

ORIGINAL ARTICLE

Reorganizing Health Care for Adolescents: The Experience of the School-Based Adolescent Health Care Program

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During the past decade, two forces emerged on the health scene that may alter significantly the delivery of health services to adolescents in the future. These are 1.) a growing public recognition of health problems and health-compromising behaviors among adolescents that impede their ability to complete school and become productive members of the workforce, and 2.) the increasing acceptance of school-based health centers as appropriate mechanisms for addressing adolescent health care needs.

In the late 1980s, The Robert Wood Johnson Foundation launched a multi-site demonstration effort, The School-Based Adolescent Health Care Program, to test on a large scale the ability of school-based health centers to increase access to health care for low-income young people, to provide comprehensive services at the school, and to secure the commitment of community institutions to participate in and sustain the school-based health centers. This paper reports on the progress of 23 health centers established under this program toward achieving these goals.

History

The School-Based Adolescent Health Care Program built on accumulating concern about the health status of many adolescents and a nearly 100-year history of developments in school-related health care. Adolescent health issues emerged as a focus of national attention in the late 1960s and 1970s when the population in the 15-24 year age group increased by 77% from 24 million in 1960 to 42.5 million in 1980. Concurrently the Surgeon General reported that these young people were the only age group whose mortality rate was higher in 1979 than in 1960 (1).

Throughout the 1980s, while rates of death and disability decreased somewhat, the health community took increasing note of the immediate and long-term negative effects of risk-taking behaviors (2). The epidemic in previously recognized sexually transmitted diseases, the new risk of human immunodeficiency virus (HIV) infection, the continued blight of unplanned pregnancies, as well as persistent alcohol and other drug-related problems compelled increased attention to adolescent health problems. Awareness that five million adolescents have no health insurance, and many more are underinsured prompted concern that financial barriers may limit access to health services that could potentially address these problems (3).

That policy makers and health providers would turn to schools as a locus of care for responding to these needs represents a rethinking of an old idea. Providing medical services in schools to achieve both public health and child health objectives has a long

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history. In 1892, New York City officials initiated the first school health program which assessed and, if necessary, excluded from the classroom children with contagious diseases. In 1902, they expanded the program to employ the first school nurse who cared for student patients and followed their illnesses and recovery (4).

As school health programs were adopted across the country, health screening and communicable disease control remained their principal focus. By 1980, schools employed 45,000 nurses to assure that immunizations were complete, screen for vision and hearing problems, and refer children for medical care. A few school districts contracted with physicians to conduct sports physical examinations and, in the more generously staffed school systems, health programs employed a variety of counselors, social workers, health educators, and substance abuse counselors at least on a part-time basis.

As the twentieth century draws to a close, school health services vary widely across the nation. By state law, about one-half of the states require vision and hearing testing; 16 require evidence of a physical examination, but none requires evidence of treatment for problems found (5). Some local school systems such as in New York City, employ no school nurses; others, such as in Denver, employ nurses or nurse practitioners in all schools.

Although most school systems have continued to limit their health role to screening and prevention services, in a few communities schools have explored the possibility of developing health programs that can not only identify but also treat the health problems of students.

The development of comprehensive, multi-disciplinary staffed health centers in schools has occurred slowly, following varying paths in different communities, and involving primary as well as secondary schools. Events in Cambridge, Massachusetts; Dallas, Texas; and St. Paul, Minnesota suggest the two central themes that have emerged in the evolution of the school-based health center model.

School-based health care can provide accessible, affordable health care to poor children.

In 1967 the Cambridge health department began providing medical services to school children at a clinic in a Cambridge K-8 school (6). A nurse practitioner-staffed clinic opened 7 years later in a Cambridge high school. In 1970, the West Dallas Youth Center at Pinkston High School, founded as an outreach center for the federally funded Children and Youth Program based at the University of Texas Health Sciences Center Pediatrics Department, be-

came the nation's first high school to offer services provided by nurse practitioners, physicians, social workers, nutritionists, and health educators. The finding of these early pilot programs—that school-based health centers are a workable, effective means to increase young people's access to care—has been repeated in a variety of other communities nationwide (7-9). Two multi-grant national programs supported by the Robert Wood Johnson Foundation in the late 1970s and early 1980s, as well as single-site projects funded by the same foundation in Chicago, Illinois; Kansas City, Missouri; Flint, Michigan; and Houston, Texas also confirmed the earlier experience (10,11).

