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ABSTRACT

This paper describes a small set of successful school-based clinics (SBCs) that provide primary health care services for the underserved and identifies factors contributing to their success. Six sites were selected on the basis of three general criteria: (1) direct involvement between the SBC and a federally-funded community health center (CHC); (2) wide geographic distribution with urban/rural representation; and (3) a demonstrated measure of success in terms of substantial student enrollment. A visit was made to each clinic and interviews were conducted with the clinic director, key staff, a CHC manager, and student-users of the clinic. Based on the data collected, a case study was written for each site, providing information on the following SBC topics: geographic characteristics; characteristics of the student population; brief history and mission; management and staffing; space and facilities; outreach and marketing efforts; services offered; costs and financing; impact of services; ongoing concerns and problems; and keys to success. (Contains 28 exhibits and 26 references.) (LL)

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ACKNOWLEDGEMENTS

According to a recent survey, there are over 200 organizations funded under titles 329, 330, and 340 of the Public Health Service Act, which provide health care to school-age children via school-linked programs, or through on-site school-based clinics. It is the latter group which this study examines, and the six selected sites represent the variety and excellence of school-based clinics.

The Executive Directors and staff of six Community Health Centers (CHCs), as well as their school-based clinic staff gave generously of their time and data in order that the Bureau of Primary Care could learn about successful school-based clinics. Invaluable assistance was also provided by the principals and teachers of the schools visited, members of the community, and perhaps most importantly, the students who were willing to discuss the impact of the school-based clinic on their lives. We gratefully acknowledge the contributions of all of these people, who through the school-based clinics, are associated with the following CHCs:

- Byhalia Family Health Center, Byhalia, MS
- Denver Health and Hospitals, Denver, CO
- Economic Opportunity Family Health Center, Miami, FL
- Northeast Valley Health Corporation, San Fernando, CA
- Jackson-Hinds Comprehensive Health Center, Jackson, MS.
- Baltimore Medical Systems, Baltimore, MD

SCHOOL BASED CLINICS THAT WORK

EXECUTIVE SUMMARY

The Bureau of Primary Health Care has always had a commitment to increasing access to comprehensive primary care services for the underserved. Since the mid-1970s, this commitment has been evidenced by many Community and Migrant Health Centers (and more recently, Health Care for the Homeless Centers) reaching out to underserved children in the schools they attend. By 1993, the number of centers providing primary health care services to children (grades K-12) through either school-based or school-linked programs, had risen to over 200, nationwide.

The purpose of this study was to examine some of these successful school-based clinics (SBCs) in order to learn lessons that will inform future replication efforts. Six sites were selected on the basis of three criteria: active partnership between the SBC and a federally-funded community health center (CHC); wide geographic distribution; and demonstrated success with respect to registering large numbers of students. At the six sites, seven clinics were visited: one clinic was in an elementary schools, two in middle schools, and four in high schools. Two are rural clinics and five are urban clinics.

Prior to the start of these SBCs, most of the students were unable to access primary health care services and dental care. They also lacked information about critical health issues such as sexually transmitted diseases. Students in the schools had a high incidence of health-related problems such as inadequate immunizations, teenage pregnancy, sexually transmitted diseases, substance abuse, suicides, and poor oral health. Directly related to these problems were high rates of school absenteeism, truancy, and dropout. Concern for all these problems moved the CHCs to forge community partnerships that created the SBCs.

Some of the SBCs were met with resistance from community residents who viewed the clinics primarily as vehicles for reproductive services, raising objections on moral grounds. Resistance in some schools also came from the teachers and school nurses who were threatened by the changes that the clinics could make to their jobs. In each case, the resistance subsided after it became clear that the SBC's main mission was to bring comprehensive primary health care to children at risk of poor health and school failure. Gradually, school administrators, teachers, school nurses, and parents could perceive the very important benefits offered by the SBCs examined in this study.

The core services offered in every SBC in this study include primary health care, preventive care, health education, and reproductive services. When resources are available, the clinics also offer mental health, substance abuse, and/or dental services. All clinics are equipped with labs, but samples are usually sent out for processing to the sponsoring CHC. Prescriptions are written in every clinic and dispensed free-of-charge in all but one clinic where a sliding-fee schedule is used.

The staff in each of the clinics includes, at a minimum, a full-time nurse practitioner or a physician's assistant, supported by a full-time medical assistant and a secretary/receptionist. A physician is in the clinic a few hours per week. When mental health or substance abuse services are offered, there is a professional mental health counselor, part-time or full-time, depending on resources.

Each of the SBCs has demonstrated success in registering a large portion of the student body in its school, indicating that its services are readily accessible. At least 70 percent of the students were registered by the fourth year in every clinic; in one case the rate reached 90 percent in less than three years. When faced with budget constraints, three clinics curtailed their outreach activities, resulting in fewer registrations, but not necessarily fewer visits.

Aside from high registration rates, some of the SBCs are also able to demonstrate increasing rates of early entry into prenatal care and declining rates in teen pregnancy, school absenteeism and dropout. Interviews with students revealed that the clinics also help in the early detection of medical and emotional problems and in improving students' self-esteem and communication skills.

Despite their demonstrated successes, the SBCs in this study are not without problems that may hamper their performance in the future. All of them are especially concerned about the stability of their funding for current services and about the unmet needs for mental health, substance abuse, and dental services.

Factors that contributed to the success of the SBCs in this study include: a thorough community plan and strong leadership and commitment of school officials and other community residents; careful hiring of staff, committed, if not trained, to work with school-age children; clinic space that is designed and decorated with the students in mind; respect for the school environment; and services shaped to meet the special needs of school-age children.

For future replication efforts, it is recommended that new SBCs:

- Address community as well as school staff concerns with facts and assurances about the clinics' broad mission to provide comprehensive health services.
- Develop alliances among community programs, not only to facilitate implementation, but also to harness community resources.
- Hire staff that is committed to, if not trained to, work with school-age children. If possible, hire staff that are closely linked to the community.
- Develop long-range financial plans to ensure stable funding sources.
- Investigate ways of removing barriers to Medicaid funds and encourage cooperation between SBCs and Medicaid managed care providers in the community.

Further analyses of trends in school-based clinics should be supported in such areas as:

- Changes over time in reasons students use SBCs.
- The relationship between use of health and mental health services, (e.g., to what extent are health visits used as a prelude to mental health care?).
- The extent of unmet needs for mental health, substance abuse, and dental services.
- The impact of SBCs on students and school staff.

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SCHOOL BASED CLINICS THAT WORK

BACKGROUND

Trends in Child and Adolescent Health

As a nation, we are at a critical crossroad with respect to child and adolescent health. Unless decisive action is taken, we may not succeed in reversing the trends that render today's children less healthy than their parents were at the same age.¹ Without targeted interventions, it may not be possible to reach some of the objectives set for school-age children by the United States Department of Health and Human Services (DHHS), in its report entitled: *Healthy People 2000, National Health Promotion and Disease Prevention Objectives*.²

Among these objectives is increased access to preventive care, including immunizations. In the United States, immunization rates are declining, while progress in the fight against preventable diseases is being made in other countries. In 1991, less than 60 percent of two-year olds in the U.S. had been fully immunized—less than 50 percent in 11 states. As a result, the incidence of measles has quadrupled in the past decade, and other preventable diseases, such as mumps and rubella, are back in our midst in increased numbers.³ The DHHS goal by the year 2000 is the total elimination of these diseases,⁴ although in 1991, there were nearly 10,000 cases of measles, over 4000 cases of mumps, and about 1400 cases of rubella.⁵

Nearly one million children in the U.S. are malnourished, and four million children suffer from lead poisoning. The incidence of asthma has increased by 60 percent in two decades. On the average, school-age children lose 4.6 days per year due to these and other health conditions.⁶

Teenagers are persisting to engage in risky behaviors that can be fatal. More than half of high school students are sexually active, and almost one in five are estimated to have had four or more partners. Yet, about 80 percent of sexually active girls report that their partners do not use a condom, the only contraceptive method known to protect against acquired immunodeficiency syndrome (AIDS), human immunodeficiency virus (HIV) infection, and other sexually transmitted diseases (STDs). Consequently each year, about three million teens contract a sexually transmitted disease and more than one million girls become pregnant.⁷

The trends in the emotional health among America's children are also disturbing. The number of teen suicides has tripled during the past two decades when the suicide rates for adults held constant. Although 12-15 percent of teens suffer from emotional or other disorders severe enough to warrant treatment, less than 30 percent receive the care they need.⁸ As part of The Year 2000 goals, DHHS hopes to reduce, to less than 10 percent, the proportion of children with emotional disorders.⁹

Excessive drinking is being recorded among younger children. As many as 21 million junior high school students report drinking alcohol on a weekly basis, and one-half million of them have more than five consecutive drinks at least once per week.¹⁰ Nearly 20 percent of all teens have had more than four drinks on at least one occasion.¹¹

Compounding these health problems is the lack of access to healthcare, especially for children living in families with low incomes. In the past decade, the percent of children living in poverty increased by 22 percent. About 20 percent of children and adolescents living in families with annual incomes below \$20,000 have not seen a physician in a year, compared to 14 percent of children from families with incomes above \$35,000. Children living in poverty are more likely than their counterparts to use an emergency room and be hospitalized. The average number of hospital days is more than twice as high for children from families with incomes below \$10,000 than those from families with incomes above \$35,000.¹²

Lack of insurance is a powerful barrier to health care, and it is increasingly affecting not only children of low income, but also children in working families. Of all children ages 6-17 years, 13 percent were uninsured in 1991. Among Blacks and Latinos, the rates of uninsured children were 17 and 28 percent, respectively. Although poor children are more likely to lack health insurance, children in families above the poverty level comprise two-thirds of all uninsured children.¹³

Poverty and lack of insurance are only two of the many barriers to adequate medical care for school-age children. Even for those who are insured, there is little, if any, coverage for the primary and preventive care they need; nor is there coordination among the myriad of services that are available in the community. Critical, if not life-saving information about treatment services and preventive care do not reach those in need, especially in low income areas.¹⁴

The changing realities of American family life have resulted in less time and resources being devoted to the care of children.¹⁵ Seventy five percent of school-age children live with mothers who are in the work-force, compared to 57 percent a decade ago.¹⁶ With increasing numbers of families of two working parents and single parents, the demands of work impede taking time off to transport children to the doctor. Moreover, when they finally get to traditional health centers and physician offices, these children typically face long waiting lines. The dearth of providers in low-income areas further reduces poor children's access to care, and the small number of providers trained to treat adolescents contributes to the sense of alienation that teens feel as patients in the traditional healthcare system.¹⁷

These health trends of school-age children do not bode well for schools and their educational goals. Students burdened by physical and mental health problems do not learn well. If the emotional problems are severe, disruptive behavior may result and adversely affect the learning atmosphere for other children. Poor school performance often leads to absenteeism, truancy, and dropout. In 1989, 13 percent of high school students dropped out of school, with the rate for Hispanics reaching as high as 33 percent. Less than 70 percent of all ninth graders graduate from high school.¹⁸ By the year 2000, the goal set by DHHS for high school graduation is 90 percent of all ninth graders.¹⁹

To reach this goal, students need to be healthy and fit. Their physical and emotional needs must be recognized and fulfilled, and they must have high self-esteem, a sense of competence, and self-understanding. In the past, it had been taken for granted that educational goals could be met without due considerations to the health needs of the children, yet for 70 percent of U.S. teachers, their students' poor health and undernourishment are discernable problems

obstructing educational activities. To address this concern, the Carnegie Council on Adolescent Development, among others, has recommended that schools: 1) take decisive action to ensure student access to health care, and 2) design the school as a health promoting environment.²⁰

Trends in School-Based Clinics

The concept of a school-based clinic (SBC) conforms well to these recommendations. The SBC is a system of comprehensive health care designed to overcome access barriers. It is usually located in a well-traveled part of the school where students can check in for appointments anytime without leaving the school premises, and thus without major disruption to their school work. When appointments are not kept, it is easy for the clinic staff to track down the students, since they are in the same building or on the same campus. SBC staff can take time to educate students and make them feel comfortable, since the staff are not obliged, as they might be in other settings, to rush through a predetermined number of appointments.²¹

While school-based clinics have their roots in the school health services that were introduced a century ago, today's model has developed over the past two decades. During this time, a variety of communities and states have launched efforts to provide comprehensive physical and mental health care to children through schools. The first health clinic physically based in a school was established in an elementary school in Cambridge, Massachusetts by the health department.²² Twenty years later, the Robert Wood Johnson Foundation launched a nationwide demonstration that funded 24 additional SBCs.²³

In the past ten years, school-based clinics have experienced rapid growth, due in part to the commitment of states to improve young people's access to health care. Arkansas, Connecticut, Delaware, Michigan and New York are states that took the lead in funding school-based clinics. According to the latest annual survey conducted by the Center for Population Options, there are approximately 425 SBCs throughout the country, nearly 40 percent more than reported in 1991.²⁴

In the past decade, the concept of school-based health clinics (SBCs) has undergone a transformation from a controversial experiment to a sensible and effective response to the health and emotional needs of school-age children.²⁵ In the 1980s, a school starting a health clinic was sure to face resistance from community groups, often on moral grounds related to contraceptive services. With effective community education about the broader mission of SBCs, supported by the mounting evidence about their positive impact on students and schools, resistance has subsided in many communities and national recognition has come from all corners. However, some people still see the SBC primarily as a vehicle for contraceptive services, rather than as a comprehensive primary health care program that reaches children who otherwise lack access to health care.

In 1990, the SBC was recognized by the U.S. Public Health Service as a vehicle to improve the health of the nation's children (*Healthy People 2000*)²⁶, and in its 1991 report, *Adolescent Health*, the Congressional Office of Technology Assessment recommended their expansion.²⁷ In 1992, the President's Advisory Commission on Social Security recommended the establishment of SBCs in elementary schools with a federal budget as high as three billion dollars. In

response, President Bush's 1993 budget allocated funds for SBCs in high-risk communities, and many well-respected organizations, including the American Medical Association, American Academy of Pediatrics, the American Nurses Association, and the National Association of School Nurses, have publicly endorsed the policy of supporting SBCs in such communities.²⁸ To this date, the Federal Government has not specifically earmarked funds for SBCs, although support has been available through federal grants to community health centers (CHCs), and through Maternal and Child Health Block grants. The Clinton Administration, with its interest in children and early preventive care, has been expected to take heed from past endorsements and from the positive experience of many communities throughout the country.

Purpose and Approach to the Study

The purpose of this study is to describe a small set of successful SBCs and to identify the factors that contribute to their success. To this end, information was gathered on the following topics:

- The circumstances that precipitated the development of the SBCs
- The barriers they faced in the early stages
- The measures they took to overcome these barriers
- Their accomplishments
- Their ongoing concerns.

To fully understand the accomplishments and problems of the SBCs, an effort was made to identify the context in which they function and the resources they have used. Thus, considerable attention is given to the general community in which the clinics operate, the school population they serve, and the initial problems they faced.

Six sites were selected on the basis of three general criteria: direct involvement on the part of a federally-funded CHC; a wide geographic distribution with urban/rural representation; and demonstrated measure of success in terms of substantial student enrollment, if not in the clinic's impact on students. SBCs with distinctive features, such as location in a school totally devoted to pregnant teens, were also given preference, as were elementary school and middle school SBCs, which, at least among CHC-sponsored sites, are more rare than high school SBCs.

In the six selected sites, seven clinics were visited - two in the rural Marshall County in northeast Mississippi, and one each in the cities of Miami, Florida; Jackson, Mississippi; San Fernando, California; Baltimore, Maryland; and Denver, Colorado.

In Miami, the SBC is located in a school for pregnant teens, aptly named Continuing Opportunity for Purposeful Education (C.O.P.E.). In East Baltimore, Maryland, the SBC is called a Teen Health Assessment and Treatment (T.H.A.T.) Place, and it is located in Herring Run Middle School. The remaining SBCs do not have their own distinct names, and are identified only by their respective schools: Lincoln High School in Denver; San Fernando High School in San Fernando; Lanier High School in Jackson; Galena Elementary School, in the town of Galena in Marshall County, Mississippi; and Henry Junior High School in the town of Byhalia in Marshall County, Mississippi. The latter two clinics are treated in this study as part of one site because

they are managed by the same CHC, and much of the required data were not available for the separate clinics.

A visit was made to each clinic and interviews were conducted with the clinic director and key staff, a manager in the CHC, and several student-users of the clinic. In three of the seven schools, the principal requested an interview, and in one school, representatives of various local community organizations participated.

To ensure that the data collected in these interviews would be comprehensive and relatively uniform across all sites, a topic outline was used to guide each interview. Based on the information collected during these interviews and from supporting documents, a case study was written for each site focusing on the following topics:

- Geographic characteristics about the general target area
- Characteristics of the school's student population
- The history and mission of the school-based clinic
- The management and staffing of the clinic
- The space and facilities
- Outreach and marketing efforts
- The services offered by the clinic
- The characteristics of students using clinic services
- The utilization of the services
- The costs and financing
- The impact of the services
- Ongoing concerns and problems
- Keys to success

SUMMARY OF FINDINGS

The Communities Served by the School-Based Clinics

Each of the six sites is located in a community marked by poverty and lack of access to medical, mental health, and dental care. The proportions of the areas' populations living below the federal-poverty level range from 15 percent in Denver to 50 percent in Jackson. Although the five urban sites are in cities with an adequate supply of medical facilities and health care providers, most of the residents in the communities served by the schools in which the clinics are located have limited access to these resources. One reason is lack of insurance; another is the diminishing supply of providers willing to serve uninsured and Medicaid populations. The single rural community included in this study has very little medical and dental services, except for those available through the CHC operating the school-based clinic.

As expected, given the pervasive poverty and dearth of health care resources, these communities are beset with a variety of health-related problems such as high rates of teenage pregnancies, high infant mortality, low immunization rates, substance abuse, as well as family violence, including homicide, suicide, and child abuse.

The School Populations

While each of the schools is in a city or a county that has a predominantly White population, the student body is largely minority, ranging from 66 percent in Denver and Byhalia, to 96 percent and 98 percent in San Fernando and Miami, respectively. A large portion of the students in each school qualifies for the Federal School Lunch Program. In Galena Elementary School, almost all of the students qualify for this program, and the SBC staff believe that this meal and the free breakfast the children receive, represent the best nutrition they get on a regular basis.

Few students in each school had regular sources of care before the inception of the SBC. For example, 54 percent of the student body in Herring Run Middle School in Baltimore had no regular source of care, and at Galena Elementary School, few, if any, of the students had ever seen a dentist.

Mental health and substance abuse problems are common among the students at these schools. For example, at Lanier High School in Jackson, it is estimated that half of the students have emotional problems that hamper their school work, and each year the SBC records over 60 cases of students contemplating suicide. Cases of sexual abuse have also been found, particularly in the San Fernando SBC where two-thirds of students seeking mental health services have been victims of sexual abuse.

High dropout and pregnancy rates are also common among the schools. For example, in the Baltimore and Denver schools, the dropout rates were 50 percent and 39 percent, respectively. Before the clinic was introduced in the Baltimore school, the pregnancy rate was 34 per 1000; in Jackson, it was 66 per 1000. Other problems confronting the school are: gangs (San Fernando), guns (San Fernando and Jackson), and drug abuse (San Fernando, Denver, Jackson, and Baltimore).

The Genesis of the School-Based Clinics

The seven SBCs range in age from 2 to 13 years, and were initiated by a variety of community organizations, including a city health department (in Baltimore), a school board (in San Fernando), the school itself (Miami), a health center (Byhalia/Galena and Jackson), and a coalition of community organizations (Denver). In all cases, a strong partnership was formed at the start with the school, which in every case has since provided the clinic space and utilities free of charge. A federally-funded CHC operates the SBC, in all cases, except in Denver, where a separate organization was created to develop and manage all of the SBCs in the city. The CHC is an active member of this organization, which in the past six years has been managing three school-based clinics, and will launch six more next Fall.

In all cases, the founding organizations started the clinics out of concern for the lack of medical attention received by the students, despite the outreach efforts by the CHCs. Having met with little success in reaching school-age children, especially teens, it seemed reasonable for these CHCs to locate the services in the schools where the students could easily access them.

Aside from the goal of making health services more accessible, some of the founding organizations were hoping to stem the high rates of acute medical emergencies, teenage pregnancy, suicide, and school dropout and absenteeism.

In the initial stages of development, there was resistance to the clinics in four out of the six communities. In Baltimore, it came from the school nurse and some of the teachers. The school nurse was concerned that the clinic would obviate the need for her job and usurp her office space; the teachers were wary that the clinic would add to their work. In Jackson, the resistance came from community residents who believed that the SBC would focus primarily on contraceptive services. In San Fernando and in Denver, the resistance came from church leaders and members of the general community who objected to contraceptive services on moral grounds. The school nurse in both places also expressed initial resistance.

In all cases, opposition abated over time as a result of concerted efforts by the SBC staff and the school administration to educate people about the true intent and mission of the clinic, and with mounting evidence of the clinics' positive effect on the students and the school staff. The parents came to see the convenience of the clinic, the teachers recognized the valuable resources that the clinic brought to their classrooms and to their troubled students, and the school nurses began to appreciate the burden they no longer had to bear in managing medical problems that they are not trained to address. Only in Baltimore was it necessary to remove the school nurse, after efforts to allay her fears failed.

In none of the sites was there any evidence that the medical community or students in the schools resisted the clinics. In Denver, the Medical Society has given an award to the SBC for its exemplary community services. In Byhalia and Galena where primary medical care is scarce, teachers and parents have not only welcomed the clinics, but have become users, at the invitation of the parent health center.

Management and Staffing

Whether or not it was involved in the creation of the SBC, the CHC in each site has played a prominent role in the clinic's medical operations, if not its administration. Except in Denver, each of the SBCs examined in this study is managed by a CHC which hires and supervises the staff, and assumes all the billing, fundraising, as well as all the clinical responsibilities. In Baltimore, there is shared staffing responsibilities with the city health department. In Denver, the SBC is operated by an organization that was established for the purpose of managing all school-based clinics in the city. The CHC is nevertheless an active partner, providing resources and a medical home-base. Indeed, over time, the role of this CHC has grown, as it has contributed more and more medical expertise and resources, including an adolescent physician specialist and lab services.

All sites have a managing director on at least a part-time basis, but only three of these are exclusively devoted to managing the SBC. Two of these three are also responsible for other sister clinics. Each clinic has a full-time nurse practitioner or a physician assistant and all but one has a full-time medical assistant. All the clinics have a receptionist/secretary and a physician who comes for a few hours per week. Most often this physician is a pediatrician or an

internist; in Denver the physician is an adolescent specialist. In Miami, where all of the student-users are pregnant or new mothers, an OB/GYN is used, as well as a pediatrician. In the two rural clinics, a dentist comes the clinic on a regular basis to conduct screenings, with follow-up treatment in the sponsoring health center.

In the four clinics that offer mental health services on site, these services are provided by a part-time clinical psychologist (San Fernando and Baltimore) or a masters degree-level social worker (Denver and Jackson). In San Fernando, a part-time family counselor is also on staff.

Each of the two clinics which provide substance abuse services employs a master degree-level social worker. In one case, the position is supported by the school system; in the other, the position is staffed by an employee of a community provider.

In sum, clinics tend to have a core full-time staff that is comprised of a nurse practitioner or physician assistant, a medical assistant, and a secretary/receptionist. They also have a part-time director and a physician. In the clinics that offer mental health services and/or substance abuse services, the staff includes part-time clinical psychologists and/or social workers.

Space and Facilities

In all cases, the space used to house the clinic is provided by the school, at no charge to the SBC. Renovations to the space were universally necessary, and the costs were usually borne by the school. Most often, the office of the school nurse is used in conjunction with some adjacent space. The clinics are quite accessible, as they are always located off hallways that are heavily travelled by the students. They are usually decorated with posters that teens would find attractive and interesting.

The space usually includes a modest reception area, and at least one examining room that affords privacy. In four of the clinics, there is also a room with beds for resting, and a small conference room for group meetings, or individual interviews. Each of the four clinics that offer mental health and substance abuse counseling has at least one additional room for such services.

Space seems to be adequate in most of the clinics. But, in some clinics that have greatly expanded and/or added services (e.g., mental health and substance abuse services), the space originally allotted by the school has begun to constrict operations. This is especially true in San Fernando where substance abuse and mental health services have been expanded over the years, and where the clinics space was rather limited to begin with.

All clinics have small lab facilities in which samples can be obtained in privacy. All but the very simple tests are processed by the CHC or a local vendor, with the aid of a daily courier service.

Outreach Activities

All of the SBCs engage in outreach activities targeting both the students and their parents. All send a letter at the beginning of the school year to inform the parents about the clinic and to request a signed consent form. Most also exhibit clinic materials on school enrollment day, when parents register their children. To a limited extent, PTA meetings are used to announce the clinics, although in most schools, the PTA meetings are not well-attended. In Denver, new registrants are recruited by a student/parent advisory committee and by a traveling theater troupe which performs skits, both to teach students about health issues and to inform them about the clinic.

Health fairs, health education classes, and sports physicals are other vehicles commonly used to reach students. In the rural towns where the clinic is opened to the community as well as to the students, health education and screening programs are held year around to attract newcomers.

Brochures have been developed in two schools and community newsletters are issued by two others. These written materials seem to be of limited value in encouraging new clinic registrations. However, they are useful in disseminating information to current users and their families.

Of all the outreach efforts, the most successful for all of the clinics are those designed to identify students in need of care. Targeting is done by clinic staff, school health educators, school nurses, and especially teachers, who are in the best position to detect students with problems.

Services Provided

All the clinics offer a core set of services that include primary health care, preventive and health education services, and reproductive services. In Denver, the reproductive services are limited to pregnancy tests, but in all the other SBCs, contraceptive counseling and devices are offered. Mental health services are offered in four clinics, and substance abuse services are offered in only two. Although most of the clinics offer dental screening, only the two rural clinics offer the services of a dentist on site. Lab and prescription services are offered by every SBC, although drugs are dispensed in only five. The specific services are:

- Primary health care services are offered in all clinics and include: treatment for minor injuries and health problems, initial treatment and follow-up of acute episodes, and diagnosis and management of chronic problems. Prenatal care is provided only at C.O.P.E in Miami; all other clinics refer students in need of prenatal services to the associated CHC. At Miami and San Fernando, well-baby care is provided to the children of students who attend the day care center located either in the same building or in another school across the street.
- Preventive and health education services are offered in all clinics and include: physical exams, EPSDT assessments, weight management programs, HIV counseling, STD testing and counseling, and health education. Without exception, the health education

programs are extensive and aimed at prevention. These programs are designed to teach students about: risky behavior and its consequences, a healthy lifestyle and its benefits, self-protection and self-esteem, and how to be informed consumers of health services. The programs are also used to inform the students about the services available at the SBC. In three schools, health education is mandatory. In one of these schools, all students are required to attend a health fair; in the other two, a health education module, developed in collaboration between school and clinic staff, is incorporated into the science curriculum.

- Reproductive health services are offered in all but one of the SBCs and include: pregnancy tests, contraceptive counseling, and contraceptive devices. (Norplant is offered in two clinics.) Pregnancy tests are offered by the one clinic that does not provide contraceptive counseling and devices.
- Dental screening is offered in all but two clinics. In the two clinics located in rural areas where dental care is so scarce, a dentist conducts the screenings at the school. In the other clinics, the screenings are performed by the nurse practitioner. Patients that need follow-up dental care are generally referred to the health centers or to other providers. But, except in the cases of the rural clinics, services are limited to those with very serious needs because reimbursement is not generally available and the health center's dental resources are scarce. All but one of the clinics have identified dental services as an unmet need.
- Mental health services are offered on site in four of the clinics, but in one, Baltimore, services are very limited because of lack of funds. There, services from a mental health professional are provided only to children with disruptive behavior patterns. In the other sites that offer mental health services (Denver, San Fernando, and Jackson), individual and group counseling services are offered, although group counseling services are more available. In all three of these clinics, services are offered to students who refer themselves, are referred by teachers, or are identified to be in need via the psycho-social assessment that is administered to all registrants.

While the clinic in Miami does not offer professional mental health services on site, it refers high-risk students (i.e., those who are pregnant and living without both parents or with previous emotional problems) to the health center's mental health program and assigns each student to a teacher, who is to provide them with emotional support. Although the two clinics in rural Mississippi do not yet offer mental health services, they plan to introduce a psycho-social assessment tool to identify at-risk students and to refer them to community services, scarce as they may be.

- Drug abuse services are offered only in the Denver and the San Fernando SBCs, although the clinic in Baltimore is seeking funds for this service. In both cases where substance abuse services are offered, they are supported by another community organization: either the school system itself or a local substance abuse treatment program.

- Prescriptions are written in every clinic and the drugs are dispensed free-of-charge in all, except the Baltimore SBC, where a sliding-fee scale is used to charge students and drugs are dispensed in nearby pharmacies.
- Every SBC is equipped to take laboratory samples, but most tests are processed by the associated health center. Baltimore is the exception, it has a contract with an independent lab to process the tests.

Clinic Users and Utilization

The schools in which the SBCs are located range in size from 329 students in Miami to 3200 students in San Fernando. (See Exhibit 1.) In five of the seven schools, at least 70 percent of the students are registered to use the clinic. In Galena elementary school, 90 percent of the students are registered and all of them have used the clinic at least once. In Baltimore and Jackson, the registration rates are lower as a result of limited outreach efforts due to reductions in staff and funds. The SBC in San Fernando is also limiting its outreach effort, because the school population has grown dramatically, while the clinic space and staff have not.

The ethnic distribution of the registrants in each SBC reflects the distribution of the student body in the school. The single exception is in Denver, where despite concerted efforts, the SBC has not succeeded in registering many Asian students. The reason appears to be cultural—these students have been hesitant to use Western Medicine and to reveal personal problems to those outside the family unit. They tend to rely on Asian physicians in the community, and their families consider it an affront to speak of problems “in public”.

In every SBC, registrants are evenly divided between females and males, within a range of three to five percentage points. But females generate many more visits than males in all but two SBCs.

The number of annual visits to the SBCs ranges from 1688 in Baltimore to 3740 in Denver. The clinics also vary widely in terms of the average number of visits per user per year. The lowest average is 2.8 visits per year per user found in Baltimore, and the highest is 9.8 visits per year per user, found in Miami, where most users are pregnant and receiving prenatal care or children receiving well-baby care. The next highest annual average is 7.6 visits per user, reported by the SBC in Jackson where there is a low registration rate (33%) and a focus on high-risk students, especially pregnant teens and those with suicidal thoughts.

Costs

In an effort to estimate the approximate cost of services, data on expenses were requested from each SBC. In all cases, these data were difficult to obtain because they are generally not separately tracked by the sponsoring organization. Moreover, in cases where multiple clinics share staff and supplies, the exercise of estimating these expense figures is especially challenging. As a result, for the Jackson site, the best that could be done was to estimate the expenses for all of the clinics managed by the CHC.

The cost estimates reported here are not comparable for three reasons. First, there is a wide variety among the clinics in the types of services offered—some offer only primary care services, while others offer additional services such as mental health and substance abuse services. Secondly, some of the clinics do not account for the costs of all of the in-kind services they receive. For example, all but the Denver SBC did not include the costs for space and utilities, and the San Fernando SBC did not include the costs of its substance abuse program, which is funded by the school. Finally, most clinics do not include all of their administrative costs, especially those associated with the affiliated health center.

The estimates of total annual operating expenses range from \$85,000, for the rural Byhalia SBC serving 700 users, to \$316,700, for the San Fernando SBC serving 1392 users. The Byhalia estimate covers primary care services only and does not include expenses due to space and utilities and to administration on the part of the health center staff. The San Fernando estimate includes expenses for primary care, mental health, substance abuse, as well as the administrative services of the health center.

Although unit costs, such as cost per visit, are reported in the individual case studies, they are not comparable for the reasons cited above, and therefore, are not appropriate for cross-site analysis.

Financing Issues

With the exception of the rural clinics, all the SBCs began with a privately-funded seed grant that by now has either expired or is much diminished. It was possible to start the rural clinics without such a seed grant because the circumstances allowed for generating Medicaid funds. Specifically, almost all of the students in the two rural schools were eligible for Medicaid, and there were no other providers competing for these students. Moreover, as a Federally Qualified Health Center (FQHC), the sponsoring CHC was in a position to be reimbursed at 100 percent of costs by Medicaid.

The Federal 330 Community Health Center Grant is an important source of support for all the clinics, especially as the private grant funds diminish. In the Baltimore SBC, this source constitutes 20 percent of the total, and in the San Fernando clinic, it comprises 25 percent. Patient fees contribute very little in three clinics, and not at all in the others, primarily because most of the student-users come from poor families, and they do not have their own sources of income. Similarly, reimbursements from private insurance contribute very little because so few users have such insurance.

