to receive ongoing services
2-3 or may limit consent to one or more services provided on a single
2-4 occasion. The consent form must list every service the
2-5 school-based health center delivers in a format that complies with
2-6 all applicable state and federal laws and allows a person to
2-7 consent to one or more categories of services. The permissible
2-8 categories of services are:

2-9 (1) family and home support;
2-10 (2) health care, including immunizations;
2-11 (3) dental health care;
2-12 (4) health education; and
2-13 (5) preventive health strategies.

2-14 (d) Reproductive services, counseling, or referrals may not
2-15 be provided through a school-based health center using grant funds
2-16 awarded under this section. Any service provided using grant funds
2-17 must be provided by an appropriate professional who is properly
2-18 licensed, certified, or otherwise authorized under state law to
2-19 provide the service.

2-20 (e) The staff of a school-based health center and the person
2-21 whose consent is obtained under Subsection (c) shall jointly
2-22 identify any health-related concerns of a student that may be
2-23 interfering with the student's well-being or ability to succeed in
2-24 school.

2-25 (f) If it is determined that a student is in need of a
2-26 referral for mental health services, the staff of the center shall

2-27 notify the person whose consent is required under Subsection (c)
3-1 verbally and in writing of the basis for the referral. The
3-2 referral may not be provided unless the person provides written
3-3 consent for the type of service to be provided and provides
3-4 specific written consent for each treatment occasion.

3-5 (g) The board of trustees of a school district may establish
3-6 and appoint members to a local health education and health care
3-7 advisory council to make recommendations to the district on the
3-8 establishment of school-based health centers and to assist the
3-9 district in ensuring that local community values are reflected in
3-10 the operation of each center and in the provision of health
3-11 education. A majority of the members of the council must be
3-12 parents of students enrolled in the district. In addition to the
3-13 appointees who are parents of students, the board of trustees shall
3-14 also appoint at least one person from each of the following groups:

- 3-15 (1) teachers;
- 3-16 (2) school administrators;
- 3-17 (3) licensed health care professionals;
- 3-18 (4) the clergy;
- 3-19 (5) law enforcement;
- 3-20 (6) the business community;
- 3-21 (7) senior citizens; and
- 3-22 (8) students.

3-23 (h) A school district may seek assistance in establishing
3-24 and operating a school-based health center from any public health
3-25 agency in the community. On request, a public health agency shall
3-26 cooperate with a district and to the extent practicable,
3-27 considering the resources of the agency, may provide assistance. A
4-1 district and a public health agency may, by agreement, jointly
4-2 establish, operate, and fund a school-based health center.

4-3 (i) If a school-based health center is located in an area
4-4 described by Subsection (j), the school district and the advisory
4-5 council established under Subsection (g) shall make a good faith
4-6 effort to identify and coordinate with existing providers to
4-7 preserve and protect existing health care systems and medical
4-8 relationships in the area. The council shall keep a record of
4-9 efforts made to coordinate with existing providers.

4-10 (j) The requirements prescribed by Subsection (i) apply only
4-11 to a school-based health center serving an area that:

- 4-12 (1) is located in a county with a population not
4-13 greater than 50,000; or
- 4-14 (2) has been designated under state or federal law as:
 - 4-15 (A) a health professional shortage area;
 - 4-16 (B) a medically underserved area; or
 - 4-17 (C) a medically underserved community by the
4-18 Center for Rural Health Initiatives.

4-19 (k) If a person receiving a medical service from a
4-20 school-based health center has a primary care physician, the staff
4-21 of the center shall provide notice of the service the person
4-22 received to the primary care physician in order to allow the
4-23 physician to maintain a complete medical history of the person.

4-24 (l) The staff of a school-based health center shall, before
4-25 delivering a medical service to a person with a primary care
4-26 physician under the state Medicaid program, a state children's
4-27 health plan program, or a private health insurance or health
5-1 benefit plan, notify the physician for the purpose of sharing

5-2 medical information and obtaining authorization for delivering the
5-3 medical service.

5-4 (m) A school district or the provider with whom the district
5-5 contracts shall seek all available sources of funding to compensate
5-6 the district or provider for services provided by a school-based
5-7 health center, including money available under the state Medicaid
5-8 program, a state children's health plan program, private health
5-9 insurance or health benefit plans, or the ability of those using a
5-10 school-based clinic to pay for the services.

5-11 (n) Subject to the availability of federal or state
5-12 appropriated funds, the commissioner of public health shall
5-13 administer a program under which grants are awarded to assist
5-14 school districts with the costs of operating school-based health
5-15 centers in accordance with this section. The commissioner, by
5-16 rules adopted in accordance with this section, shall establish
5-17 procedures for awarding grants.

5-18 (o) A school district may not receive more than \$250,000 per
5-19 biennium through grants awarded under this section. To be eligible
5-20 to receive a grant, a district must provide matching funds in
5-21 accordance with rules adopted under Subsection (n). The matching
5-22 funds may be obtained from any source available to the district,
5-23 including in-kind contributions, community or foundation grants,
5-24 individual contributions, and local governmental agency operating
5-25 funds.

5-26 (p) The rules adopted under Subsection (n) must provide
5-27 that:

6-1 (1) grants are awarded to school districts on an
6-2 annual basis through a competitive process; and

6-3 (2) a preference is given to school districts that are
6-4 located in rural areas or that have low property wealth per
6-5 student.

6-6 (q) The commissioner of public health shall adopt rules
6-7 establishing standards for health care centers funded through
6-8 grants that place primary emphasis on delivery of health services
6-9 and secondary emphasis on population-based models that prevent
6-10 emerging health threats.

6-11 (r) All programs should be designed to meet the following
6-12 goals:

6-13 (1) reducing student absenteeism;

6-14 (2) increasing a student's ability to meet the
6-15 student's academic potential; and

6-16 (3) stabilizing the physical well-being of a student.

6-17 (s) Based on statistics obtained from every school-based
6-18 health center in this state, the commissioner of public health
6-19 shall issue an annual report to the legislature about the relative
6-20 efficacy of services delivered by school-based health centers and
6-21 any increased academic success of students at campuses served by
6-22 those centers, with special emphasis on any increased attendance,
6-23 decreased drop-out rates, improved student health, and improved
6-24 performance on student assessment instruments administered under
6-25 Subchapter B, Chapter 39. In obtaining statistics for preparation
6-26 of the report required by this subsection, the commissioner shall
6-27 ensure that data is collected for each county and aggregated
7-1 appropriately according to geographical region.

7-2 (t) The commissioner of public health shall require client
7-3 surveys to be conducted in school-based health centers funded

7-4 through grants provided under this section, and the results of
7-5 those surveys must be included in the annual report required under
7-6 Subsection (s).

7-7 SECTION 2. Chapter 38, Education Code, is amended by adding
7-8 Section 38.012 to read as follows:

7-9 Sec. 38.012. NOTICE CONCERNING HEALTH CARE SERVICES. (a)

7-10 Before a school district or school may expand or change the health
7-11 care services available at a school in the district from those that
7-12 were available on January 1, 1999, the board of trustees must:

7-13 (1) hold a public hearing at which the board discloses
7-14 all information on the proposed health care services, including:

7-15 (A) all health care services to be provided;

7-16 (B) whether federal law permits or requires any
7-17 health care service provided to be kept confidential from parents;

7-18 (C) whether a child's medical records will be
7-19 accessible to the child's parent;

7-20 (D) information concerning grant funds to be
7-21 used;

7-22 (E) the titles of persons who will have access
7-23 to the medical records of a student; and

7-24 (F) the security measures that will be used to
7-25 protect the privacy of students' medical records; and

7-26 (2) approve the expansion or change by a record vote.

7-27 (b) A hearing under Subsection (a) must include an
8-1 opportunity for public comment on the proposal.

8-2 SECTION 3. Chapter 38, Education Code, is amended by adding
8-3 Section 38.0095 to read as follows:

8-4 Sec. 38.0095. PARENTAL ACCESS TO MEDICAL RECORDS. (a) A
8-5 parent or guardian of a student is entitled to access to the
8-6 student's medical records maintained by a school district.

8-7 (b) On request of a student's parent or guardian, the school
8-8 district shall provide a copy of the student's medical records to
8-9 the parent or guardian. The district may not impose a charge for
8-10 providing the copy that exceeds the charge authorized by Section
8-11 552.261, Government Code, for providing a copy of public
8-12 information.

Appendix F

SBHC School Profiles 1998-1999¹

Bonner Elementary School
8100 Elrod • Houston, TX 77017 • 713-943-5740

Students

Enrollment		Ethnicity	
Total	959	African American	2%
Kindergarten & below	231	Asian	3%
Gender		Hispanic	93%
Female	47%	Native American	<1%
Male	53%	White	2%
Students by Program			
Bilingual	59%	Free/Reduced Lunch	95%
ESL	5%	Limited English (LEP)	65%
Gifted/Talented	6%	At-Risk ²	75%
Special Education	9%	Grades Served	EE ³ -5
Title I ⁴	100%		

Teachers

# of Teachers		Ethnicity	
Total	46	African American	22%
Gender		Asian	4%
Female	87%	Hispanic	54%
Male	13%	Native American	0%
Years of Experience		White	20%
Average Experience	14yrs	Advanced Degrees	
5 or less	17%	Master's	37%
6 to 10	24%	Doctorate	0%
11 or more	59%	Teachers by Program	
Regular	20%	Gifted/Talented	0%
Bilingual/ESL	54%	Special Education	20%
Compensatory Ed. ⁵	7%	Other	0%

Staff

Counselors	1	Educational Aides	21
Assistant Principals	1	Auxiliary Staff	17
Other Professional Staff	1		

¹ Source: District and School Profiles 1998-1999. Houston Independent School District (HISD)

² Student is considered at risk of dropping out of school if he/she has either failed any section of TAAS at last attempt or is LEP.

³ Early Education

⁴ Federally funded program that provides supplementary instruction in reading/language arts, mathematics, and bilingual/ESL for disadvantaged students in selected public schools. HISD grants all students to enroll in Title I when 75% or more of the student population comes from low-income families.

⁵ Programs and instructional services designed for at-risk students.

Easter Elementary School
 4435 Weaver Rd. • Houston, TX 77016 • 713-696-6050

Students

Enrollment		Ethnicity	
Total	354	African American	63%
Kindergarten & below	90	Asian	0%
Gender		Hispanic	36%
Female	50%	Native American	0%
Male	50%	White	1%

Students by Program

Bilingual	23%	Free/Reduced Lunch	96%
ESL	5%	Limited English (LEP)	27%
Gifted/Talented	5%	At-Risk	32%
Special Education	7%	Grades Served	Prek ⁶ -5
Title I	100%		

Teachers

# of Teachers	20	Ethnicity	
Gender		African American	70%
Female	80%	Asian	5%
Male	20%	Hispanic	15%
Years of Experience		Native American	0%
Average Experience	13yrs.	White	10%
5 or less	40%	Advanced Degrees	
6 to 10	15%	Master's	25%
11 or more	45%	Doctorate	0%

Teachers by Program

Regular	70%	Gifted/Talented	0%
Bilingual/ESL	20%	Special Education	10%
Compensatory Ed.	0%	Other	10%

Staff

Counselors	0	Educational Aides	4
Assistant Principals	0	Auxiliary Staff	10
Other Professional Staff	4		

⁶ Pre-Kindergarten students must be identified as LEP or eligible for the free/reduced lunch program.