School-based health services may also be an effective means of reducing rates of teen pregnancies and improving birth outcomes for young women who do become pregnant.

The role of school-based health centers in preventing or delaying teen pregnancies and improving birth outcomes has been debated, but the potential of these health centers for addressing issues related to adolescent sexual behavior has fueled much of the interest in school-based health centers. In 1973, the Maternal and Infant Care Program at St. Paul-Ramsey Medical Center opened a comprehensive health center in Mechanic Arts High School primarily to provide pregnancy prevention, prenatal care, and postnatal care. Augmenting these services was a child care facility designed to retain parenting teens in school. The St. Paul project leaders reported that patients served at the school clinic had a lower incidence of obstetric problems than adolescent patients treated in the community (12). It was also reported that the health center reduced initial and repeat teen pregnancies as well as school drop-out after delivery (13). A recent reanalysis of the St. Paul data, using city-wide birth statistics and longer time frames, concluded that the health centers had not reduced teen births (14). Improvements in birth outcomes were not re-evaluated.

Reports of the positive impact of school-based health centers on adolescents' access to health care as well as teen birth rates fostered support for the school-based health center model. That many physicians were attracted to the concept was demonstrated in a 1986 American Medical Association survey of primary care physicians. Almost one-half of those responding said that general medical care clinics, including those that provide contraceptive information, should be available in all high schools regardless of the school's maternity rate (15).

Although there was growing enthusiasm for this

new, intensified approach to health services in schools, proposed implementation of the school-based health center model also generated heated controversy in some communities. Both local residents and national groups argued that schools are not an appropriate locale for the discussion or provision of contraception. Opponents also maintained that school-based health centers would lead to a loss of parental control over their children's health care. In several cities applications to The Robert Wood Johnson Foundation program were not made, or were later withdrawn, owing to opposition from some segments of the population. However, in schools that received Johnson Foundation funds, there has been little expressed opposition. No parents in these schools have organized against the health centers, and it appears that, where opposition developed, it came from outside the school community. This fact together with the willingness of the health centers to refer students off site for contraceptive services and the requirement that all students receive written parental consent to use the health centers appears to have satisfied parental and community concerns as borne out by generally high enrollment.

By the end of the 1980s, the American Academy of Pediatrics, the American Medical Association, the Society for Adolescent Medicine, the American School Health Association, the American Nurses Association, the National Association of Pediatric Nurse Practitioners, the National Association of School Nurses, and the National Association of State School Nurse Consultants had all adopted statements in support of the continued development of school-based health centers (16-18). In 1990, the United States Public Health Service, through its national goals statement, *Healthy People 2000*, identified school-based and school-linked health services as model programs that could help achieve the Year 2000 health objectives for young people (19). This recommendation was repeated 9 months later by the Congressional Office of Technology Assessment in its report, *Adolescent Health* (20).

Methodology

To describe the progress made by The Robert Wood Johnson Foundation grantees in developing 23 school-based health centers over the past 3 years, we have analyzed data provided by these projects in quarterly management information reports. These reports summarize characteristics of newly enrolled patients, patient visit volume, patient visits by pri-

mary diagnosis or service, and services by provider. Patient registration and encounter data are collected by health centers using either hand counts or a computerized data management system. There are no penalties or rewards from the granting agency linked to data. Within the limits of staff constraints, the data appear to reflect accurately the clinical services provided.

Additional information on parental consents, numbers of actual student users, and school enrollment is recorded and reported by staff of participating health centers. Information related to project startup as well as implementation is gathered through frequent telephone conversations and annual site visits by program office staff and expert consultants.