For all but the two rural SBCs cited above, Medicaid revenues have been difficult to obtain for several reasons. First, in some states, there is the requirement that a physician be on site if the services provided by the nurse practitioner or physician assistant are to be reimbursed. Second, the Medicaid eligibility process is cumbersome and time-consuming, even if an eligible worker is on site. Presumptive eligibility, which can accommodate all those who live in designated zip codes with very little additional confirmation of eligibility, would greatly facilitate the Medicaid eligibility process in SBCs, but none of the SBCs are in locations that

benefit from this option. In San Fernando, there is also the unique challenge of "undocumented" families who are not eligible, or are afraid to apply, even when they are.

Finally, there is the barrier created by Medicaid managed care contractors. In Miami and Baltimore where they abound, these contractors compete intensely in the communities served by the SBCs, but they generally do not recognize the SBC as a provider, resulting in significant losses for the sponsoring health center. So, even if the health center is an FQHC, it cannot take advantage of the higher Medicaid reimbursement rates because a substantial number of the students are locked into a Medicaid managed care contractor which considers the clinic an out-of-plan provider.

Impact of Clinic Services

Evaluation data are sparse because the clinics do not have the resources to compile and analyze such information, although most do collect data that would be useful in evaluation analyses. Nevertheless, most of the clinics were able to supply some data on changes in access to care, service utilization, teen pregnancy, early entry into prenatal care, and school dropout and absenteeism.

An effort was also made to collect anecdotal information from several clinic users in each site on the impact that the SBC has had on them. These interviews supported the statistical data and yielded additional information on: early detection of medical and mental health problems and on improvements in the students' communication skills and self-esteem. These effects are described below.

Improved Access to Care

All of the clinics have as their first and most important objective to reach and bring under their care a large proportion of the students. In most cases, the clinics succeeded in registering 60 percent of their school's students within their first three years of operation; and some reached a 70 percent registration rate soon thereafter. As shown in Exhibit 2, the San Fernando SBC illustrates this pattern: in each of the first four years that the SBC operated, it succeeded in registering and providing services to a larger percentage of students.

The number of students that a clinic can accommodate is limited by financial and space constraints. Three of the six SBCs, including San Fernando, seem to have reached their respective limits. Consequently, they have suspended aggressive outreach activities and are focusing on students who refer themselves, who are referred by the school staff, and who belong to particular target groups. For example, the San Fernando SBC has targeted students with little or no access to medical care, and now, 93 percent of clinic registrants have no other sources of medical care, primarily because of lack of health insurance.

Similarly, in the last two years the Denver SBC has been targeting its outreach efforts at students with grade point averages below 1.6, a measure that one of its studies found to be the best of a whole host of possible indicators of school dropout. The hope is that the clinic can address through counseling services, any emotional problems that may adversely affect these

student's school performance and lead to dropout. So far, the clinic has succeeded in registering 55 percent of the freshmen students with a low grade point average, and 53 percent of all the students in the school with such an average.

Decrease in Teenage Pregnancies

Several clinics have been able to demonstrate that they have had a positive impact on the number and rates of pregnancies in their school. The Baltimore SBC has seen a 50 percent decline in the school-wide pregnancy rate—from 34/1000 to 17/1000—in just two years. The rate of pregnancy among clinic users is about one-third of the school-wide rate: 6 per 1000, compared to 17/1000. Whether there are other factors contributing to these trends has not been systematically determined, but the nurse practitioner believes that family planning counseling, accompanied by mental health counseling, makes a difference in the decisions the students make regarding pregnancy. Student interviews bear out this assessment.

The most dramatic decrease in the number of pregnancies among the students was reported by the SBC in Jackson. Although the school enrollment increased by 58 percent in the 13 years since the clinic was introduced, the number of pregnancies declined from 88 to only 16 (See Exhibit 3). This represents a decrease of 450 percent!

In the San Fernando SBC, during the current school year, less than one percent of the clinic users have had positive pregnancy test results, compared to 3.6 percent in 1988-89, and 2.5 percent in 1989-1990. The high school in Denver has had a 44 percent decrease in number of pregnancies since the first year of the clinic, and at the Byhalia SBC, the number of pregnancies fell from five in first year of the clinic to only one each in the second and third years.

Early Prenatal Care

Of the pregnant students under the care of the Baltimore SBC, all but one began prenatal care in the first trimester, for an average of 80 percent. At the Denver SBC, 93 percent of the pregnant girls were identified in the first 13 weeks, and 80 percent of them entered prenatal care in their first trimester. In the Jackson SBC, all 16 pregnant girls entered prenatal care in the first trimester and all of them returned to school after delivery. It is reported by the clinic staff that, before this clinic opened, a very small percentage of the 88 pregnant girls in the school had any prenatal care.

Reduced School Dropout Rates

In the San Fernando SBC, clinic users seem less likely to drop out of school than other students. A comparison of the dropout rate for clinic users and other students found that 18 percent of regular students dropped out, whereas only 9 percent of clinic registrants dropped out. The school and clinic staff attribute at least some of this progress to the clinic's services. As Exhibit 4 shows, the dropout rate for the school as a whole has declined by 44 percent since the year before the clinic began.

In the Miami SBC, it is believed that the clinic has had the effect of lowering the school's dropout rate. All of the 93 students who are seniors are scheduled to graduate this year. In

addition, 20 out of the 93 are expected to continue their education towards obtaining a medical technician license. According to the school principle: "The clinic and the nursery have caused a lot of these students to stay in school."

In the school in Jackson, last year all 16 pregnant girls returned soon after delivery; thirteen years ago, before the clinic began, half of 88 girls dropped out of school after delivery.

Reduced School Dismissals and Absenteeism

In its efforts to minimize the number of students sent home due to illness or injury, the Denver SBC has been successful in demonstrating that clinic users were sent home 20 percent less often than those who were not using clinic services. The substance abuse treatment contract approach used by this clinic with students committing drug-related offenses is credited with reducing by 80 percent the number of such students suspended from the school. The testimony of a male student who was interviewed at the clinic confirmed the positive effect of the clinic's substance abuse services. The boy reported that the program helped him kick his addiction to drugs, improve his class attendance, and even boost his grades.

The SBCs in rural Mississippi have allowed the students to get care without compromising their school attendance. For example, one student who uses the clinic noted that there was a big difference between the school clinic and the main health center facility: there is no waiting and no paperwork required at the clinic, and her mother does not have to take time off from work to drive her to see the nurse. Several other student-users reported that, before the clinic was in the school, they used to have to miss classes when they went to the doctor for their chronic conditions.

In the Miami SBC, there is also evidence of reduction in school absenteeism. A random sampling of girls who receive services from the clinic and girls who get care from other off-campus sources revealed that the clinic students missed an average of 30 school days, whereas other students missed an average of 38 days. This school's attendance record won the attention of the county which awarded the school first prize for most-improved attendance.

Early Detection of Medical and Emotional Problems

There is anecdotal evidence to suggest that the clinics' early detection of medical problems has averted more serious conditions and almost certainly has saved money. For example, one boy was brought into the Byhalia SBC with an eye injury. He was treated immediately by the clinic staff, but it was clear that he needed attention from a specialist. Arrangements were quickly made for an appointment in the hospital in Memphis, where a hemorrhage was diagnosed and controlled. After a follow-up in the school, the child was fine, but had he not had immediate attention, he may have lost his sight in the injured eye.

During an EPSDT screening at the Galena school SBC, a third grade girl was suspected to have diabetes by the clinic nurse. She was referred to an endocrinologist who determined that she indeed was diabetic. After initial treatment and education, she returned to school and was monitored thereafter by the clinic nurse.

At the Jackson SBC, a student diagnosed with lupus reported that the clinic staff was instrumental in getting her to realize the seriousness of her condition: "If it wasn't for the clinic, I would've gone on for years before I realized that I had a serious problem."

In most of the schools, the clinics play a vital role in attending to those who are contemplating suicide. This was a theme reiterated by other students interviewed on site. To what extent the clinics are actually preventing suicide attempts is not known.

At the San Fernando SBC, a student came to the clinic in her junior year for severe depression and repeated thoughts of suicide resulting from having been sexually and physically abused. She reported that, due to the counseling services she received at the clinic, she is doing much better in school, plans to graduate with good grades, and hopes go on to college on her way to becoming an adolescent psychiatrist. She says that, were it not for the help she found at the clinic, she would probably not "be around" any longer, suggesting that she may have attempted suicide.

At the Denver SBC, a female student credited the clinic with addressing and controlling her suicidal tendencies. She had come to the clinic first because of an acute illness, finding that the clinic was not only convenient to use, but also a place where she felt comfortable to speak her mind. When she got to know the staff, she began to talk about her emotional problems, and eventually joined a group on depression. She found that she was not alone with her problems, and that she could articulate and control her anxieties, for the first time. She now feels more confident and her performance in the classroom has improved.

Improved Self-Esteem and Communication Skills

Interviews with students at the Baltimore SBC revealed that the clinic, especially its mental health services, has made a significant impact on their self-esteem. They reported that, were it not for the clinic staff, they would be "on the street by now." At the Jackson SBC, a student said that, before coming to the clinic, she felt: "Nobody cares about me because I am worthless. When I had my problems, I felt that I couldn't exist without the clinic." Another student said: "Seeing the counselor taught me to want more for myself. The counselor helped me get through my pregnancy, 'cause I had someone to talk to. Without the clinic, I think I would have dropped out of school."

One of the students interviewed at the Jackson SBC had had an acute emotional episode that required hospitalization. He is now back in school performing well academically and in better control of himself. He said that, through the clinic counseling services, he learned to express himself: "I never talked about my problems before. Without the clinic, I'd probably went crazy by now. I've recommended it to my friends, and they have experienced positive results, too."

Ongoing Concerns

Despite their demonstrated successes, the SBCs in this study are not without problems that may hamper their performance in the future. All of them are concerned with the availability and stability of funding. At the same time, there is a universal recognition that needs, especially for mental health, substance abuse, and dental services, are not being met. In one clinic, space

constraints limit the capacity of the clinic to keep pace with the school's growing enrollment. In another clinic, the short supply of providers, especially physicians and nurse practitioners, has seriously hampered the clinic's ability to meet all of the students' needs.

Stable Funding Sources

The staff at the Baltimore SBC have been impeded from recruiting more registrants and expanding the services because they do not have ongoing and reliable sources of funds, particularly for outreach and mental health and substance abuse services. Despite its success in harnessing community resources and obtaining many in-kind resources, the Denver SBC continues to strain under financial pressures. Having relied on a large foundation seed grant, as well as other grants that are for a limited time period, this SBC is continually searching for replacement funds. The fact, that the community has made a commitment to open additional SBCs in Denver can be counted as a measure of success, but it also compounds the need for future funds.

Despite the nearly 60 percent growth in the school population, the clinic in Jackson has not been able to expand its program because of limitations in funds. Consequently, the clinic has reached its capacity, both in terms of staff and physical space, yet has registered only one third of the students and is unable to reach out to the rest of the student population.

The staff at the San Fernando SBC view obtaining long-term funding for clinic operations as their most persistent problem. Nearly half of the funds in the past have come from private foundations which traditionally prefer to provide seed grants to cover start-up costs, rather than support on-going operations. Given the low percentage of students with third-party coverage and the high number of uninsured students, there seems to be a need to stabilize funding with support from government sources. State government funds have been pursued, but they are so limited in scope and duration that they do not serve to stabilize the financial uncertainties.

Moreover, the San Fernando SBC needs to be funded at a higher level to be able to add enough primary health and mental health providers to accommodate the ever-increasing demand for services. The staff size has remained relatively constant, while school enrollment and clinic registration has grown steadily. A related concern is the shortage of space that limits the clinic's capacity to serve more students and adversely affects staff morale.

Unmet Need for Services

As the clinic staff members at the two rural Mississippi SBCs gain experience with the students, it is becoming clear that there is a large unmet need for professional mental health services. Since mental health services are not as reimbursable by Medicaid as health services, funding would be a problem. Similarly, the dental needs of the students are far beyond the capacity of the health center.

Mental health services, for which third-party reimbursement is scarce, is in great demand in the SBC in Jackson; yet it is available only two days per week.

In the Baltimore SBC, mental health services have been reduced sharply in the past two years, due to lack of funding. Thus, only students with disruptive behavior are seen by the mental health professional who now comes only once per week. Many other children come to this SBC for emotional support, and it is the nurse practitioner who sees them. Aside for additional mental health services, the clinic staff see an increasing need for substance abuse services.

KEY SUCCESS FACTORS

What makes these SBCs successful? How did they overcome their initial barriers and subsequently reach their goals? In the process of the interviews, three types of attributes emerged as keys to success: leadership and community support, staff and space, and service design elements.

Leadership and Support

- Support from community health center and other providers
- Strong leadership on the part of the school principal
- Support from school administration
- Support/cooperation from school faculty
- Support from the students and parents and others in community

Staff and Space

- Skilled and committed management and clinical staff to win the trust of the students and school staff
- Accessible and attractive facility
- A respectful accommodation to the school environment, in an effort to minimize friction and increase students' access to clinic services

Service Design Elements

- A system designed to target and follow high-risk students, especially the sexually active and the emotionally-troubled
- A plan of action that is individualized for each high-risk student and monitored regularly
- A thorough follow-up system that ensures that students keep all appointments
- Medical back-up and specialty services
- Comprehensive services addressing students' emotional needs, as well as physical needs (in those clinics that have access to funding or community resources).

SUMMARY AND CONCLUSIONS

The communities served by the schools in which the selected clinics are located are poor and medically underserved. Before the SBCs were introduced, most of the students in these schools lacked access to primary health, mental health, and dental services, as well as to information

about critical health issues such as AIDs and STDs. It is not surprising then that there was in these schools a high incidence of health-related problems such as inadequate immunizations, teenage pregnancy, sexually transmitted diseases, substance abuse and mental health problems. Moreover, the rates of school absenteeism, truancy, and dropout were unacceptably high. Concerns for these problems moved a variety of organizations to forge partnerships to create the school-based clinics (SBCs).

A SBC is a system of comprehensive health care designed to overcome the access barriers school children have faced elsewhere. It is usually located in the part of the school where the students are sure to see it, and they can check in for appointments anytime, without leaving the school premises and thus with minimum disruption to their school work. When appointments are not kept, it is easy for the clinic staff to track down the kids, since they are in the same building or campus. SBC staff can take time for educating students and making them feel comfortable, since they are not obliged, as they might be in other settings, to rush through a predetermined number of appointments.

The core services offered in every SBC in this study include primary health care, preventive care, health education, and reproductive services, which in one clinic are limited to pregnancy tests. When resources are available, the clinics also offer mental health, substance abuse, and dental services, all of which were identified by clinic staff as important yet under-funded.

The staff for a clinic offering basic primary health services usually includes a full-time nurse practitioner or a physician's assistant, supported by a full-time medical assistant and a secretary receptionist. A physician, usually a pediatrician or an adolescent specialist, is assigned to the clinic for a few hours per week. When mental health services are offered, there is a professional masters-level mental health counselor, part-time or full-time, depending on resources. Substance abuse counselors are available in only two clinics. In San Fernando, the school system provides these services on the school campus. In Denver, a local community organization supports the staff on site and provide the students ready access to an inpatient treatment program.

In most cases, CHCs are critical in the implementation stage, if not in the initial planning phase. They are frequently among the founders of the SBCs, and always the major providers of services. In all but one of the sites, a CHC is responsible for managing the clinic operations.

Resistance to the SBCs was not uncommon and emanated from various sources including community groups and school staff. Issues concerning reproductive services typically aroused the community groups, which were more often than not, comprised of non-parents. Even where well-organized, however, the resistance subsided with effective community education emphasizing the broad mission of the clinics, and in one case, with a promise to exclude contraceptive services and devices. By requiring parental consent for services, the clinics have generally avoided organized parental resistance.

To succeed, a SBC needs two essential partners and can be much enhanced by a third. The two partners that a SBC cannot do without are a medical sponsor and the school system, including the home school itself. The medical sponsor, in these cases a CHC, is in charge of all the medical aspects including the staff, the medical protocol, the supplemental and backup medical services,

and in most cases, the financial responsibilities. The school administration approves the addition of the SBC to the school, provides and sometimes renovates the space, facilitates relationships among school and clinic personnel, and sets the tone for the teachers and students. The third partner in successful SBCs consists of one or more community organizations that are committed to serve school-age children but yet have been unable to reach them.

The marriage of a health center and a school is a challenge for several reasons. They come from different traditions that have rarely been combined. For example, a mental health counseling session traditionally takes 45-50 minutes, but classes are usually on a 40-minute schedule. Secondly, space is often tight, and accommodating the clinic may be at the expense of other priorities. School nurses may fear being displaced, and teachers may fear being overburdened. But, with efforts to nurture relationships between clinic and school staff, and after sufficient time passes to demonstrate the clinic's benefits, school staff generally see that their burdens are relieved. Teachers are no longer responsible for medical emergencies that they have not been trained to manage and that in the past may have taken them from the classroom. They now have a place to refer their troubled students, who return to the classroom much less disruptive. The school nurse is left to do what she is hired to do, without the responsibility for dealing with complex medical problems, or for sending kids home without medical attention. School principals see absenteeism and dropout rates decline, and in some schools, teen pregnancies also decrease, or at least are managed with early and proper health services.

In sum, an effective marriage between the school and the health center can demonstrate encouraging results that are in direct response to concerns about such problems as lack of access to care and high rates of suicide, teen pregnancy, and school dropout, truancy, and absenteeism. Some of the schools hosting the SBCs in this study have experienced a significant drop in these trends, and all of the schools have seen a high participation rate in the clinics, which means that many students no longer go without ready access to primary health care.

Why does this model of health care work for school-age children, including teenagers? The answer is that the school-based clinic represents a model of primary health care that is accessible, comprehensive, and continuous—the three most commonly cited criteria for high quality of care. By removing most, if not all, of the major barriers, SBCs make services quite accessible to school children, even those that have eluded traditional forms of care. The physical access is obvious—the clinic is where the children already are every day, so they do not need to make special transportation arrangements, or even appointments. The care is either free or based on a sliding-fee schedule, thus there are no financial barriers. The SBC is staffed by persons who work at making students comfortable to minimize the psychological barriers. Finally, there is no lack of information about the clinic and its services, since concerted outreach efforts are made in order to reach every student in the school through a wide variety of media.

The services that SBCs offer are comprehensive in that they focus not only on acute problems, but also on prevention. This is not only sick-care but also well-care. And the services do not address only physical problems; they attend to the emotional problems, as well.

Continuity of care is ensured because the SBC is designed to offer care to a person over time rather than for a particular episode of illness or a specific disease. The SBC model of care

encourages a long-term relationship between provider and user, which facilitates recognition and management of problems that may not be otherwise detected. This relationship also aids in the early prevention of problems. Given the nature of the target population, there is a great deal of emphasis on **coordination of care and follow-up** to ensure that appointments are kept and results are returned and acted upon. Finally, there is continuity in the **link between the clinic services and health education in the classroom.**

How do these SBCs clinics come by their success? The answer is: with thorough community planning in advance, and with strong leadership and commitment on the part of school officials and other community leaders ready to address, with information and effective community organization, the concerns that inevitably arise among some community residents. Other key factors of success are: careful hiring of staff, committed, if not trained, to work with school-age children; clinic space that is designed and decorated with the students in mind; respect for the school environment; and attention to design issues regarding services for school-aged children.

RECOMMENDATIONS FOR FUTURE EFFORTS

Demonstration and Replication Efforts

Should the Federal Government support the expansion of school-based clinics, the following lessons should be incorporated into future demonstration and replication efforts.

- Anticipate reluctance if not resistance from the community as well as school staff, and be prepared to address their concerns with facts and assurances about the clinic's broad mission to provide comprehensive primary care services.
- Encourage collaboration among community programs, not only to facilitate implementation, but also to harness community resources which may lead to more comprehensive services and cost savings.
- Include community education and outreach to the school nurse, counselor, and teachers, as they must be persuaded that their jobs will not be jeopardized or hampered, but rather enhanced.
- Make funds available for space renovations, since they are not always provided by the school.
- Encourage hiring of staff that is committed to, if not trained to, work with school age children. If possible, encourage hiring staff that are closely linked to the community, for they offer students powerful role models and bring a unique experience to the clinic and the school.
- Encourage long-range financial planning to ensure stable funding sources.

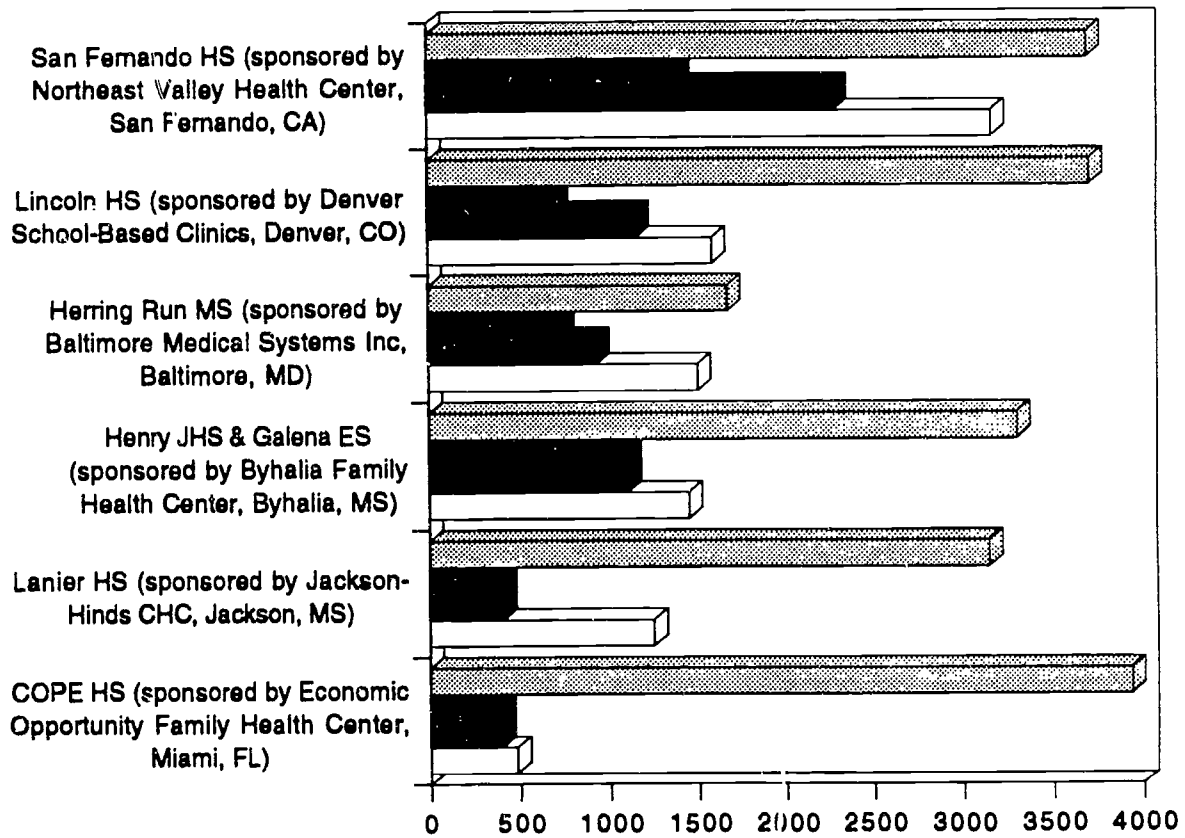
- Investigate ways of removing barriers to Medicaid funds and encourage cooperation between SBCs and managed care providers in the community.

Further Research

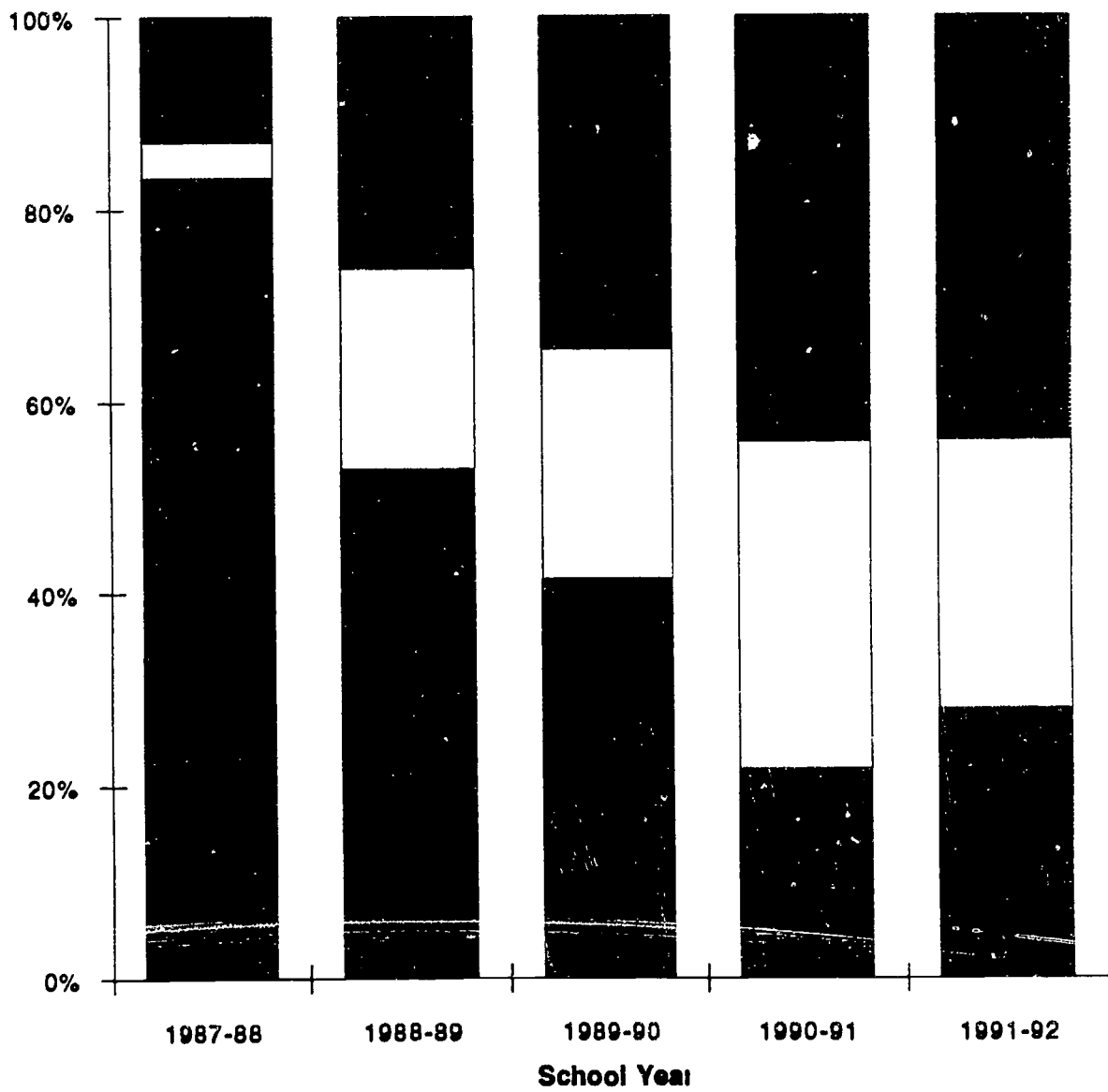
Further analysis of trends in school based clinics should be supported in such areas as:

- Changes over time in reasons students use SBCs.
- The relationship between use of health and mental health services, (e.g., to what extent are health visits used as a prelude to mental health care).
- Extent of unmet needs for mental health and substance abuse services (possible to detect from the psycho-social assessments most clinics conduct).
- Impact of SBCs on students and school staff (possible by linking registration and encounter data, and by conducting special surveys).

Exhibit 1. Number of Students, SBC Registrants, SBC Users, and SBC Visits by School.

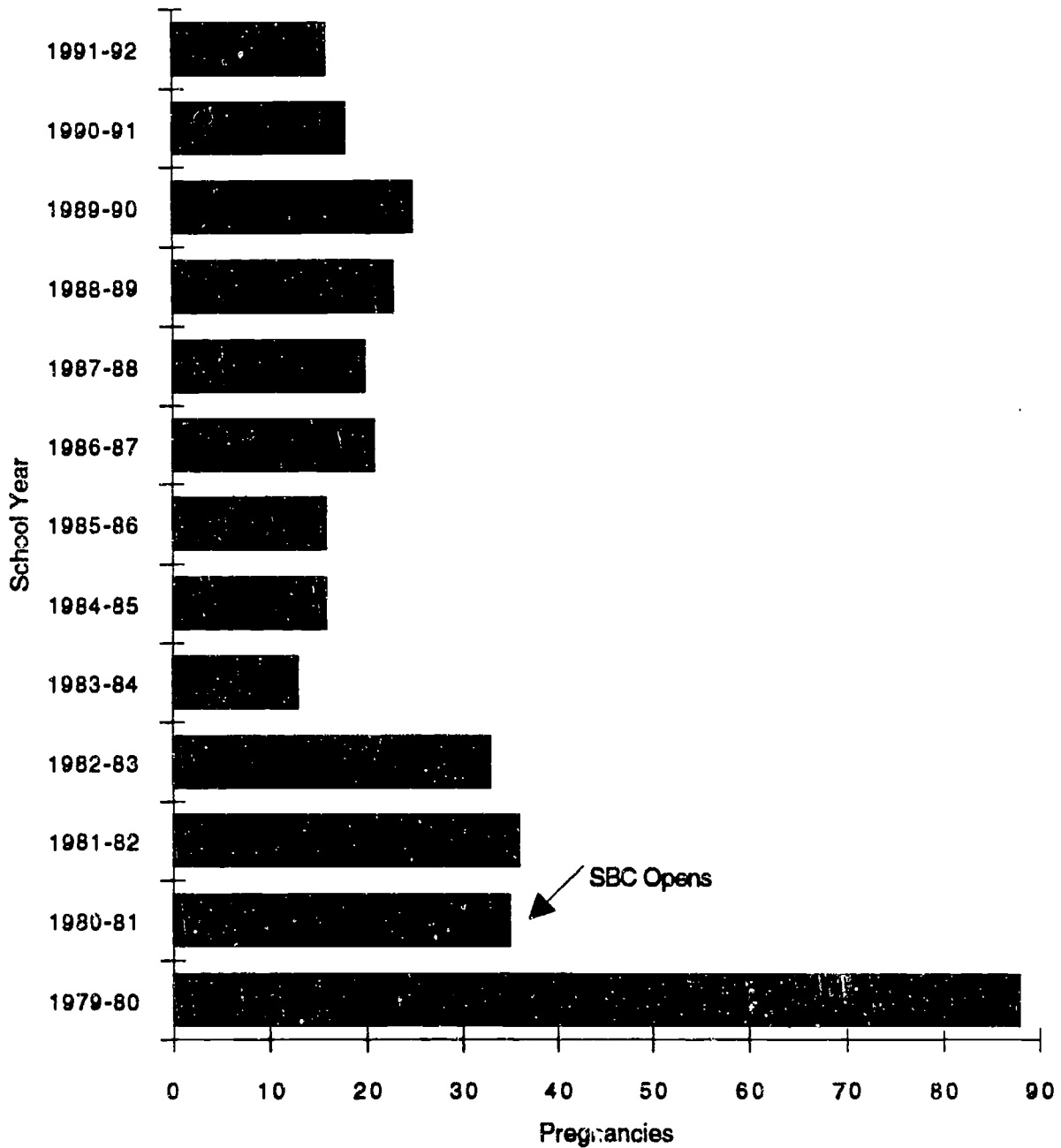


**Exhibit 2. San Fernando High School SBC
Sponsored by Northeast Valley Health Center, San Fernando, CA:
Percent Distribution of Students Who Are Registrants and Users,
1987-88 through 1991-92.**

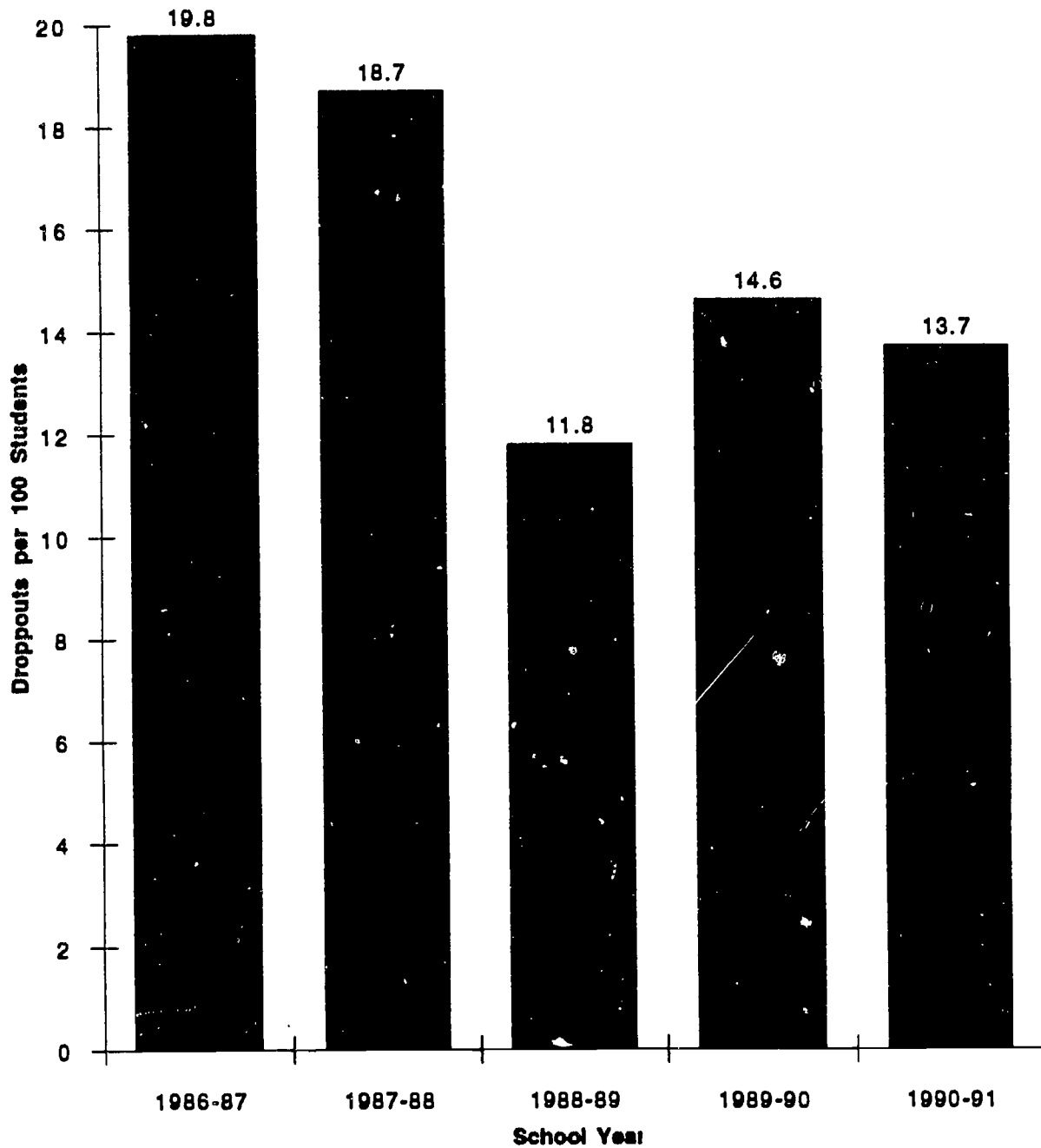


Students not registered with SBC
 Students registered with but not using SBC
 Students registered with and using SBC

**Exhibit 3. Lanier High School SBC
Sponsored by Jackson-Hinds CHC, Jackson, MS.:
Number of Pregnant Students,
1979-80 through 1991-92.**



**Exhibit 4. San Fernando High School SBC
Sponsored by Northeast Valley Health Center, San Fernando, CA:
School Dropout Rate,
1986-87 through 1990-91.**



**THE SCHOOL-BASED CLINICS IN HENRY JUNIOR HIGH SCHOOL AND
GALENA ELEMENTARY SCHOOL
MANAGED BY BYHALIA FAMILY HEALTH CENTER
IN BYHALIA, MISSISSIPPI**

Geographic Area

Marshall County, Mississippi is located in the northeastern corner of the state. Its major industries are small manufacturing companies and warehouse distribution centers, so employment opportunities are limited to unskilled workers. In recent years, a double digit unemployment rate has been the norm. The level of poverty in the area is pronounced.