Elrod Elementary School
6230 Dumfries • Houston, TX 77096 • 713-778-3330

Students

Enrollment		Ethnicity	
Total	943	African American	64%
Kindergarten & below	197	Asian	4%
Gender		Hispanic	30%
Female	47%	Native American	0%
Male	53%	White	2%

Students by Program

Bilingual	15%	Free/Reduced Lunch	92%
ESL	8%	Limited English (LEP)	27%
Gifted/Talented	2%	At-Risk	40%
Special Education	9%	Grades Served	PreK-5
Title I	100%		

Teachers

# of Teachers	56	Ethnicity	
Gender		African American	46%
Female	82%	Asian	0%
Male	18%	Hispanic	11%
Years of Experience		Native American	0%
Average Experience	12yrs	White	43%
5 or less	30%	Advanced Degrees	
6 to 10	16%	Master's	32%
11 or more	54%	Doctorate	4%

Teachers by Program

Regular	52%	Gifted/Talented	11%
Bilingual/ESL	23%	Special Education	9%
Compensatory Ed.	5%	Other	2%

Staff

Counselors	1	Educational Aides	9
Assistant Principals	2	Auxiliary Staff	12
Other Professional Staff	3		

McNamara Elementary School
8714 McAvoy • Houston, TX 77074 • 713-778-3460

Students

Enrollment		Ethnicity	
Total	856	African American	15%
Kindergarten & below	176	Asian	8%
Gender		Hispanic	75%
Female	52%	Native American	0%
Male	48%	White	2%

Students by Program

Bilingual	42%	Free/Reduced Lunch	91%
ESL	26%	Limited English (LEP)	67%
Gifted/Talented	2%	At-Risk	76%
Special Education	8%	Grades Served	PreK-5
Title I	100%		

Teachers

# of Teachers	43	Ethnicity	
Gender		African American	37%
Female	79%	Asian	5%
Male	21%	Hispanic	28%
Years of Experience		Native American	0%
Average Experience	16yrs	White	30%
5 or less	21%	Advanced Degrees	
6 to 10	21%	Master's	37%
11 or more	58%	Doctorate	0%

Teachers by Program

Regular	30%	Gifted/Talented	0%
Bilingual/ESL	56%	Special Education	2%
Compensatory Ed.	12%	Other	7%

Staff

Counselors	1	Educational Aides	13
Assistant Principals	1	Auxiliary Staff	14
Other Professional Staff	3		

Appendix G

School-Based/Linked Health Program Charts

Distribution of Student Ages in Study										
<i>Age of Student</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Eight	7	8.86%	6	7.89%	3	3.75%	4	5.00%	20	6.35%
Nine	21	26.58%	20	26.32%	25	31.25%	26	32.50%	92	29.21%
Ten	20	25.32%	22	28.95%	36	45.00%	25	31.25%	103	32.70%
Eleven	24	30.38%	23	30.26%	14	17.50%	17	21.25%	78	24.76%
Twelve	6	7.59%	4	5.26%	2	2.50%	7	8.75%	19	6.03%
Thirteen	1	1.27%	1	1.32%	0	0.00%	1	1.25%	3	0.95%

Distribution of the Student's Gender in Study										
<i>Gender</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Male	44	55.70%	39	51.32%	36	45.00%	41	51.25%	160	50.79%
Female	35	44.30%	37	48.68%	44	55.00%	39	48.75%	155	49.21%

Distribution of Student Ethnicity										
<i>Ethnic Group</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
African American	0	0.00%	49	64.47%	64	80.00%	14	17.50%	127	40.32%
Hispanic	77	97.47%	26	34.21%	13	16.25%	57	71.25%	173	54.92%
Native American	0	0.00%	1	1.32%	2	2.50%	1	1.25%	4	1.27%
Asian	0	0.00%	0	0.00%	1	1.25%	7	8.75%	8	2.54%
White	2	2.53%	0	0.00%	0	0.00%	1	1.25%	3	0.95%

Distribution of Student's Domicile										
<i>Domicile</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Own House	48	60.76%	40	52.63%	10	12.50%	13	16.25%	111	35.24%
Family House	4	5.06%	17	22.37%	1	1.25%	1	1.25%	23	7.30%
Apartment	24	30.38%	18	23.68%	66	82.50%	65	81.25%	173	54.92%
Other	3	3.80%	1	1.32%	3	3.75%	1	1.25%	8	2.54%

Number of People in Student's Household										
<i># in Household</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Two	0	0.00%	2	2.63%	6	7.50%	1	1.25%	9	2.86%
Three	5	6.33%	4	5.26%	6	7.50%	10	12.50%	25	7.94%
Four	18	22.78%	15	19.74%	28	35.00%	20	25.00%	81	25.71%
Five	17	21.52%	22	28.95%	18	22.50%	19	23.75%	76	24.13%
Six	16	20.25%	11	14.47%	8	10.00%	18	22.50%	53	16.83%
Seven	8	10.13%	7	9.21%	5	6.25%	5	6.25%	25	7.94%
Eight or more	15	18.99%	15	19.74%	9	11.25%	7	8.75%	46	14.60%

Number of Students Receive Health Care										
<i>Received Care</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	49	62.03%	49	64.47%	63	78.75%	45	56.25%	206	65.40%
No	30	37.97%	27	35.53%	17	21.25%	35	43.75%	109	34.60%

Distribution of Student's Complaints										
<i>Problem</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
facial palsy	0	0.00%	1	1.32%	0	0.00%	0	0.00%	1	0.32%
Headache	0	0.00%	0	0.00%	1	1.25%	0	0.00%	1	0.32%
Fracture	1	1.27%	1	1.32%	0	0.00%	0	0.00%	2	0.63%
Seizure	1	1.27%	1	1.32%	0	0.00%	0	0.00%	2	0.63%
Ear Ache	0	0.00%	2	2.63%	0	0.00%	3	3.75%	5	1.59%
Tooth Ache	1	1.27%	0	0.00%	2	2.50%	2	2.50%	5	1.59%
Asthma	0	0.00%	0	0.00%	5	6.25%	1	1.25%	6	1.90%
Chicken Pox	2	2.53%	1	1.32%	3	3.75%	1	1.25%	7	2.22%
Sore Throat	3	3.80%	6	7.89%	1	1.25%	3	3.75%	13	4.13%
Dermatitis	3	3.80%	6	7.89%	5	6.25%	3	3.75%	17	5.40%
Cold	7	8.86%	11	14.47%	8	10.00%	16	20.00%	42	13.33%
Stomach	11	13.92%	7	9.21%	23	28.75%	7	8.75%	48	15.24%
Fevers/Flu	21	26.58%	13	17.11%	13	16.25%	11	13.75%	58	18.41%
None	29	36.71%	27	35.53%	19	23.75%	33	41.25%	108	34.29%

Student's Usual Treatment Options										
<i>Place Treated</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
School Clinic	9	11.39%	23	30.26%	30	37.50%	21	26.25%	83	26.35%
Private Doctor	25	31.65%	24	31.58%	18	22.50%	13	16.25%	80	25.40%
Community	33	41.77%	17	22.37%	25	31.25%	38	47.50%	113	35.87%
Emergency Rm.	5	6.33%	8	10.53%	2	2.50%	0	0.00%	15	4.76%
No One	4	5.06%	3	3.95%	2	2.50%	6	7.50%	15	4.76%
Other	3	3.80%	1	1.32%	3	3.75%	2	2.50%	9	2.86%

Number of Times Students Treated At School Clinic										
<i>Number</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Never	25	31.65%	25	32.89%	42	52.50%	39	48.75%	131	41.59%
One	22	27.85%	20	26.32%	12	15.00%	20	25.00%	74	23.49%
Two	11	13.92%	11	14.47%	9	11.25%	9	11.25%	40	12.70%
Three	9	11.39%	10	13.16%	3	3.75%	9	11.25%	31	9.84%
Four	12	15.19%	10	13.16%	14	17.50%	3	3.75%	39	12.38%

Place of Dental Treatment										
<i>Place</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
No Treatment	24	30.38%	9	11.84%	13	16.25%	13	16.25%	59	18.73%
School Clinic	26	32.91%	57	75.00%	37	46.25%	40	50.00%	160	50.79%
Private Clinic	25	31.65%	8	10.53%	25	31.25%	22	27.50%	80	25.40%
ER	0	0.00%	0	0.00%	3	3.75%	0	0.00%	3	0.95%
Other	4	5.06%	2	2.63%	2	2.50%	5	6.25%	13	4.13%

Reason for Dental Visit										
<i>Reason</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
No Answer	1	1.82%	0	0.00%	0	0.00%	0	0.00%	1	0.39%
Check-Up	38	69.09%	58	86.57%	50	74.63%	43	64.18%	189	73.83%
Toothache	10	18.18%	4	5.97%	13	19.40%	9	13.43%	36	14.06%
Gum Abscess	0	0.00%	1	1.49%	1	1.49%	1	1.49%	3	1.17%
Other	6	10.91%	4	5.97%	3	4.48%	14	20.90%	27	10.55%
Total	55		67		67		67		256	

Number of Visits Per Student To School Dental Clinic										
<i>Number</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
None	52	65.82%	19	25.00%	42	52.50%	36	45.00%	149	47.30%
One	5	6.33%	8	10.53%	3	3.75%	11	13.75%	27	8.57%
Two	8	10.13%	17	22.37%	13	16.25%	11	13.75%	49	15.56%
Three	6	7.59%	17	22.37%	6	7.50%	8	10.00%	37	11.75%
Four or more	8	10.13%	15	19.74%	16	20.00%	14	17.50%	53	16.83%

Students with Tooth Extractions at Dental Visit										
<i>Extractions</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	19	24.05%	19	25.00%	16	20.00%	31	38.75%	85	26.98%
No	60	75.95%	57	75.00%	64	80.00%	49	61.25%	230	73.02%

Where Students Received Sealant										
<i>Place</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Not Applicable	46	58.23%	33	43.42%	37	46.25%	44	55.00%	160	50.79%
School Clinic	19	24.05%	35	46.05%	20	25.00%	27	33.75%	101	32.06%
Private Doctor	11	13.92%	3	3.95%	19	23.75%	4	5.00%	37	11.75%
Community	3	3.80%	5	6.58%	2	2.50%	5	6.25%	15	4.76%
Other	0	0.00%	0	0.00%	2	2.50%	0	0.00%	2	0.63%

Where Medical Check-up took place										
<i>Where</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
No Check-up	22	27.85%	10	13.16%	10	12.50%	13	16.25%	55	17.46%
School Clinic	3	3.80%	24	31.58%	8	10.00%	7	8.75%	42	13.33%
Private Doctor	27	34.18%	23	30.26%	25	31.25%	16	20.00%	91	28.89%
Community	25	31.65%	17	22.37%	35	43.75%	43	53.75%	120	38.10%
Other	2	2.53%	2	2.63%	2	2.50%	1	1.25%	7	2.22%

Where Students Where Immunized										
<i>Place</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
No Immunization	1	1.27%	6	7.89%	2	2.50%	4	5.00%	13	4.13%
School Clinic	17	21.52%	32	42.11%	8	10.00%	15	18.75%	72	22.86%
Private Doctor	13	16.46%	18	23.68%	17	21.25%	19	23.75%	67	21.27%
Community	48	60.76%	19	25.00%	53	66.25%	40	50.00%	160	50.79%
Other	0	0.00%	1	1.32%	0	0.00%	2	2.50%	3	0.95%

Number of Students Injured on School Campus										
<i>Number</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Injured	12	15.19%	16	21.05%	31	38.75%	16	20.00%	75	23.81%
Not Injured	67	84.81%	60	78.95%	49	61.25%	64	80.00%	240	76.19%

Type of Injuries Suffered by Students										
<i>Number</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Abrasion	3	25.00%	7	43.75%	15	48.39%	11	68.75%	36	48.00%
Laceration	8	66.67%	5	31.25%	15	48.39%	5	31.25%	33	44.00%
Fall	0	0.00%	2	12.50%	1	3.23%	0	0.00%	3	4.00%
Heat Exaction	0	0.00%	1	6.25%	0	0.00%	0	0.00%	1	1.33%
Fracture	1	8.33%	1	6.25%	0	0.00%	0	0.00%	2	2.67%
Total	12		16		31		16		75	

Where Students were Treated for Injury										
<i>Place</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
School Clinic	0	0.00%	1	6.25%	7	22.58%	5	31.25%	13	17.33%
School Nurse	9	75.00%	7	43.75%	20	64.52%	4	25.00%	40	53.33%
Class Teacher	3	25.00%	3	18.75%	1	3.23%	3	18.75%	10	13.33%
ER	0	0.00%	2	12.50%	0	0.00%	0	0.00%	2	2.67%
Other	0	0.00%	3	18.75%	3	9.68%	4	25.00%	10	13.33%
Total	12		16		31		16		75	

Distribution of Students who feel happy most of the time										
<i># Happy</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Not Applicable	3	3.80%	0	0.00%	0	0.00%	0	0.00%	3	0.95%
Yes	70	88.61%	73	96.05%	77	96.25%	79	98.75%	299	94.92%
No	6	7.59%	3	3.95%	3	3.75%	1	1.25%	13	4.13%

Distribution of Students who feel sad most of the time										
<i># Sad</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Not Applicable	15	18.99%	0	0.00%	0	0.00%	0	0.00%	15	4.76%
Yes	19	24.05%	33	43.42%	39	48.75%	29	36.25%	120	38.10%
No	45	56.96%	43	56.58%	41	51.25%	51	63.75%	180	57.14%