Program Implementation

The Grantees

A variety of institutions applied for grants to support school-based health centers. Ultimately, project sponsorship has been spread among three academic health centers, four teaching and community hospitals, four school systems, five county health departments, and two not-for-profit agencies. Community health centers participate in school-based health centers through affiliation with the funded teaching hospitals (two) or school systems (two).

The grantees are located in 11 states—Alabama, California, Colorado, Florida, Louisiana, Michigan, Minnesota, New Jersey, New York, North Carolina, and Tennessee—and 14 cities.

Early Program Experience

In the first year of the program, 1987-1988, a few projects began providing services immediately. Most projects required 4-8 months to renovate health center space, hire staff, organize clinical services, negotiate relationships with the school staff, and market the services to the school faculty, staff, students, and their parents. This relatively brief start-up period is probably related to the lengthy pre-funding activities generated by the program requirement that detailed letters of support from community leaders be included with the grant proposal.

During the first grant year, 34% of the students had parental consent to use the health centers (Figure 1). The number of students with consent ranged from a low of 3% to a high of 97%. Total patient

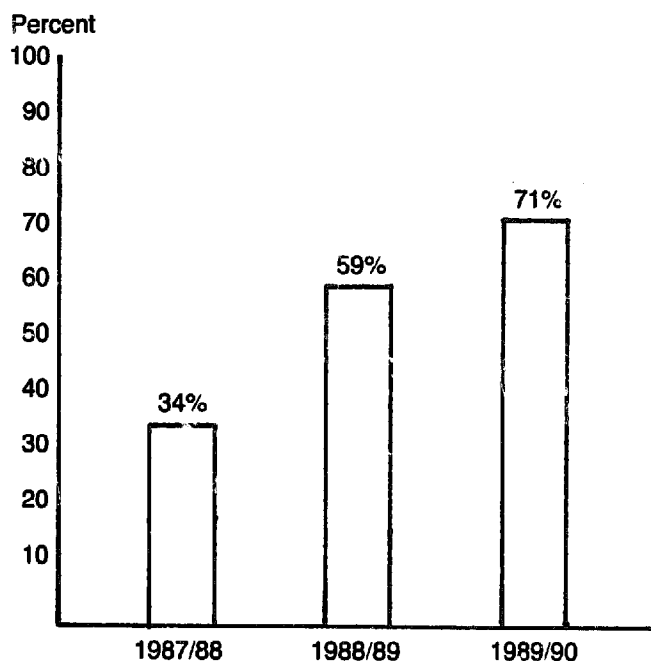


Figure 1. Percentages of students whose parents consented to care.

visits ranged from 31 at a clinic that struggled with temporary space to 2,200 at a health center that had been opened the year prior to Johnson Foundation funding.

Recent Program Experience

Data provided in Tables 1–3 describe the experiences of The School-Based Adolescent Health Care Program grantees as they became established providers.*

During the second grant year (the first full operating year), the percentage of students who had parental consent to use the health centers increased from 34 to 59% and in the third grant year, the average rose to 71%. These data are consistent with those reported from four schools in St. Paul in 1984–1985 (21).

Although total patient visits varied among the 23 sites, Table 2 indicates that 15 of the 23 reporting health centers provided more than 2,000 patient visits during the 1989–1990 year. Of these, six provided more than 3,000 patient visits. The 3.7 visits-per-patient ratio provides evidence of the potential of these health centers for providing continuity of care.

*The number of health centers has varied slightly from year to year. In 1987–1988, 22 health centers provided services, a 23rd center which was funded 6 months later did not open until 1988–1989. In 1989–1990, the health center number remained at 23, but that number reflected the loss of one clinic in New Jersey and the addition of a third clinic at the Denver project. A 24th clinic is scheduled to open in 1991.

Again, program experience is mirroring that reported by other full-time, comprehensive health centers (21–23).