Marshall County is considered a Health Manpower Shortage Area. The Byhalia Family Health Center (BFHC) is one of only two sources of community health services within a 20 mile radius. The other source is an internist who resigned from the health center two years ago to set up his own practice, in which he serves primarily patients with private insurance. The nearest hospitals are between 20 and 25 miles away, in Memphis, Tennessee and in Holly Springs, Mississippi, and they have very limited outpatient services. Nevertheless, the emergency rooms at these hospitals are overflowing, according to clinic staff. Even more scarce in the area are mental health services.

The population of Marshall County has poor maternal health and nutritional status, lacks adequate prenatal services and follow-up care for infants, and has a high ratio of births to teenage mothers.

With respect to perinatal health indicators, Marshall County fares worse than Mississippi, which consistently ranks 49th or 50th in the nation. Between 1986 and 1990, the infant mortality rate in the county averaged 17.7 per 1000 (22.9 per 1000 among Non-Whites), whereas the state's rate was 12.4 per 1000. In 1990, the county's percent of low birth-weight babies (i.e., less than 2500 grams) was 13.2 for all races and 16.7 among Non-Whites.

In 1991, the incidence of live births to teenagers in Marshall County was 261 per 1000, which was the fourth highest rate in the state. Of all the perinatal enrollees at the BFHC, half were teenagers. In a 1990 study by the Mississippi Department of Health, the incidence of early-stage syphilis was found to be 252 per 100,000, while the rate for gonorrhea was 970 per 100,000.

The Student Populations

Henry Junior High School, which is in the town of Byhalia in the northwest corner of Marshall County, has 1000 students in kindergarten through eighth grade; Galena Elementary School, which is situated in the rural section of the southern part of the county, has 375 students in kindergarten through eighth grade. The vast majority of students, 64 percent at Henry Junior High School and 97 percent at Galena Elementary School, are Black and most are poor. With few

exceptions, the students are either Medicaid recipients or eligible for Medicaid; 75 percent live in homes without telephone service and many live in homes without running water.

Until the opening of the school-based clinics, most of the students had limited exposure to health care due to financial constraints and the scarcity of health care providers in the area. There is only one school nurse assigned to all eight schools in the county, so her time in each school was limited to a few hours per week.

Although no systematic needs assessment has been conducted in these schools, the clinic staff has identified nutritional and dental needs to be particularly common among the children. It is commonly believed that the school lunch, which many students receive free through the Federal School Lunch Program, and the school breakfast, which is also government-funded, are the most nutritious meals eaten each day by most students at Galena.

Before the clinics were in place, the need for dental care was very great. To have ever seen a dentist was rare particularly for the younger children attending Galena Elementary School. Reportedly, 90 percent of the Galena students had never had any dental care until they were seen at the clinic. Compounding the problems stemming from their lack of dental care was the fact that most Galena students live in homes dependent on well water, which is not fluoridated. Consequently, many had rotten teeth by the time they even began school.

Moreover, cases of neglect and physical and/or sexual abuse are common findings among the students. Several cases of rape and incest have been detected and, each year, at least four to five referrals are made to Child Protective Services. Yet, there are no rape crisis centers or mental health programs in the area and, according to clinic staff, the Child Protective Services Agency cannot be relied upon, even in emergencies. These circumstances are believed to contribute to the high incidence of alcohol abuse and sexual activity found among the children.

Families without phones or personal transportation are common, especially in Galena. Thus, it is difficult to send sick children home before bus transportation is available at the close of school. And, it is not unusual for ailing kids to return to school before they are well, because they would rather be in school than be at home where medical attention is lacking and where food is in short supply.

A Brief History of the School-Based Clinics

The Byhalia Family Health Center (BFHC) founded the clinics at Henry Junior High School and at the Galena Elementary School. The former was established in January of 1991, while the latter was started in September of the same year. The director of BFHC, who has been in this position for ten years, recognized that the health center was not reaching many children, especially teenagers, except in acute episodes. He saw a need for primary care and early prevention for school-age children, and he wondered whether a school-based clinic would be the way to meet this need.

Having learned about the school-based clinic model operated by the Jackson-Hinds Comprehensive Health Center in Jackson, Mississippi, he began to believe that his center might

be able to address the needs of the children with a similar program. Moreover, since most of the students in the local schools were either Medicaid recipients or eligible for Medicaid, he felt the program could be supported primarily by funds derived from Medicaid reimbursements and from federal 330 funds. After attending a seminar on school-based clinics held in Memphis, he was convinced that he could start these clinics in his own community without waiting for special grant funds, if he steered clear of the politics of abortion.

So, after gaining support from his staff and his center's Board of Trustees, the director approached the Marshall County School Board with a proposal to establish the school-based clinics, promising that no abortions would be performed and that physicians and nurses would provide all the health services and make all "medical decisions." Without resistance, the school board gave the green light to launch a network of clinics in local schools, including elementary, junior high, and high schools.

The first clinic was established at Henry Junior High School, because it was close to the center and it had space that could be readily renovated. The second clinic in Galena Elementary School followed soon thereafter. Two more school-based clinics are planned; their implementation awaits the resolution of space issues.

Since the beginning, the Marshall County School Board has cooperated with the BFHC by authorizing the space and allotting time in the school schedule for students to receive health education and health assessments. In addition, the school system has paid for the necessary renovations of the space, although BFHC paid for the air conditioning units.

Like the school board, the parents, the school staff, and the community at large have not opposed the clinics. Perhaps the lack of resistance can be explained in part by the fact that the clinic services have also been offered to the teachers and their families (in both schools) and to the community at large (particularly in Galena Elementary School). This policy of opening up the clinics to others beyond the students was made for three reasons. First, there was a recognition that virtually no other primary care services are readily accessible in the area, especially in Galena. Secondly, the BFHC was interested in helping the teachers, as well as the students, particularly if time away from school could be reduced for both. Finally, BFHC recognized this venture as a promising revenue-producing opportunity, as well as a good public relations vehicle, since services would not be free to the non-students who could afford to pay. Indeed, the teachers and other adults who can pay are offered a physical exam at the clinic for \$20, and sports physicals are offered for \$5 to children with private insurance.

Mission and Objectives

The primary mission of both clinics is to bring primary health care and preventive services to the students who are medically underserved. There is a particular interest in recruiting teenagers, because typically they have not been seen at the health center and are likely to engage in high-risk behavior. In the Galena clinic, there is also the mission of providing health services to all community residents, not just the student body, because it is in a geographically isolated area where access to care is minimal.

Specific objectives for both clinics are to: register a majority, if not all of the students, and to reduce the number of students who become pregnant.

Management and Staffing

The BFHC is totally responsible for all operational aspects of the clinics: it provides all the staff, performs all the lab tests, and dispenses all prescribed medicines. Moreover, since people other than students also receive care at the clinics, it might be said that these clinics are operated much like satellites of the center.

Both clinics are open every day of the school year, and in the Summer, the clinic at Henry Junior High School is open to perform EPSDT screenings and for community education sessions.

Each clinic is staffed by a full-time family nurse practitioner and a medical assistant. The nurse practitioners have been with the clinics from the beginning, providing continuity that has generated a loyal following by many of the students, most of whom come for medical reasons, but some also come to talk about emotional problems.

The physicians at BFHC provide the supervision and medical back-up. For emergency and acute care episodes requiring hospitalization, referrals are made to the Regional Medical Center and Le Bonheur Children's Hospital in Memphis, Tennessee, and to Baptist DeSoto Hospital in Mississippi.

BFHC has employed a registered nurse (RN) to work in the clinics as a case manager. The primary responsibility of this position is to follow-up all pregnant teens to ensure that they enter prenatal care early, keep their appointments, maintain a balanced diet, and avoid risky behaviors, such as smoking and drinking. The case manager also certifies the children's eligibility for the WIC program. An RN was recruited for this position because RNs are more available than social workers and because the center director has concluded that the nature of the work is quite suited for a nursing degree.

Space and Facilities

Each clinic has a large waiting room, a spacious examination room, and an area for obtaining lab samples, which are processed at BFHC. In Galena, the clinic is very near the entrance to the school, next to the cafeteria where all the children are likely to be on a daily basis. Thus, the space is quite visible and physically accessible. At Henry Junior High School, the clinic has its own entrance somewhat separated from the school building, but visible from the place where all the children catch their buses.

Both spaces were used for other purposes in the past, and had to be especially remodeled to accommodate their current use. These renovations, except for the air conditioning which was funded by BFHC, were paid for by the schools.

Outreach and Marketing

To market the services of the clinics, BFHC has conducted a series of programs in the schools. In the junior high school, these programs addressed family planning, substance abuse, and STDs; in the elementary school, the programs focused on physical fitness and personal hygiene. Believing that children are more likely to stay in care if reached while young, BFHC has also worked with the local Headstart programs. There, the clinic staff provided physical exams and conducted programs on physical fitness and dental hygiene. During school vacations, the clinics are used for community education programs on hypertension and diabetes, as well as for the delivery of primary care to community residents.

Some students come to the clinic on their own, but most are referred by teachers, particularly the physical education teachers. While boys, in general, resist using the clinics, some do come in to get free condoms.

Services

Both clinics offer a full range of primary care services and health education classes, but no mental health services. The specific services are as follows:

- Primary care services - treatment for injuries and acute illnesses and management of chronic problems.
- Reproductive health services - counseling on postponing sexual involvement and contraceptive counseling, instructions, and methods.
- Preventive care - physical exams especially for sports teams, EPSDT screenings, STD screening and treatment, and health education. The health education classes focus on such subjects as hypertension, diabetes, reproductive health, family planning, teen pregnancy, and STDs. The school guidance counselor provides health education classes and the Marshall County Health Department nurse teaches sex education classes. In conjunction with the state Health Department, the clinic offers classes in prenatal care and breast feeding. CPR classes are offered to church groups, private industry, and other community organizations.
- Substance abuse services - education programs are offered for both students and staff. For example, last year clinic staff participated in "Red Ribbon Week" and a "Just Say No to Drugs" campaign.
- Dental services - exams are provided by an BFHC dentist who visits the clinics. Students with obvious problems are referred, and if necessary provided transportation, to the health center for immediate care.
- Lab and prescription services - all lab tests are performed at the clinic and processed by BFHC. All prescription drugs are offered to the students free of charge.

Mental health service are not provided at the clinics, although they have an agreement with a regional mental health association. Reportedly, this organization is so under-funded that it cannot accommodate the referrals from the school clinics. In certain dire cases, referrals have been made to interns from the Memphis State University graduate program in social work. In the future, the clinics hope to conduct a behavioral risk assessment, in order to identify substance abuse, emotional distress, and risk of physical injury.

Clinic Users and Service Utilization

Of the 450 students that attend Galena Elementary School, the clinic at the school has registered and provided services to 406 or 90 percent of them. Henry Junior High School has a student body of about 1000, and seven hundred or 70 percent of them have been registered and provided at least one service by the clinic there.

Prior to the establishment of the clinics, school children between the age of 5 and 19 comprised 20 percent of BFHC's patients. Since the clinics have opened, these children comprise 37 percent of the patients served by BFHC. This sharp increase clearly reflects how the clinics have improved these children's access to care

The number of males and females who are registered in each clinic is about equal, but girls use the services more. It was noted by the clinic staff that boys are less likely to use the clinic, unless the reason is sports-related, a serious injury or illness, or to obtain free condoms.

During calendar year 1992, it is estimated that 3,300 visits were made in the clinics. Forty percent were for preventive services, while 60 percent were for acute care or management of a chronic condition. It should be noted that more than half (1653) of these visits were accounted for by dental exams performed in the clinics by the BFHC dentist.

Costs and Financing

These school-based clinics do not have their own separate budgets. Visits made at the clinics are billed as if they were made at the main offices of the health center itself. However, an attempt to calculate the cost of providing care at Henry Junior High School yielded an estimate of \$85,106, of which almost \$75,000 or 87 percent was for personnel expenses. For a user population of 700 students, the annual average is \$122 per user and \$56 per visit.

Since almost all users of the clinics are Medicaid recipients, Medicaid reimbursement is the major source of revenues. And, since BFHC is a Federally Qualified Health Center (FQHC), it can bill Medicaid at the cost-based reimbursement rate (\$54 per visit).

When the parents submit a permission form, they are asked to indicate their Medicaid number, or send a \$5.00 fee for the year. For those deemed potentially eligible for Medicaid, a Medicaid eligibility worker assists in filling out the necessary application.

All of the personnel costs of both clinics are included in BFHC's 330 grant budget. Although Medicaid reimbursements and patient fees supplement this budget, it is not known how much each revenue source contributes to the budget for each clinic.

Impact of Clinic Services

Few statistical measures are available about the impact of these clinics on the students at the two schools because BFHC had to change computer systems due to output problems and is now unable to generate much of its data. Still, there is some evidence that suggests that **the clinics have succeeded in meeting their objectives of reducing pregnancies in the two schools, and increasing access to primary care.** In the school year 1990-91, which was the first year of the clinic, a total of five students became pregnant, whereas in 1991-92, there was only one student pregnancy and, so far in this school year (1992-93), there has been only one pregnancy.

Given the high registration rate achieved by the clinics in less than three years, it is quite clear that the clinics are accessible to the students and have eliminated barriers that may have inhibited them from using health services in the past. **Moreover, the clinics have allowed the students to get care without compromising their school attendance.** For example, one student clinic user noted that there was a big difference between the school clinic and the main health center facility; there is no waiting and no paperwork required at the clinic, and her mother does not have to take time off from work to drive her to see the nurse. Several other student-users reported that, before the clinic was in the school, they used to have to miss classes when they went to the doctor for their chronic conditions.

For their part, **teachers report feeling more comfortable knowing that health care is available** in case of emergencies, and that they are no longer responsible for managing children in medical distress. In addition, since teachers can receive services at the clinic, it makes getting care more convenient for them, as well.

There is evidence to suggest that **the clinics' early detection of medical problems has averted more serious conditions and almost certainly has saved money.** For example, one boy was brought into the Henry Junior High School clinic with an eye injury. He was treated immediately by the clinic staff, but it was clear that he needed attention from a specialist. Arrangements were quickly made for an appointment in the hospital in Memphis, where a hemorrhage was diagnosed and controlled. After a follow-up in the school, the child was fine, but had he not had immediate attention, he may have lost his sight in the injured eye.

In another case, a third grade girl at Galena undergoing an EPSDT screening was suspected to have diabetes by the clinic nurse. She was referred to an endocrinologist at Le Bonheur Children's Hospital where it was determined that indeed she was diabetic. After initial treatment and education, she returned to school and was monitored thereafter by the clinic nurse.

There is also some evidence that **the clinics have inspired some children to live more healthy, less risk oriented lifestyles.** Specifically, it was reported that many girls who

started taking birth control pills while they were students at Henry Junior High School have voluntarily returned to the clinic to get their prescriptions refilled, since their current school does not yet have its own clinic.

Ongoing Concerns

As the clinic staff members gain experience with the students in these schools, it is becoming clear that there is a large unmet need for professional mental health services. Since mental health services are not as reimbursable by Medicaid as health services, funding would be a problem. Similarly, the dental needs of the students are far beyond the capacity of the health center, so to meet these needs, financial support beyond Medicaid will also be required.

Summary

The school-based clinics in Byhalia and Galena were established without much fanfare and community resistance, thanks to the political savvy and resourcefulness of the BFHC Director, and the willingness of the school board to support his intention to bring primary health services to a rather underserved population of school-age children. Clearly, this goal has been met. Not only has primary health care now reached these children, but also much needed dental care. In addition, these rural clinics have met the needs of the adult community, which is otherwise isolated by poverty and lack of transportation. The goal of reducing teenage pregnancies has also been reached through the efforts of the clinics.

The clinics function as an extension of their parent family health center, which brings the services to the schools, as the need arises. For BFHC, the clinics are outposts, but yet an integral part of the operation. There is only the 330 grant for funding the clinics, aside from Medicaid reimbursements. Since most of the students qualify for Medicaid, and since the center enjoys a Federally-Qualified Health Center status, Medicaid reimbursement is believed to represent a substantial portion of the needed revenues. However, the budget for the clinics is not separate from the total health center budget, therefore, it is not known how much each revenue source contributes to the total budget.

Contributing to the success of the clinics are the following factors:

1. Initial endorsement from the school board and the community at large.
2. Determined leadership by the health center director.
3. Skilled and committed clinic staff.
4. Support by teachers and school nurse.
5. Lack of any other primary care providers in the area.
6. Previously unmet needs for medical and dental services.

**THE SCHOOL-BASED CLINIC IN LINCOLN HIGH SCHOOL
MANAGED BY DENVER SCHOOL-BASED CLINICS
IN DENVER, COLORADO¹**

The Geographic Area

In the decade between 1980 and 1990, the Denver metropolitan area experienced many changes. The population of the city of Denver decreased, but the minority population grew, with the various racial/ethnic groups experiencing a growth rate ranging from 2 to 25 percent. In 1990, 61 percent of Denver's population was Non-Hispanic/White, but only 42 percent of children were Non-Hispanic White—37 percent of the children were Hispanic and 16 percent were Non-Hispanic Black. An even greater disparity existed among the 59,000 Denver Public School (DPS) students, as about 34 percent of them were Non-Hispanic/White, 39 percent were Hispanic, 22 percent were Black, and 5 percent were Asian and/or American Indian.

Mirroring the nation's incidence of children living in poverty, almost one in five Denver children in 1980 lived in a family with an income below the federal poverty level, and a number of indicators suggest the situation has worsened since then. For example, the Colorado Department of Labor estimates that the percent of those living in poverty in Denver increased from 13.7 to 15.0 between 1980 and 1990. Furthermore, there has been growth in the number of children eligible for the Federal School Lunch program, suggesting more children come from families whose income is below 130 percent of the federal poverty level. In the school year ending in 1989, 41 percent of Denver public elementary school students and 38 percent of Denver public middle school students qualified for free lunch. A year later, these percentages rose to 45 and 41 percent, respectively.

In 1990, as many Denver students in grades 7-12 dropped out or were expelled from school as graduated. In the Denver public high schools, 40 percent of students attended less than 90 percent of their classes. In the 1990-91 academic year, over 7300 DPS students received an average of two suspensions each; more than half of these suspensions were dismissals from school.

In 1990, almost two in five (38%) families in Denver were headed by a single parent, compared to 30 percent in 1980. (The parent was the mother in 86% of these cases.) The fact that more than one out of every three (37%) births is to a single mother contributes significantly to the large number of children with a single parent and with no health insurance.

In 1989, Denver's infant mortality rate was 8.6 per 1000 live births, which was about equal to the State's rate of 8.7. In 1989, 9.0 percent of all births in Denver were of low birth-weight, whereas the percent for the state as a whole, was 7.8 percent. In 1989, the birth rate for Denver girls of ages 15-19 was about 103 per 1000, which is almost twice the rate of 53 births per 1000 for the state. Over 85 percent of these births were unintended.

¹ The data reported in this case study are from DSBC's 1991-92 Annual Report and *The Health of Denver Public Schools Children: A Community Concern*. Report of the Commission on School and Community Partnership for Improved Health and Learning of Denver Students, 1991.

The Student Population in the Denver Public Schools

Approximately 20 percent of DPS students lack a regular source of health care and the means to pay for care. The DPS Nursing Service Annual Report for 1989-90 reveals that 6023 or 10.5 percent of the total student population had a significant medical condition. The two most common problems were asthma and hearing loss. The Denver Mental Health Corporation estimates that between 2.3 and 3.3 percent of Denver children under 19 years of age are in need of mental health services, due to serious emotional disorders. About one fifth of these children have problems that significantly impair their ability to function. A 1988 survey in the three high schools with school-based clinics found that 35 percent of the students had experienced a long period of depression; 32 percent had thought about suicide; and 11 percent stated that they had attempted suicide.

A 1990 health behavior survey of middle and high school students in DPS revealed that about 40 percent of all high school students, 40 percent of middle school boys, and 25 percent of middle school girls had had sexual intercourse. One quarter of the sexually active boys and one tenth of the sexually active girls had more than three sexual partners. The same survey found that ten percent of the students had problems with school work due to alcohol abuse.

In the city of Denver, primary health care to the indigent population is provided primarily by Denver Health and Hospitals (DHH) through its community health centers. Until the establishment of the school-based clinics, DHH was not succeeding in its efforts to reach school-age children. For many of these children, the primary health care provider was the school nurse who visited their school several hours a week, but could provide only limited services. In a 1988 survey, 16 percent of the students in the three schools with school-based clinics reported that, until the establishment of the clinics, they did not have a place for regular medical care and 22 percent said that they were uninsured.

In Lincoln High School, the student population of nearly 1584 reflects most of the problems delineated above. Nearly 54 percent of the Lincoln students are Hispanic, the largest of the minority groups, which together comprise more than two-thirds of the student body. Nearly 18 percent of the students qualify for the Federal School Lunch program, coming from a community where 35 percent of the residents live below the poverty guidelines. In 1987, before the establishment of the clinic, the school had a dropout/attrition rate of 39 percent, and a teen pregnancy rate of 66 per 1000, which was 25 percent higher than the rate for the state.

Brief History of the School-Based Clinic

The concept of a school-based clinic (SBC) was seen as the answer to a set of problems long recognized within the Denver school and health care communities. There were concerns about teenage pregnancy, teen substance abuse, and school dropout rates, and there were frustrations about the lack of access to comprehensive health services on the part of school-age children, despite the availability of these services in local community health centers. Although they were successful in reaching adults and children under five years of age, these community health

centers were not serving school-age children, especially teenagers. It seemed reasonable then to move the needed health services to where the children could be more easily reached. Consequently, the School Board voted unanimously to establish health clinics in Denver public schools.

When the Robert Wood Johnson (RWJ) Foundation announced its intention to fund SBCs in selected cities, a steering committee was established for the purpose of organizing a proposal effort. This committee gave way to a larger task force which had representatives from a wide variety of community organizations that have since worked closely together during the ensuing implementation stages. Four of these organizations: Denver Public Schools, Denver Health and Hospitals, University of Colorado Health Sciences Center, and Children's Hospital ultimately formalized a joint venture named: Denver School-Based Clinics (DSBC). It is this entity that is managing the clinic in Lincoln High School, as well as the other two operational SBCs in Denver. There are plans to launch seven additional SBCs in the Fall of 1993, and DSBC is now applying for funds to start 15 additional clinics in the future.

Thus, from the beginning, there has been in Denver a tradition of collaboration among community organizations, galvanized by the concept of bringing comprehensive health care to school children. These organizations represent schools, students, parents, health care providers, and providers of other services important to children, such as substance abuse, social services, and mental health services. The teachers in the schools have also been involved with the clinics during their planning and implementation stages, and they continue to participate as key advisors and referral sources.

Even the Denver Medical Society and the private medical community have been supportive from the start. The private-practice physicians were convinced that the care provided by the SBCs would augment, rather than conflict with the care they provide. All along, DSBC has been keeping the private physicians apprised of its plans, and also referring students to them for services that are not available at the clinics. This past November, the Denver Medical Society honored DSBC with its annual Community Education Services Award.

These collaborative efforts and the support received from all corners of the community have paid off in a program that offers a rich array of services underwritten by the cooperating community organizations. In the last mayoral election, SBCs became a political commodity which resulted in a commitment by the current Mayor to bring more clinics into Denver public schools. DSBC has also earned the endorsement of the Governor, as well as a national reputation as a progressive model of care.

But these milestones were not reached without problems. In the earliest stages, there was resistance from the local Archbishop and some local politicians who opposed contraceptive counseling in the school. Combating this resistance served as an important exercise in community organizing, which has become a critical skill in the ensuing five years.

The irony is that while Archbishop of Denver was involved with the initial planning of the SBCs, he made public inflammatory comments opposing the clinics when the RWJ grant proposal effort was announced. To respond to these comments and to ensure that the correct information

about the broad mission of the clinics was disseminated to the community, the news media was used extensively and effectively by the newly formed community alliance.

When a Denver City Council member objected to the contract being negotiated among the founding entities, a public hearing was convened and nearly 150 parents attended, speaking in favor of the clinics. When only six people spoke in opposition, the City Council voted to approve the contract.

Initially, there was also resistance among the school staff, most notably the school nurse, who feared that her job would be in jeopardy; in some schools there is still some competition between the school nurses and the DSBC staff.

Other problems encountered in the early stages of the DSBC include: developing a plan for long-term financial support; building an adequate marketing plan; developing the means to link all students with a community medical home base for specialty services (not offered through the clinic); securing Medicaid reimbursement; and addressing the needs of all the constituent groups. Some of these problems, especially procuring long-term funding for the clinics, are still being addressed today.

Mission and Objectives

Prior to the establishment of DSBC, the DPS had several major programs that dealt with the health and mental health of students. Each program was separately administered; each had separate and distinct reporting arrangements; and none of them had any formal collaborative mechanisms. This lack of coordination was not idiosyncratic to the DPS; coordination was lacking among all of the organizations in Denver that dealt with health and mental health care. Consequently, among the first goals of the DSBC was to use the establishment of the city's first SBCs as the impetus to revamp the way that school health services were provided; to restructure the financing of primary health services for the children of Denver; and to facilitate the overall coordination among community organizations.

More specific to Lincoln's SBC were the following initial goals: 1) introduce and strengthen physical and mental health enhancing behaviors among students, while eliminating or reducing health compromising behaviors; 2) provide affordable, accessible, and appropriate services for the promotion of physical, psychological, educational, social, and personal health; and 3) register at least 25 percent of the student body in the first year.

Now, after nearly five years of operations, there are more ambitious objectives for the clinic at Lincoln High School. As of the end of the last school year, the clinic was to:

- Register 70 percent of the student body.
- Provide at least one clinic visit to 45 percent of the students with a grade point average of less than 1.6. (This measure is deemed a proxy for high-risk, based on a study conducted in the school which revealed that a low grade point average is the best predictor of all other possible indicators of school dropout.)

- Ensure that 70 percent of girls referred for family planning methods keep their appointment within 28 days of referral.
- Register 80 percent of pregnant girls within 13 weeks of pregnancy, so that, if desired, prenatal care can be received within the first trimester.
- Increase the percentage of students receiving mental health and substance abuse treatment with family involvement.
- Minimize the percentage of clinic users sent home due to illness or injury.

Management and Staffing

DSBC operates the clinic at Lincoln High School, as well as clinics at two other schools. Although other community organizations are involved, the DSBC is primarily a partnership among four organizations: the University of Colorado Health Sciences Center, Denver Public Schools, Denver Health and Hospitals, and Children's Hospital. Each of these partners contributes a portion of the staff and other resources to each of the clinics.

The University of Colorado is the grantee of the RWJ seed grant, the largest single source of funds that launched the DSBC. Its Department of Pediatrics employs the Project Director and the Principal Investigator, who together have been responsible for launching all of the clinics and providing the leadership necessary for their success. It also funds a full-time physician assistant, who provides primary care services at the clinic. Fulfilling its inherent role in higher education, the University Health Sciences Center School of Nursing, in collaboration with Denver's Children's Hospital, will in the next school year support a full-time nurse practitioner/educator who will assist in tailoring education programs and hands-on training to upgrade the skills and expand the clinical role of the school nurses.

The second partner of the DSBC, the Denver Public Schools, contributes the space, covers the utility costs, and supports a school nurse and school social worker at the Lincoln clinic. DPS has been and continues to be involved with DSBC at all levels. DSBC administrative staff have met with superintendents over the years and have obtained the support needed for space, facilities and leadership that filters down to the principal, the teachers, the school nurse and social worker.

The third partner is Denver Health and Hospitals (DHH) which is a system of federally-funded community health centers, serving as the medical home base for many of the students who use the Lincoln SBC. That is, DHH provides all the services that are not offered at the clinic, such as contraceptive counseling, prenatal care, and other specialty services. All of its services are available to the students when school is not in session. A DHH physician serves as the medical director of the clinic, and another physician who is an adolescent specialist provides supervision and consultation to the clinic staff. DHH also processes and pays for all lab tests.

Children's Hospital, the fourth major partner, supports the administrative staff and provides services to students who need hospitalization or specialists that are not available at the clinic or at Denver Health and Hospital health centers.

The remainder of the staff at the Lincoln SBC include: a full-time clinical social worker who is supported by Human Services, Inc., a community mental health provider; a full-time substance abuse counselor provided by Arapahoe House, a community substance abuse inpatient/outpatient program; a counselor from the Denver Gay and Lesbian Community Health Center who works two hours per week at the clinic; and a counselor specializing in violence prevention from a community organization called AMEND (Abusive Men Exploring New Directions) who spends 15 hours per week at the clinic.

Although the funds flow through various organizations, DSBC is its own organization with its own bylaws, policies and procedures, as well as a commitment by its staff to each of the schools and the students. DSBC is very serious about its accountability to the schools, carefully following procedures designed to track clinic users and minimize class absence. The clinic staff members consider themselves guests in the schools; thus they are obliged to bend their practices to fit the school environment. This is done to minimize friction between school staff and clinic staff and to facilitate the integration of clinic services with school activities. The clinic staff is considered part of the school team, present at the school for the purpose of expanding services to the children. The result is that the children are encouraged to use the clinic as they would any other resource in the school, such as the library. For example, kids can participate in group counseling sessions during school hours, without negative repercussions from the teachers or the principal. In return, the clinic makes every attempt to accommodate the school's needs. For example, while mental health therapy sessions are usually held for 50 or 60 minutes in traditional settings, here they are confined to 40 minutes, the interval at which the school bell rings between classes.