Distribution of Students Who Seek Help										
<i>Who Seek</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Not Applicable	7	8.86%	1	1.32%	0	0.00%	0	0.00%	8	2.54%
Yes	49	62.03%	58	76.32%	63	78.75%	67	83.75%	237	75.24%
No	23	29.11%	17	22.37%	17	21.25%	13	16.25%	70	22.22%

Distribution of Students Who Seek Help										
<i>Person sought</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Not Applicable	30	37.97%	18	23.68%	17	21.25%	13	16.25%	78	24.76%
Mother	36	45.57%	36	47.37%	49	61.25%	54	67.50%	175	55.56%
Father	6	7.59%	5	6.58%	1	1.25%	8	10.00%	20	6.35%
Sibling	2	2.53%	5	6.58%	1	1.25%	4	5.00%	12	3.81%
Social Worker	1	1.27%	0	0.00%	0	0.00%	0	0.00%	1	0.32%
School Nurse	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
School Clinic	1	1.27%	0	0.00%	0	0.00%	0	0.00%	1	0.32%
Other	3	3.80%	12	15.79%	12	15.00%	1	1.25%	28	8.89%

Number of Times Students Counseled by Social Worker										
<i># of Times</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Never	72	91.14%	66	86.84%	76	95.00%	71	88.75%	285	90.48%
One	4	5.06%	10	13.16%	4	5.00%	6	7.50%	24	7.62%
Two	0	0.00%	0	0.00%	0	0.00%	3	3.75%	3	0.95%
Three	1	1.27%	0	0.00%	0	0.00%	0	0.00%	1	0.32%
Four	1	1.27%	0	0.00%	0	0.00%	0	0.00%	1	0.32%
Five	1	1.27%	0	0.00%	0	0.00%	0	0.00%	1	0.32%

Students who visited clinic and referred to outside care										
<i>Referred</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	8	14.81%	4	7.84%	2	5.26%	3	7.32%	17	9.24%
No	46	85.19%	47	92.16%	36	94.74%	38	92.68%	167	90.76%
Total Population	54		51		38		41		184	

Number of Meals Per Day										
<i># meals per day</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
1	1	1.27%	0	0.00%	0	0.00%	0	0.00%	1	0.32%
2	9	11.39%	8	10.53%	10	12.50%	9	11.25%	36	11.43%
3	46	58.23%	59	77.63%	65	81.25%	71	88.75%	241	76.51%
4	20	25.32%	7	9.21%	5	6.25%	0	0.00%	32	10.16%
5	3	3.80%	2	2.63%	0	0.00%	0	0.00%	5	1.59%

Number of Students Who Eat Fruits and Vegetables										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	78	98.73%	74	97.37%	79	98.75%	79	98.75%	310	98.41%
No	1	1.27%	2	2.63%	1	1.25%	1	1.25%	5	1.59%

Number of Students Who Always Ate Fruits and Vegetables										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	64	81.01%	61	80.26%	64	80.00%	58	72.50%	247	78.41%
No	15	18.99%	15	19.74%	16	20.00%	22	27.50%	68	21.59%

Population of Students Who Started Eating Fruits and Veg.										
<i>Influence</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Health Ed.	3	20.00%	3	20.00%	6	37.50%	9	40.91%	21	30.88%
School Doctor	5	33.33%	5	33.33%	2	12.50%	0	0.00%	12	17.65%
Mother	7	46.67%	7	46.67%	8	50.00%	12	54.55%	34	50.00%
Other	0	0.00%	0	0.00%	0	0.00%	1	4.55%	1	1.47%
Total Population	15		15		16		22		68	

Number of Students Who Like Fast Food										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	78	98.73%	73	96.05%	75	93.75%	75	93.75%	301	95.56%
No	1	1.27%	3	3.95%	5	6.25%	5	6.25%	14	4.44%

Distribution of What Sports the Students Play										
<i>Sport Played</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Not Applicable	4	5.06%	9	11.84%	8	10.00%	10	12.50%	31	9.84%
Basketball	17	21.52%	25	32.89%	31	38.75%	27	33.75%	100	31.75%
Football	4	5.06%	8	10.53%	12	15.00%	6	7.50%	30	9.52%
Soccer	28	35.44%	18	23.68%	11	13.75%	23	28.75%	80	25.40%
Track	2	2.53%	7	9.21%	3	3.75%	5	6.25%	17	5.40%
Swimming	0	0.00%	1	1.32%	2	2.50%	1	1.25%	4	1.27%
Volleyball	3	3.80%	5	6.58%	6	7.50%	4	5.00%	18	5.71%
Baseball	12	15.19%	3	3.95%	5	6.25%	3	3.75%	23	7.30%
Bike Ridding	3	3.80%	0	0.00%	0	0.00%	1	1.25%	4	1.27%
Roller Skating	5	6.33%	0	0.00%	1	1.25%	0	0.00%	6	1.90%
Tennis	1	1.27%	0	0.00%	1	1.25%	0	0.00%	2	0.63%

Number of Students Who Enjoy Physical Education										
<i>Enjoyment</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	76	96.20%	72	94.74%	75	93.75%	77	96.25%	300	95.24%
No	3	3.80%	4	5.26%	5	6.25%	3	3.75%	15	4.76%

Frequency of Student Tooth Brushing Per Day										
<i>Times Per Day</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
One	4	5.06%	32	42.11%	39	48.75%	33	41.25%	108	34.29%
Two	67	84.81%	34	44.74%	25	31.25%	34	42.50%	160	50.79%
Three	8	10.13%	10	13.16%	16	20.00%	13	16.25%	47	14.92%

Mother Supervises Student Tooth Brushing										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	44	55.70%	33	43.42%	53	66.25%	39	48.75%	169	53.65%
No	35	44.30%	43	56.58%	27	33.75%	41	51.25%	146	46.35%

Students Like Brushing Teeth										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	75	94.94%	69	90.79%	72	90.00%	64	80.00%	280	88.89%
No	4	5.06%	7	9.21%	8	10.00%	16	20.00%	35	11.11%

When Students Began to Like Brushing Teeth										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Health Fair	0	0.00%	0	0.00%	1	12.50%	4	25.00%	5	14.29%
Dental Hygienist	2	50.00%	5	71.43%	5	62.50%	7	43.75%	19	54.29%
Other	2	50.00%	2	28.57%	2	25.00%	5	31.25%	11	31.43%
Total Population	4		7		8		16		35	

Distribution of Students Who Floss										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	59	74.68%	62	81.58%	44	55.00%	39	48.75%	204	64.76%
No	20	25.32%	14	18.42%	36	45.00%	41	51.25%	111	35.24%

Distribution of How Many Times Students Floss										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Once	24	40.68%	19	30.65%	16	36.36%	15	38.46%	74	36.27%
Twice	33	55.93%	35	56.45%	13	29.55%	9	23.08%	90	44.12%
Other	2	3.39%	8	12.90%	15	34.09%	15	38.46%	40	19.61%
Total Population	59		62		44		39		204	

Students Who Have Mom Supervise Flossing										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	33	55.93%	31	50.00%	29	65.91%	17	43.59%	110	53.92%
No	26	44.07%	31	50.00%	15	34.09%	22	56.41%	94	46.08%
Total Population	59		62		44		39		204	

Students Who Always Liked Flossing										
<i>Preferred floss</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	45	76.27%	43	69.35%	37	84.09%	23	58.97%	148	72.55%
No	14	23.73%	19	30.65%	7	15.91%	16	41.03%	56	27.45%
Total Population	59		62		44		39		204	

Primary Influences to Start Flossing										
<i>Reason</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Health Fair	1	7.69%	4	21.05%	1	14.29%	0	0.00%	6	10.91%
Dental Hygienist	9	69.23%	13	68.42%	6	85.71%	14	87.50%	42	76.36%
Other	3	23.08%	2	10.53%	0	0.00%	2	12.50%	7	12.73%
Total Population	13		19		7		16		55	

Distribution of Academic Performance										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Excellent	11	13.92%	19	25.00%	3	3.75%	10	12.50%	43	13.65%
Very Good	35	44.30%	19	25.00%	23	28.75%	19	23.75%	96	30.48%
Good	21	26.58%	23	30.26%	26	32.50%	39	48.75%	109	34.60%
Satisfactory	11	13.92%	15	19.74%	24	30.00%	10	12.50%	60	19.05%
Poor	1	1.27%	0	0.00%	4	5.00%	2	2.50%	7	2.22%

How Students Like School										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Very much	37	46.84%	47	61.84%	51	63.75%	54	67.50%	189	60.00%
Not too much	40	50.63%	25	32.89%	29	36.25%	24	30.00%	118	37.46%
Not at all	2	2.53%	4	5.26%	0	0.00%	2	2.50%	8	2.54%

Distribution of Students who Have visited the Principal's Office										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Never Been	48	60.76%	58	76.32%	49	61.25%	59	73.75%	214	67.94%
At least Once	20	25.32%	11	14.47%	15	18.75%	9	11.25%	55	17.46%
Two Times	4	5.06%	1	1.32%	8	10.00%	7	8.75%	20	6.35%
Three Times	2	2.53%	3	3.95%	3	3.75%	2	2.50%	10	3.17%
Four or More	5	6.33%	3	3.95%	5	6.25%	3	3.75%	16	5.08%

Number of Students Suspend										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
No Answer	2	2.53%	0	0.00%	2	2.50%	0	0.00%	4	1.27%
Yes	4	5.06%	7	9.21%	13	16.25%	5	6.25%	29	9.21%
No	73	92.41%	69	90.79%	65	81.25%	75	93.75%	282	89.52%

Distribution of Student Absence										
<i># of Days</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Never Absent	36	45.57%	25	32.89%	13	16.25%	16	20.00%	90	28.57%
One day	12	15.19%	15	19.74%	10	12.50%	11	13.75%	48	15.24%
Two days	12	15.19%	11	14.47%	11	13.75%	16	20.00%	50	15.87%
Three days	6	7.59%	7	9.21%	11	13.75%	9	11.25%	33	10.48%
Four days	4	5.06%	6	7.89%	14	17.50%	10	12.50%	34	10.79%
≥ A Week	7	8.86%	10	13.16%	15	18.75%	16	20.00%	48	15.24%
≥ Two Weeks	2	2.53%	1	1.32%	5	6.25%	1	1.25%	9	2.86%
≥ Three Weeks	0	0.00%	1	1.32%	1	1.25%	1	1.25%	3	0.95%

Student Satisfaction With School Clinic (clinic users only)										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Very Good	26	48.15%	27	52.94%	26	68.42%	17	41.46%	96	52.17%
Good	13	24.07%	15	29.41%	8	21.05%	14	34.15%	50	27.17%
Satisfactory	4	7.41%	4	7.84%	0	0.00%	3	7.32%	11	5.98%
No Answer	11	20.37%	5	9.80%	4	10.53%	7	17.07%	27	14.67%
Total	54		51		38		41		184	

Student Satisfaction With Dental Clinic (dental clinic users only)										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Very Good	12	44.44%	33	57.89%	21	55.26%	26	59.09%	92	55.42%
Good	8	29.63%	19	33.33%	11	28.95%	10	22.73%	48	28.92%
Satisfactory	2	7.41%	2	3.51%	3	7.89%	4	9.09%	11	6.63%
No Answer	5	18.52%	3	5.26%	3	7.89%	4	9.09%	15	9.04%
Total	27		57		38		44		166	

Gender of Parent										
<i>Gender</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Male	4	5.56%	4	7.14%	13	18.31%	10	15.38%	31	11.79%
Female	68	94.44%	52	92.86%	57	81.43%	55	84.62%	232	88.21%

Type of Guardian										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Father	4	5.56%	4	7.14%	13	18.31%	10	15.38%	31	11.79%
Mother	64	88.89%	45	80.36%	53	74.65%	54	83.08%	216	82.13%
Guardian	2	2.78%	1	1.79%	2	2.82%	1	1.54%	6	2.28%
Grand Parent	1	1.39%	6	10.71%	2	2.82%	0	0.00%	9	3.42%
Other	1	1.39%	0	0.00%	0	0.00%	0	0.00%	1	0.38%

Ethnicity of Parents										
<i>Ethnic Group</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
African American	0	0.00%	36	64.29%	41	58.57%	7	10.77%	84	31.94%
Hispanic	71	98.61%	20	35.71%	17	24.29%	52	80.00%	160	60.84%
Asian	0	0.00%	0	0.00%	5	7.14%	5	7.69%	10	3.80%
Native American	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
White	1	1.39%	0	0.00%	7	10.00%	1	1.54%	9	3.42%