Health center users. Student users are divided about equally between males and females. However, more young women than young men have made health center visits, with 63% of the visits in 1989–1990 being made by females (See Table 2). Although males make fewer visits to health centers than females, they use school-based services in greater numbers than they use other community-based services in greater numbers than they use other community-based adolescent services (11). In several program projects, visits by males approach 50% of the total.

Patient visits classified by race/ethnicity also vary somewhat from the general student population. Grant applications, which used 1986 school data, indicated that student enrollment by race/ethnicity was African-American, 52%; Hispanic, 28%; non-Hispanic white, 16%; Asian, 4%; and Native

Table 1. Student Enrollment and Visits, 1989–1990

State	High school	Enrollment	Parental consents (%)	Clinic users	Total visits	Visit rate ^a
AL	Ensley	1,200	96	714	2,555	3.6
CA	Los Angeles	2,706	82	910	1,518	1.7
CA	Jordan	1,790	86	951	1,736	1.8
CA	San Fernando	2,764	58	954	3,803	4.0
CA	Overfelt	1,950	67	549	1,653	3.0
CA	San Jose	625	74	405	1,560	3.9
CO	Lincoln	1,572	59	727	4,246	5.8
CO	East	1,511	53	555	2,326	4.2
CO	Manual	1,007	49	255	1,050	4.1
FL	Northwestern	1,890	41	484	2,840	5.9
LA	Istrouma	700	100	674	3,294	4.9
LA	Westdale	640	87	405	2,827	7.0
LA	Carver	1,447	66	766	2,439	3.2
MI	Northern	1,300	57	873	2,553	2.9
MI	Northwestern	1,650	58	815	1,827	2.2
MN	Southwest	1,219	N.A.	421	1,674	4.0
MN	Harding	1,644	77	487	2,834	5.8
NJ	Snyder	1,200	70	785	3,538	4.5
NY	Taft	2,400	63	800	3,129	3.9
NY	Morris	1,700	85	1,450	3,049	2.1
NY	Far Rockaway	1,500	75	897	4,010	4.5
NC	Giljespie	766	48	269	1,805	6.7
TN	Northside	925	100	602	2,803	4.7
Total		34,106	71	15,748	59,069	
Average		1,483	71	685	2,550	3.7

^aVisit rate shown as visits per patient.

^bThe larger number of parental consents than students enrolled reflects student drop-outs and transfers in during the school year.

Table 2. Patient Visit Data for 1988–1989 and 1989–1990^a

Data	1988–1989	1989–1990
Total visits (n)	49,337	59,069
Repeat visits	81	84
New visits	19	16
Patient visits by sex		
Female	65	63
Male	35	37
New registrants by most recent medical care		
Within one year	59	58
1–2 years	22	21
2+ years	19	21
New registrants by insurance status		
Medicaid	24	18
Private insurance	27	25
Self-pay	49	58
New registrants by routine source of medical care		
Physician/clinic	63	72
Emergency room	8	8
No regular source of care	29	21
Patient visits by race/ethnicity ^c		
Asian	2	1
African American	56	57
Hispanic	21	19
Non-Hispanic white	19	20
Other	3	3
Patient visits by primary diagnosis/service ^d		
Acute illness/accidents	25	26
Mental health related	20	21
Immunization, vision/hearing testing, other	13	12
Reproductive health	13	12
Physical exams	12	12
Chronic disease management	5	4
Acne/other dermatology	4	4
Nutrition/eating disorders	3	3
Dental services	1	2
Substance abuse	1	1

^aData cited as percentages unless otherwise indicated.

^b23 school-based health centers reporting.

^c8,000 patient visits (14% of total) not reported by race/ethnicity.

^d13,000 patient visits (22% of total visits) not reported by primary diagnosis or service.