Space and Facilities

The clinic at Lincoln High School has a small but very cheerful waiting room; three examination rooms; and offices for the substance abuse counselor, the clinic social worker, and the director. The school social worker the school nurse each has her own office in the same suite. There is also a small conference room that doubles as a group counseling room and rest area for those students who need to lie down, and an on-site lab where most routine tests are processed.

Outreach and Marketing

In Fall 1987, DSBC established a Community Advisory Council (CAC), comprised of students, parents, teachers, other school personnel, and representatives from agencies with close affiliations to the school. The CAC serves in an advisory capacity to the clinic staff and is actively involved in all of the clinic's planning and implementation activities, e.g., planning and participating in marketing activities. Thus, much of the outreach conducted inside and outside the school is due to the efforts of the CAC.

Most outreach activities are planned and implemented through the CAC, which reaches potential clinic users through a variety of means including: Back-to-School Night, Freshman Orientation Day, PTA meetings, special workshops for parents, telephone calls to parents to obtain consent forms, speaking engagements targeting specific groups of students, and special events such as drug awareness week. In addition, each month DSBC sends to parents a newsletter prepared specifically to address their concerns.

One of the most effective outreach vehicles is a special program called Teen Improvisational Theater Troupe that delivers health messages to students. The clinic staff meets with the students who comprise the troupe to discuss ideas for health information to be conveyed to the students. The troupe members then create skits that are offered in classes throughout the year. In this way, students learn about current health issues and the clinic.

Aside from parents and students, teachers are targeted for outreach. The thrust of these efforts is to encourage teachers to identify students with health concerns or in danger of being dismissed from school for behavioral problems. Academic contracts are offered to students failing two or more subjects and SBC counseling is often included as part of the contract. Similarly, students who would be otherwise dismissed from school because of illegal drug use or disruptive behavior, are offered instead the option of undergoing substance abuse treatment at the clinic, or, if inpatient services are needed, at the Arapahoe House.

Services

The clinic at Lincoln High School offers a full range of medical and psycho-social services:

- Primary health - management of chronic conditions and care for sports injuries, acute illness, and adolescent concerns, such as acne, menstrual problems, and weight problems.
- Preventive Care - complete physical exams, immunizations, and health education. With regard to health education, the clinic staff worked closely with the school's Science Department teachers to prepare a two-semester health and ethics class, that freshman students are now required to take. In this class, information about sexuality, substance abuse prevention, and violence is presented. In addition, at the time of routine physical exams, a "Teen Health History" form is used to collect information about high-risk behavior and determine the need for counseling regarding AIDS, STDs, etc.
- Reproductive health services - per agreement with Board of Education, the clinic does not provide birth control methods or prescriptions. The clinic does provide pregnancy tests, pelvic exams, pap smears, diagnosis and treatment of STDs, AIDS testing, contraceptive counseling, and referrals for contraceptive methods and follow-up on those referrals. A stated objective is to ensure that girls at risk for unintended pregnancy make and keep an appointment to receive family planning methods within 45 days of referral.

- **Dental care** - dental screenings are performed, but treatment services are not available, except for acute episodes which are referred to Denver General Hospital. Uninsured children are referred to a local dental volunteer clinic that offers free services.
- **Mental health services** - counseling is provided primarily through group sessions, though individual sessions are also offered. There is a myriad of counseling groups that focus on such problems as grief, depression, sexual abuse, co-alcoholism, and homosexuality. For example, violence prevention group counseling sessions are provided by AMEND; gay and lesbian group sessions are provided by a specialist from the local Gay and Lesbian Community Health Center
- **Substance abuse** - in its second year, DSBC developed a model school-based substance abuse program. Clinical services are free to students and include: assessments and group, individual, and family treatments. Substance abuse education and training are also provided to students and teachers. Services are provided by a multi-disciplinary team according to a treatment contract approach. Specifically, when a student commits a drug offense, he/she is offered by the school administrator the opportunity to enter into a treatment contract for seven sessions at the clinic instead of being immediately suspended.
- **Lab and Prescription Services** - routine lab tests are taken and processed at the clinic while more complex tests are sent to the nearby community health center, which is part of the Denver Health and Hospitals. Prescriptions for routine medicines are filled free of charge.

When the clinic does not provide a needed service directly, referrals are made. For example, students in need of prenatal care are referred to a local community health center. In these cases, the clinic contacts the provider to make arrangements and to provide information. A computerized tickler system is used to follow-up on referrals.

Clinic Users and Service Utilization

In 1991-92, 1157 or 73 percent of the 1584 students at Lincoln High School were registered at the clinic. Of these, 43 percent were males and 57 percent were females. This differential between girls and boys registered at the clinic has increased steadily over time, beginning with only a two percent difference in the first full year of operations (1988-89).

Exhibit 5 shows that the ethnic profile of the clinic registrants last year closely resembled that of the total student population, with one exception. Asian students, who comprised 12.1 percent of the total student body, accounted for only 9.1 of the clinic registrants, 5.4 percent of the clinic users, and 2.2 percent of the visits. The clinic staff have been aware of this discrepancy for some time, and have employed a number of strategies to reach out to Asian students. For example, registration materials have been translated into four Asian languages and mailed to families who have indicated a need for them; clinic staff have circulated in classes of Asian students studying English as second language; an in-service for clinic and school health staff was

sponsored by DSBC through the Asian Center for Human Development; and, finally an Asian staff member has performed direct outreach to families. Yet, little success has been realized, thus far. The reason appears to be cultural—these students have been hesitant to use Western Medicine and to reveal personal problems to those outside the family unit. They tend to rely on Asian physicians in the community, and their families consider it an affront to speak of problems “in public”. One case cited by the clinic staff involved an Asian student who had been hospitalized after a suicide attempt, and thereafter, was diagnosed as psychotic. Through a translator, the staff attempted to learn why this student was reluctant to use the clinic’s mental health services. They learned that the parents considered the diagnosis unacceptable and refused to allow their daughter to speak to anyone outside the family about personal matters.

Exhibit 6 shows the pattern of insurance sources among the students registered at the clinic last year. Specifically, 15 percent were Medicaid eligible, 25 percent were eligible to receive indigent care through Denver Health and Hospital’s community health centers, 20 percent belonged to an HMO or a PPO, 25 percent had other private insurance, and the remaining 25 percent had no source of insurance whatsoever.

Of the 1157 students registered in the clinic last year, 710 or 61 percent used at least one service. In total, 3740 visits were made by these students, for an average of 3.2 visits per registered student, and 5.3 visits per clinic user. As Exhibit 7 shows, girls accounted for far more visits than boys. The average number of visits for female clinic users was 7.4, compared to the average of 4.4 visits per male clinic user.

Of all the visits made to the clinic, 22 percent were for acute problems, 41 percent were for mental health problems, 14 percent were for physical exams, eight percent were for substance abuse problems, 5 percent were for reproductive health and STDs, and 5 percent were for other conditions. (See Exhibit 8.)

Exhibit 9 shows the number of visits made last year by type of provider. The physician assistant accounted for almost half of the visits (44%). The mental health providers and the substance abuse counselor were responsible for 24 percent and 19 percent of the visits, respectively. The rest of the visits were staffed by the rotating physician (6%) and the gay/lesbian counselor (3%).

Costs and Financing

The total expenses, including those for space and utilities and those met through in-kind contributions, for the SBC at Lincoln High last year were \$181,667. As Exhibit 10 shows, the major categories of expenses were: Clinical salaries (63%), administrative salaries (22%), and other expenses (15%). Thus, salaries accounted for 85 percent of the total expenses.

Exhibit 11 shows the clinic’s expenses by type of service; medical services accounted for 47 percent, mental health services for 33 percent, and substance abuse for 20 percent.

Given that 710 students were registered at the clinic and made 3740 visits, the annual cost per registrant was \$256 and cost per visit was \$49.

Anticipating the end of its RWJ grant, DSBC has been struggling to develop long-range funding sources, but thus far, the only major sources are grants, which are inherently of a limited time span. Third-party reimbursements represent another revenue source, albeit a limited one, because most of the students are without insurance or they are insured by HMOs and PPOs that do not consider DSBC a reimbursable provider. In addition, DSBC does not have the capacity for a billing system.

However, there is consideration being given to billing Medicaid, although only about 15 percent of Lincoln High School students are Medicaid eligible. Moreover, clinic visits are only reimbursable when a physician is on-site, and even then, the Medicaid reimbursement rate is low (40 percent of usual and customary charges). Consequently, DSBC is assessing the possibility of having one of its partners, Denver Health and Hospitals (DHH), bill on its behalf, because DHH is a Federally Qualified Health Center (FQHC) which means that it can bill Medicaid at 100 percent of the usual and customary charges and is exempt from the requirement that a physician be on-site.

Impact of Clinic Services

The clinic has succeeded in meeting its major objectives. Specifically, in pursuit of registering at least 70 percent of the student body, the clinic met with success last year when it reached the 73 percent mark. While in the past six years the school student enrollment has held somewhat steady (Exhibit 12), the proportion of clinic registrants and users has increased dramatically (Exhibit 13).

The clinic also succeeded in its attempt to see at least once 45 percent of the students with a low grade point average. In the school year 1990-91, the clinic reached 55 percent of freshman students with a low grade point average and 53 percent of all Lincoln students with a low grade point average students. The purpose of seeing these students in the clinic is to address, through counseling services, any emotional problems that may affect school performance.

As for the goal of entering pregnant girls into prenatal care in the first trimester, last year, 93 percent of the pregnant girls were identified in the first 13 weeks, and 82 percent of them entered prenatal care in their first trimester.

In its efforts to minimize the number of students sent home due to illness or injury, the clinic also has been successful. Last year, clinic users were sent home 20 percent less than those who were not using clinic services.

The substance abuse treatment contract approach used by the clinic with students committing drug-related offenses is credited with reducing by 80 percent the number of such students suspended from the school. The testimony of a male student who was interviewed at the clinic echoes the role of the clinic's substance abuse treatment. The boy reported that the program helped him kick his addiction to drugs, improve his class attendance, and even boost his grades.

Other student interviews suggest additional ways that the clinic has been helpful. A female student credited the clinic with helping her address and control her suicidal tendencies. She had come to the clinic first because of an acute illness, finding that the clinic was not only convenient to use, but also a place where she felt comfortable speaking her mind. When she got to know the staff, she began to talk about her emotional problems, and eventually joined a group on depression. She found that she was not alone with her problems, and that she could articulate and control her anxieties, for the first time. She now feels more confident and her performance in the classroom has improved.

A second girl interviewed at the school learned about the clinic through her older sister. She had felt very uncomfortable around boys and, as a result, did not engage in many social activities. The counseling sessions at the clinic helped her sort out her sexual feelings and her fear of boys. She says that she now is more comfortable with herself and is able to keep company with the boys in school.

Ongoing Concerns

The major concern for DSBC is long-term funding for the clinics. Despite its success in harnessing community resources and obtaining many in-kind resources, DSBC continues to strain under financial pressures. Having relied on a large foundation seed grant, as well as other grants that are for a limited time period, the DSBC is continually searching for replacement funds. That the community has made a commitment to open additional SBCs in Denver is measured as a success by DSBC, but it also compounds the need for future funds.

Summary

The Denver School-Based Clinics is an organization established for the purpose of meeting the health and mental health needs of school-age children attending Denver public schools. The organization is a result of a partnership among several community organizations, each contributing commitment and resources. Recognizing that the health care needs of the students were not being met by a fragmented system of care, these community organizations formed an alliance that has served them and the children well over the years, first in meeting the initial resistance posed by those who objected to contraceptive counseling, and ultimately in harnessing the resources required to meet the wide spectrum of needs found among the children.

After several years of carefully and systematically building a community coalition, DSBC now has implemented clinics in three schools, and is planning to offer clinics in seven additional schools. These clinics provide a wide spectrum of health and mental health services that have been effective in promoting healthy lifestyles and maintaining the health of all students; targeting high-risk students; and improving various educational problems related to absenteeism and suspensions.

DSBC has plans for starting seven new clinics next Fall, and if grants are received, as many as 15 more in the following year. These are ambitious plans, given the uncertainties of long-term

funding. Medicaid revenues may be pursued in the future, but for older children in Denver, this is not a promising revenue source. What is needed is an alternative sources that would allow long-term planning without the uncertainties and the all consuming burden of pursuing grants and contracts of short duration.

Contributing to DSBC's success are the following factors:

1. Strong commitment to building a community coalition that has generated support among the students and parents, as well as much needed resources for the clinics.
2. A respectful accommodation to the school environment, in an effort to minimize friction and increase students' access to clinic services.
3. A thorough assessment of the students' needs yielding a comprehensive array of services.
4. Skilled and committed management and clinical staff who have won the trust of the students and school staff.

Exhibit 5. Lincoln High School: Percent Distribution of Students, SBC Registrants, SBC Users, and SBC Visits by Race/Ethnicity, In School Year 1991-92.

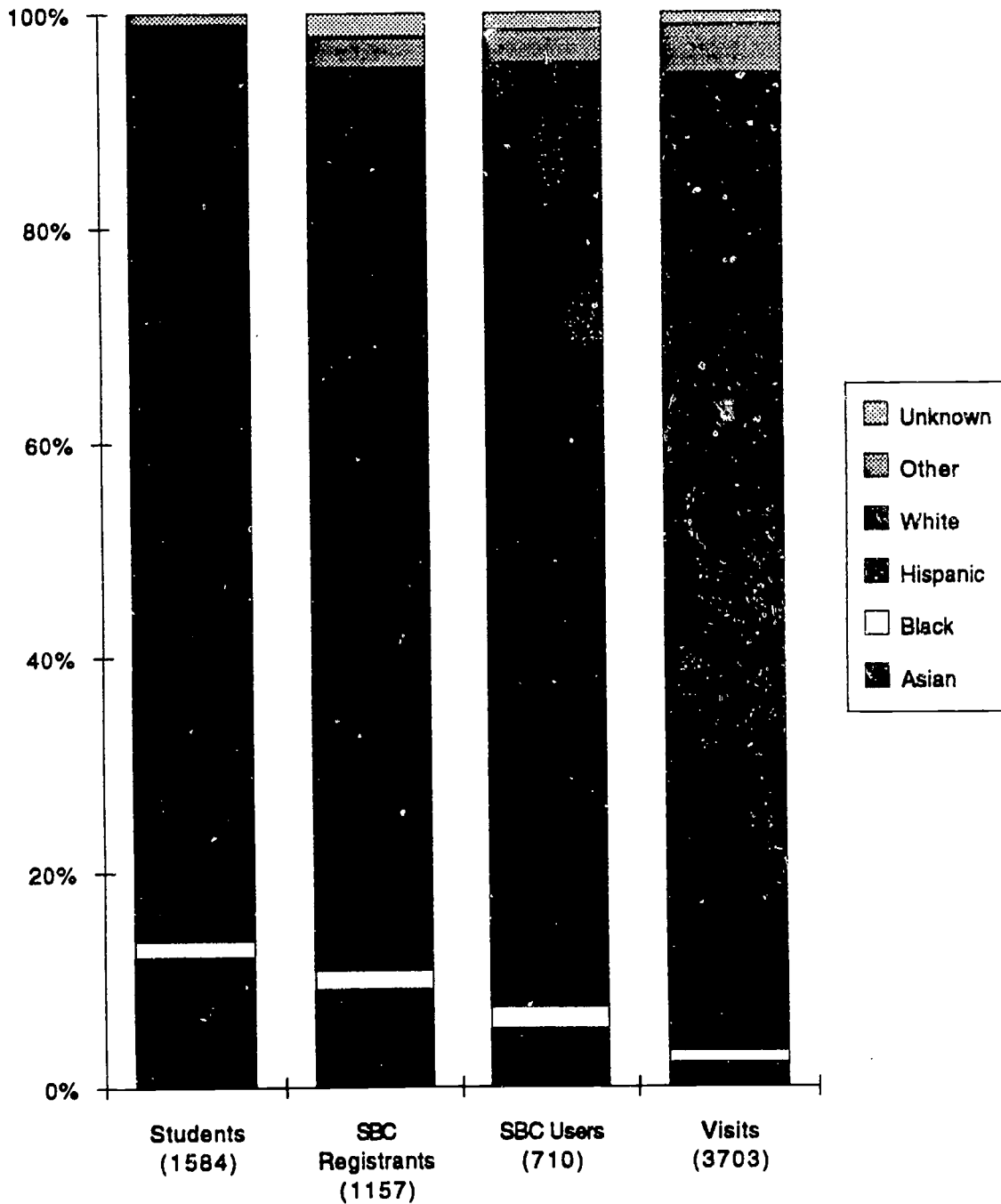


Exhibit 6. Lincoln High School SBC: Percent Distribution of Registrants by Source of Insurance, 1991-92.

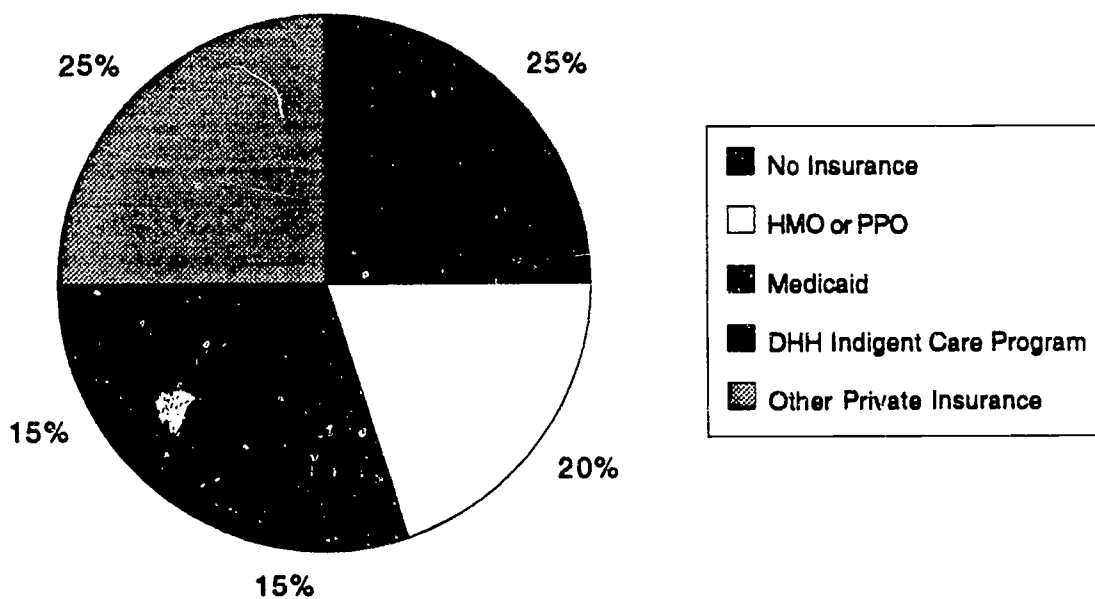


Exhibit 7. Lincoln High School SBC: Number of Visits by Sex, 1987-88 through 1991-92.

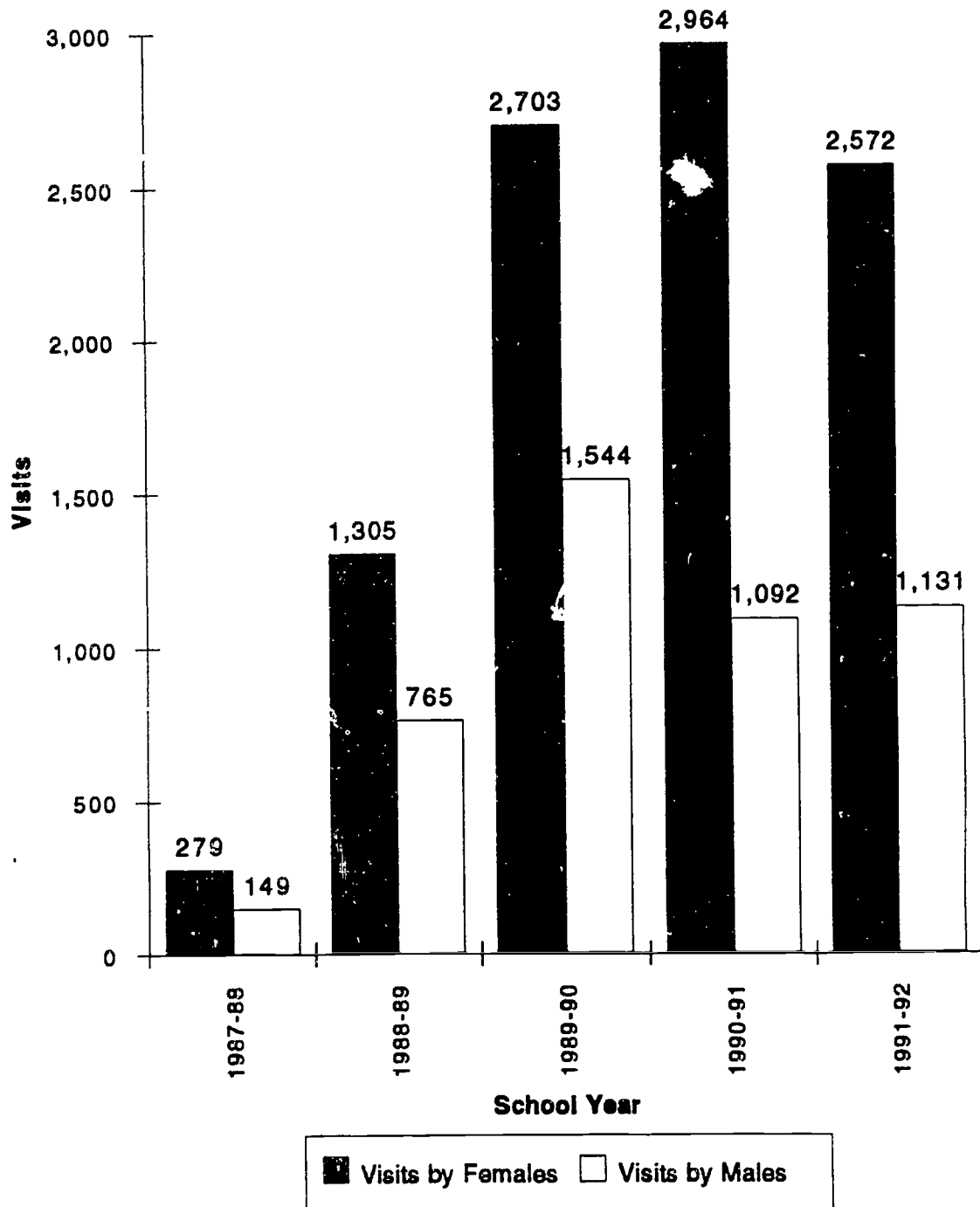


Exhibit 8. Lincoln High School SBC: Visits by Primary Diagnosis, 1991-92.

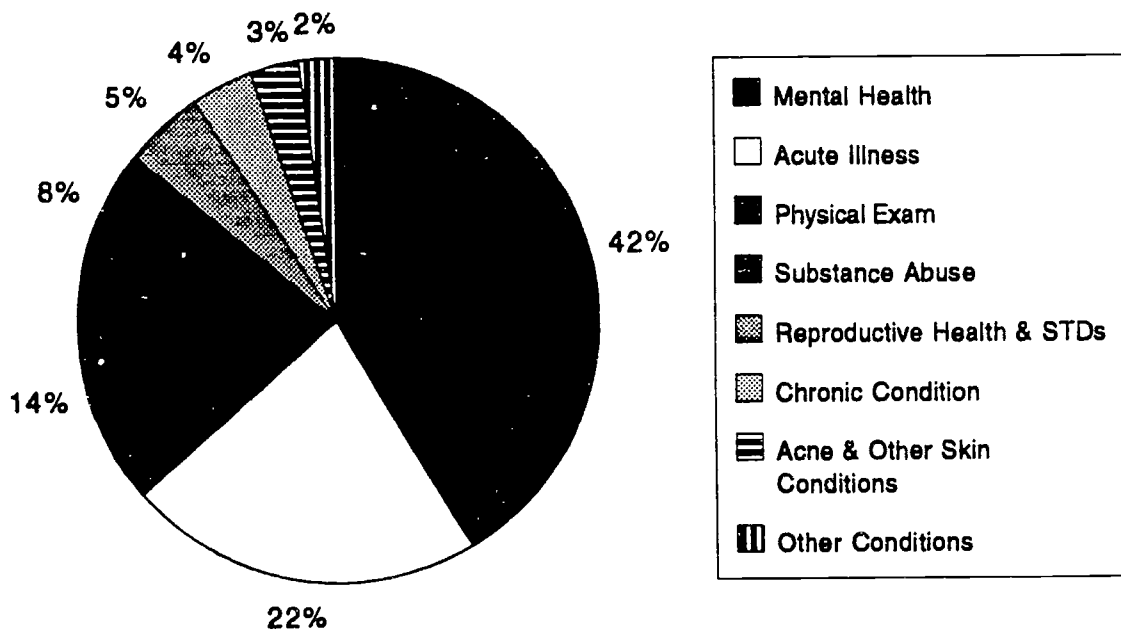


Exhibit 9. Lincoln High School SBC: Visits by Provider Type, 1991-92

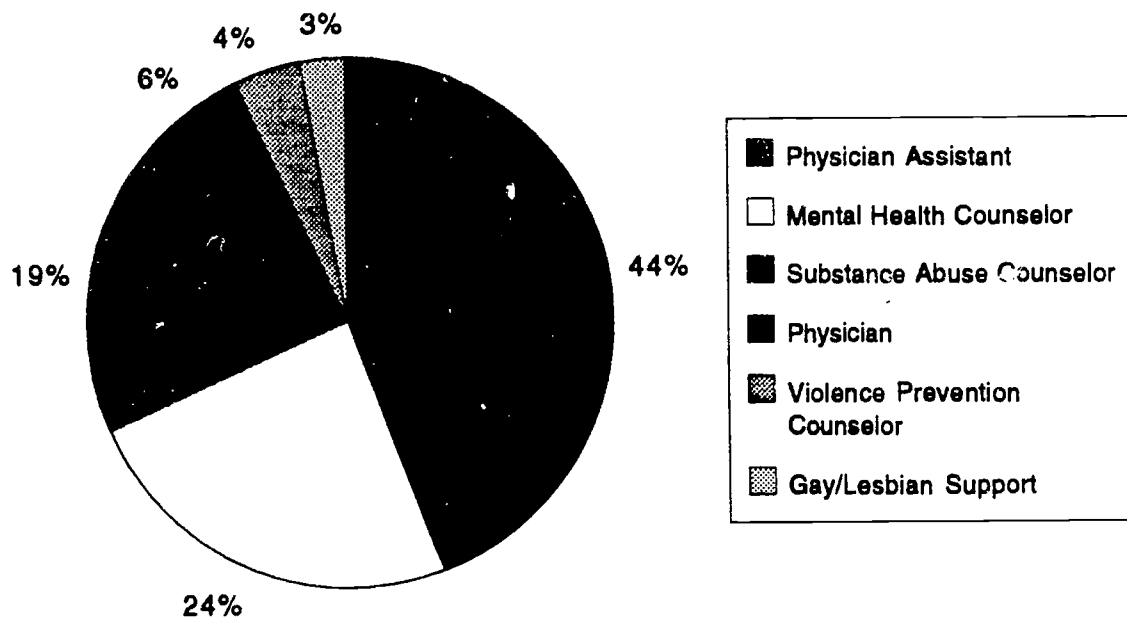


Exhibit 10. Lincoln High School SBC: Distribution of Total Expenses (\$181,667) by Major Category, 1991-92.

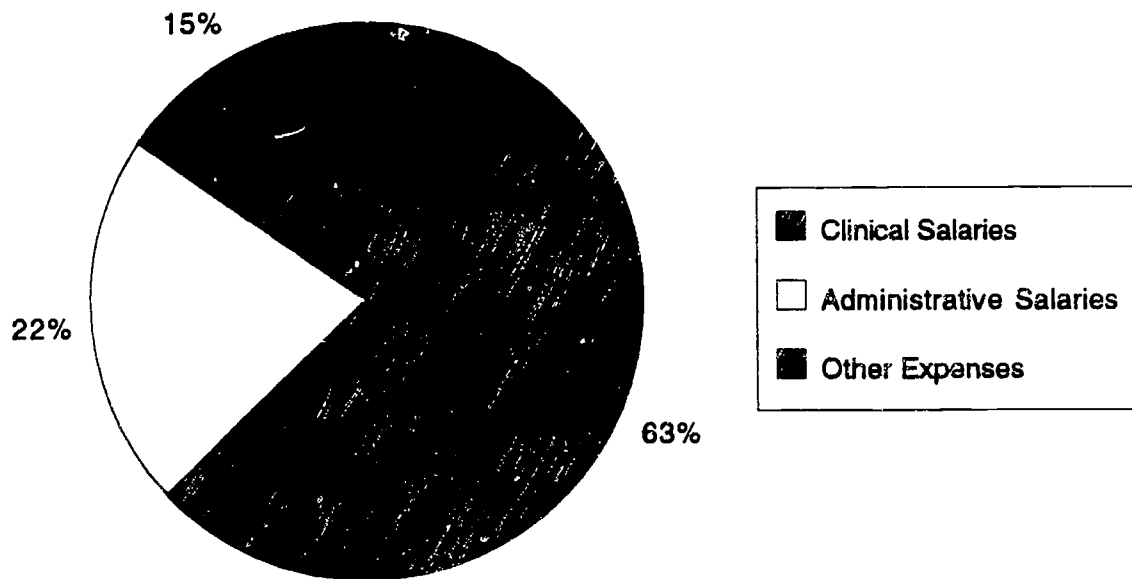
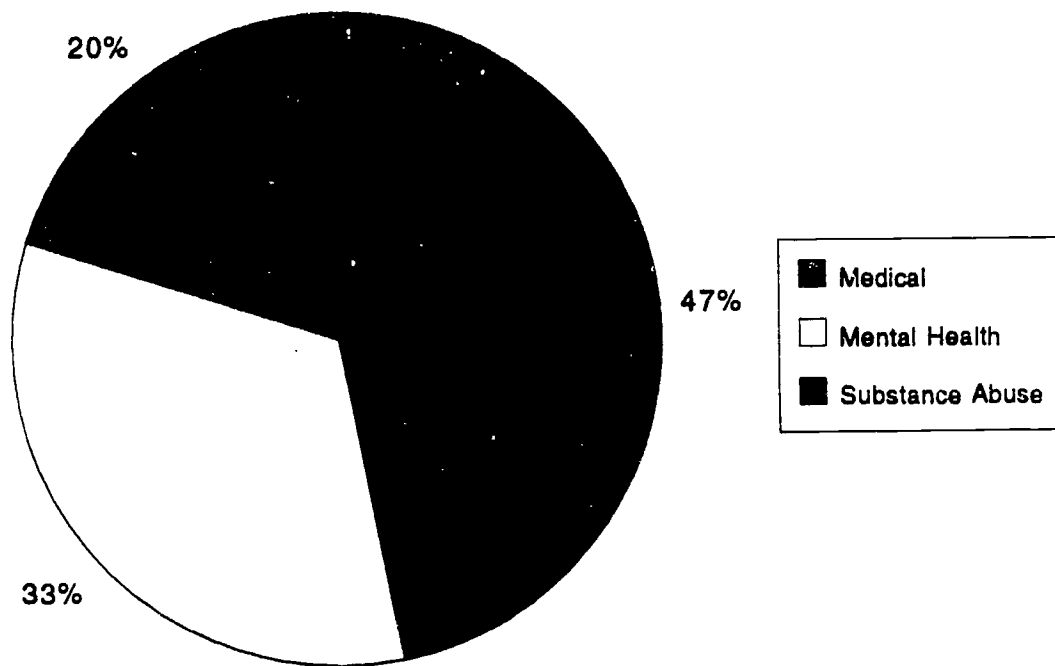


Exhibit 11. Lincoln High School SBC: Distribution of Total Expenses (\$181,667) by Type of Service, 1991-92.