Distribution of Domicile										
<i>Type of Domicile</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Own House	39	54.17%	20	35.71%	9	12.86%	10	15.38%	78	29.66%
Family House	4	5.56%	8	14.29%	5	7.14%	3	4.62%	20	7.60%
Apartment	25	34.72%	22	39.29%	56	80.00%	52	80.00%	155	58.94%
Other	4	5.56%	6	10.71%	0	0.00%	0	0.00%	10	3.80%

Number of People Living in Domicile										
<i>Number</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
2	0	0.00%	3	5.36%	4	5.71%	2	3.08%	9	3.42%
3	5	6.94%	4	7.14%	6	8.57%	5	7.69%	20	7.60%
4	16	22.22%	13	23.21%	20	28.57%	20	30.77%	69	26.24%
5	17	23.61%	12	21.43%	21	30.00%	23	35.38%	73	27.76%
6	14	19.44%	7	12.50%	12	17.14%	9	13.85%	42	15.97%
7	17	23.61%	10	17.86%	5	7.14%	1	1.54%	33	12.55%
8	1	1.39%	4	7.14%	2	2.86%	4	6.15%	11	4.18%
9	1	1.39%	2	3.57%	0	0.00%	1	1.54%	4	1.52%
10	0	0.00%	1	1.79%	0	0.00%	0	0.00%	1	0.38%
11	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
12	1	1.39%	0	0.00%	0	0.00%	0	0.00%	1	0.38%

Distribution of Parents who are Gainfully Employed										
<i>Employment</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	29	40.28%	33	58.93%	53	75.71%	49	75.38%	164	62.36%
No	43	59.72%	23	41.07%	17	24.29%	16	24.62%	99	37.64%

Distribution of Other Persons in Household Employed										
<i>Other Employed</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Spouse	53	73.61%	20	35.71%	26	37.14%	42	64.62%	141	53.61%
Mother	1	1.39%	0	0.00%	1	1.43%	2	3.08%	4	1.52%
Father	1	1.39%	0	0.00%	1	1.43%	3	4.62%	5	1.90%
Sister	1	1.39%	0	0.00%	1	1.43%	1	1.54%	3	1.14%
Brother	1	1.39%	0	0.00%	2	2.86%	2	3.08%	5	1.90%
Relative	0	0.00%	10	17.86%	1	1.43%	0	0.00%	11	4.18%
Daughter	0	0.00%	6	10.71%	4	5.71%	1	1.54%	11	4.18%
Son	0	0.00%	0	0.00%	1	1.43%	1	1.54%	2	0.76%
No Other Person	15	20.83%	20	35.71%	33	47.14%	13	20.00%	81	30.80%

Number of Places Family has Lived in Last Year										
<i>Number</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
1	64	88.89%	48	85.71%	61	87.14%	55	84.62%	228	86.69%
2	6	8.33%	6	10.71%	6	8.57%	8	12.31%	26	9.89%
3	1	1.39%	2	3.57%	3	4.29%	2	3.08%	8	3.04%
4 or More	1	1.39%	0	0.00%	0	0.00%	0	0.00%	1	0.38%

Length of Stay at Present Domicile										
<i>Length of time</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Less than 6 mon.	7	9.72%	6	10.71%	5	7.14%	2	3.08%	20	7.60%
More than 6 mon.	2	2.78%	2	3.57%	4	5.71%	8	12.31%	16	6.08%
1 year	6	8.33%	2	3.57%	3	4.29%	10	15.38%	21	7.98%
1.5 years	1	1.39%	1	1.79%	2	2.86%	1	1.54%	5	1.90%
2 years	8	11.11%	9	16.07%	16	22.86%	4	6.15%	37	14.07%
3 years	7	9.72%	13	23.21%	16	22.86%	11	16.92%	47	17.87%
4 years	10	13.89%	3	5.36%	9	12.86%	6	9.23%	28	10.65%
5 years	6	8.33%	2	3.57%	3	4.29%	5	7.69%	16	6.08%
More than 5 yr	25	34.72%	18	32.14%	12	17.14%	18	27.69%	73	27.76%

Distribution of Family Health Insurance Coverage										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Insurance/ HMO	15	20.83%	13	23.21%	20	28.57%	13	20.00%	61	23.19%
Medicaid	5	6.94%	21	37.50%	24	34.29%	4	6.15%	54	20.53%
Medicare	4	5.56%	0	0.00%	0	0.00%	0	0.00%	4	1.52%
Other	11	15.28%	4	7.14%	2	2.86%	4	6.15%	21	7.98%
None	37	51.39%	18	32.14%	24	34.29%	44	67.69%	123	46.77%

Alternate Places for Health Care if No School Clinic										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Private Doctor	35	48.61%	22	39.29%	31	44.29%	22	33.85%	110	41.83%
Community Clinic	29	40.28%	24	42.86%	28	40.00%	37	56.92%	118	44.87%
HMO Provider	1	1.39%	4	7.14%	5	7.14%	5	7.69%	15	5.70%
Emergency Room	6	8.33%	5	8.93%	6	8.57%	0	0.00%	17	6.46%
Other	1	1.39%	1	1.79%	0	0.00%	1	1.54%	3	1.14%

Distribution of Parents Who have Signed Consent Form										
<i>Signed</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	43	59.72%	56	100.00%	61	87.14%	55	84.62%	215	81.75%
No	29	40.28%	0	0.00%	9	12.86%	10	15.38%	48	18.25%

How Many Visits Children Made to Clinic										
<i>Times</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
1	10	13.89%	4	7.14%	17	24.29%	8	12.31%	39	14.83%
2	13	18.06%	29	51.79%	24	34.29%	17	26.15%	83	31.56%
3	11	15.28%	11	19.64%	11	15.71%	11	16.92%	44	16.73%
4 or more	6	8.33%	6	10.71%	4	5.71%	3	4.62%	19	7.22%
Never Gone	32	44.44%	6	10.71%	14	20.00%	26	40.00%	78	29.66%

Distribution Children's Emergency Room Use										
<i>Number of Times</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
One	3	4.17%	2	3.57%	9	12.86%	5	7.69%	19	7.22%
Two	2	2.78%	1	1.79%	0	0.00%	1	1.54%	4	1.52%
Three	1	1.39%	0	0.00%	0	0.00%	0	0.00%	1	0.38%
Never	66	91.67%	53	94.64%	61	87.14%	59	90.77%	239	90.87%

Parent's Perception of ER service waiting length										
<i>Too Long?</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	3	50.00%	1	33.33%	5	55.56%	3	50.00%	12	50.00%
No	3	50.00%	2	66.67%	4	44.44%	3	50.00%	12	50.00%
Total Population	6		3		9		6		24	

Approximation of Emergency Room Wait										
<i>Number of Hours</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Minutes	1	16.67%	0	0.00%	3	33.33%	0	0.00%	4	16.67%
one hour	2	33.33%	2	66.67%	1	11.11%	2	33.33%	7	29.17%
two hours	0	0.00%	1	33.33%	1	11.11%	1	16.67%	3	12.50%
more than three	3	50.00%	0	0.00%	4	44.44%	2	33.33%	9	37.50%
No Answer	0	0.00%	0	0.00%	0	0.00%	1	16.67%	1	4.17%
Total Population	6		3		9		6		24	

Distribution of Parents Who have Signed Dental Consent Form										
<i>Signed</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	40	55.56%	55	98.21%	60	85.71%	53	81.54%	208	79.09%
No	32	44.44%	1	1.79%	10	14.29%	12	18.46%	55	20.91%

Alternative Dental Care if Dental Clinic was not available										
<i>Alternate Place</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Private Doctor	40	55.56%	20	35.71%	29	41.43%	19	29.23%	108	41.06%
Community Dental	26	36.11%	34	60.71%	38	54.29%	44	67.69%	142	53.99%
Other	6	8.33%	2	3.57%	3	4.29%	2	3.08%	13	4.94%

Parents Absent from Work if No School (Medical / Dental) Clinic										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	62	86.11%	45	80.36%	57	81.43%	61	93.85%	225	85.55%
No	10	13.89%	11	19.64%	12	17.14%	4	6.15%	37	14.07%
Not Applicable	0	0.00%	0	0.00%	1	1.43%	0	0.00%	1	0.38%

Alternate Person to Take Child to Health Care										
<i>Person</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Mother	5	50.00%	1	10.00%	3	25.00%	1	33.33%	10	28.57%
Father	1	10.00%	0	0.00%	2	16.67%	0	0.00%	3	8.57%
Sister	3	30.00%	1	10.00%	0	0.00%	0	0.00%	4	11.43%
Brother	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Relative	0	0.00%	6	60.00%	3	25.00%	2	66.67%	11	31.43%
Daughter	0	0.00%	2	20.00%	3	25.00%	0	0.00%	5	14.29%
Son	1	10.00%	0	0.00%	1	8.33%	0	0.00%	2	5.71%
Total Population	10		10		12		3		35	

If Child Was Ill, Would Child Stay at Home										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	52	72.22%	52	92.86%	68	97.14%	53	81.54%	225	85.55%
No	20	27.78%	4	7.14%	2	2.86%	12	18.46%	38	14.45%

If Child Complained of Not Feeling well, Would Child Go to School										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	25	34.72%	35	62.50%	29	41.43%	33	50.77%	122	46.39%
No	47	65.28%	21	37.50%	41	58.57%	32	49.23%	141	53.61%

Why Parents Would Send Children To School If Feeling Ill										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
School Clinic	18	72.00%	35	100.00%	26	89.66%	30	90.91%	109	89.34%
Not Miss School	7	28.00%	0	0.00%	3	10.34%	3	9.09%	13	10.66%
Total Population	25		35		29		33		122	

School Based Clinic / Dental Usual Provider										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	36	50.00%	28	50.00%	26	37.14%	52	80.00%	142	53.99%
No	36	50.00%	28	50.00%	44	62.86%	13	20.00%	121	46.01%

Has Child been Completely Vaccinated										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	72	100.00%	56	100.00%	70	100.00%	64	98.46%	262	99.62%
No	0	0.00%	0	0.00%	0	0.00%	1	1.54%	1	0.38%

Where Child Received Vaccination										
<i>Place</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
School Clinic	4	5.56%	9	16.07%	0	0.00%	8	12.31%	21	7.98%
Community Clinic	58	80.56%	40	71.43%	57	81.43%	44	67.69%	199	75.67%
Private Doctor	10	13.89%	7	12.50%	13	18.57%	12	18.46%	42	15.97%
Other	0	0.00%	0	0.00%	0	0.00%	1	1.54%	1	0.38%

Children With Bi-Yearly Dental Check-ups										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	45	62.50%	51	91.07%	63	90.00%	56	86.15%	215	81.75%
No	27	37.50%	5	8.93%	7	10.00%	9	13.85%	48	18.25%

Where Received Dental Check-up										
<i>Place</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
School Clinic	26	57.78%	49	96.08%	51	82.26%	48	85.71%	174	81.31%
Private Dentist	16	35.56%	1	1.96%	9	14.52%	8	14.29%	34	15.89%
Community Dental	2	4.44%	1	1.96%	1	1.61%	0	0.00%	4	1.87%
Other	1	2.22%	0	0.00%	1	1.61%	0	0.00%	2	0.93%
Total Population	45		51		62		56		214	

Children had Tooth Extraction										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	17	23.61%	6	10.71%	11	15.71%	21	32.31%	55	20.91%
No	55	76.39%	50	89.29%	59	84.29%	43	66.15%	207	78.71%
Did not know	0	0.00%	0	0.00%	0	0.00%	1	1.54%	1	0.38%

Parent Supervise Child Brushing Teeth										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	63	87.50%	56	100.00%	69	98.57%	57	87.69%	245	93.16%
No	9	12.50%	0	0.00%	1	1.43%	8	12.31%	18	6.84%

Frequency Per Day of Brushing Teeth										
<i>Times Per Day</i>	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
One	12	16.67%	12	21.43%	11	15.71%	5	7.69%	40	15.21%
Two	55	76.39%	43	76.79%	57	81.43%	44	67.69%	199	75.67%
Three	5	6.94%	1	1.79%	2	2.86%	14	21.54%	22	8.37%
Don't Know	0	0.00%	0	0.00%	0	0.00%	2	3.08%	2	0.76%

Children Floss on a Regular Basis										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	47	65.28%	33	58.93%	47	67.14%	44	67.69%	171	65.02%
No	25	34.72%	23	41.07%	23	32.86%	21	32.31%	92	34.98%

