DOCUMENT RESUME

ED 385 950 EA 026 985

AUTHOR Newman, Lynn
TITLE School-Agency-Community Partnerships: What Is the Early Impact on Student School Performance?
INSTITUTION SRI International, Menlo Park, Calif.
PUB DATE Apr 95
NOTE 36p.; Paper presented at the Annual Meeting of the American Educational Research Association (San Francisco, CA, April 18-22, 1995). The evaluation presented is being conducted for the California Partnership for School-Linked Services and funded by the Foundation Consortium for School-Linked Services.
AVAILABLE FROM SRI International, 333 Ravenswood Avenue, Room BS178, Menlo Park, CA 94025 (Order No. 206, free; quantity price $2 per copy).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; Agency Cooperation; Elementary Secondary Education; *Family Programs; Family School Relationship; Human Services; *Integrated Services; *Outcomes of Education; Partnerships in Education; School Health Services; *Social Services
IDENTIFIERS *California; *Healthy Start Program CA

ABSTRACT

California's Healthy Start initiative, begun in 1991, awards grants to local groups of schools and public and private organizations to collaboratively plan and implement strategies to integrate services for children and families, which are provided at or through the school. This paper presents findings of a study that examined whether participation in the Healthy Start program contributed to improved educational performance, specifically, as indicated by students' grade-point averages (GPAs). The school records of 268 students were reviewed for the years 1991-92 and 1992-93. Student performance before and after program participation was compared. To identify the contribution of services to changes in students' GPAs, four separate analyses were conducted for each of the four types of educational services--tutoring, counseling, advocacy, and parent education. Findings indicate that educationally oriented services contributed to small gains in school performance even after relatively short-term participation in those services. Students from families who needed basic assistance (food, clothing) were less likely to achieve gains than were students from families with fewer needs. The provision of basic-needs services through Healthy Start helped to reduce barriers to learning presented by deficits in such basics as food and clothing. The Healthy Start program had positive education effects for children and families, although effects at this early stage were small and often not statistically significant when differences between students were controlled. Eight tables and two figures are included. Appendices contain an overview of data-collection methods and a list of related reports. (Contains nine references.) (LMI)

April 1995

School-Agency-Community Partnerships: What Is the Early Impact on Student School Performance?

Lynn Newman
California Healthy Start/Comprehensive Integrated School-Linked Services Evaluation

Prepared for presentation to the Social Context of Education Division, American Educational Research Association annual meetings, San Francisco, California, April 1995

The statewide Healthy Start Evaluation is being conducted by SRI International for the California Partnership for School-Linked Services. Evaluation funding has been provided by the Foundation Consortium for School-Linked Services.

CONTENTS

TABLES

FIGURES

School-Agency-Community Partnerships: What Is the Early Impact on Student School Performance?*

A growing number of communities and states are attempting to restructure their systems of education, health, mental health and social services to better meet the needs of children and families (e.g., see U.S. GAO, 1993, Adler and Gardner, 1994, Gomby and Larson, 1992). Partnerships and inter-organizational collaboration are central to these restructuring strategies. The intent of these changes is to create a new delivery system form the fragments of the existing multiple systems that serve children and families—a "pro family system" that encourages institutions and community organizations to work together to develop integrated, comprehensive, and high-quality services that support and strengthen families. Ultimately, the goal of this reorganization of educational, social and health resources is to ensure that children, youth, and families receive the services that they need to improve the outcomes of childhood and adolescence.

California's Healthy Start initiative, launched in 1991 under the auspices of Senate Bill 620, is one example of these strategies for achieving systems change in inter-organizational collaboration. The Healthy Start Support Services for Children Act authorized the awarding of grants to local groups of schools and public and private organizations, in collaboration, to plan and implement strategies to integrate services for children and families and to provide them at or through the schools. In the initiative's first year, the California Department of Education, as the lead agency for Healthy Start, used an appropriation of $20 million form the legislature to award 40 grants of up to $400,000 each to local collaboratives that demonstrated in competitive grant applications that they were ready to implement comprehensive, integrated, school linked services. These 40 operational sites throughout the state were granted funds for a three year period to integrate the education, health, mental health, and social service delivery systems in their communities so that children and families would have readier access to a broader array of services through their schools. At the same time, SRI International was commissioned by the California Department of Education and the Foundation Consortium for School-Linked Services to conduct a 3-year evaluation of the processes and outcomes of the efforts of these operational grantees.