**Exhibit 12. Lincoln High School: Enrollment,
1987-88 through 1992-93.**

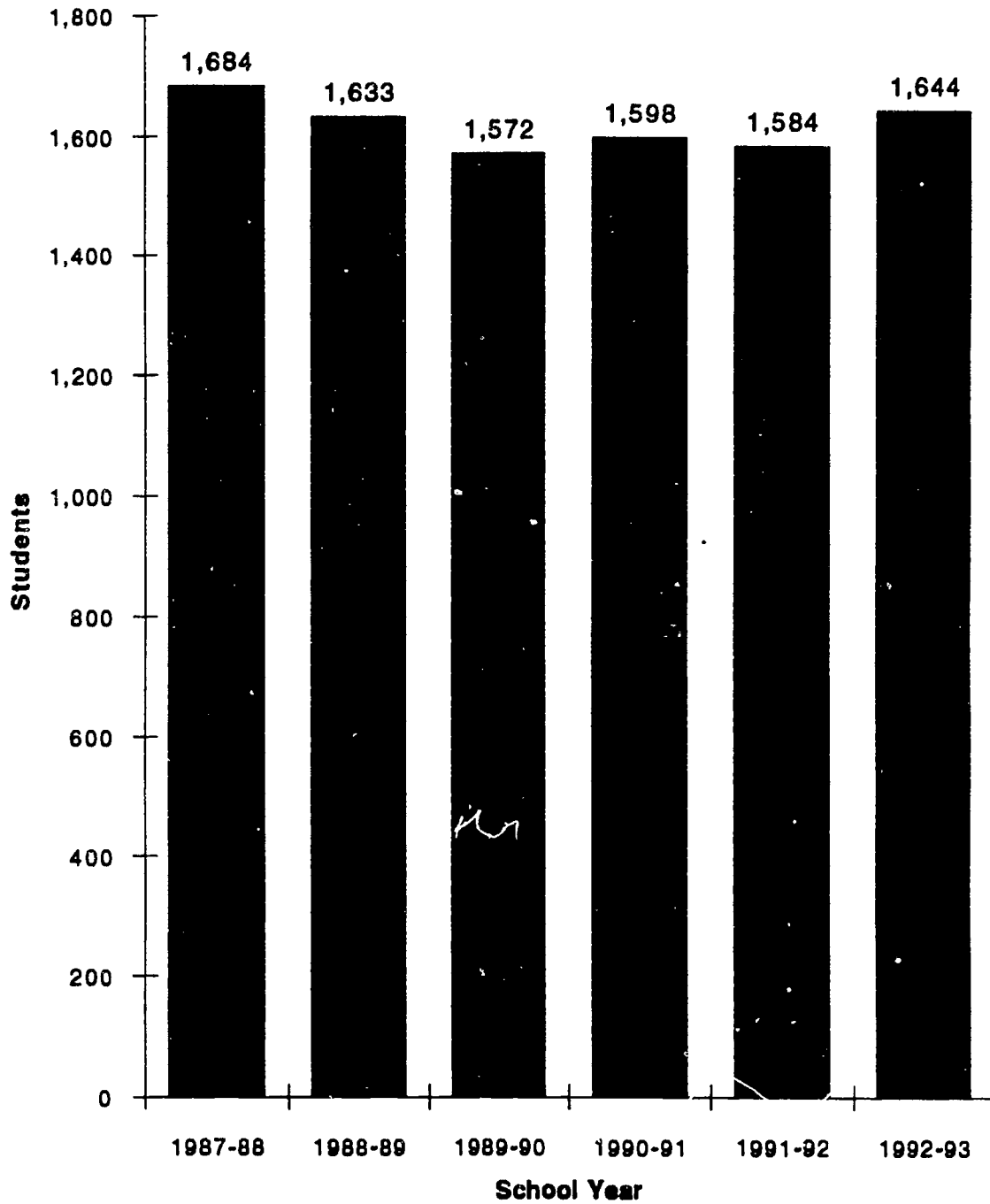
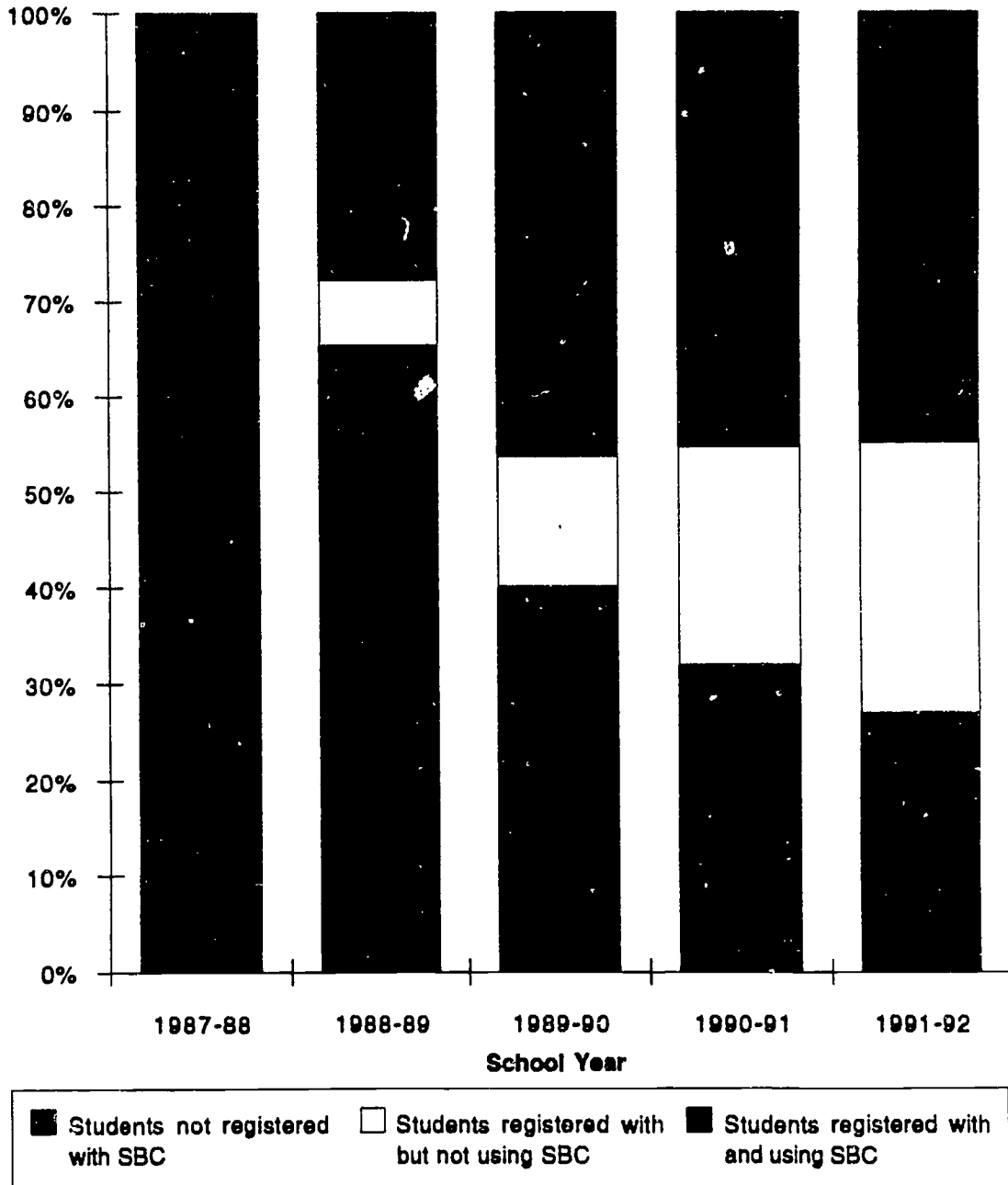


Exhibit 13. Lincoln High School: Percent Distribution of Students by SBC Non-Registrants, SBC Non-using Registrants, and SBC Patients, 1987-88 through 1991-92.



**THE SCHOOL-BASED HEALTH CLINIC AT
CONTINUING OPPORTUNITIES FOR PURPOSEFUL EDUCATION CENTER NORTH
OPERATED BY ECONOMIC OPPORTUNITY FAMILY HEALTH CENTER, INC.,
IN DADE COUNTY, FLORIDA**

The Geographic Area

Within urban Dade County, Florida, there are three distinct communities called Liberty City, Little Haiti, and Hialeah. Each is economically depressed and together they have a population of about 300,000 people.

The residents of Liberty City are mostly Black, and over 50 percent of them have incomes at or below the poverty level—many living in the area's eight federal low-income housing projects. The troubles of the area include a high crime rate, a high unemployment rate (particularly among its youth), a high school dropout rate, a high adolescent pregnancy rate, a high infant mortality rate, and a high incidence of substance abuse.

Little Haiti consists primarily of legal and illegal Haitian immigrants, and Hialeah consists primarily of blue-collar and working-class Cuban Americans, and illegal and legal immigrants from Nicaragua and other South American countries.

In all three communities, residents face complex, multi-faceted health problems that stem from or are exacerbated by poverty. Nevertheless, needs for day-to-day survival far overshadow concerns for prevention and early treatment. Consequently, many people but especially the children, have emotional, physical, or substance abuse problems.

Communicable diseases and immunizations are major concerns for school children in this area. Sexual activity and the use of cigarettes, alcohol, and illicit substances are beginning earlier and earlier in their lives. The problem of teen pregnancy is particularly acute—the rate in Dade County is twice that for the U.S. More than 40 percent of all teen deliveries in the county are to girls under 16 years old. In 1992, there were 131 births to Dade County girls under the age of 15, and 3650 births to girls between 15 and 19 years of age.

Contributing to these problems is the fact that early and affordable health care is primarily available to them only from Economic Opportunity Family Health Center (EOFHC), a 22 year old year, multi-site, federally-funded comprehensive health center. EOFHC provides primary care services; an outpatient substance abuse program; a residential treatment center for pregnant abusers with perinatal case management team approach focusing on high-risk groups; and an aggressive AIDS outreach testing, counseling, and treatment service. In addition, the center offers primary care services in ten elementary schools, where a full-time pediatrician rotates for a half day per school to conduct a health assessment on the children. Those who need care are followed-up in the home or are referred to the center or to other community providers.

Within the area, there are many health-related educational institutions and EOFHC has affiliations with the following: the University of Miami School of Medicine, University of Miami

School of Nursing, Florida International University School of Nursing, and the Health Education Department at the University of Florida. These institutions offer the center interns and residents who rotate through and provide services, as well as opportunities to recruit providers at all levels.

The Student Population

Continuing Opportunities for Purposeful Education (C.O.P.E.) Center North is a Dade County public school, established in 1968 by the school board as a non-residential program to meet the educational needs of pregnant teenagers and teenage parents who have problems that would cause them to drop out of school, notably: poor attendance, low achievement, homelessness, and abuse. Applicants must reside in a specified area (which represents about half of Dade County and is served by five schools) and volunteer for admission, since pregnant students are also allowed to stay in their home schools. A student is considered for admission when a referral is made, the pregnancy is confirmed, and an application is made. The application process requires an orientation meeting with the student and parent/guardian, and the signing of an agreement form and authorization for placement by the parent or authorized agent. In this school, EOFHC operates a school-based clinic (SBC).

Given where they come from and their level of motivation, the students who apply to C.O.P.E., tend to be medically underserved. In some cases, the student's first encounter with a physician for their pregnancy occurs at the C.O.P.E. clinic and subsequently, they have no contact with other health care providers. Based on a risk assessment that is performed with all students, about five percent of the 329 students that attend C.O.P.E. are at risk of having a complicated pregnancy or bearing a low birth-weight baby, because of drugs, alcohol, cigarettes and/or poor nutrition.

The most common medical problems identified among the student population include: discomforts of pregnancy (nausea, vomiting, indigestion, hemorrhoids), anemia, upper respiratory infection, urinary tract infections, pre-eclampsia, and visual defects. With 100 percent of the student population being sexually active, there are is the predictable problem of sexually-transmitted diseases (STDs).

Despite the range of medical problems addressed at the clinic, the most common need according to the school principal is for a sense of reassurance. This need is met by having a caring staff available and accessible for information-giving, interpreting of complaints and findings, and making appropriate referrals for all types of assistance, as the students at C.O.P.E. tend to have many serious financial, social, and psychological problems. For example, housing is a critical problem for many students, particularly the eleven who currently have no permanent residence.

Brief History of the School-Based Clinic

Until February 1990, when the agreement between the C.O.P.E. School North and EOFHC was consummated, the medical services available at C.O.P.E. were provided by the Dade County

Health Department and were limited to services related to the students' pregnancies. Now, comprehensive health services are provided, in addition to health education and related services. The driving force for this change was the current school principal, who was assigned to C.O.P.E. two years ago. He found the initial system of providing health care to his students fragmented and counterproductive in his effort to keep the students focused on school. He believed that the provision of health care in the school setting not only results in improved health, but also decreases absenteeism and enhances the learning process.

The interest of the EOFHC stemmed from its Executive Director's belief that health education and services must reach children at an early age, preferably at the elementary school level. She believes that school is the place to reach kids, and the younger they are the better. It is at a young age that it is still possible to teach them to change their lifestyles, to turn from negative self-defeating behavior to positive, healthy habits. Although she feels that high school is rather late to make an impact on teens, she saw C.O.P.E. as an opportunity to reach an at-risk population and a chance to make a difference in their lives as well as in their babies' lives.

The original agreement between EOFHC and C.O.P.E called for clinic services to be available to students one day per week. Shortly after the program started, it was determined that the demand for services called for a schedule of four days per week.

Mission and Objectives

The mission of the program is to make comprehensive coordinated health services available to all students, instilling within them the desire to continue to maintain preventive health care and lifestyles, while they remain in school. Specific goals are to:

- reduce absenteeism due to off-campus health-related appointments;
- promote healthy lifestyles by providing comprehensive support; family planning; prenatal, postpartum, and well-baby care; and parenting education;
- promote preventive healthy lifestyles through early identification of drug abuse, education, and HIV screening; promote the reduction of low birth-weight babies and repeat pregnancies; and
- facilitate improved infant care outcomes by providing both education to the mothers and early screening and referrals to the children.

Management and Staffing

The EOFHC operates and staffs the clinic at C.O.P.E. The day-to-day operations of the clinic are managed by an Advanced Registered Nurse Practitioner (ARNP). There is a Parent Advisory Committee that includes parents and students, and is responsible for lobbying the school board to get what is needed for the clinic. It is worth noting that this group incorporated to overcome school board red-tape. Over time, this committee has taken on the role of the advocate for the

whole school. No other community group was available because the area served by the school is so large.

The clinic's full-time staff includes: a nurse practitioner, a licensed practical nurse, a medical assistant, and a clerk/receptionist. On a part-time basis, the clinic staff includes: a social worker (one day per week), an HIV counselor (one afternoon per week), a pediatrician (four hours per week), a pediatric nurse practitioner (three afternoons a week), and an obstetrician (two half-days per month). The school teachers also provide counseling and assist in monitoring the health of the students. In total, the school has 25 classroom teachers, all women except two.

The principal would like every teacher to be trained as a nurse or social worker, because he believes that the students' needs call for persons who are trained to listen, rather than lecture, and for a curriculum that focuses less on abstract academic subjects, and more on real life experiences that the students are so overwhelmed by. The principal believes that the curriculum should be changed so that all that is taught would be based on the central theme of the developing baby.

The child care facility, called the Nurturing Center, has five classrooms: three for the infants and two for the toddlers. There is one child care worker for each six toddlers and for each four infants. When they are hired, the childcare workers are not required to have any previous training, but upon entering C.O.P.E., they are trained by early childhood educators to follow activities that are especially designed to stimulate the children at various stages of development.

Space and Facilities

The clinic space includes a waiting area, a small lab facility, two examination rooms, and two offices for the medical staff. The Nurturing Center has five large classrooms that are divided among the infants and toddlers, with each group having a room for napping and a room for playing and learning.

Medical records are maintained in a central registry at the clinic, but they follow the patients, when they are referred for services elsewhere. Upon the birth of a baby, a new chart is formed and linked with the mother's chart. For appointments at EOFHC or in the hospital, the students and their babies are provided transportation.

Outreach and Marketing

Since all of the students at C.O.P.E. are pregnant, they are clearly in need of health care and they are essentially a captive audience. Consequently, marketing the clinic's services to the students is not necessary. Nevertheless, C.O.P.E. has a newsletter, called *THE C.O.P.E. NEWSBRIEF*, which is designed to inform the parents and the community at large about the mission and activities of the school and its clinic.

Services

The services provided by C.O.P.E are designed to address the unique needs of pregnant teens and teen mothers. They are comprehensive, and they emphasize follow-up and monitoring, to ensure that the students adhere to a healthy behaviors that will benefit themselves and their children. There is a concerted effort to integrate educational and health services, yet the principal would like even more integration.

During the first visit to the clinic, the student undergoes a risk assessment that includes a medical, obstetrical, and social history. During the assessment, substance abuse information and education are provided, and if needed, referrals are made. Correspondingly, medical services, including a complete obstetrical exam, lab tests, HIV pre-counseling and testing, prenatal counseling, and a tuberculin test, are initiated at the main office of EOFHC. When appropriate, students are referred for screening for Medicaid eligibility and nutrition, dental, and case management services. Subsequently, an individualized plan of action, which delineates specific desired outcomes, is developed for each student and family by a Student Services Team. The team uses a case conference approach and is comprised of the principal, assistant principal, social worker, activities coordinator, Nurturing Center coordinator, and the ARNP. Other school staff, community representatives, and parents are involved as needed.

The specific services offered by the SBC include:

- Pregnancy-related services - prenatal care, nutritional counseling, and substance abuse education.
- Family planning services - contraceptive counseling is offered at the clinic after delivery. Norplant is available by referral to a local hospital.
- Obstetrical services - consultations with the obstetrician and ultrasound tests are referred to the EOFHC and round-trip transportation is provided. The postpartum physical exam, lab tests, and initial contraceptive methods are provided at EOFHC, but follow-up visits for these services are also available at the clinic.
- Health education - classes involve nine weekly sessions, each lasting two and one half hours. The sessions were developed to meet the specific needs of expectant teens and teen parents. Some of the topics covered include: different stages of the fetus; danger signs of pregnancy and the effects of substances; food groups and weight gain; self-esteem and stress; labor; caring for the newborn; family planning; sexually transmitted disease; first aid; and CPR. During their third trimester, students are taken on field trips to a maternity center or a hospital obstetrical wing to become familiar with the facilities, labor and delivery room equipment, nursery, and admissions procedures.
- Counseling - each teacher at C.O.P.E. serves as an advisor for up to 15 students. The teacher monitors prenatal and postnatal care appointments, renders individual and group counseling, and serves as an advocate for the students. For select students, C.O.P.E. also has a Mentor program, which is operated by a group of young African-

American professionals. The mentors meet with the students as a group once a month in a workshop setting. The group's members serve as role models and encourage prenatal and postnatal care and are available for counseling on an ongoing basis.

- Day care - the C.O.P.E. students' children between the ages of four weeks and three years are provided day care at the Nurturing Center, which is a full-service child care facility, providing nurturing, infant stimulation, and an innovative developmental curriculum.
- Lab and prescription services - lab tests are taken at the clinic and processed by EOFHC, at its own expense. Prescription drugs are dispensed free of charge to students, and third-party billing is done by EOFHC on behalf of the students.

Clinic Users and Service Utilization

Currently, last year there were 329 students attending C.O.P.E. and 153 babies at the day care center. All but two of the students are females. According to the principal: "You've got to be a strong male to go to school here." The two boys attending C.O.P.E. have wives and kids there. During the last calendar year, the clinic had 400 registered clients, including 274 students and 126 children, for a registration rate of 83 percent. Of the student-patients, one-third were prenatal care patients and two-thirds were family planning patients. In total, 3920 visits were made during the year for an average of 9.8 visits per user.

The distribution of the patients by ethnicity reflects the pattern of the school population which is 70 percent African-American, 15 percent Haitian, 5 percent Puerto Rican, 4 percent Nicaraguan, 3 percent Cuban, and 3 percent White American or Chilean.

Costs and Financing

The total annual operating costs for the clinic at C.O.P.E is \$200,000. Given that there were 400 parents and children registered at the clinic, the average annual cost per client is \$500. The average cost per visit is \$51.

Some of the students belong to local HMOs which do not consider EOFHC a participating provider, and thus, refuse to reimburse the center for its services. The money lost to HMOs is significant and is offset with 330 grant funds.

Impact of Clinic Services

One effect of the clinic providing comprehensive services at the school is the reduction of absenteeism. A random sampling of girls who receive services from the clinic and girls who get care from other off-campus sources revealed that the C.O.P.E students missed an average of 30 school days whereas other students missed an average of 38 days, even though C.O.P.E. allots 20 days excused absence during the postpartum period. And, with the high

percentage of students using the clinic, this record won the attention of the county which awarded the school first prize for most-improved attendance. Having services available at school also means that the students' parents do not have to leave work or home in order to provide transportation.

It is believed that the clinic has also had the effect of lowering the school's dropout rate. According to the school principle: "The clinic and the nursery have caused a lot of these kids to stay in school." The clinic nurse reiterated the importance of the nursery, but added that the listening and goal-setting were also very important. And while students must return to their home school to graduate because C.O.P.E. does not grant diplomas, all of the 93 students who are seniors are scheduled to graduate this year. In addition, 20 out of the 93 are expected to continue their education towards obtaining a medical technician license. (C.O.P.E. is orienting its curriculum towards vocations that do not require college degrees. The difficulty is finding a way to challenge good students with this Voc-Tech orientation.)

Another impact of the clinic is the early detection of potential problems and increased opportunities for discussions about healthy lifestyles afforded because of the bonding or trust that develops between the health care professional and the teens. The clinic staff report an increase in the number of the girls who bring their babies to the clinic and who have enrolled in the WIC program.

Improved birth outcomes are suggested by some statistics on deliveries during the eight month period between May and December of 1992. Specifically, of the 91 live births, only seven were premature and there was only one infant death (at two days old). In the same time period, there were a total of only four repeat pregnancies, two of which were carried to term. The reasons cited for these pregnancies were: inconsistent contraception and contraceptive method failure.

And what is the view of the students? Among those interviewed, there was a young mother whose aunt had attended the school. She described C.O.P.E. as a better environment for herself and her child, noting that health care is readily available there and that her educational needs are being met. She finds the clinic staff approachable and helpful in teaching her about healthy lifestyle habits that benefit her and her child. Her only complaints are that the pediatrician is not available as often as she would like, and that the school does not offer CPR and Ultrasound technician classes. She feels that, as a result of the clinic being situated in the school, she has missed fewer classes, improved her school performance, has more time with her child, and is becoming a better parent.

Ongoing Concerns

One problem that the clinic is concerned about is getting the students to enter prenatal care early. Ninety-five percent of the pregnant clients in the program enter prenatal care during the second trimester. The reasons given for the delayed entry include: delay in informing parents of pregnancy, and the time it takes to transfer students from other schools. (It can take from two weeks to several months to process the transfer.)

Another concern is the nature and style of the education provided to these students at a very special time in their life when they need attention for themselves, but yet are obliged to learn to pay considerable attention to their babies. The principal in this school feels that the teachers need to listen more and lecture less, and the curriculum should be changed to focus on the students' current life experiences, rather than on subject that seem remote to them. He is convinced that nurses and social workers would be more suited to teach this population of students than traditional high school teachers.

Finally, the center is losing considerable funds because many of the clinic users come from families that have signed up with Medicaid managed care providers which consider the clinic and EOFHC as out-of-plan providers, despite repeated attempts by the EOFHC Executive Director to negotiate a more favorable relationship. Thus, the center and clinic services are not reimbursed by these managed care programs, and the center is forced to offset this loss with funds from other sources, including federal 330 comprehensive health center grants.

Summary

C.O.P.E is an example of what can be done in an area where there is a sufficient concentration of pregnant teens to warrant a separate school. It is a model that has succeeded in keeping these girls in school, while ensuring that they have ready access to the services they and their children need. It combines a wide array of services that are critical to the health and education of the students and their children, including not only primary and perinatal care, but also well-baby care and parenting classes. These services seem to improve birth outcomes, parenting skills, and school attendance and graduation rates. There also seems to be a more consistent use of preventive services that may contribute to better health for mother and child alike.

The teachers have had to adapt to the unique needs of their students, since they do not come to the school with special training. While they have become more sensitive to these needs over time, there is still room for improving their teaching style and for adapting the curriculum to better suit the students' special circumstances.

Contributing to the success of C.O.P.E are the following factors:

1. Strong leadership and initiative by the school principal.
2. An experienced health center director with a strong commitment to accessible health education and care for school-age children.
3. A plan of action individualized for each student.
4. A thorough follow-up system that ensures that students keep all appointments.
5. Comprehensive services for the students and their children offered on campus.
6. Strong links to a health center providing medical back-up and specialty services.

**SAN FERNANDO HIGH SCHOOL TEEN CENTER
MANAGED BY NORTHEAST VALLEY HEALTH CORPORATION
IN SAN FERNANDO, CALIFORNIA**

The Geographic Area

The city of San Fernando is located in a geographically and geologically distinct portion of San Fernando Valley, California. San Fernando is home to a population that is predominantly poor, minority, and medically-indigent. A large majority of the community's population is Latino, including both old-time immigrants and new refugees from war-torn countries in Central America. Many of these people have significant language barriers, and most have had virtually no preventive medical care and only minimal acute and chronic care. About 40 percent of the residents of this community have incomes below the federal poverty level; 70 percent have incomes less than 200 percent of the poverty level.

Although the demand for perinatal care in this community is high, the availability of such care is limited. Aside from the over-burdened county health department, the Northeast Valley Health Center (NEVHC) is the only provider for indigent patients, and it has had to ration perinatal care because it has the capacity to care for only 1000 women per year. Yet, last year, 1,400 pregnant women sought perinatal services at NEVHC. Nevertheless, the infant mortality rate in this area is low—about 15 percent of the national average—and the rate of low birth-weight babies is equal to the median of the state as a whole.

The area has one of the worst records in all of California with respect to teen births, teen prenatal care, and teen homicides. It is in the top 14 percent of all California communities for births to teens 12-13 years old, and in the top third with respect to the rate of births among older teens. Many of these births occur without any prenatal care whatsoever. Only 12 percent of other communities in the state had a higher rate of teen births without such care.

Violence is a big problem in this community. The teen homicide rate in neighborhoods around the high school is exceeded by only seven percent of the communities in California. The teen suicide rate and the incidence of child abuse in this community ranks above the median among communities in the state.

The Student Population

In the school year 1991-1992, 3032 students were enrolled in San Fernando High School and enrollment is expected to increase significantly in 1993-1994, as the school is switching to a 12-month schedule. The student body is predominantly Hispanic (93%), with three percent Black, two percent White, and a few Asians and American Indians. Half of the students qualify for the Federal School Lunch program; 15 percent of the students are from families with incomes below the federal poverty level and another 25 percent are from families with incomes below 200 percent of the poverty level.

The dropout rate at the school was 18 percent in 1991-1992, and 28 percent of the students have a limited proficiency in English. The school ranks in the bottom eight percent of all California schools in reading skills, and in the bottom 12 percent in math skills.

Within the female population in the school, there is a very high incidence of sexual abuse—about 68 percent of the girls seen by the mental health counselors have suffered such abuse.

Brief History of the School-Based Clinic

For about nine years before NEVHC began the school-based clinic (SBC) in San Fernando High School (known as the Teen Center), there was already a commitment to serving adolescents in this area, albeit not in school locations. Specifically, in 1978, NEVHC began operating a Teen Adolescent Health Initiative which was located at San Fernando Health Center, one of NEVHC's sites. Later, a Maternal and Child Health grant made possible the addition of prenatal services focusing on adolescents. El Nido, a social services/substance abuse treatment agency, added a case management program for pregnant teens. In addition, a Parent Involvement Program and a Teen Advocate Program provided outreach to local in-school youths and their parents focusing on decision-making and communication skills. Next door to San Fernando High School, another school especially for pregnant teens opened, along with a child care center for the children of teen parents attending both schools.

In 1987, the Los Angeles School Board issued a Request for Proposals from health care providers interested in operating a health clinic in San Fernando High School. NEVHC decided to respond and submitted a proposal in collaboration with the University of California Los Angeles' (UCLA) Department of Pediatrics. Community agencies, including El Nido, were contacted for support and input.

The school board unanimously accepted the NEVHC/UCLA proposal, provided that private funds could be obtained. In response to this condition, the NEVHC/UCLA team submitted an application to the Robert Wood Johnson Foundation (RWJ). When the RWJ funding was offered, the school board unanimously accepted it, despite protests from community residents who suspected that the Teen Center would become primarily a provider of abortions and contraceptive devices. In November of 1987, two months after the award of the grant, the Teen Center was opened to students.

The opposition to the Teen Center was well organized from the outset and was reported to be more vocal than that of any other of the 19 projects funded by RWJ. Led by a small number of people belonging to *Parents and Students United*, an anti-birth control/anti-abortion organization, and the priest from the Catholic church near the school, the opposition lobbied the NEVHC's community board and organized protest marches, vigils, and petition drives. In February of 1988, several months after the inception of the Teen Center, an Assembly-person sympathetic to the opposition, introduced a bill to ban schools from providing family planning services. The bill did not pass, and over time, the power of the demonstrations dissipated.

One reason for the limited impact of the opposition was that NEVHC organized a Clinic Advisory Council to defend the Teen Center by distributing information about the actual services and the

role of parental consent forms. This information was disseminated via flyers and in meetings with parents, students, community representatives, and state legislators. Another factor that contributed to overcoming the initial resistance to the Teen Center was that the school faculty supported the clinic during its first year. In response, clinic staff were particularly careful in adhering to agreed upon rules and procedures, e.g., parental consents had to be signed in person or confirmed by phone.

Probably the most influential of all the groups in the initial development of the Teen Center was the Board of the NEVHC, which was a powerful force in the community, and thus, was viewed as representing the majority of the residents when it made clear its full support for the Teen Center. NEVHC had been a major provider of health care since 1973 and was regarded as a reputable organization by many community residents, including members of local churches.

Although concerned about the initial community reactions, the school principal has supported the Teen Center from its inception. Over time, the support of the principal grew even stronger, as he encountered medical crises among the students that could be referred to the clinic. He became especially supportive upon learning how important the mental health services were to the new students who had immigrated from El Salvador and Nicaragua. In reaction to the horrors they had seen in their war-torn countries, these children were suffering from post-traumatic stress which affected their ability to concentrate on school work. Their access to the Teen Center's mental health services was critical to their overcoming their emotional barriers, as well as their language barriers.

Despite the fact that her office was reduced in size to accommodate the new Teen Center, the school nurse welcomed the clinic. She viewed it as an important resource to the school, especially for those without health insurance. She had seen first-hand the problems that students had in getting medical care, for lack of insurance and also because of parental neglect. She knew of all too many parents who failed to bring their children to a health care provider, even in dire emergency situations. Even with the school nurse's support, everyone has had to work diligently to resolve problems inherent in joining two organizations into a cohesive service delivery system.

Mission and Objectives

The mission of the Teen Center is to improve the overall physical and mental health care of the school's students through the provision of quality primary care, counseling, health education, and referral services. The impetus was the perception that there was a great unmet need for health care. Shortly after opening the clinic, it became apparent that the unmet need for psycho-social services was even greater than anticipated.

Within the first two years, the Teen Center was to have accomplished the following goals: to reduce the proportion of students with no medical care by at least 50 percent; to encourage at least 50 percent of the sexually-active youth to use contraception regularly; to reduce unwanted pregnancies by 25 percent; and to reduce the number of teens with sexually-transmitted diseases (STDs).

The clinic's operational objectives are to: make primary health care and ancillary services (pharmaceutical and lab) available on campus at least eight hours on all days during which the school is open; provide health education to all enrolled students; provide mental health counseling and referrals to students presenting problems of depression, alcohol or other drug abuse, family adjustments, etc.; and refer students in need of services beyond the scope of the Teen Center to services within the community.

Management and Staffing

NEVHC has managed the Teen Center since its inception, providing managerial support and medical supervision and back-up. The Teen Center's medical director is arranged for via a subcontract between NEVHC and UCLA Medical School. This relationship enables the clinic to receive fellows in adolescent medicine who provide care under the supervision of the medical director.

The Teen Center staff also includes the clinic director, a mental health counselor, a clinical psychologist, a nurse practitioner, two health educators, a community health worker, and a medical assistant. The clinic director works three quarters time and the medical director works six hours per week providing medical supervision and consultation. The two health educators, the nurse practitioner, the community health worker, and medical assistant are full-time.

The mental health counselor, who is trained in marriage, family and child counseling, provides day-to-day supervision of psychology interns, as well as direct services to the students. He works 32 hours per week, and the clinical psychologist spends one day a week at the Teen Center. While the services of the clinical psychologist are reimbursable by Medicaid and private insurers, the services of the mental health counselor are not.

With the exception of the director and one of the health educators, all clinic staff are bi-lingual.

Staffing has been rather consistent over the years. However, during the first year, the medical director was unable to fulfill his contracted schedule and the Adolescent Fellow was ill for a considerable amount of time, so the other staff members, particularly the nurse practitioner, were called upon to cover for them. Thus, in the first few months, the clinic was forced to cancel some of its sessions, due to a staff shortage. However, this problem was resolved in the second year, when a new medical director was assigned. This medical director had considerable experience with school-based health clinics and he quickly became very committed to the staff and the students, and has remained so for the past five years.