Parent Saw Principal Because of Child's Negative Behavior										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	16	22.22%	12	21.43%	12	17.14%	3	4.62%	43	16.35%
No	56	77.78%	44	78.57%	58	82.86%	62	95.38%	220	83.65%

Parent Talked to Social Worker Because of Child's Problem										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	10	13.89%	3	5.36%	5	7.14%	2	3.08%	20	7.60%
No	62	86.11%	53	94.64%	65	92.86%	63	96.92%	243	92.40%

Child Gets Into Trouble at Home										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	3	4.17%	2	3.57%	2	2.86%	0	0.00%	7	2.66%
No	69	95.83%	54	96.43%	68	97.14%	65	100.00%	256	97.34%

Took Child to Doctor Because of Trouble										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	2	2.78%	0	0.00%	1	1.43%	0	0.00%	3	1.14%
No	70	97.22%	56	100.00%	69	98.57%	65	100.00%	260	98.86%

Parents Give Child Fruits and Vegetables										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	71	98.61%	56	100.00%	69	98.57%	63	96.92%	259	98.48%
No	1	1.39%	0	0.00%	1	1.43%	2	3.08%	4	1.52%

Child Likes Fruits and Vegetables										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	53	73.61%	36	64.29%	53	75.71%	54	83.08%	196	74.52%
No	19	26.39%	20	35.71%	17	24.29%	11	16.92%	67	25.48%

Parent Has Always Given Fruits and Vegetables to Child										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	69	95.83%	49	87.50%	68	97.14%	63	96.92%	249	94.68%
No	3	4.17%	7	12.50%	2	2.86%	2	3.08%	14	5.32%

Parent Has Always Given Fruits and Vegetables to Child										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
After Health Fair	1	33.33%	5	71.43%	0	0.00%	1	50.00%	7	50.00%
Hygienist Taught Child	2	66.67%	1	14.29%	0	0.00%	1	50.00%	4	28.57%
Other	0	0.00%	1	14.29%	2	100.00%	0	0.00%	3	21.43%
Total Population	3		7		2		2		14	

Number of Times Parents Attended PTO Meetings										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Never Gone	41	56.94%	24	42.86%	28	40.00%	30	46.15%	123	46.77%
One	10	13.89%	9	16.07%	9	12.86%	6	9.23%	34	12.93%
Two	7	9.72%	12	21.43%	21	30.00%	9	13.85%	49	18.63%
Three	5	6.94%	7	12.50%	11	15.71%	8	12.31%	31	11.79%
Four	9	12.50%	4	7.14%	1	1.43%	12	18.46%	26	9.89%

Parent Satisfaction With Child's Academic Achievement										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Excellent	17	23.61%	14	25.00%	20	28.57%	16	24.62%	67	25.48%
Very Good	32	44.44%	28	50.00%	25	35.71%	30	46.15%	115	43.73%
Good	15	20.83%	10	17.86%	14	20.00%	12	18.46%	51	19.39%
Satisfactory	8	11.11%	2	3.57%	9	12.86%	3	4.62%	22	8.37%
Poor	0	0.00%	2	3.57%	2	2.86%	4	6.15%	8	3.04%

Number of Parents Who Help Child With Homework										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Yes	66	91.67%	52	92.86%	65	92.86%	60	92.31%	243	92.40%
No	6	8.33%	4	7.14%	5	7.14%	5	7.69%	20	7.60%

Parent Satisfaction With School Medical Clinic										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Excellent	20	51.28%	19	38.00%	17	30.36%	11	27.50%	67	36.22%
Very Good	17	43.59%	28	56.00%	36	64.29%	22	55.00%	103	55.68%
Good	1	2.56%	3	6.00%	2	3.57%	4	10.00%	10	5.41%
Satisfactory	1	2.56%	0	0.00%	1	1.79%	0	0.00%	2	1.08%
Poor	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Not Applicable	0	0.00%	0	0.00%	0	0.00%	3	7.50%	3	1.62%
Total	39		50		56		40		185	

Parent Satisfaction With School Dental Clinic										
	Bonner		Easter		Elrod		McNamara		Total Group	
	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>	<i>#</i>	<i>Percent</i>
Excellent	20	76.92%	28	57.14%	23	45.10%	21	43.75%	92	52.87%
Very Good	5	19.23%	18	36.73%	27	52.94%	24	50.00%	74	42.53%
Good	0	0.00%	3	6.12%	1	1.96%	3	6.25%	7	4.02%
Satisfactory	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Poor	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Not Applicable	1	3.85%	0	0.00%	0	0.00%	0	0.00%	1	0.57%
Total	26		49		51		48		174	

Appendix H

School-Based/Linked Health Program Charts

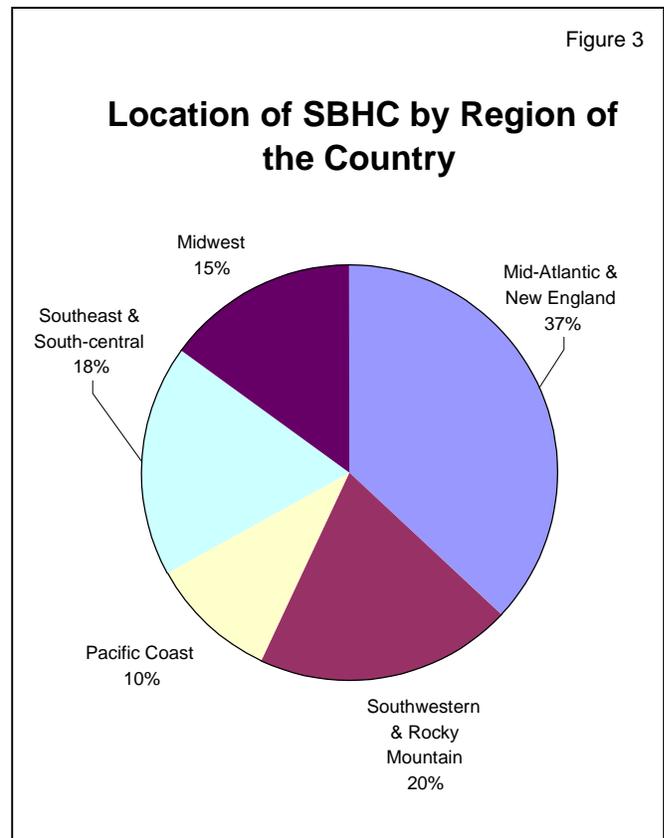
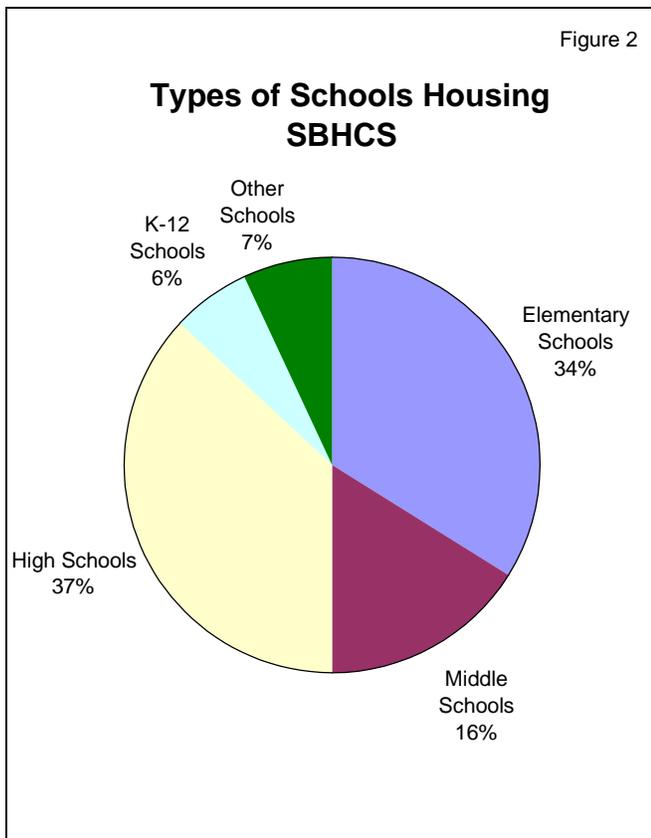
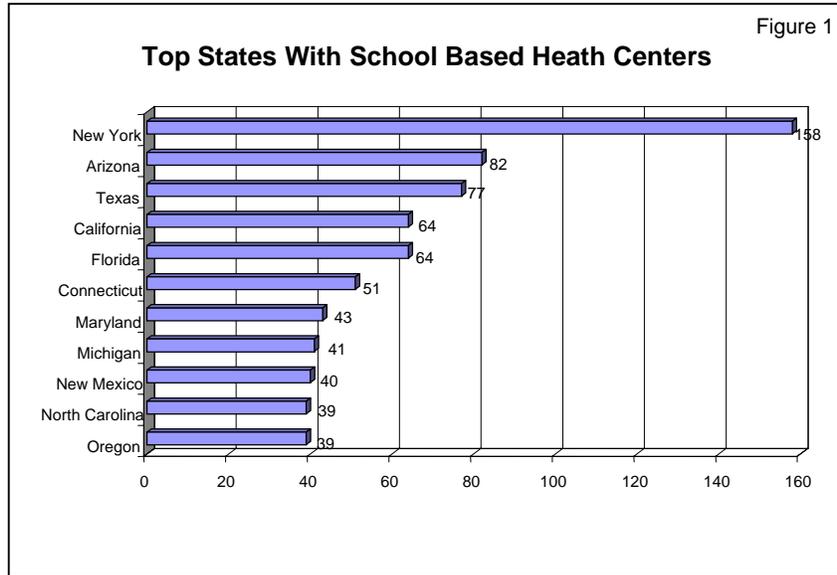