American/other, 1%. African-American students accounted for about 57% of patient visits in 1989–1990. Hispanic students, who had been underrepresented in the first two years' patient visits, remained so and declined from 21% of patient visits to 19% of total patient visits in 1989–1990. White students constituted 20% of visits, a number that has changed little during the program. Since these data are *visit based* and not *unduplicated user based*, conclusive statements about the propensity of var-

Table 3. Patient Visits by Primary Provider

	1988–1989 (%)	1989–1990 (%)
Nurse practitioner/physician assistant	44	41
Social worker	11	14
Nutritionist	2	2
Health educator	6	4
Pediatrician/family physician	17	17
Psychologist	7	4
Nurse	6	9
Dentist	(1)	1
Ob/Gyn	(1)	(1)
Midwife	(1)	(1)

ious ethnic groups to use the health centers cannot be made. In general, health center staff report that clinic users reflect the population of the school. For the most part this is consistent with earlier descriptions of clinic users (8,24,25).

Data provided by new registrants suggest that the student users of the health centers are medically underserved. As indicated in Table 2, this past year 21% reported that they had not received medical care for more than two years; 58% described themselves as self-pay and were presumed to be uninsured, and 21% said they had no regular source of medical care. Although family insurance status information reported by adolescents should be used with caution, Newcheck and McManus have previously described a large uninsured adolescent population (3). One in seven adolescents was reported as uninsured in 1984.

Health center staffing and hours. All projects are open at least 7 hours a day, 5 days a week during the school year. Summer and vacation hours are generally limited, with the sponsoring medical institution providing back-up clinical hours and telephone service. In some centers, the students are given the on-call number for the clinicians; in others, the students are asked to report to the back-up facility outpatient department or emergency room if problems occur when the center is not open.

Core staff vary little from high school to high school. Part-time staffing, however, shows considerable diversity and reflects the local availability of in-kind contributions from affiliated agencies.

Of the 23 reporting health centers, 22 have similar full-time staff: a medical assistant/receptionist and a nurse practitioner or physician assistant. Mental health services are provided primarily by a master's level, clinically trained social worker. In 11 health centers the social worker is full-time, and in 4, half-

time. Other centers provide mental health services through part-time psychologists and psychology graduate students and, in one case, a psychiatrist.

All health centers have a pediatrician or family practitioner on site who can see students during at least one session (4 hours) a week. Three centers also have an obstetrician/gynecologist on site for limited hours. Obstetrical/gynecological (Ob/Gyn) staff members have proven difficult to maintain owing to rising costs. Two projects employ nearly the equivalent of a full-time physician; most use significantly less physician back-up. Eight centers engage a physician for two sessions a week and eight more schedule a physician for only one session a week. With one session a week of physician time, it is difficult to schedule students who need to see a physician and also review charts and also review charts and arrange adequate clinical conference time with other staff.

Five health clinics staffed by academic medical centers and teaching hospitals have developed training rotations for pediatric and, in one case, family practice residents. Although the rotations are described as very popular with 2nd and 3rd year residents, the training programs have been introduced only after issues of on-site supervision, advisory board support, and clinic staff support have been thoroughly explored.

A key feature of the health centers is that the staff members are multi-disciplinary and acknowledge the critical role that psycho-social issues play in adolescent health concerns. Case conferencing and consultation encourage cross-disciplinary thinking and the melding of skills to address adolescent health problems.

Patient visit by provider data reflect the staffing patterns at the health centers. Nurse practitioners and physician assistants provided the greatest amount of care—43% of total visits in 1989–1990. (Table 3) In the third grant year, physicians continued to provide 16% of total visits and social workers maintained their visits at 14% of the total. The nurses, however, increased their visits by 100%—from 6% to 12% of the total.

Patient visits by type of service. As Table 2 indicates, primary services requested by and provided to students are truly comprehensive. Data are not submitted on secondary or tertiary diagnoses or services. The importance of providing a full range of services was attested to by Edwards et al. (12) in describing the poor start experienced by the St. Paul program when its first clinic began by offering a full

range of reproductive health care. Only when services expanded to include physical examinations, immunizations, and weight control programs did the clinic enrollment begin to grow.