Despite the initial pressures related to the shortage of medical staff and to the intense community resistance, the original nurse practitioner has remained since opening day. Even a brief visit to the clinic revealed that she has succeeded in winning the trust of the students and the cooperation of the school staff. She is so trusted by the students that they seek her protection from gang members and confide in her when they know of a planned attack, such as a "drive-by" shooting that another student intends to carry out. She is then in the position of informing the police and the school administration, who in turn attempt to avert the crisis.

The mental health staff, too, seems to be keenly aware of the children's emotional stresses and has been diligent in developing a comprehensive program designed to meet the children's needs and to help the school staff address these needs in the classroom and on campus. It helps that the clinical psychologist grew up in the neighborhood and that the students view him as one of their own. Given the stressful environment in which the children live and the school work, the mental health staff has been an invaluable resource in anticipating crises, addressing problems, and consulting on solutions.

Space and Facilities

The health staff of the Teen Center currently occupies a space that was originally part of the school nurse's office. It was remodeled into two examining rooms, a central hall which serves as the nurse station/reception area, a chart/pharmacy/lab room, and a small consultation room. The space has been considered insufficient since the end of the first year of operations. During the visit to the clinic, it was clear that there is not sufficient room to accommodate the clinic staff, especially when the physicians are in the clinic.

A small room that currently serves as the boy's bathroom has recently been released to the clinic for additional work-space, but it can not be used until its renovation is funded. Moreover, this small addition will not fully relieve the current space constraints.

The mental health and substance abuse staff are located in another place on the school campus, in a small bungalow far from the main building. There are three open cubicles for the staff and for private interviews, and there are two small rooms for group counseling sessions. Given the number of groups meeting each week, this again is an insufficient amount of space. Furthermore, this space does not afford complete privacy.

Outreach and Marketing

To use the Teen Center, students must have parental consent. Most of the children join the clinic when they enroll in school, at which point they and their parents are approached by the Teen Center staff with information and a consent form. Students also register throughout the year and faculty, particularly the school nurse and health education teacher, play a critical role in encouraging them to do so. To facilitate the outreach and parent education effort, a brochure that describes the Teen Center and notes its need for insurance information, was developed.

Although more students might be registered if parents were permitted to simply sign a consent form, the Teen Center believes that it is important to have a parent register the child in-person or by phone, so staff can make sure that the parent understands that the clinic offers a comprehensive range of services and has a broad mission of keeping students healthy. This information is important not only to inform parents about all of their children's options in the clinic, but also to allay the concerns of any who still might view the Teen Center as primarily a dispenser of contraceptive devices.

Aggressive outreach has not been undertaken in recent years because the clinic has reached its capacity in staff time and space. At this time, the Teen Center is struggling to meet the increasing demand for services among those who are already registered. When the demand for services has been too great, students belonging to accessible HMOs have been referred for sports physicals, and others needing immunizations have been referred to the county health department. School enrollment, and thus clinic registration, are expected to increase dramatically next year, as additional tracts are added to the twelve-month schedule.

Services

The services offered by the Teen Center include:

- Primary health care - treatment for minor conditions, illness, and injury; STD treatment; and well-baby care for children of students.
- Preventive care - physical examinations for sport teams, preventive tuberculosis treatments, a weight management program, HIV counseling, immunizations, and health education. The health education programs, which are conducted by the health educators, have included: suicide prevention, values clarification, birth control, skin care, HIV risk reduction, and tobacco use prevention. From time to time, the clinic staff contribute articles to the school newspaper.
- Reproductive health services - family planning counseling and services and pregnancy tests. The clinic's service listing explicitly excludes abortion counseling and referral. All contraceptive options are offered, including Norplant implants.
- Dental care - screenings are performed and those in serious need of follow-up care are referred.
- Substance abuse - substance abuse services are provided through the *IMPACT* program which is funded separately through the school system; its services are coordinated with the clinic's mental health services.
- Mental health - new clinic registrants answer a psycho-social questionnaire, and if indicated, an in-depth assessment is made through a personal interview. Students in need of care are referred to individual and/or group counseling and other resources. On-campus clinical therapy groups are conducted on sexual abuse, depression due to abusive families, suicide, teen parenting, grief, alcohol and other drugs, gang involvement, biculturation, and gay/lesbian support. Crisis intervention services are also available. In addition, the clinic has maintained a strong presence in the school's *Crisis Team* which is comprised of the school administrators, psychologist, *IMPACT* coordinator, school nurse, dropout counselor, deans and other school personnel, as well as the clinic's medical and mental health staff. The *Crisis Team* is intended to respond to school crises, such as natural disasters and student deaths. The clinic has also been instrumental in creating *Support Services Coordinating Meetings*, intended to identify problems, brainstorm prevention solutions, and improve the

mental health climate on campus. In addition, the clinic's mental health staff provides indirect services, such as consultation and in-service training and coordination, mental health education in classrooms, and community referral services.

- Lab and prescription services - simple lab procedures such as UA dips, HCTs, and pregnancy tests, are done at the Teen Center. PAP smear evaluations and other more complicated blood tests are processed by arrangement with the NEVHC and other labs. The NEVHC staff come to the Teen Center to perform the HIV tests, which are processed at NEVHC, and sent back to the clinic. Results are not recorded in the medical record, in order to protect the child's privacy. X-rays are also provided by NEVHC. The Teen Center has a fully-stocked pharmacy with a limited formulary that includes the most commonly prescribed antibiotics, over-the-counter medicines, and contraceptives. All items are dispensed free of charge.

When students need care that is not available at the clinic, they are referred to community providers. Students without private insurance are referred to NEVHC or, when appropriate, to the local county hospital. For specialty care, students are referred to NEVHC or to the county health department. The Teen Center has rigorous procedures for follow-up of referrals, abnormal lab results, and broken appointments. When a student does not return a copy of the referral slip which serves as confirmation of the appointment, staff contact the student until the appointment is made and the results are reported back. Follow-up with pregnant girls is especially careful, with the intent of encouraging early and regular prenatal care, and staying in school after the birth.

Clinic Users and Service Utilization

When the Teen Center was opened in 1987-88, San Fernando High School had just over 2800 students; of these, only 472 students or 17 percent registered. The following factors contributed to the low registration rate in the first year: the clinic opened two months after school started so clinic staff did not have an opportunity to be part of the school's enrollment process; some teachers were unfamiliar with the clinic so they did not promote it in their classrooms; and some parents hesitated to register their children because there were some in the community who opposed the clinic.

In the ensuing five years, all but the latter of these problems has been resolved. Consequently, as the school's enrollment grew, the absolute number of clinic registrants rose (See Exhibit 14 and Exhibit 15). However, as the enrollment grew between 1990-91 and 1991-92, the registration rate fell from 78 percent to 71 percent.

The vast majority (86.4%) of the registrants in 1991-1992 had no insurance, while about seven percent were covered by Medi-Cal (California's Medicaid program) and the remaining seven percent belonged to HMOs or had private insurance coverage. In the same year, females represented 53 percent of the users, and males 47 percent. More than 92 percent of the Teen Center users were Hispanic, reflecting the ethnic make-up of the student population (See Exhibit 16.)

Between July 1, 1991 and June 31, 1992, almost 1400 students used the clinic and amassed almost 3700 encounters or an average of 2.6 encounters per user. Over the past four years, the total number of encounters has remained quite stable (Exhibit 17), but the average number of encounters per user has declined by an average of 10 percent per year (Exhibit 18). This decrease in conjunction with the decreased registration rate suggests that the Teen Center's capacity is already being stretched by the school's enrollment. That the school's enrollment is definitely going to grow bodes badly for the clinic.

Of the 3689 encounters in 1991-92, females accounted for 63 percent, although they represented only 53 percent of the 2200 clinic users. Conversely, males accounted for 47 percent of the users, but only 37 percent of the encounters.

The 3689 encounters in 1991-1992 were accumulated during 3749 visits. (A person can have more than one encounter in a visit that has multiple purposes.) Of the visits, 39 percent were for mental health related problems, 51 percent were medical visits, and the remaining 10 percent were for health education. As Exhibit 19 shows, this distribution has changed over time, with medical visits declining in proportion to mental health and health education visits.

During 1991-92, the two most common types of chronic problems addressed by the clinic concerned acne and positive PPD skin tests. The Teen Center also performed 633 immunizations; started 69 students on treatment for the prevention of tuberculosis; performed 80 pregnancy tests; identified one to two cases of child abuse per week; and diagnosed a handful of life-threatening conditions.

Costs and Financing

The total clinic budget in 1992-93 was \$316,708, of which \$80,000 is from NEVHC's 330 grant or 330 program revenues. Given the 2281 registered students and the 1392 clinic users in that year, the average annual cost was \$139 per registered student and \$227 per user.

Long-term financing has become a burning issue with the Los Angeles District School Board, which was at the forefront in the establishment of the clinic, as well as two others in Los Angeles. The board formed a separate non-profit organization and made a \$60,000 loan to this entity for the purpose of supporting a professional fundraiser. In two and a half years, this loan has been paid and a total of one million dollars has been raised for the three school-based clinics. Included in the funds raised was a \$500,000 "bridge" grant from the California Wellness Foundation, to be used for building the capacity for long-term funding sources, particularly third-party reimbursement, in-kind services from local organizations and government agencies, and corporate donations from local companies.

From the beginning, there was full recognition that third-party revenues were important to the financial health of the Teen Center, but there were many barriers to overcome. For example, while 79 percent of clinic users in the first year of operation had no health insurance, attempts to get students to apply for Medi-Cal were thwarted because many came from "undocumented" families, and others had a language barrier. It was not until 1992 that the clinic began collecting money from Medi-Cal. In that year, the clinic staff were permitted to perform on-

site eligibility assessments for students applying for Medi-Cal, instead of sending the students to the Medi-Cal eligibility office away from campus. This change has significantly increased the number of students on Medi-Cal, and thus, the revenues that the clinic can generate from Medi-Cal.

Medi-Cal revenues could be potentially greater if California allowed for presumptive eligibility. Such a mechanism would obviate the need for a lengthy individualized process to determine Medicaid eligibility, as persons residing in given zip code areas would automatically qualify.

Impact of Clinic Services

The Teen center has met its primary objective of reaching students who have no other access to medical care. **About 93 percent of clinic registrants had no other sources of regular medical care before coming to the clinic, primarily because of lack of health insurance.**

Furthermore, **the clinic is believed to have encouraged student-users to live healthier lifestyles.** One effect is that a much lower percentage of clinic users have become pregnant. In the first three quarters of the current school year, only .09 percent of the clinic users have had positive pregnancy test results, compared to 3.6 percent in 1988-89, and 2.5 percent in 1989-1990.

Teen Center users appear less likely to drop out of school than other students. A comparison of the dropout rate for clinic users and other students in 1990-91, found that 18 percent of regular students dropped out, whereas only 9 percent of clinic registrants dropped out. The school and clinic staff attribute at least some of this progress to the clinic's services; however, since it is not possible to control for self-selection bias in such a comparison, this difference should be interpreted cautiously. As Exhibit 20 shows, the number of dropouts has decreased while the school enrollment has increased since the inception of the clinic.

To gain a sense of the impact that the Teen Center has made on the San Fernando students, three clinic users were interviewed - one female and two males. The female student came to the clinic in her junior year for severe depression and repeated thoughts of suicide. After careful but persistent probing by the mental health counselor, this girl revealed that she had been raped by her mother's boyfriend at the age of 12 and beaten regularly by her mother and her grandmother. She had been sustaining these beatings since elementary school days, unable to defend herself or find refuge. The mental health counselor helped her find safety in a foster home and worked with her on communication skills that would allow her to feel her anguish and to assert herself when she is in danger. She has since returned home, finding effective avenues of communications with her family, and a renewed concept of herself. She is doing much better in school, plans to graduate with good grades, and go on to college on her way to becoming an adolescent psychiatrist. She says that, were it not for the help she found at the clinic, she would probably not "be around" any longer, suggesting that she may have attempted and succeeded at suicide.

A male student had learned of his own cousin's murder on the evening news. He had been very close to his cousin and was horrified to view his violent end on television. Suffering from shock and grief, he could not do his school work, nor could he find emotional refuge in his family. His father had left years ago, and his mother was preoccupied with work and several small children. He thought about joining a gang to avenge his cousin's death, but instead he entered grief therapy in the clinic. He was seen first individually by the consulting psychologist, who himself had grown up in the neighborhood, and thus, served as the role model this boy so desperately needed. Eventually, the boy joined a grief counseling group conducted at the clinic, where he found that he was not alone in his grief. He formed new friendships which have since served as ongoing sources of support, and he has been actively recruiting other students into the clinic, including friends who are in gangs. He feels very much in control of his emotions now, and he says that his school work has improved. He plans to go to business school and start his own company.

The other male student came to the clinic initially with complaints of a headache. After seeing the nurse practitioner a few times, he began to reveal his depression and thoughts about suicide. She referred him to the mental health counselor who, in turn, invited him to join the suicide support group. After several months with this group, he says that he has learned to understand his own emotions and to be more assertive at home, where he had been abused and manipulated. He now considers himself more outgoing and more likely to make friends. He is grateful to the clinic staff for helping him to communicate better with both adults and peers. He feels that the counseling he received at the clinic saved his life.

Ongoing Concerns

The most persistent problem has been procuring long-term funding for clinic operations. Nearly half of the funds in the past have been from private foundations which traditionally prefer to provide seed grants to cover start-up costs, rather than support on-going operations. Given the low percentage of students with third-party coverage and the high number of uninsured students, there seems to be a need to stabilize funding with support from government sources. State government funds have been pursued, but they are so limited in scope and duration that they do not serve to stabilize the persistent financial uncertainties.

Also of concern is the shortage of space that limits the clinic's capacity to serve more students and adversely affects staff morale. Staff burnout has been a concern since the end of the clinic's first year, when there was still the potential for outside opposition and an already excessive demand for services, and was particularly serious in the past year, when clinic staff witnessed increased gang violence, student deaths, suicidal tendencies, and child abuse.

Finally, if the Teen Center is to accommodate the ever-increasing demand for services, additional staff, both the primary and mental health providers, will be necessary. The staff size has remained relatively constant, while school enrollment and clinic registration has grown steadily.

Summary

The Teen Center at San Fernando High School was launched shortly after funding was approved, despite a small but very vocal opposition, thanks to a well-organized community coalition that supported the clinic. From the outset, there was support from the faculty and administration.

The Teen Center provides services to a student body that suffers from the effects of persistent poverty, violence, and medical neglect. Gangs abound on the school campus, and sexual abuse is not uncommon. Many of the children face language barriers in their school work, and some suffer from the trauma of war in the homeland from which they recently escaped. Thus, from the beginning, it was not difficult to recognize the boundless need, not only for primary care, but also for extensive mental health services.

Despite a fast-growing school enrollment and resistance to family planning services among some parents, the clinic has managed to serve a large proportion of the students, most of whom had no access to medical care in the past. And although there has been no rigorous study of the clinic's impact on school the dropout rate, there is evidence to suggest that the clinic has contributed to the sharp decline in the past four years. Anecdotal evidence suggests that many very troubled children are learning survival skills, if not altering the direction of their lives, through the clinic's counseling services. The health team, too, has identified medical problems before they became life-threatening crises, and has provided preventive care to previously neglected children.

The size of the staff has not grown to accommodate the increasing demand for services, so both the staff and the space are stretched to the limit.

Financial support has been an on-going problem. An operational grant has been secured, and much progress has been made toward removing the barriers to Medi-Cal reimbursements. The Medi-Cal eligibility process could be greatly facilitated if California allowed for presumptive eligibility, qualifying all students in certain zip codes and obviating the need for a lengthy individualized application process. Aside from increasing third-party billing, there are plans for an aggressive campaign targeting more in-kind contributions and corporate donations. But, in the long run, the perception is that funding problems cannot be solved without government support.

The factors that have contributed to the success of this SBC are:

1. A long-standing community commitment to adolescents, especially on the part of the school board and the community health center.
2. Clinic staff committed to effective communications with students and the school staff, despite inadequate space and tensions on campus and in the neighborhood.
3. Support from the school principal and the teachers.
4. Comprehensive services addressing students' emotional needs, as well as physical needs.

Exhibit 14. San Fernando High School: Enrollment, 1987-88 through 1991-92.

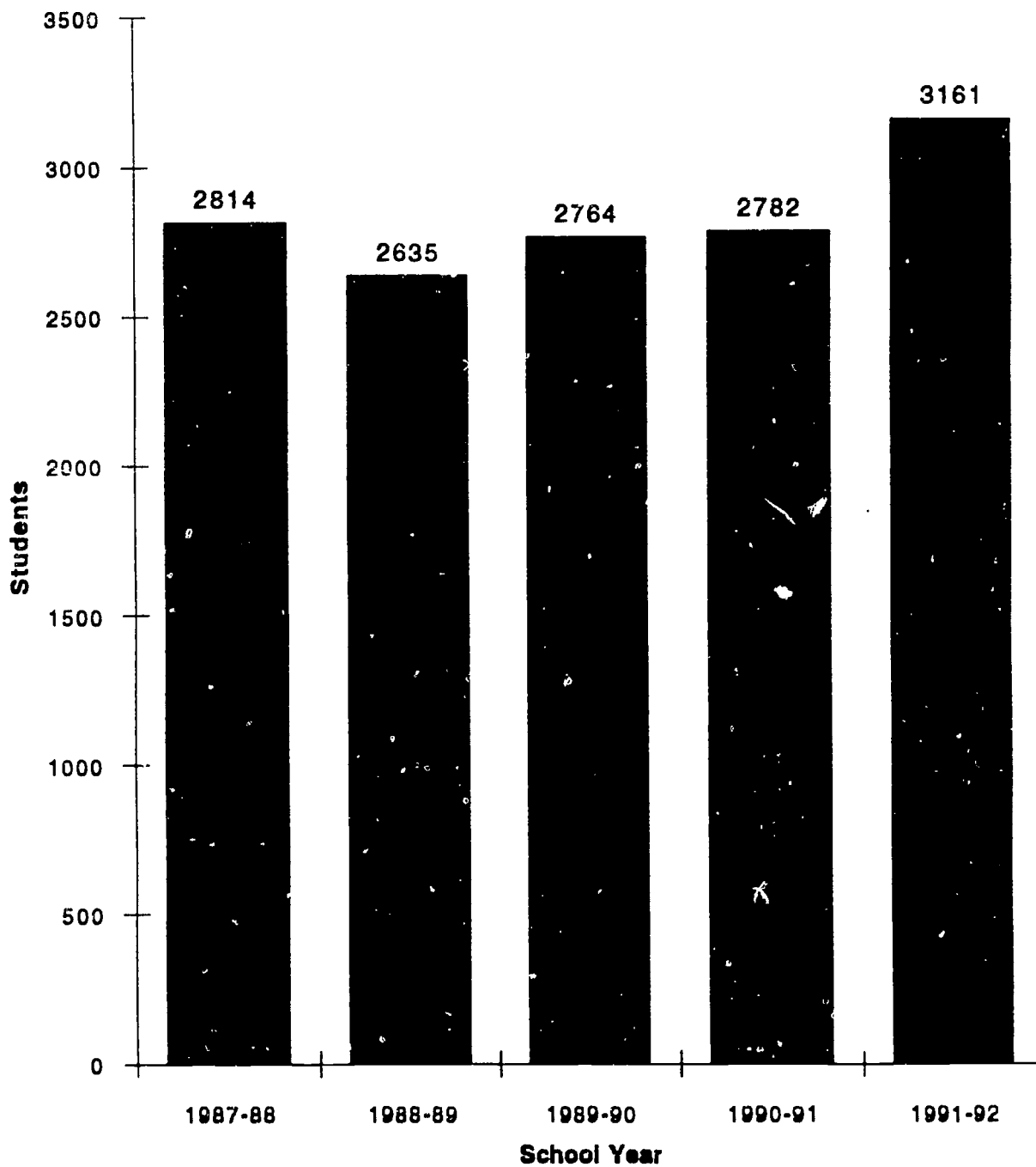
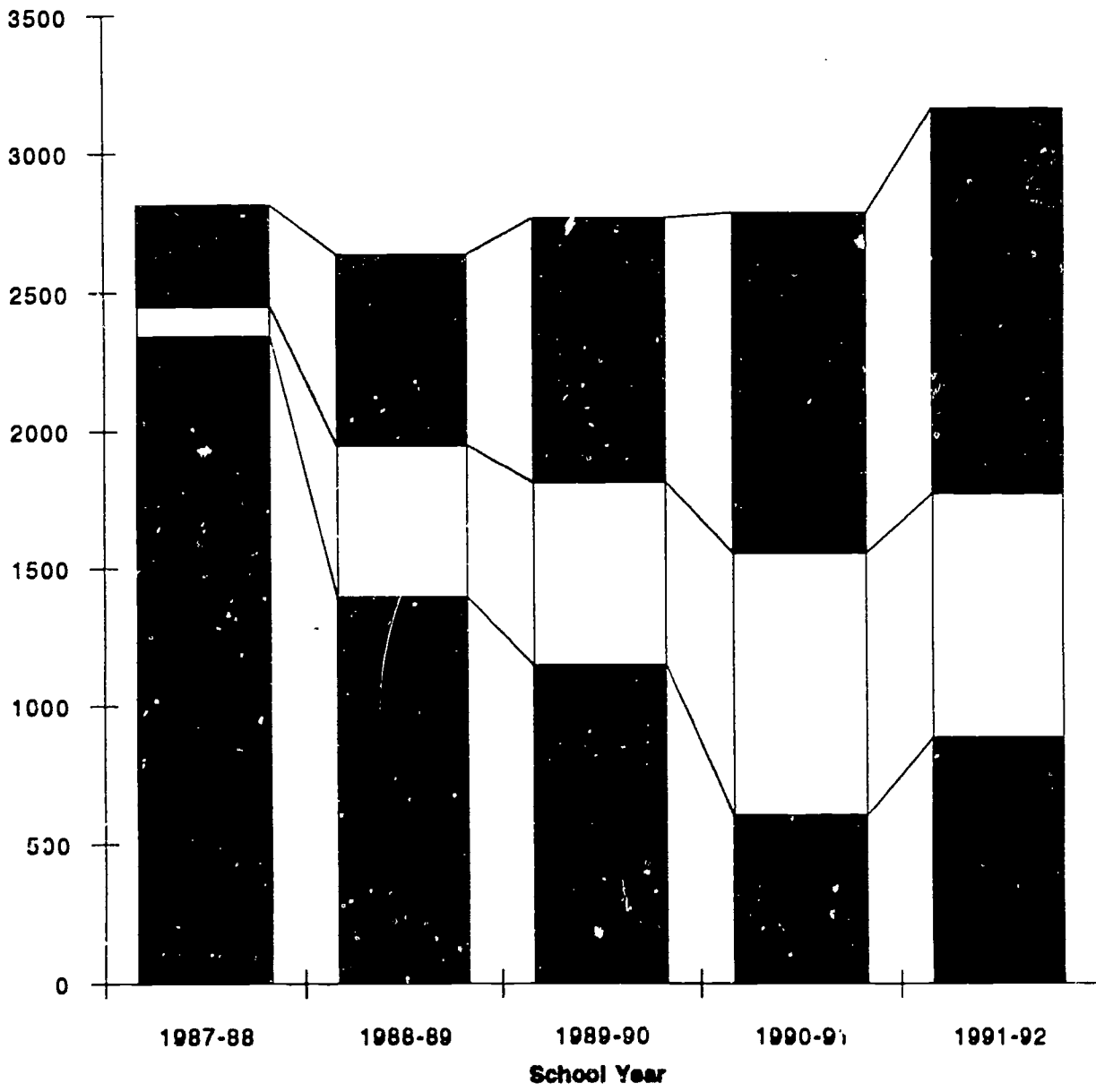


Exhibit 15. San Fernando High School: Distribution of Students by SBC Non-Registrants, SBC Non-using Registrants, and SBC Patients, 1987-88 through 1991-92.



Students not registered with SBC
 Students registered with but not using SBC
 Students registered with and using SBC

Exhibit 16. San Fernando High School: Distribution of Students by Race/Ethnicity, 1991-92.

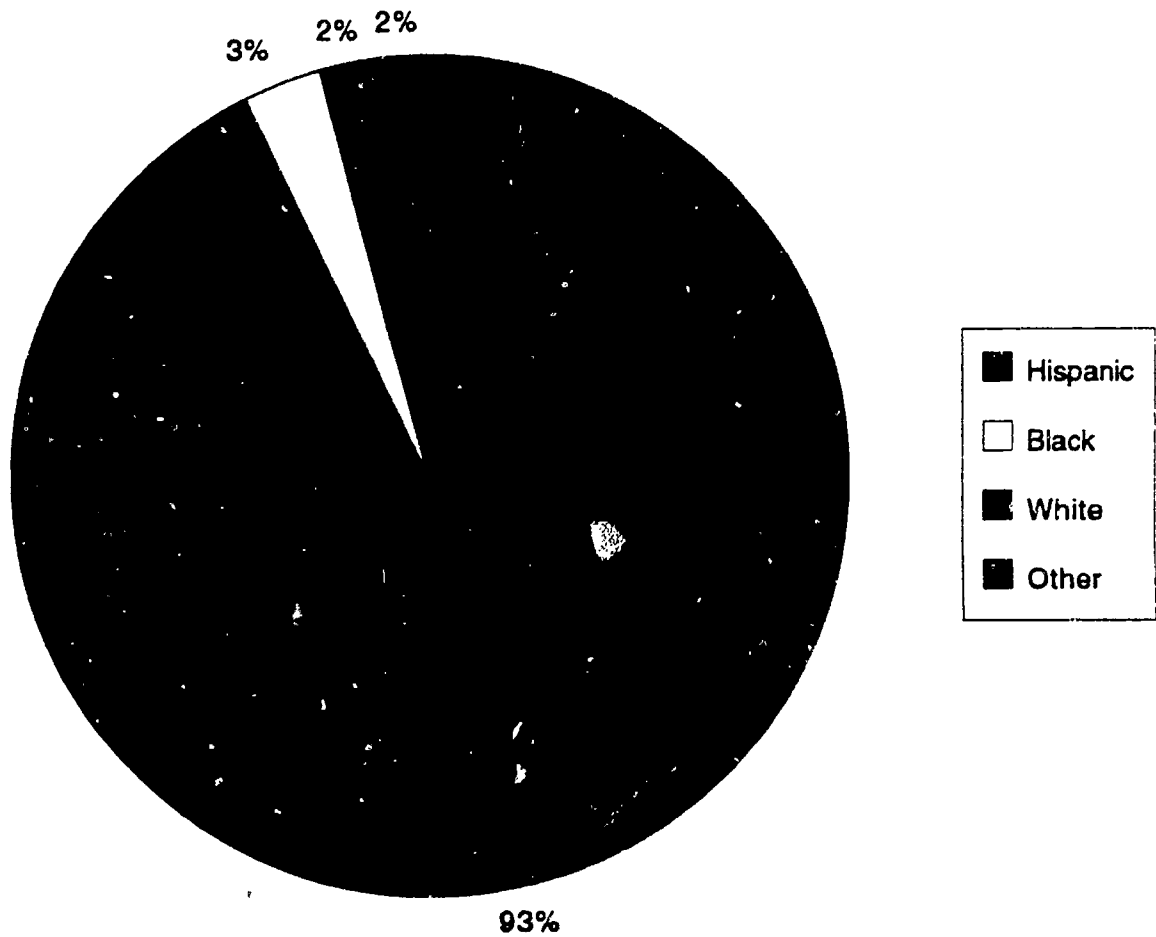


Exhibit 17. San Fernando High School SBC: Number of Encounters, 1987-88 through 1991-92.

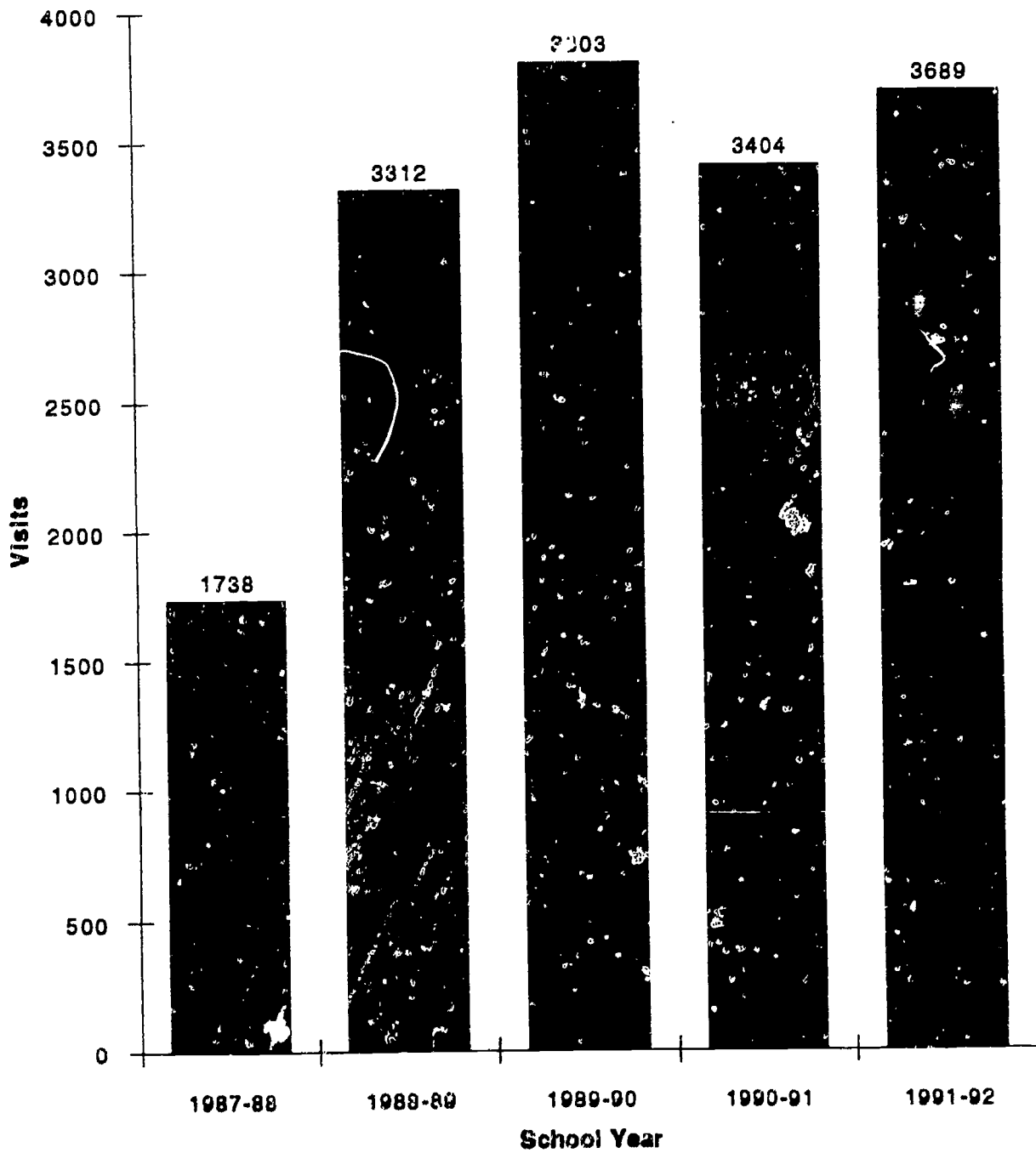


Exhibit 18. San Fernando High School SEC: Average Number of Encounters per User, 1987-88 through 1991-92.