Figure 4

Distribution of Student Ethnicity

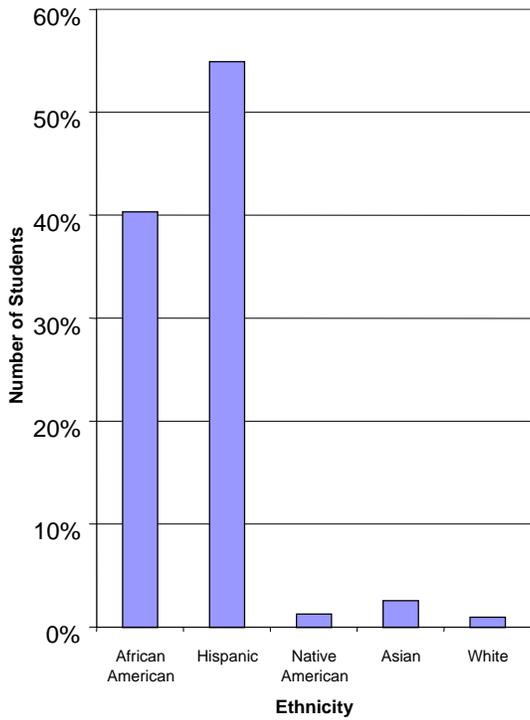


Figure 5

Distribution of Students' Domicile

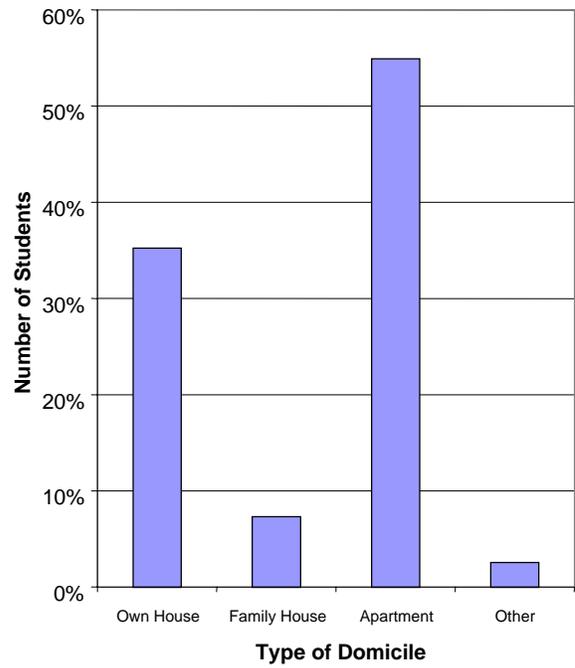


Figure 6

Number of People in Student's Household

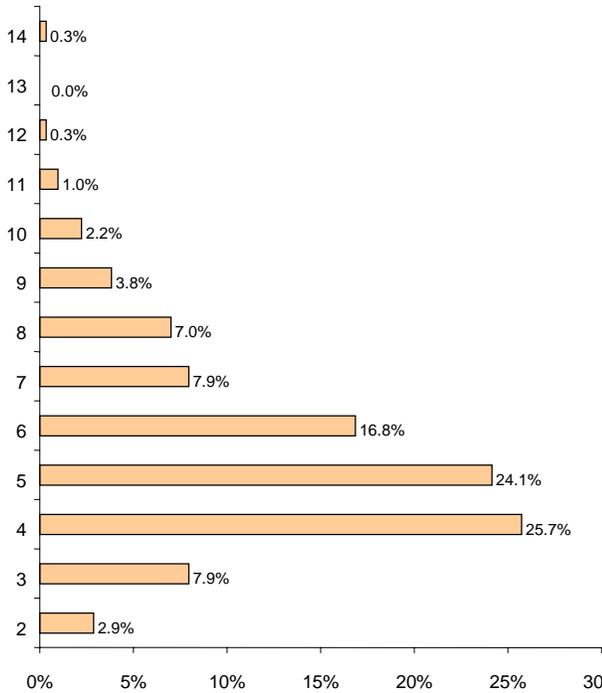


Figure 7

Distribution of Student Complaints

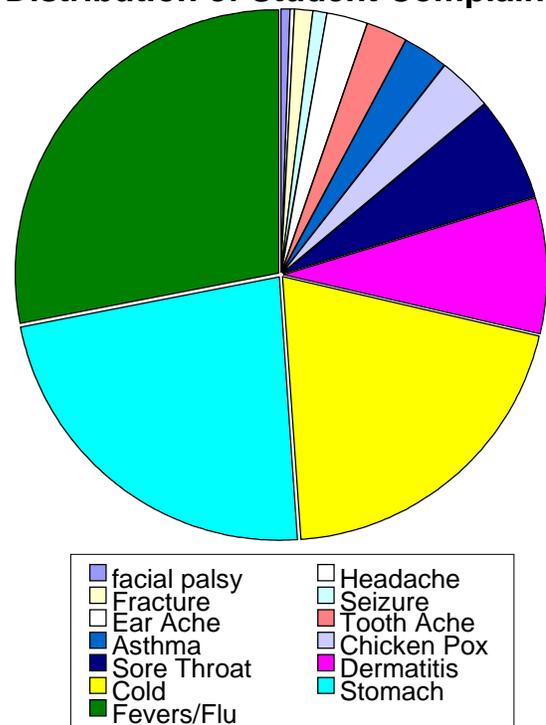


Figure 8

Student Usual Treatment Options

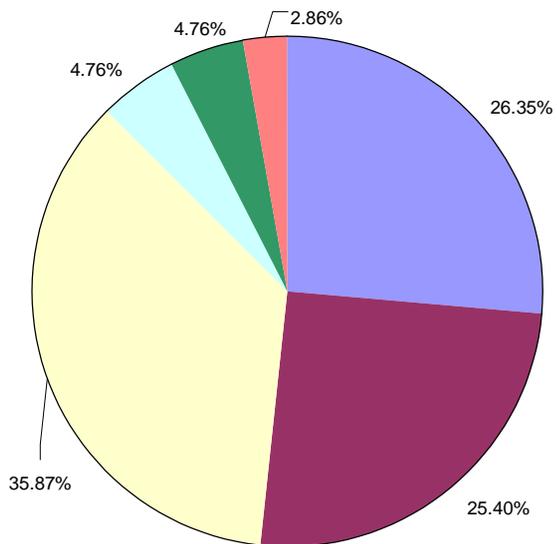


Figure 9

Place of Dental Treatment

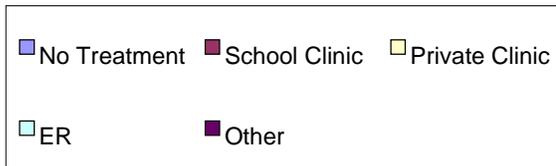
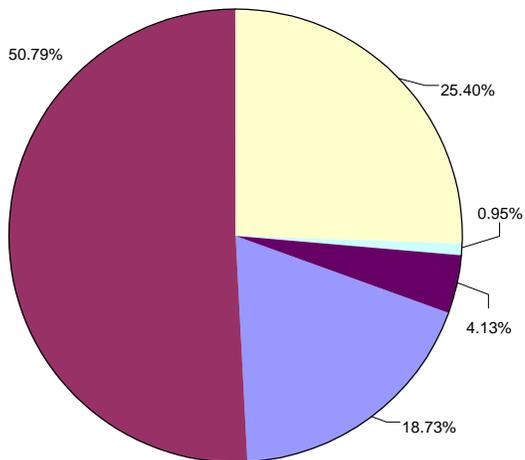


Figure 10

Reason for Dental Visit

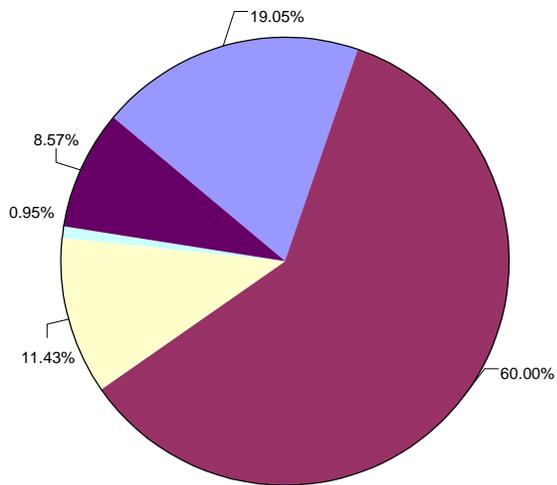


Figure 11

Number of Visits Per Student To school Dental Clinic

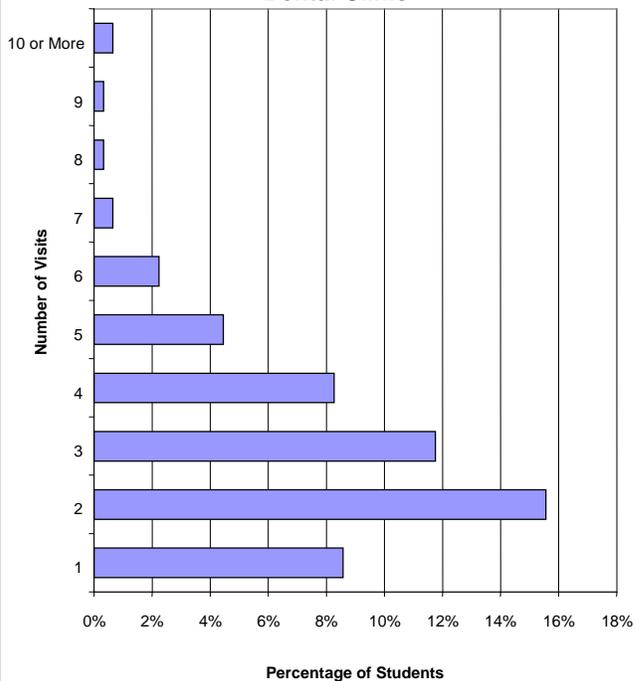


Figure 12

Where Students Received Sealant

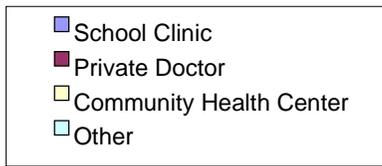
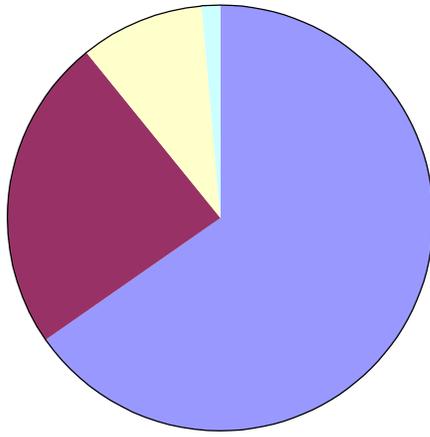


Figure 13

Where Medical Check-up Took Place

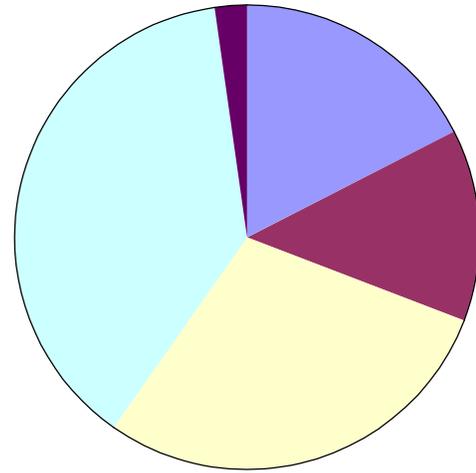


Figure 14

Where Students Go for Help When Sad

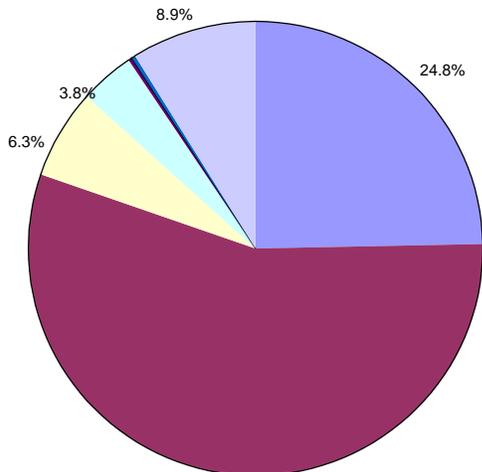


Figure 15

How Students Started Eating Fruits and Vegetables

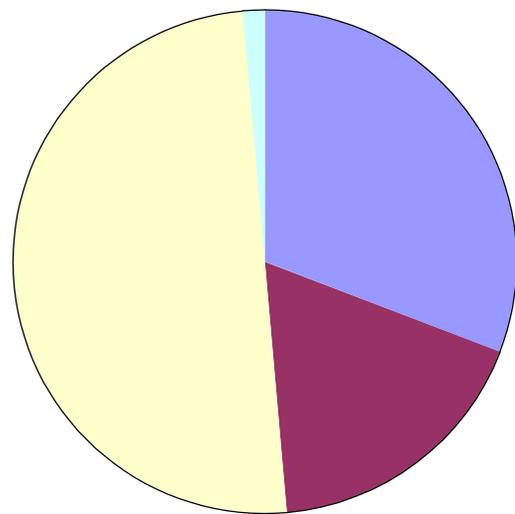


Figure 16

When Students Began to Like Brushing

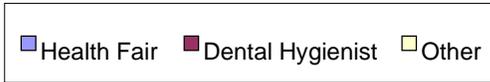
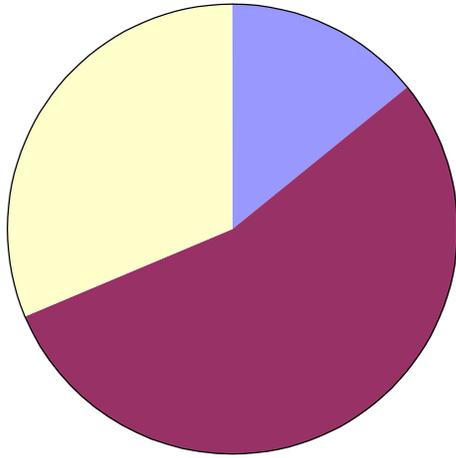