Treatment of acute illness and injury remains the leading service provided (26% of total services). Mental health-related care, including individual as well as group therapy, constitutes 21% of services. Physical examinations, reproductive health care, and a miscellaneous category that includes important school-related health services such as immunizations and vision/hearing screening each represented 12% of total visits. Chronic disease management and skin problems each involved 4% of services. Dental services, available at only a few sites, represented 2% of total visits. Despite public concern and program focus on substance abuse, alcohol and other drug abuse services were only 1% of total service. Although some schools have separately funded and operated substance abuse programs, school-supported services generally focus on prevention rather than assessment and treatment. Thus it seems that the school-based health centers need to examine carefully the extent to which their services meet the needs within the student population.

Perhaps as significant as the diversity of the services provided is the length of time students are spending with providers. In contrast with national data that showed that 20% of adolescent medical visits lasted 16 minutes or more (27), the health centers reported in 1989–1990 that 46% of visits lasted longer than 20 minutes; 36% lasted between 10 and 20 minutes, and 19% lasted under 10 minutes.

Nonclinical activities. In addition to direct clinical service, school-based health center staff are engaged in a variety of extramural activities to promote student health. From once-a-year school fairs to ongoing participation on crisis intervention teams, some health center staff are investing substantial time in outside-the-clinic programs. As indicated in Table 4, providing classroom education is the most common of these functions.

Most health centers have assumed a number of nonclinical responsibilities. Of the 18 grantees, 16 have undertaken at least three health center/school staff collaborative efforts.

Discussion

Program experience to date documents that it is politically and institutionally possible to establish

Table 4. School-Based Health Center Participation in Extramural Activities by Activity Type^a—1990

Activities	Participating projects (n)
Classroom health education	16
Schoolwide health fairs	9
Schoolwide immunization programs	8
PTA/other parent education	7
Nonclinic sports/other physicals	6
Schoolwide crisis intervention teams	5
Teacher education	5
Drop-out prevention	5

^aActivities reported by 18 program grantees.

comprehensive, school-based health services in geographically and ethnically diverse communities and that students will use these services with a frequency that makes continuity of health care possible.

An evaluation study supported by The Robert Wood Johnson Foundation is assessing the impact of school-based centers on access to care and health status.

The utilization data currently available suggest strongly that these programs have, at the least, laid a foundation for intervention in high-risk problem areas by 1.) serving a large percentage of students at each school, 2.) reaching an ethnically diverse population of male and female students, 3.) providing health education and services that relate to key adolescent problems, and 4.) having multiple contacts with students. With 46% of patient visits lasting 20 minutes or longer and the average student user having nearly four visits a year, the health centers have created the opportunity for impact. Future research should examine the degree to which improved access to care improves health status and evaluate the costs/benefits related to this new mode of health care delivery.

Community acceptance of these health centers is evident. Of 24 sites, 23 started up in less than a year and without community conflict. More than 90% of parents who consented for their children to use the health centers chose not to limit services that their children could receive. In addition, the diversity of geographic location and institutional sponsorship suggest that belief in the need for more adolescent health services and the appropriateness of school-based health services is not limited to a narrow sector of the public or health care community.

Equally important as community acceptance is adolescent approval of the health centers. The continued growth in student enrollment, the number of

repeat visits, and the use of health centers to address confidential mental health needs as well as to secure more routine care all suggest that students are receptive to school-based health centers. The fact that the health centers draw patients from all segments of ethnically diverse high schools also indicated broad appeal and acceptability.

As noted at the beginning of this article, the great impetus for exploring new approaches to organizing adolescent care is growing recognition that many young people are at risk for serious physical and mental health problems that impede their ability to complete school or become effective workers. Because schools offer the setting most accessible to young people, reorganizing the health services delivered in school has been the approach most attractive to those concerned about unmet adolescent health needs.