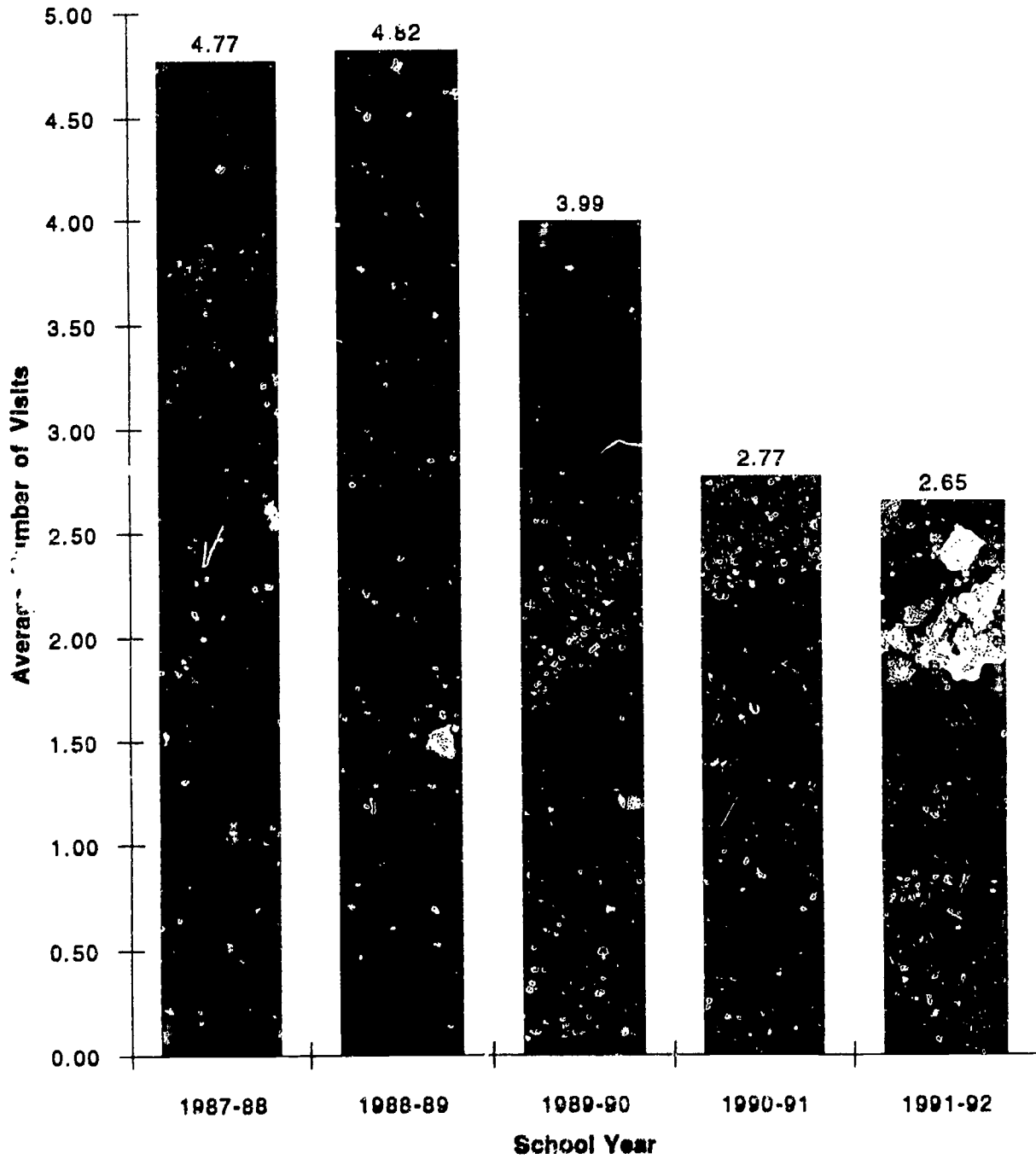


Exhibit 19. San Fernando High School SBC: Percent Distribution of Visits by Service Type, 1988-89 through 1991-92.

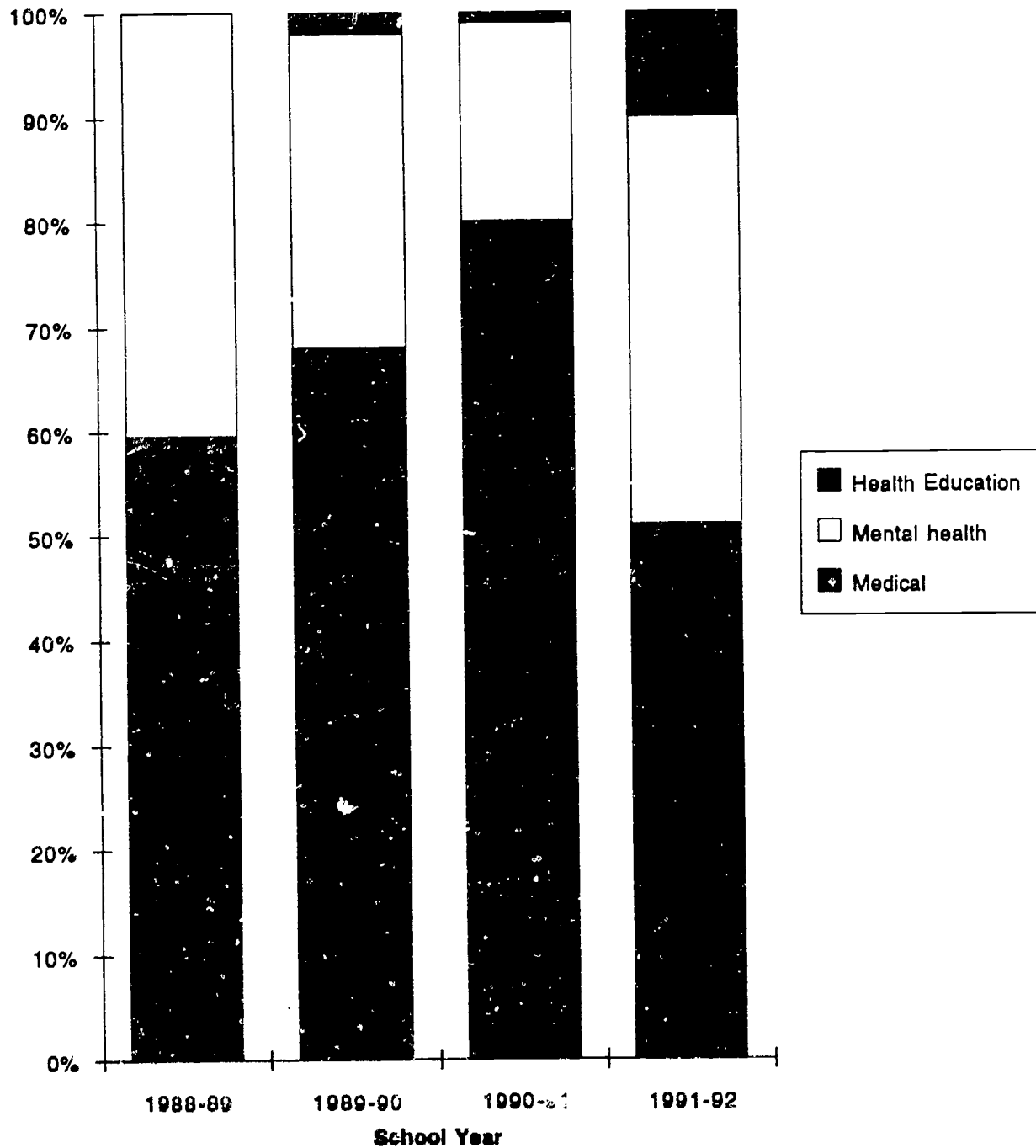
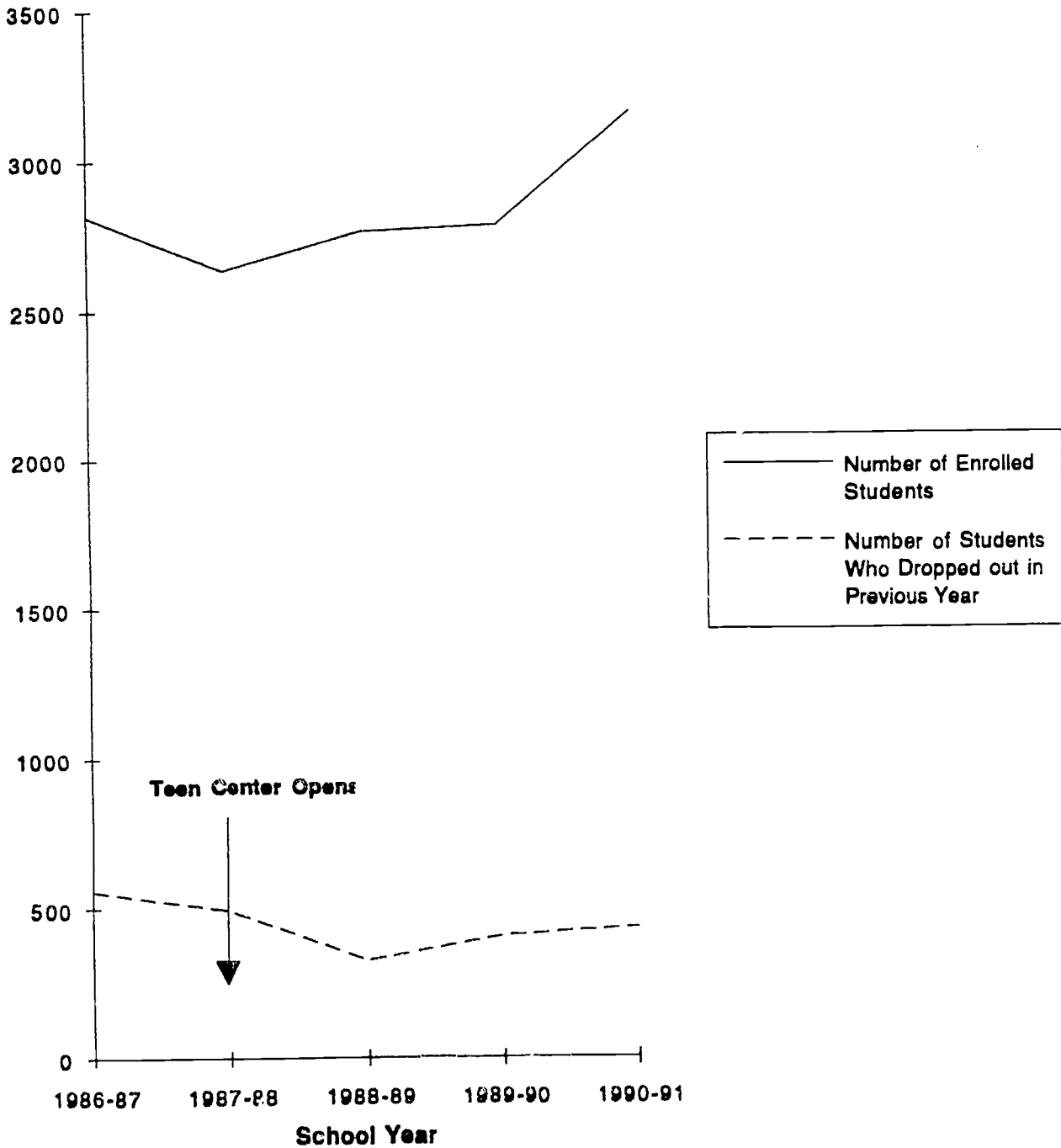


Exhibit 20. San Fernando High School: Number of Enrolled Students and Dropouts, 1986-87 through 1990-91.



THE SCHOOL-BASED HEALTH CLINIC IN LANIER HIGH SCHOOL MANAGED BY JACKSON-HINDS COMPREHENSIVE HEALTH CENTER IN JACKSON, MISSISSIPPI

The Geographic Area

The Jackson metropolitan area is in Hinds County, which is the largest intra-state area in Mississippi, and has a population of 265,775. Most of the people live in the inner-city, but some live in the surrounding affluent suburban neighborhoods and the very poor rural areas. In all, approximately 15 percent of the county residents live at or below the federal poverty level, and 51 percent of the population are Black (excluding Hispanics).

A 1991 survey of adolescents and pre-adolescents in Hinds County revealed that 43 percent of students in grades 7-9 and 69 percent of students in grades 10-12 were sexually active. In the same year, the infant death rate in Hinds County was 13.1 per 1000 for Blacks and 10.1 per 1000 for Whites. In 1990, there were 33 births to Black girls under the age of 15, more than eight times as many as births to White girls of the same age. Black teenagers between 15 and 19 years had 635 births, nearly five times as many births to Whites of the same age.

A 1991 survey by the Mississippi School Board revealed that only 74 percent of the two-year old children in the county were adequately immunized. Although AIDS cases are not reported by county, it is believed that the AIDS problem is increasing in Hinds County.

While Hinds County has a large number of primary care physicians (1 to 625 people), access to care for poor people remains a problem. More and more of the obstetricians in the area are limiting or phasing out their participation in Medicaid, as a result of low reimbursement rates. Only 28 percent of the primary care physicians in the area accept Medicaid, and only one of the four area hospitals accepts non-emergency indigent patients.

The Student Population

The student body at Lanier High School has increased by 60 percent during the past 12 years from 780 in 1979-80 to 1250 in 1991-1992. During the school year 1979-80 when the school-based clinic (SBC) was established, there were 88 pregnant girls, representing 11 percent of all the students and 22 percent of all girls in the school. This translates to 111 pregnancies per 1000 girls.

In a survey conducted last year, more than half of the students in each grade admitted to being sexually active. In the 11th and 12th grades, the percentages of sexually active students were 62 and 66 percent, respectively. Although no student has been identified with HIV, all of these students are considered at risk for contracting HIV, as well as other sexually transmitted diseases (STDs). In the last school year, 34 Lanier students were diagnosed with STDs.

Aside from the risks of pregnancy and STDs, the school's biggest challenges are drugs and guns. It is estimated that 17 percent of the school population are at risk for substance abuse, and 7 percent are at risk for violence. Drugs are dealt just outside the school entrance, and possibly on the premises. And while guns are totally forbidden in the school, they are nevertheless present. According to principal of the school, three students were recently expelled for bringing guns to school on a day that he happened to frisk everyone.

More subtle are the students' emotional problems. It is estimated that at least 40 percent of Lanier students have mental health problems, serious enough to hamper their school work. In the last school year, there were 62 serious suicide attempts in a population of 1250 students.

Most of the students come from poverty-stricken families and 90 percent did not have private or public health insurance last year. Some are on Medicaid, but in recent years, as the economic condition of Mississippi has worsened, the Medicaid budget has been cut and eligibility has become increasingly restrictive. Consequently, the proportion of Medicaid recipients has decreased. It is not surprising then that the majority of students in the school had not seen a doctor on a regular basis until the clinic was installed, and that serious medical problems such as lupus, asthma, hypertension, and upper urinary tract infections had gone undetected.

Brief History of the School-Based Clinic

In the late 1970s, two physicians, one of whom was Dr. Shirley Aaron, the executive director of Jackson-Hinds Comprehensive Health Center (CHC), were conducting free physical examinations for sports teams of a local inner-city high school. In the process, these physicians found many children who had not had a medical exam since they were little, and some of whom had serious medical problems that needed immediate and on-going attention. The physicians began to wonder about the health of the non-athletes who might have similar problems or worse, and could not afford to pay for health care. This concern led Dr. Shirley to consider bringing primary health care to the inner-city high schools in Jackson, starting with Lanier High School, from which he had graduated.

The clinic at Lanier was opened in the Fall of 1979. During the first school year, the need for service was underscored by the fact that the clinic staff identified that 88 girls in the student body of 780 were either pregnant or already had a child. About 25 percent of the pregnancies occurred while the girl was in junior high school. These findings led to the extension of resources to an inner-city junior high school and another high school in rural Hinds County during the following year.

To establish the clinic at Lanier, Dr. Shirley worked closely with the Superintendent of Schools and the Lanier High School principal at the time. As the Director of the Jackson-Hinds CHC, Dr. Shirley already had a strong footing in the community. But, there were some misconceptions about the clinic that had to be addressed. For example, the clinic was perceived to exist primarily to treat students who had venereal disease, who were pregnant, or who needed birth control. So, to address these misconceptions, the principal met and talked with community leaders, parents, school administrators, teachers, and students to convey to them the broader mission of the clinic. Although the early opposition of the community eventually dissipated, it

was not an easy task and the clinic staff felt a great deal of pressure. This pressure, along with the heavy workload, have been cited as reasons for the rather high staff turnover that was observed in the early stages of implementation.

Once the clinic was launched, the principal also played a critical role in encouraging students to use its services and the teachers to refer students with unserved needs. The parents of the students have always appreciated the value of the clinic, recognizing that it provides to their children health and mental care they had not received before.

Mission and Objectives

The initial purpose of the school-based clinic was to provide underserved adolescents with services that would meet their medical and emotional needs. From the beginning, the clinic founders had a mission broader than the provision of primary care—they saw the clinic as an opportunity to educate the children about the values and methods of caring for their bodies, and to assure them that there is someone who cares and who will listen to their problems in confidence.

The Executive Director of Jackson Hinds CHC was committed to providing comprehensive health services to all the children, regardless of ability to pay, and especially to those with previously undetected medical problems. The project director whom he recruited at the inception of the clinic because of her unique skills in relating to school children, was committed to reaching the children, not only with health services, but also with careful attention to their emotional needs. Despite the initial pressures of building the clinic, she has remained steadfast in this determination. Initially, she was the only source of support for the children who needed help with their emotional problems. Eventually, a mental health counselor was hired, and she, too, is committed to create in the clinic a safe haven for troubled children.

Nonetheless, given the high pregnancy rate in the school, the three primary objectives include:

- Provide family planning and contraceptive services to those who are sexually active;
- Reduce the number of pregnancies among the girls in the school; and
- Enter all pregnant girls into prenatal care in their first trimester.

Management and Staffing

The school-based clinic at Lanier High School is one of five operated in local high schools and middle schools by the Jackson-Hinds CHC. There is a plan to start two more clinics in middle schools in the Fall of 1993, and to link their primary care services to their elementary feeder schools. In the elementary schools, Jackson-Hinds CHC staff will provide complete health assessments for the students, referring them to providers at their main center for needed services.

The clinic at Lanier High School is open from 9 A.M. to 5 P.M. daily, and appointments are required by the students. Students are called a day in advance to confirm their appointments. After hours, on the weekends, and during school vacations, the children can be seen at the Jackson-Hinds CHC, which also provides medical back-up and supervision, as well as specialty consultations. For acute episodes that require hospitalization, the nearby University Medical Center is used.

The Jackson-Hinds CHC provides all the staff and lab services at Lanier as well as the other clinics, while the school system provides the facilities and covers the utility costs. Jackson-Hinds CHC rotates a team of providers through its five school-based clinics; the team includes a director, a pediatrician, three nurse practitioners, two registered nurses, one counselor (BSW with a Masters in counseling), four nursing assistants, and a licensed practical nurse (LPN). At the Lanier clinic, there is coverage by either the pediatrician or a nurse practitioner on two and one half days per week; coverage during the remainder of the week is provided by a registered nurse. The counselor is at Lanier two days per week, and a medical assistant is there at all times.

Since the current staff cannot keep up with the demands of the current users, who comprise less than half of the student population, it is clear that this staffing pattern does not reflect need but rather the financial constraints of the Jackson-Hinds CHC, which no longer gets grant funds. With additional funds, the clinic would like to add more medical staff, a full-time counselor, and conduct an aggressive outreach campaign to register and care for the large number of children remaining underserved.

Space and Facilities

The clinic space is divided into two small suites down the hall from each other. One suite houses a small waiting room, two small examining rooms, and the on-site lab. The other suite has the counselor's office, and the office of the Director for Adolescent Services, who also manages the other school-based clinics operated by Jackson-Hinds CHC. Both suites provide only minimum space for the staff and the students, and neither offers abundant light. Situated along a well-traveled main hall, these suites are noticeable and physically accessible to the students.

Outreach and Marketing

The clinic has a policy that a student must submit an authorized parental consent form to register to receive services at the clinic. To generate new registrations every year, the clinic engages in a variety of outreach activities aimed to inform parents and students about the clinic services and policies and to encourage parents to register their children.

These outreach efforts begin with a mailing sent to the parents of all students enrolled at the school at the beginning of the school year. Subsequently, the clinic staff make a presentation at a parent-student orientation meeting and offer materials at a display table on school enrollment days.

While students themselves constitute the major source of referrals to the clinic, the school nurse, principal, and teachers are also active referral sources. They usually refer students with medical or emotional problems.

Services

When a student submits an authorized parental consent form, a medical history is taken; routine laboratory tests are performed; a psychosocial assessment form is completed to determine risk levels for drug and substance abuse, violence, suicide, pregnancy, STDs, accidents, and family conflict. For those deemed in need of medical attention, a visit with a physician or nurse practitioner is scheduled. Similarly, for those who are identified to be at risk for suicide, violence, parenting problems, pregnancy, and low self-esteem, an appointment for either an individual or group session is scheduled with a mental health counselor.

Specifically, the following services are offered at the Lanier school-based clinic:

- **Primary health care** - treatment of minor injuries and health problems; initial treatment of acute problems which are then followed by referral at the Jackson-Hinds CHC; and ongoing management of chronic medical problems.
- **Preventive Care** - complete physical exams, AIDS counseling (testing is performed via referral at Jackson-Hinds CHC), and health education. The health education is offered under two basic formats. One is rather formal and is related to specific health problems diagnosed by clinic providers. The other format involves the use of group "rap sessions", which usually involve 15-20 students, male and female, who gather for informal one-hour sessions to discuss such topics as parenting, anatomy and physiology of the reproductive system, pregnancy prevention, sexual values, STDs, and drug and alcohol abuse. Bi-weekly meetings are also held with mothers and fathers. For these meetings, each parent is given a topic on some phase of child development to study and present to the group. The purpose of these sessions is to enhance parenting skills and to provide information about what to expect from their children.
- **Reproductive health services** - students determined to be at risk for pregnancy are referred for family planning counseling. Contraceptive services and devices are available on a volunteer basis to every student requesting them. Teen mothers and students who admit that they are sexually active and not using contraceptives are considered "at-risk" and are followed closely with bi-weekly visits.
- **Dental services** - screenings are performed and those in serious need of follow-up care are referred to Jackson-Hinds CHC, which provides comprehensive dental services specifically designed for children and adolescents.
- **Mental Health Services** - a psycho-social assessment is done on all clinic registrants and individual and group counseling are available two days per week for those in need. Referrals to Jackson Mental Health Center are made for students without insurance.

who need more extensive therapy. Those with private insurance are referred to a private psychiatrist.

- **Substance abuse** - students with substance abuse problems are referred to the clinic counselor. She refers those with serious problems to the mental health providers at Jackson-Hinds CHC. If a child needs intensive treatment, he or she are in turn referred to local programs specializing in substance abuse treatment for teens. There are only two such programs in the area, and they are both very expensive.
- **Lab and Prescription Services** - specimens are taken in the clinic's on-site lab, and transported on a daily basis to Jackson-Hinds CHC. Prescriptions, too, are taken to Jackson-Hinds where they are filled free of charge.

The clinic also used to offer child day care but was forced to drop it when funds were discontinued. The day care program enabled the clinic staff to maintain closer ties with the mother and was thought to help deter repeat pregnancies. Parenting skills and other life skills were taught as part of this program.

As noted above, whenever the clinic does not provide a needed service directly, referrals are made. Similarly, children who qualify for special programs are referred. For example, all pregnant teens are referred to Jackson-Hinds CHC to take advantage of its prenatal case management program, which is funded by the federal Comprehensive Perinatal Care Program. Furthermore, the clinic's mental counselor actually arranges for the prenatal visits and ensures that the appointments are kept. Throughout each pregnancy, the counselor works with the pregnant teen with the goal of impressing upon her the importance of prenatal care and compliance with dietary and other instructions prescribed by the clinician. Special emphasis is placed on keeping the student in school as long as possible during the pregnancy, and getting her back in school one month after giving birth.

In general, the high pregnancy rate and the high incidence of mental health problems in the school have been driving the design and emphasis of the services offered. For instance, the health education classes emphasize pregnancy prevention and parenting skills. In this light, the clinic staff and school principal feel that mental health services should be expanded to meet the full needs of the students. Since the clinic currently has a limited schedule and the counselor is available only part-time, it cannot meet the needs of all those identified to be at risk through the psycho-social assessment, much less reach out to at-risk students not registered in the clinic.

Clinic Users and Service Utilization

Of the Lanier High School's 1250 students, 410 students or 33 percent were registered during the school year 1991-1992. All those who were registered used at least one service. As shown in Exhibit 21, the number of registered students has vacillated in the past 13 years from a low of 266 in 1986-87 to a high of 577 in 1982-83, while during the same time period, the school population has steadily increased from 790 to 1250. The biggest decrease, which occurred in 1983-84, resulted from a severe budget cut and a staff shortage produced by the

CHC's inability to hire providers, especially physicians and nurse practitioners. Since that time, the clinic has targeted services to high-risk and self-referred students and discontinued doing aggressive outreach.

Between the school year 1988-89 and the school year 1991-1992, the number of visits made at the clinic increased by 33 percent. Last year, the 410 students registered in the clinic accounted for 3146 visits, for an average of 7.7 visits per student.

Of the total clinic users in the last school year, 60 percent were female and 40 percent were male and this distribution has been relatively consistent since the clinic opened. (See Exhibit 22.) Of the 245 female clinic users last year, only three percent (16) were pregnant and about 12 percent (29) were mothers.

Costs and Financing

The budget for the Lanier clinic can not be partitioned from the total budget for the five SBCs operated by the Jackson-Hinds CHC because they all share staff and supplies. The total budget for the five clinics is about \$268,500. Given that 1373 students made 9131 visits to these clinics, the average annual cost is about \$196 per user and \$29.40 per visit.

Impact of Clinic Services

As mentioned earlier, one of the specific objectives of the clinic was to reduce the number of pregnancies in the school. As Exhibit 23 shows, indeed the number of pregnancies among Lanier students has decreased dramatically since the year the clinic opened (1979-80). During the first year of the clinic, there were 88 pregnancies, compared to only 16 last year. This represents a decrease of 450 percent in a 13-year time span. This reduction occurred despite a 58 percent increase in the student population.

Another of the clinic's objectives is to increase the rate of pregnant girls who enter prenatal care in the first trimester. Last year, all of the 16 pregnant girls entered prenatal care in the first trimester and all of them returned to school after delivery. It is estimated that, before the clinic's inception, a very small percentage of the 88 pregnant girls had any prenatal care. Moreover, half of the 88 girls dropped out of school after the delivery of their babies.

Interviews with students indicate that the clinic has probably aided in the prevention of mental health problems and the care for serious health problems. For example, one of the students interviewed had had an acute emotional episode that required hospitalization. He is now back in school performing well academically and in better control of himself. He said that, through the clinic counseling services, he learned to express himself: "I never talked about my problems before. Without the clinic, I'd probably went crazy by now. I've recommended it to my friends, and they have experienced positive results, too."

A second student said that, before coming to the clinic, she felt that "nobody cared about me because I am worthless. When I had my problems, I felt that I couldn't exist without the clinic." Another student said: "Seeing the counselor taught me to want more for myself. The clinic helped me get through my pregnancy, 'cause I had someone to talk to. Without the clinic, I think I would have dropped out of school."

A student diagnosed in the clinic with lupus reported that the clinic staff was instrumental in getting her to realize the seriousness of her condition: "If it wasn't for the clinic, I would've gone on for years before I realized that I had a serious problem."

Ongoing Concerns

Despite the nearly 60 percent growth in the school population, the clinic has not been able to expand its program because of limitations in funds and difficulties in hiring providers, especially pediatricians and nurse practitioners. Currently, the clinic is functioning to capacity, both in terms of staff and physical space, but is serving only one third of the students. Clearly, the clinic is not meeting all of the students' needs for health services and especially mental health services, which now are available only two days per week and scarcely reimbursed by third-party payers.

Summary

The school-based clinic at Lanier High School is testimony to what can be done to address teenage pregnancy and other serious problems in inner-city schools. By targeting sexually active teenagers, the clinic has reduced the number of pregnancies; by targeting pregnant teenagers, it has succeeded in getting a high percentage of these children to get early prenatal care and stay in school. And, even though the clinic's registration rate is low, there is an indication that other students with serious medical and emotional problems seek treatment at the clinic. This is particularly important since most of the students attending this school are without access to any other health services.

Among the factors that have led to the success of the clinic are:

1. Strong partnership between the school and the comprehensive health center.
2. Strong leadership on the part of the school principal.
3. Full cooperation by the teachers who serve as major referral sources.
4. Clinic staff committed to the children.
5. A system designed to target and follow high risk students, especially the sexually and the emotionally troubled. active.