Figure 17

Primary Influence to Start Flossing

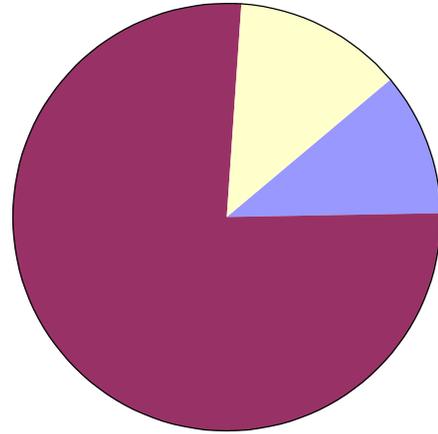


Figure 18

Distribution of Academic Performance

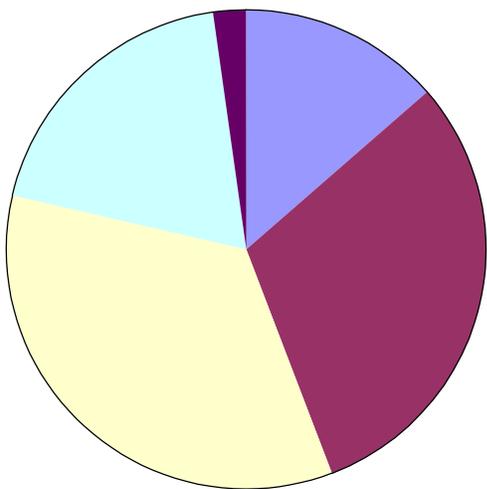


Figure 19

How Students Like School

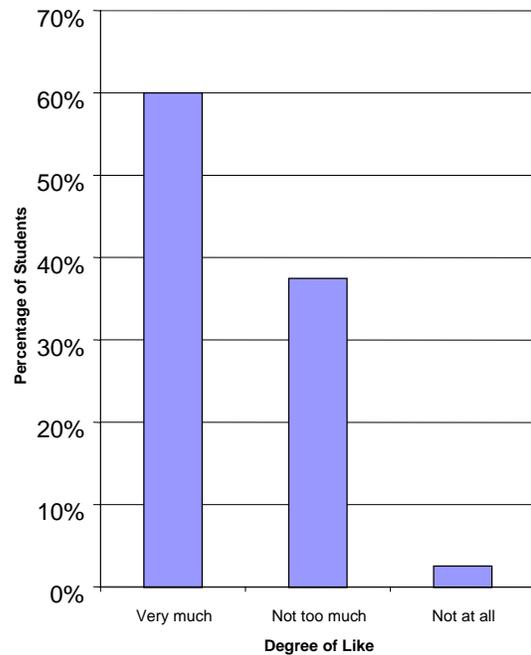


Figure 20

Distribution of Students Who Have Visited Principal's Office

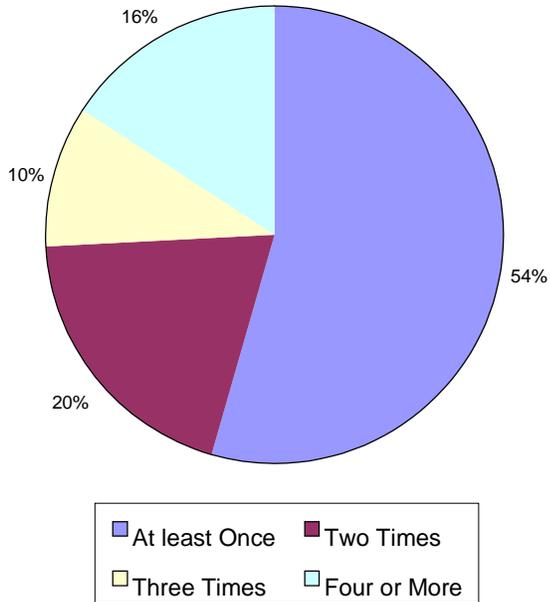


Figure 21

Distribution of Student Absence

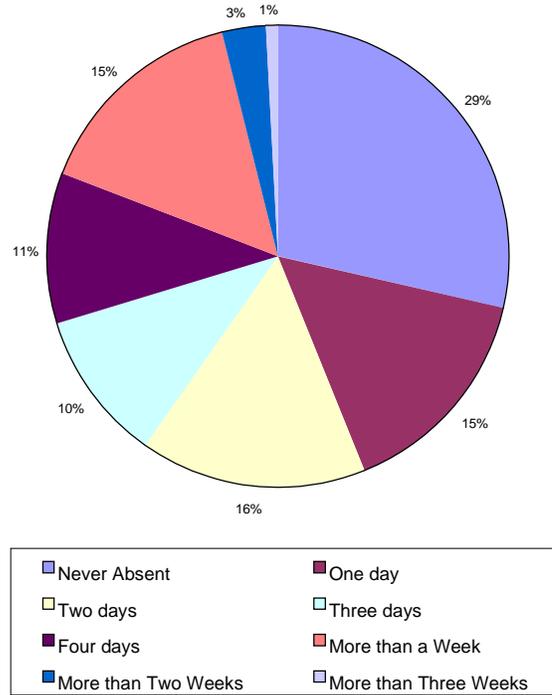


Figure 22

Student Satisfaction With School Clinic

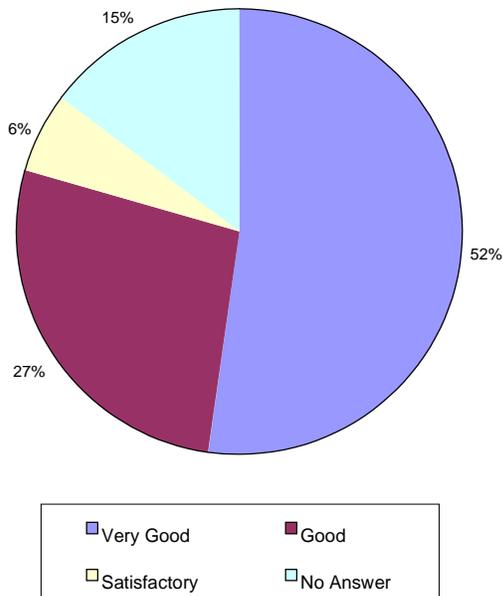


Figure 23

Student Satisfaction With Dental Clinic

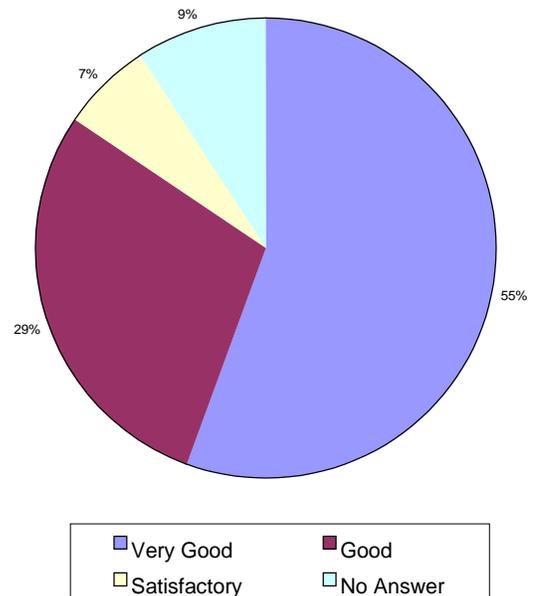


Figure 24

Type of Guardian

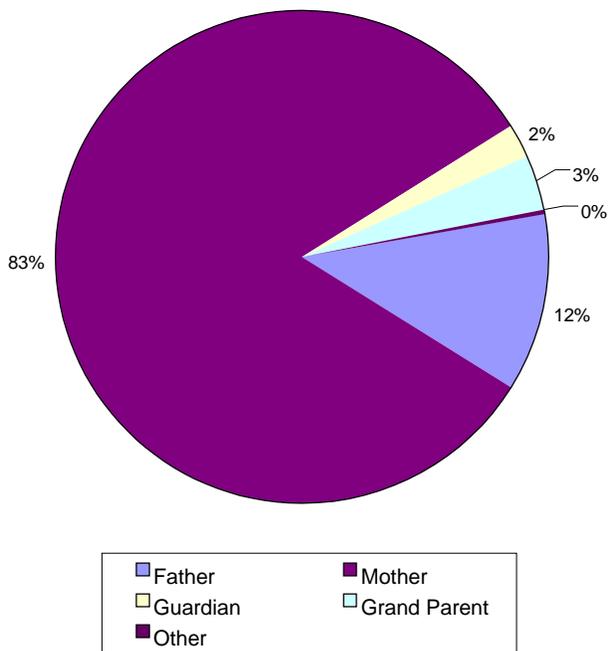


Figure 25

Ethnicity of Parents

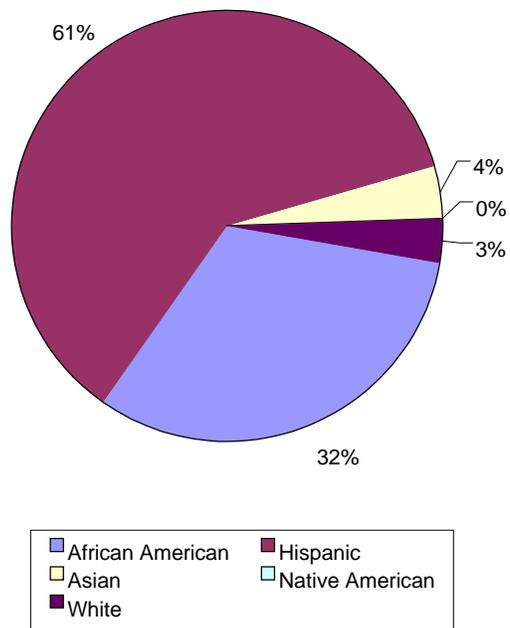


Figure 26

Distribution of Domicile

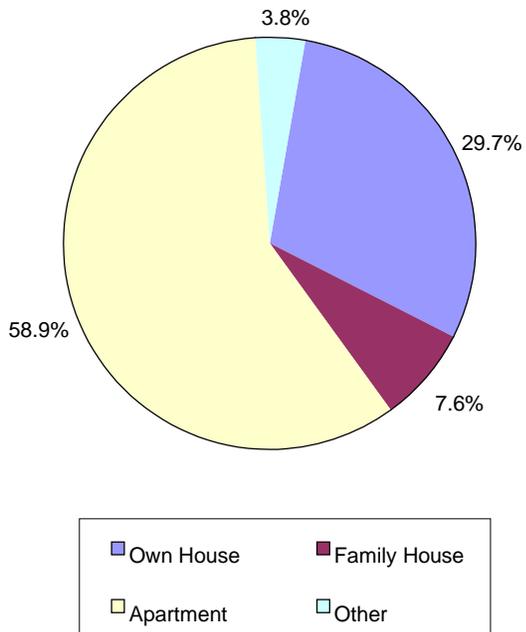


Figure 27

Number of People Living in Domicile

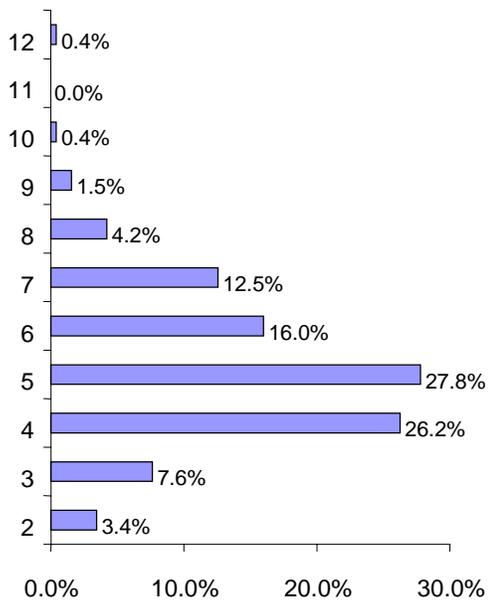


Figure 28

Distribution of Other Persons In Household Employed

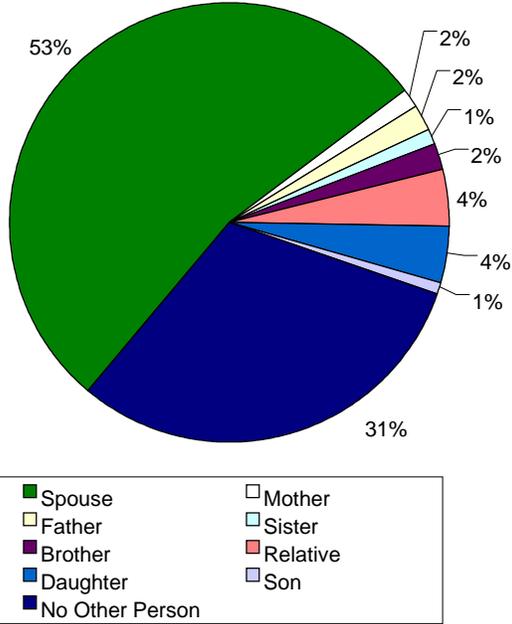


Figure 29

Number of Places Family has Lived in a Year

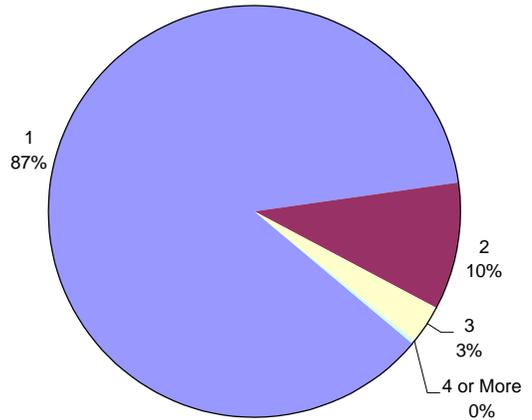


Figure 30