The transformation of school health care from a nurse's office to a comprehensive center staffed by a multi-disciplinary team involves fundamental organizational changes. First, the role of the school nurse is being reconsidered. School nurses have historically been constrained by school board directives and state law from performing important health services. Because of these limitations, expectations of school health have been reduced. Overcoming low expectations for school health programs challenges school districts and health officials who attempt to broaden the school health mission. Although some school nurses, as in Baltimore, have welcomed the opportunity to participate in a comprehensive program, others have resisted the structuring of new roles (28).

The health centers differ from nurses' offices not only in providing a new scope of service but also in bridging the traditional separation of school health from other health care institutions in the community. School-based health care is integrated with that provided by others in the community. The health centers are operated by qualified institutional medical providers. Even if a school system administers the grant, under The Robert Wood Johnson Foundation program, it may not hire health professionals directly but must contract with hospitals, health departments, or other suitable providers to manage the delivery of health services. Thus, health services provided at the school are a unit of a larger health care institution.

This strategy, rooted in the belief that the way to strengthen school health services is to make those services an integral part of the community's health care system, relies on traditional providers to assure

that students served by school-based health centers receive needed care. The sponsoring medical institutions arrange medical referrals, address infection control, arrange laboratory pick-ups, protect medical confidentiality, provide medical back-up when the health centers are closed, and respond to the myriad of issues that arise in the daily management of the health centers. Additionally, and perhaps most importantly, these institutions struggle with the difficulty of securing specialty care for young patients who are either uninsured or underinsured.

While the location of school-based health centers would appear self-evident, increasing references by policymakers and program analysts to school-linked health centers as including both school-based and off-site services may blur this characteristic of school-based health centers. This is not a matter of nomenclature. There is a fundamental difference between delivering services on-site at a school and using a case management system to organize the delivery of care at locations away from school. The research that supports positive outcomes related to increased access to health care for adolescents at school-based health centers has not been shown to apply to school-linked programs.

From the beginning of health service delivery in schools, there has been on-going debate over how much health care should be provided in schools, who should provide the care, and how it should be funded. However, a consensus is emerging that for some children these protracted debates are costly. Their unmet physical and mental health needs are so great that these children will be lost to the future unless the needs are addressed quickly; and reaching these children through the school has become an increasingly acceptable strategy.

It would appear that the favorable experiences to date from the school-based health centers together with a political need to respond to the urgent problems of poor children will drive continued development of school-based health centers. Nevertheless, as some projects found, overcoming barriers to better care is not a simple task. During the first 2 years of the program, one project found that it could not resolve space renovation issues or conflicts with established school health personnel. Other projects have found that staff turnover due to salary constraints or normal attrition have limited anticipated growth.

Physician staffing has been a particular challenge. To control costs, 8 of 23 health centers provide only one session a week for the health center physician.

With 4 hours a week, it is difficult to schedule students who need to see a physician, review charts, consult with referral physicians, and arrange clinical conference time with other staff.

Nearly all projects learned that simply "being there" does not inform students that services are available, confidential, and responsive to students. The low enrollment rates during the first year of operations reflected in part the projects' staffing and renovation priorities, but they also demonstrated that special marketing initiatives were required.

At least one-half of the projects needed to re-think their approach to making their services known to students. Re-energized marketing strategies included staff presentations to school faculty, developing referral relationships with the school nurse (if one is on site), frequent meetings with school administrative staff, working with sports team coaches to organize athletic physical examinations, and having staff available in the school office when parents enroll their children. Most projects found that there is no substitute for close working relationships with faculty and school staff to educate students and their families concerning the availability and utility of school-based health services.

Although this article has focused on clinical activities, as noted above the school-based health centers have also been engaged in health promotion and disease prevention efforts to a degree not possible in off-site adolescent health care settings. Most health center staff see themselves as part of a school-wide effort to create healthier learning environments for young people.

Joint health center/school activities nurture the very partnership that seems to make the health centers successful. Health centers that engage in health promotion and education activities in the classroom do not appear to offer less clinical service in the health center. Rather, those health centers that are fully engaged in their host schools also become the centers to which teachers, principals, coaches, and students refer young people who need assistance, with resulting patient volume pressing health center staff to the limit.

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