**Exhibit 21. Lanier High School SBC: Number of Registrants,
1979-80 through 1991-92.**

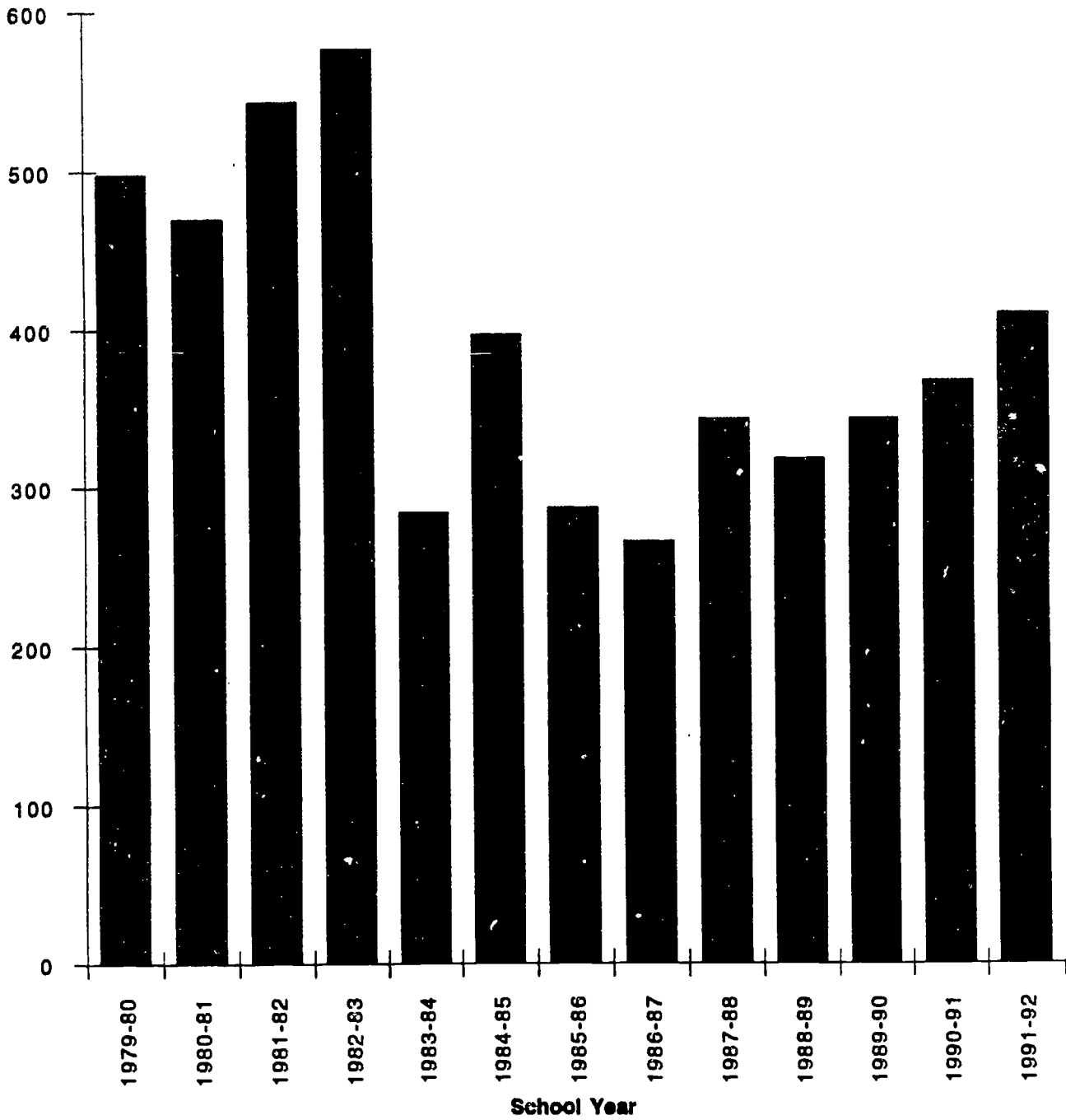
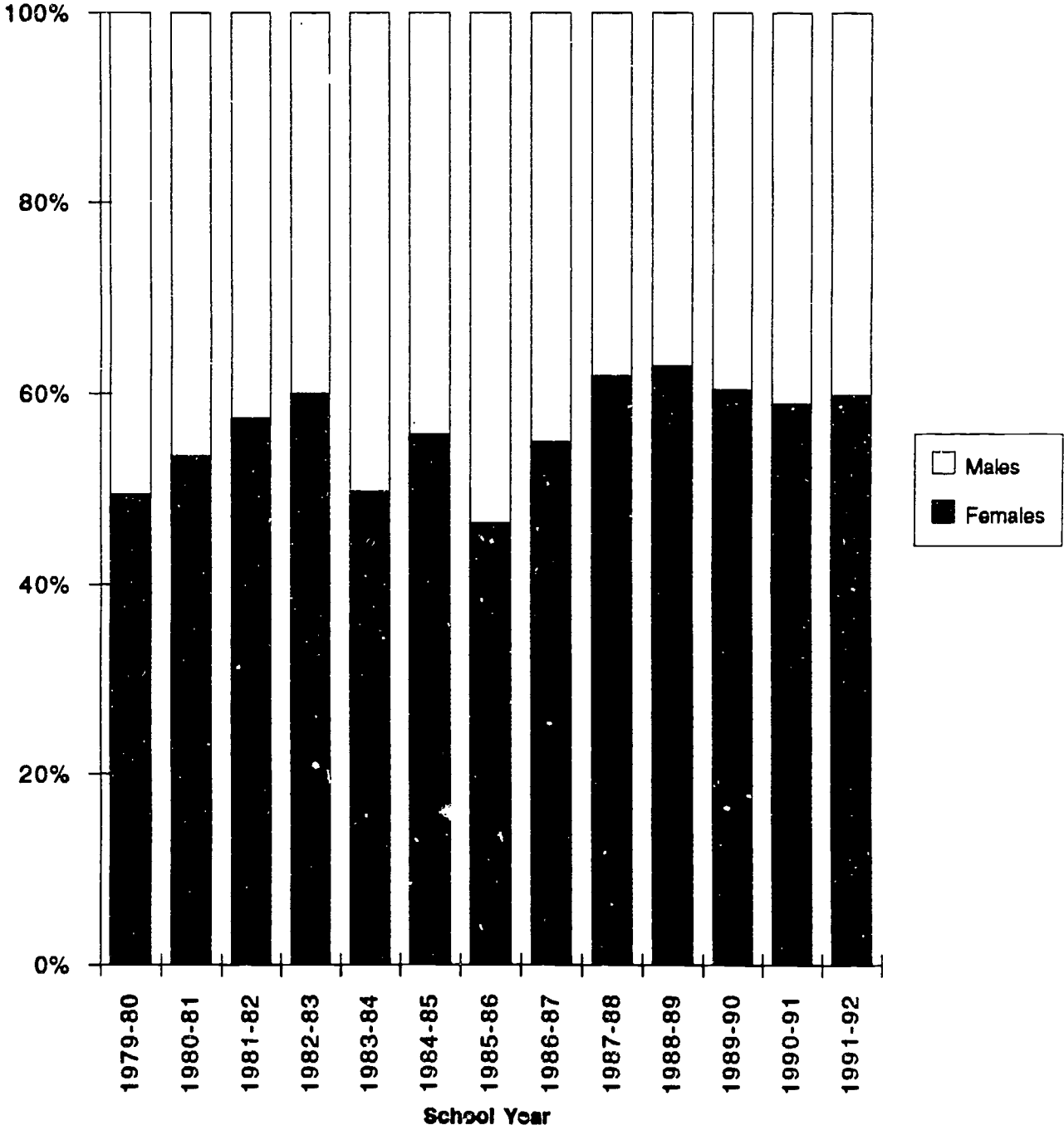
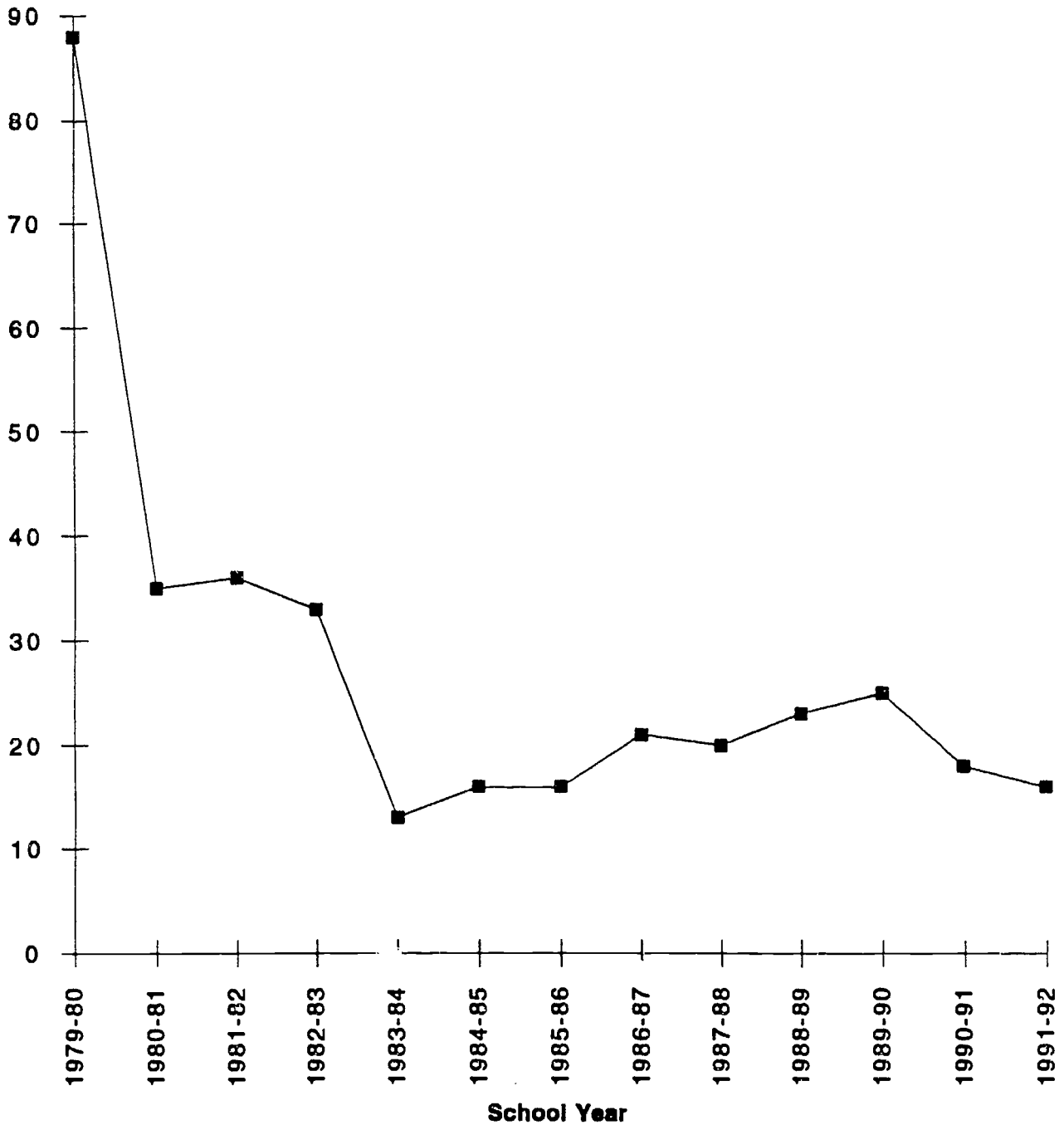


Exhibit 22. Lanier High School SBC: Distribution of Registrants by Sex, 1979-80 through 1991-92.



**Exhibit 23. Lanier High School SBC: Number of Pregnancies,
1979-80 through 1991-92.**



**T.H.A.T. PLACE: A SCHOOL-BASED CLINIC IN HERRING RUN MIDDLE SCHOOL
MANAGED BY BALTIMORE MEDICAL SYSTEMS
IN BALTIMORE, MARYLAND**

The Geographic Area

East Baltimore is an area in the City of Baltimore, Maryland that is distinguished by the fact that it includes proportionately more minority residents than do other parts of the city, which is 60 percent White and 40 percent minority, almost all of whom are Black. East Baltimore also accounts for disproportionately more of the city's economic and public health problems, which are significant.

Baltimore has been in a steady economic decline in the past decade due to the massive shutdown of its manufacturing and steel industries. About 35 percent of the population live in families that have incomes below the federal poverty level, and an additional 30 percent have incomes at 100-200 percent of the poverty level.

Baltimore has the highest percentage of births to adolescents among all U.S. cities of populations of 500,000 or more. The gonorrhea rate for teens ages 10 through 19 is 50 per 1000, which is five times the national average and much higher than that found in other major cities, i.e., the rate in Baltimore is twice that found in Philadelphia and Chicago, and five times that found in New York City.

While Baltimore accounts for 16 percent of Maryland's population, it is responsible for 37 percent of the teenage births. In the decade between 1980 and 1990, the birth rate for girls ages 15-17 increased by 62 percent from 60 to 97 per 1000; for girls ages 10-14, the increase was 50 percent from 4 to 6 per 1000.

The Student Population

Herring Run Middle School has a student population of 1500; 93 percent are Black and 6 percent are White. Prior to the establishment of T.H.A.T. Place, or Teen Health Assessment and Treatment Place, which is the name of the school-based clinic (SBC) in Herring Run Middle School, a health screening program was implemented to assess the students' need for medical services. Over 50 percent of the student body were found to have an acute or chronic health problem in need of medical attention, and the majority of the students had no identified source of care. Moreover, of those with a regular source of care, 20 percent had not had a health visit for more than two years. Currently, 54 percent of the students are uninsured.

Of the school's total student population, 70-80 percent are estimated to have parents with a disabling drug or alcohol problem. Each year, at least one student experiences an acute psychotic breakdown, between 5 and 10 students are removed from their home for abuse or neglect by the parents, and 15-20 students report having suicidal tendencies. While nearly all

of the students from the school go on to high school, many do not graduate, as only one out of two students graduates from Baltimore high schools.

Brief History of the School-Based Clinic

Recognizing the needs of adolescents under its jurisdiction, the Baltimore City Health Department (BCHD) has established various school-based clinics (SBCs). While BCHD manages some of these SBCs directly, it has contracted the management of T.H.A.T. Place since its creation in 1988, to Baltimore Medical Systems Inc. (BMSI), a comprehensive health center serving East Baltimore. BMSI was selected because it already had a strong footing in the East Baltimore community and a good reputation for delivering primary health care, and was able to provide the necessary medical backup and assure the availability of services 24-hours a day, year-around.

The principal of the Herring Run Middle School was quite supportive of the clinic from its inception, and also had the strong leadership skills to address the initial resistance from the school nurse and some teachers. The school nurse felt threatened and, ultimately when it became clear that she would not cooperate, had to be dismissed. Due to budget cuts in the City Health Department, the vacant school nurse position at the school has never been filled.

The initial concerns of some teachers were based on suspicions that they would have more work to do as a result of the clinic. Their fears were allayed through concerted educational efforts by the principal and the clinic staff. The leadership and consensus building skills of the principal were invaluable to the initial acceptance of the clinic within the school. There was no resistance to the clinic by parents or community groups.

Mission and Objectives

The mission of the clinic is to improve the health status of the students at Herring Run through the provision of primary health, mental health, and preventive services, including health education. To accomplish this mission, the clinic aims to provide continuity of care and coordinated services through a personal provider, the pediatric nurse practitioner. Specific objectives are to: register 100 percent of the students in the clinic; lower the pregnancy rate among the female students; and get all pregnant girls to enter prenatal care in the first trimester.

Management and Staffing

T.H.A.T. PLACE is a joint venture between the Baltimore City Health Department (BCHD) and Baltimore Medical Systems (BMSI), which manages three adolescent programs and five community health centers. BCHD funds the position of an administrative assistant and health aid; BMSI pays for a full-time pediatric nurse practitioner, who has been at the clinic since day one, providing primary health care as well as counseling services, and part-time physician, who provides consultation and supervision for four hours per week.

A part-time psychologist is on contract with BMSI, and a private lab contractor processes all the exams. Both bill the insurers directly, and absorb the cost for the uninsured students.

The Johns Hopkins Hospital and Francis Scott Key Medical Center are two local hospitals that are used in cases that require hospitalization or specialty consultations unavailable directly through BMSI. These hospitals were selected because the BMSI physicians, who provide medical supervision and backup to the clinic, have admitting privileges there.

All students registered at the clinic are also registered at the BMSI health center closest to their home, and many use this option after school hours, on the weekends, and during vacations, either through a referral by the clinic or self-referral.

Space and Facilities

The clinic is located a few feet away from the front entrance of the school, so physically, it is quite accessible and easily identified. Next to a rather cheerful waiting room where there are two desks for the support staff, there is a private examining room used by the nurse practitioner. This room accommodates the nurse practitioner's desk, an examination table, and lab facilities. There is also a room with beds for resting, a small office for interviews with counselors and vision/hearing tests, and an additional room with a table and several chairs for small group sessions.

Outreach and Marketing

The clinic has a policy that a student must submit an authorized parental consent form to register to receive services at the clinic. At the beginning of each school year, a mailing is sent to the parents of all students enrolled at the school to inform them about the clinic services and to encourage them to register their children. Subsequently, presentations are made at school-parent orientations. In addition, students are reminded of the clinic through announcements that are aired regularly over the school's public address system.

In the past, the clinic staff also made presentations at PTA meetings, but these are attended by too few parents. The consistently poor parental participation in the PTA and other parent meetings is explained in part by the fact that Herring Run is a large middle school that is fed by 25 elementary schools. Some of these feeder schools are located in neighborhoods far away, and all are in poor areas where private and public transportation are scarce.

Outreach efforts have not been as extensive as planned because the position of the health educator has been vacant for a while. A concerted outreach effort will be undertaken within the school and the community, once this position is filled. The plan is for the new health educator to form an adolescent services council that will include community groups, student groups, and representatives of the clinic and the school administration. The purpose of the council will be to reach out to the students and their parents, to inform them about programs, and to identify and address unmet service needs.

In the absence of an extensive outreach program, the clinic has come to rely on the teachers to recruit and refer students, especially those who show a clear need for medical or psychological attention. To facilitate this, the nurse practitioner consults throughout the school year with the teachers, updating them about the services of the clinic, and providing health education materials to be used in the classroom.

Services

The services currently provided at the clinic are as follows:

- **Primary health care** - including treatment for acute problems and minor injuries, and management of chronic problems.
- **Preventive Care** - complete physical exams, including full EPSDT assessments; weight control programs; AIDS Counseling and Testing; and health education. The health education is done in small group sessions of about 10 students in nine sessions of 45 minutes each, using a curriculum that combines the BCHD Teen Impact Prevention Series (TIPS) and the Center for Population Options' Life Planning Education (LPE). In addition, the clinic in conjunction student nurses, Towson State University students, and Herring Run students, conducts three health fairs, one for each grade, each year. At these fairs, blood pressure, dental, and vision screenings are performed and information is disseminated about narcotics abuse, family planning methods, nutrition, stress management, health careers, smoking prevention, sexual assault, and AIDS. To ensure attendance, the entire class is required to come as part of the science curriculum. When grant funds are available, the clinic also offers an eight-week summer day program for students who otherwise have no planned activities. The program features such classes as: career planning, fitness, good health, and illness prevention. The goals of this program are to develop self-esteem and leadership potential and to facilitate values clarification.
- **Reproductive services** - pregnancy testing, reproductive health exams, family planning counseling, and contraception.
- **Mental health services** - individual and group counseling and health discussion groups are offered but are targeted primarily at students who are at risk of suspension from school due to recurrent behavior problems. In addition, the nurse practitioner is available for individual sessions with all students that need to talk about their problems. In a typical year, there are 15-20 students among those seen at the clinic who have suicidal thoughts and one child with a psychotic break. They are referred for hospitalization, and if they return to the school, these students are followed by the clinic staff.
- **Lab services** - dipstick and microscopic urine analysis, wet preps, gram stains, rapid strep screens, and urine pregnancy testing. For all other tests, outside labs are used by referral, most often to one of BMSI's community health centers. All tests are processed by a contracted lab facility via courier.

When the clinic was started, mental health counseling was provided by a part-time social worker. In 1990, due to budget cuts, this position was eliminated, and a contract was signed with Urban Psychological Associates (UPA) for the services of a part-time psychologist, who is an African-American male with a wealth of experience in treating inner-city adolescents. UPA was willing to do its own billing of insurers, without charging the clinic for its services.

But since then, UPA has found that this arrangement has been financially taxing, and has thus reduced the time psychologist spends at the clinic. He restricts his services to students who are at risk of suspension due to disruptive behavior, seeing them in individual sessions and in group sessions. Currently, the groups meet twice per week for nine weeks, but next year, because of fiscal problems, the groups will be convened only once per week.

Clinic Users and Service Utilization

Of the 1350 students enrolled at the school in 1990-91, 733 or 54 percent were registered at the clinic; 53 percent of registrants were female and 47 percent were male.

Of the students registered in the clinic last year, 597 or 81 percent had been seen at least once and they made 1688 visits, for an average of 2.8 visits per user. There was little gender difference in the rate of use, as females and males made 52 and 48 percent of the visits, respectively.

As Exhibit 24 shows, 28.4 percent of these visits were due to acute illness, 26.2 percent were due to chronic conditions, 17.5 percent were preventive visits, 10.8 percent were for reproductive health and/or treatment for sexually transmitted disease, and 13.7 percent were related to mental health problems—10.3 percent related to learning behavior problems, and 3.4 percent related to family conflicts.

Costs and Financing

The total clinic budget for the current school year is \$180,956, not including the cost of the space and utilities, which the school funds, nor the cost of the mental health services and the processing of the lab tests. These latter two services are contracted out, and the contractors bill on behalf of the students. This budget also does not include the \$3,000 cost of the summer program as the offering of this program is contingent on receiving a local grant. For two years now, the nurse practitioner at the clinic has demonstrated her total commitment to the children by spearheading a fundraising campaign, featuring pizza sales, in order to supplement the meager grant funds received for the summer program.

Exhibit 25 shows a breakdown by major cost centers of the budget. The health staff salaries account for 77 percent, general and administrative (G&A) expenses for 20 percent, and facilities for three percent. It should be noted that almost half of the G&A expenses are due to the bad debt caused by insurers who have not reimbursed the clinic for services rendered to the students.

Also in Exhibit 26 is an estimate of a budget that would be required by the clinic to meet the full needs of the children. This budget of \$305,956 would cover the mental health services that are needed in this school, including the services of psychiatric social workers, a violence prevention program, and a substance abuse program. The costs for these mental health services alone comprise 25 percent of this expanded budget. Also included is the cost of a full-time health educator (10%), and an evaluation component that would afford systematic studies of the clinic's impact on the student population (5%). An additional \$3,000 (1%), would go for the summer program.

Supporting the current budget are five major sources: BMSI's federal 330 grants funds (20%); a Children and Youth Grant targeting uninsured children (45%); reimbursements from insurers (16%); fees from paying patients (14%); local private foundation grants (2%); and other sources (3%). (See Exhibit 26.)

If a child has health insurance, BMSI attempts to bill the carrier for the services rendered by the clinic. Those children without any health insurance are expected to pay for clinic services themselves, but the bill is determined according to the BMSI's sliding-fee scale, which accommodates the person's ability to pay. Most children are able to pay something. Indeed, fees from patients have generated almost as much revenue as reimbursement from insurers.

Although the revenue collected from insurers is limited by the number of students covered by public and private insurance, it has amounted to less than expected. BMSI has encountered significant problems getting reimbursed for care provided to students who are covered by Medicaid but who belong to HMOs that have state Medicaid managed care contracts. All but one of these HMOs consider the clinic and the health center out-of-plan providers, and therefore, offer no reimbursement. Compounding the effect of this loss is that BMSI is a Federally-Qualified Health Center (FQHC), and thus is entitled to a higher level of reimbursement. This advantage cannot be realized when the families of many students at the school have signed up with Medicaid managed care contractors which will not reimburse the clinic for services rendered to these students.

To estimate unit costs, 1990-1991 cost figures were used to match the utilization statistics that apply to that year. In 1990-1991, the cost of running the clinic, not including facilities and utilities were \$152,000. The average annual cost was \$207 per registered student, \$254 per user, and \$90 per visit.

Impact of Clinic Services

Lowering the pregnancy rate among students is one of the major goals of the clinic. In the two years between 1988-89 (the year in which the clinic was established) and 1990-91, the school-wide pregnancy rate decreased by 50 percent from 34/1000 to 17/1000. Moreover, among the clinic users, the pregnancy rate in 1990-1991 was 6/1000. While other factors may have contributed to these trends, the clinic staff believe that the clinic has played a major role; they have seen how the clinic's family planning

counseling, accompanied by mental health counseling, makes a difference in the decisions that the students make regarding pregnancy.

Another of the clinic's objectives is to increase the rate of pregnant girls who enter prenatal care in the first trimester. Of the pregnant students under the care of the clinic staff in the last two years, all but one began prenatal care in the first trimester, for an average of 80 percent. Given that only 60 percent of the pregnant adults using BMSI enter prenatal care in the first trimester, the clinic appears to be doing well in this regard.

Since there has been no study measuring the effects of the clinic on its users, nor a survey to determine students' attitudes towards the clinic, several regular users were interviewed to assess their perceptions of the clinic and its impact on their lives. Selected for these interviews were some of the high-risk students who are, or have been, in group counseling. These students revealed that the clinic, especially through its mental health services, have made a significant impact on their lives.

One student confessed that she would undoubtedly be pregnant and out of school by now, if she had not had the benefit of the group counseling and the access to the listening ear of the nurse practitioner. She explained that learning to communicate her feelings and to improve her self-esteem has helped her raise her expectations of herself. Her mother, who had come to pick her up because she was diagnosed with chickenpox, confirmed that there has been a marked improvement in her daughter's behavior and academic performance since her involvement with the clinic. An older son had also been through the group counseling program at the clinic and has since gone on to high school, more prepared for the academic and peer pressures he has found there. The mother said that, in his counseling sessions, her son learned communications skills that help him stay out of conflicts and in school, although he also spends much time in "the streets". She added that, as a result of his newfound ability to handle conflicts, he has become more respectful and more open-minded towards adults, including teachers.

The three other students who were interviewed concurred that the group counseling has helped them focus better on the work in the classroom and that, having the nurse practitioner available in troubled times is important to them. They respect her and find her easy to talk to. A 7th grader and an 8th grader who had been consistently truant before using the clinic, both admitted that they do not like school, but stay because they benefit from the personal attention they receive from the nurse practitioner, who is available to listen when they have personal or family problems. To these kids, the clinic, through the nurse practitioner and the counseling staff, has provided an emotional lifeline and a place to resolve tension that in the past was not managed effectively.

Ongoing Concerns

Despite their commitment to meet the needs of all of the children at Herring Run, the staff at BMSI and T.H.A.T. Place are unable to recruit more registrants and expand the clinic's services because on-going and reliable sources of funds, particularly for mental health and substance abuse services, are lacking.

The clinic suffers significant financial losses because it is recognized as a reimbursable provider by only one of the managed care Medicaid contractors who have succeeded in enrolling many of the families whose children are at the school.

Poor parental and community involvement are persistent problems which make recruitment even harder; with additional funds, the clinic hopes to launch a more aggressive outreach program to address these.

Summary

The clinic in Herring Run Middle School demonstrates that:

- Despite opposition from school staff, it is possible to establish an SBC that provides comprehensive services to a large proportion of the student body.
- It is possible to operate an SBC through a cooperative relationship between a city health department and a community health center.
- Primary health care must be supplemented by mental health services, if the children's needs are to be met. Yet, it is difficult to finance these services.
- The annual cost of providing comprehensive primary care and limited mental health services is about \$207 per registered student, \$254 per user, and \$90 per visit.
- While systematic evaluations have not been conducted of this clinic's impact on the student body, there is evidence to suggest that this clinic has contributed to a lower pregnancy rate, a lower truancy and dropout rate, improved classroom behavior by some of the most disruptive children, and improved mental health, at least among some of the children receiving counseling services.

The key factors that have made these results possible are:

1. Skilled and committed staff.
2. Addition of mental health services to health services.
3. Accessible and attractive facility.
4. Strong leadership on the part of the school principal.
5. Partnership with school administration and staff.
6. Partnership between city health department and community health center.

Exhibit 24. Herring Run Middle School SBC: Distribution of Total Visits (1688), 1990-91.

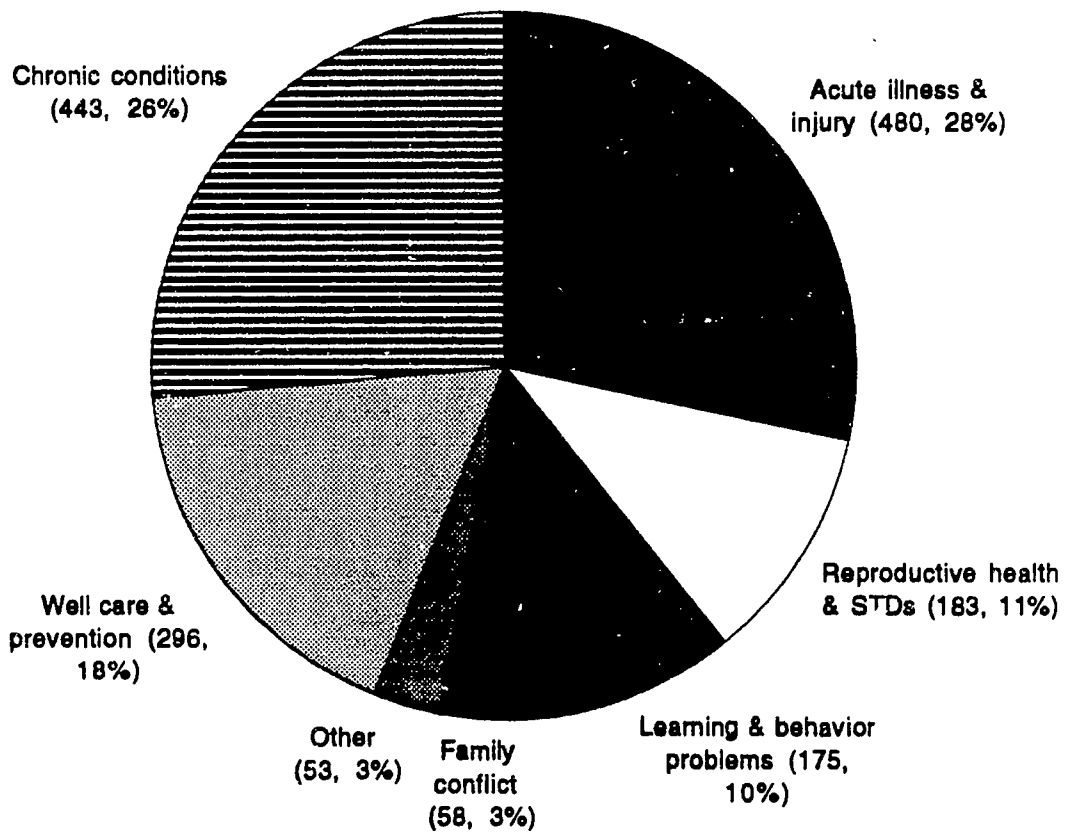


Exhibit 25. Herring Run Middle School SBC: Distribution of 1991 Base Budget and Expanded Budget.

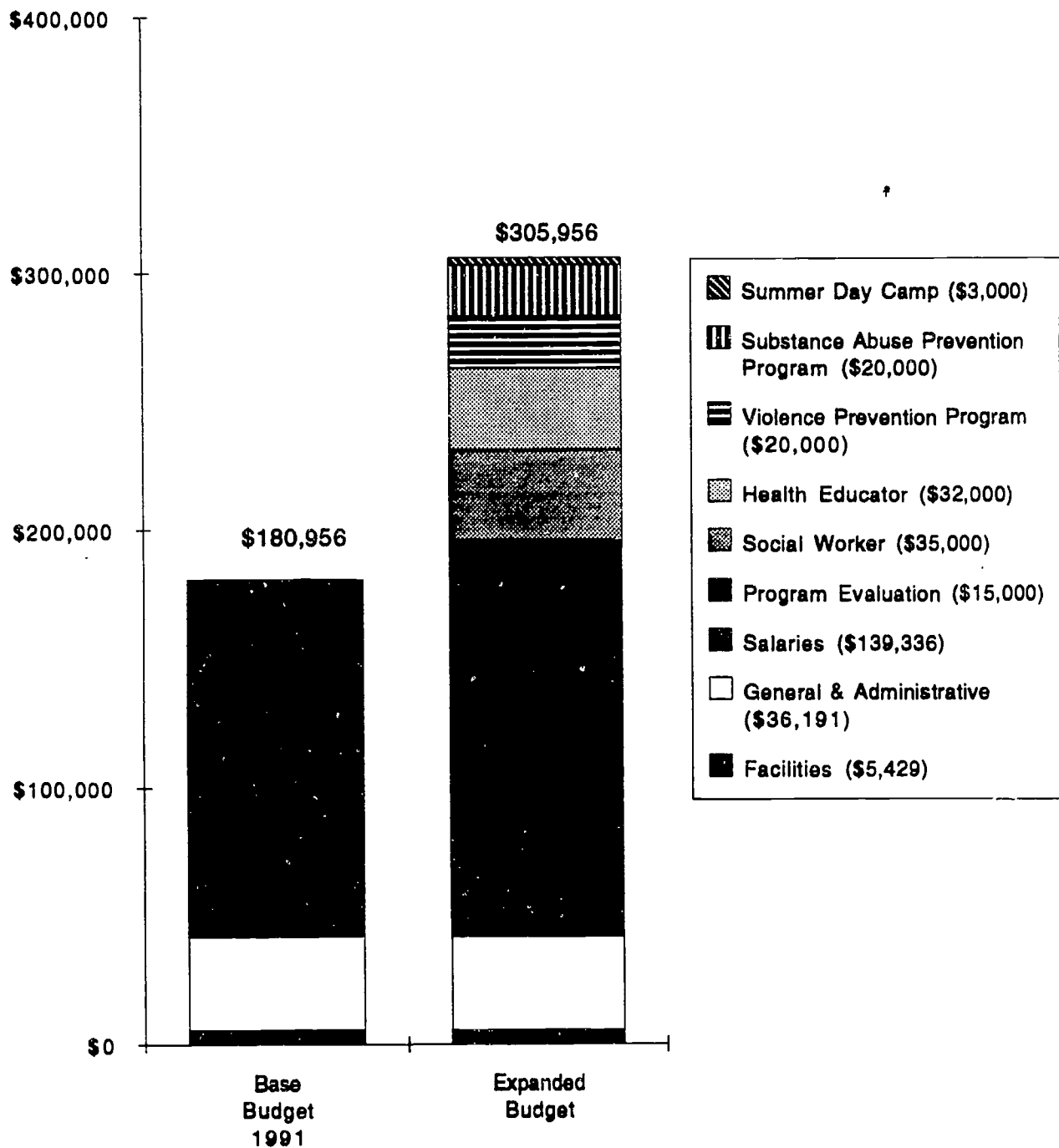
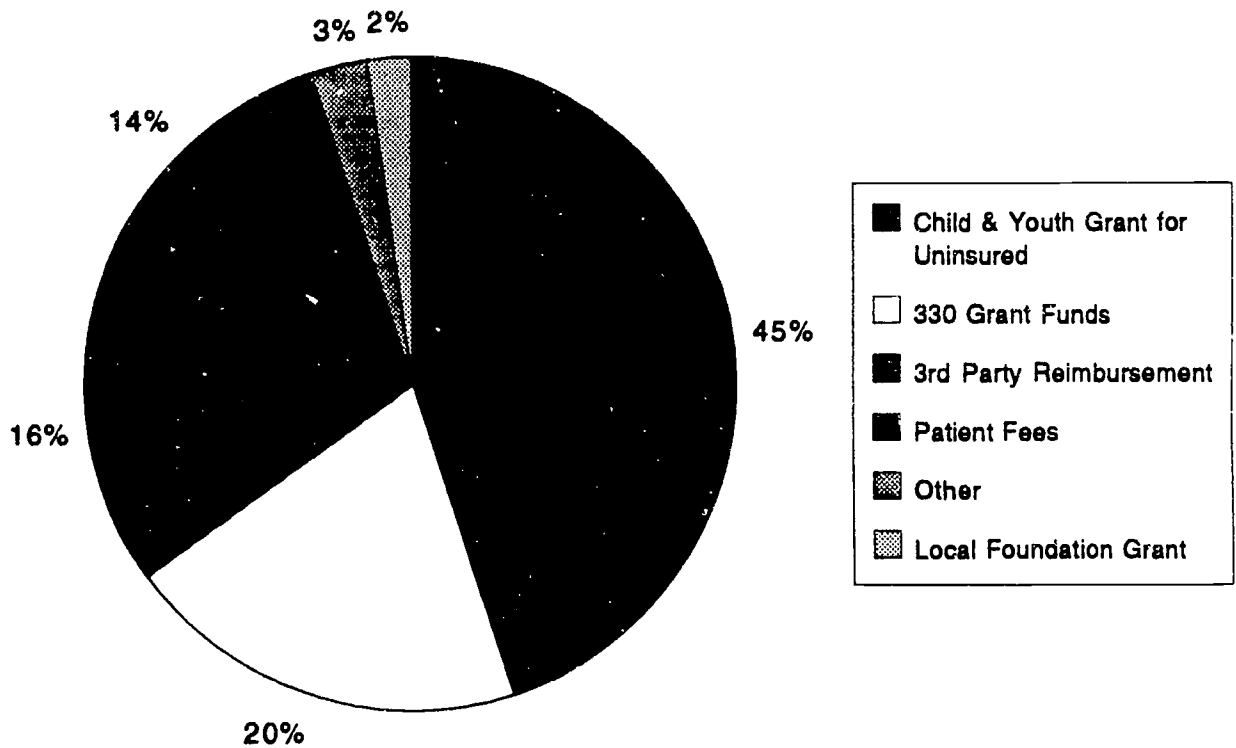


Exhibit 26. Herring Run Middle School SBC: Distribution of Revenue by Source, 1992-93.



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