Distribution of Family Health Insurance Coverage

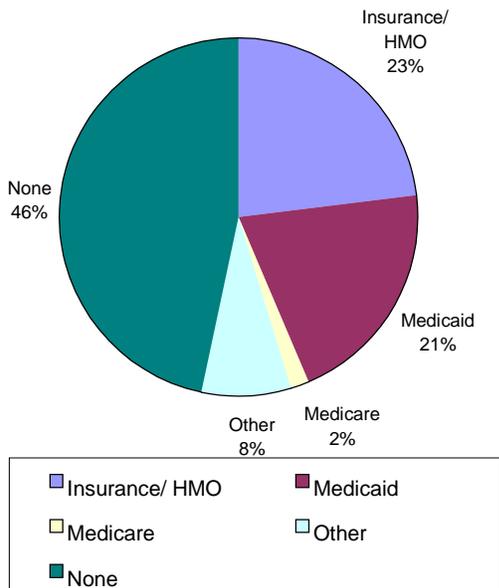


Figure 31

Distribution of Alternate Places to Go

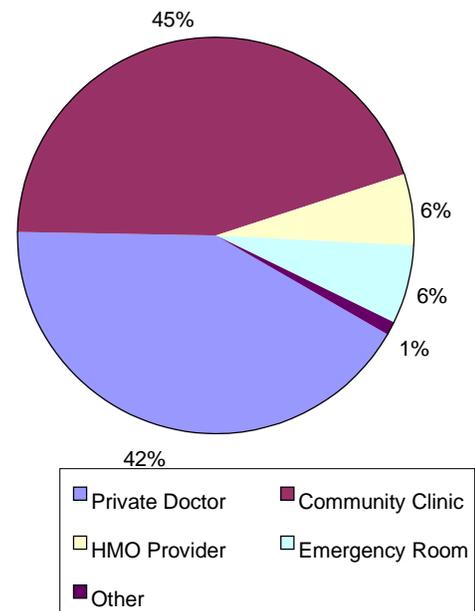


Figure 32

Distribution of Children's Emergency Room Use

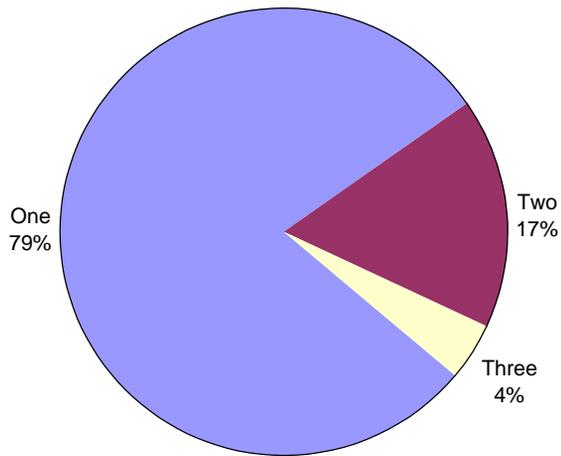


Figure 33

Approximation of Emergency Room Wait

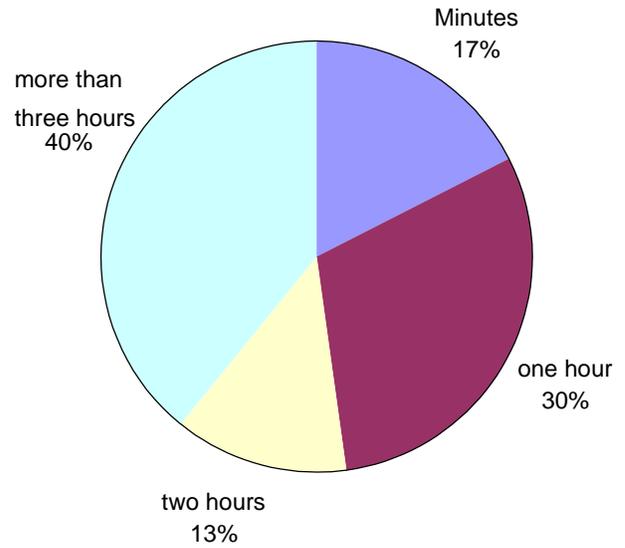


Figure 34

Alternate Dental Care if Dental Clinic Was Not Available

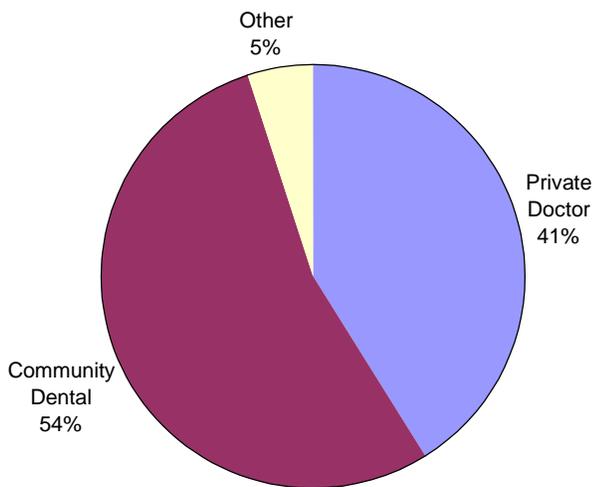


Figure 35

Alternate Person to Take Child Home

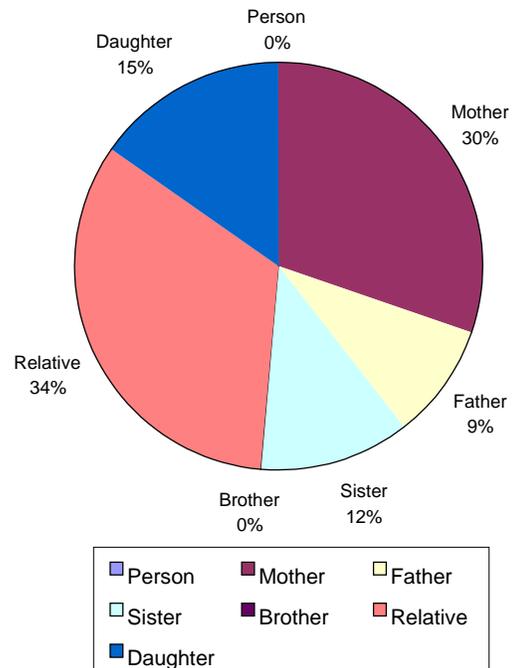


Figure 36

Where Received Vaccination

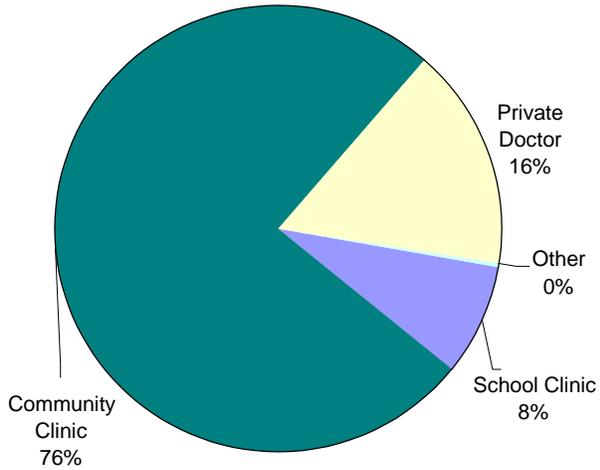


Figure 37

Where Parents Report Children Received Dental Check- Up

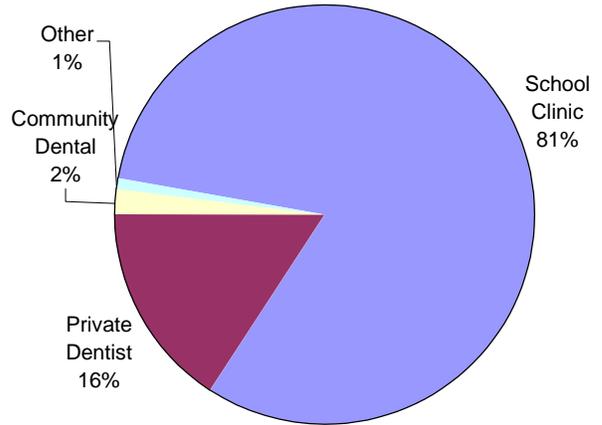


Figure 38

When Child Started Eating Vegetables

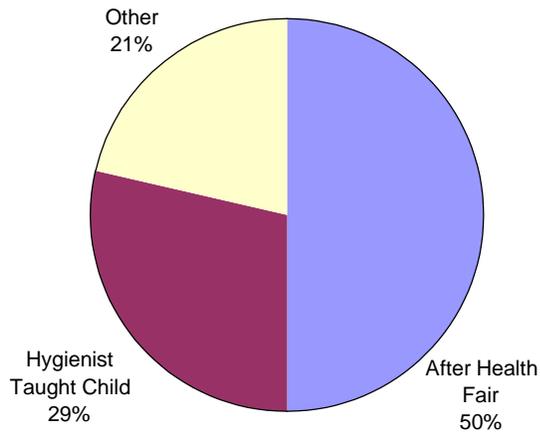


Figure 39

Number of Times Parents Attend PTO Meetings

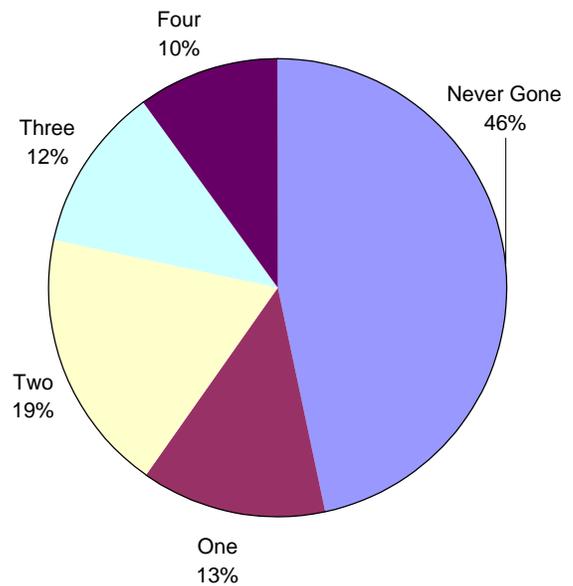


Figure 40

Parent Satisfaction with Child's Academic Achievement

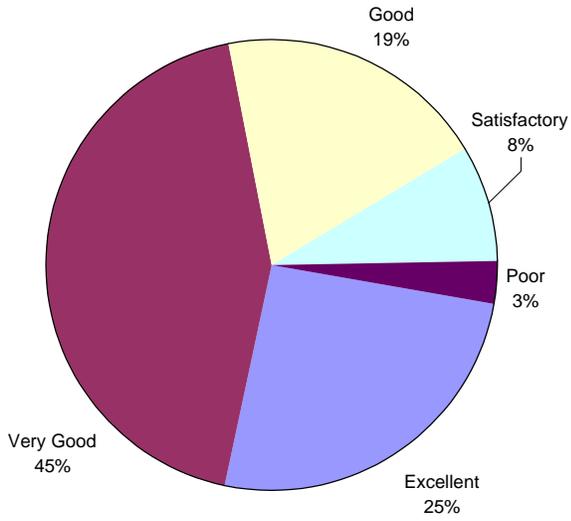


Figure 41

Parent Satisfaction with School Clinic

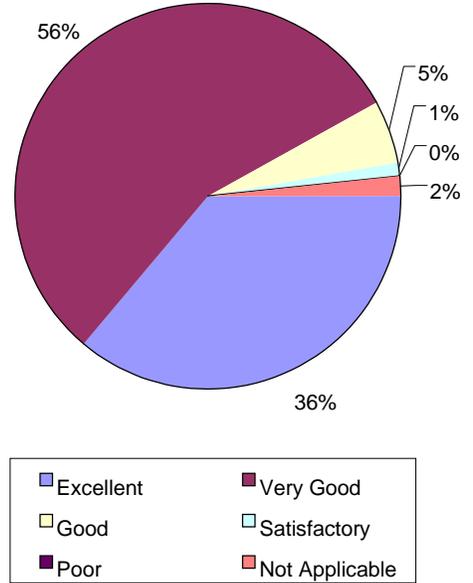


Figure 42

Parent Satisfaction Which School Dental Clinic