---

* Based on analyses and reporting in *A Healthy Start for California's Children and Families: Early Findings from a Statewide Evaluation of School-Linked Services.* Prepared by Mary Wagner, Shari Golan, Debra Shaver, Lynn Newman, Marjorie Wechsler and Fiona Kelley.

While a wide variety of benefits are expected to accrue to participants in Healthy Start, improving students' school performance is an important objective of Healthy Start; as stated in the SB 620/Healthy Start RFA, "the goal of Healthy Start is to produce measurable improvement in outcomes for students...in the areas of school attendance and performance..." (California Department of Education, 1992a, p.7). Improving educational outcomes is an objective that has guided the activities of most Healthy Start programs, 83% explicitly stated a goal of improving educational performance, and one-fourth of all Healthy Start services were academically related. This paper examines the impact of integrated services on student school performance. Specifically, we address the following questions:

- What changes in educational outcomes are experienced by Healthy Start core clients?
- What changes in educational outcomes are achieved by students in programs with a stated goal of improving educational performance?
- Were some program models particularly effective in improving educational performance?
- Did improvements in educational outcomes accrue to particular kinds of students?
- What was the relationship between receiving educational services, such as tutoring or school counseling and educational outcomes?

To answer these questions, this paper focuses on the school performance of a subset of students in Healthy Start programs, those students who were most intensively served by their Healthy Start program. The paper begins with a description of schools and students participating in Healthy Start. It then continues with an examination of the changes in educational outcomes of a subset of students in schools associated with Healthy Start programs, comparing school performance, (attendance, teacher ratings of student behaviors and grades), before and after student involvement in the Healthy Start program. Educational outcomes will be considered first for core Healthy Start students overall, and then for core students in different types of Healthy Start programs, and with different individual characteristics. The paper will then focus on an exploration of the relationship between receiving particular Healthy Start services and school performance.

Data Sources

Findings focus on the first 40 sites that were awarded Healthy Start grants in 1992. Analysis presented here pertain to a subset of Healthy Start students, students who are considered by their Healthy Start site to be core students—those most intensively served by

Healthy Start programs. School records for the 1991-92 and 1992-93 school years were collected for the "index child" in core families—the student through whom the family initially became involved with Healthy Start—if that child had completed the Healthy Start intake process by April 15, 1993. This date was selected to ensure that students would have been in school for at least one quarter of the school year after beginning their involvement in Healthy Start.

School records were requested for 675 students. Although 545 school records were returned (a response rate of 81%), only 268 of the returned school records had sufficient before and after Healthy Start involvement to be included in this analysis; school records often included only partial information, usually due to high student mobility. School performance analysis includes only those students who had a minimum of a full grading period of school performance information both before and after their initial involvement with the Healthy Start program. The period of time for which records were obtained before intake into Healthy Start varied; on average data were obtained for about 1.25 school years before Healthy Start enrollment and for just under 1 semester after Healthy Start enrollment.

It is important to note that because 1993-94 school records have not yet been collected, we have school records for only a short period of time after students became Healthy Start core clients. It is early to see the impact of Healthy Start involvement, and this analysis should be considered preliminary until the 1993-94 school information is collected and included in the analysis.

Descriptions of schools participating in Healthy Start are based on the *Consolidated Programs Description Database,* a database, managed by the California Department of Education, which contains information form a number of smaller databases, and on mail surveys of principals in Healthy Start schools.

Descriptions of Healthy Start programs are derived form Healthy Start grant proposals, visits to Healthy Start programs, telephone interviews with grant coordinators, telephone interviews with up to five collaborative partners, and mail surveys with remaining collaborative partners.

Services provided by Healthy Start programs are documented through several forms, varying with the type of service being delivered. These forms include, event description forms, event attendance sheets, and service encounter logs. These forms varied with the type of service being delivered. Family background information was documented through the family intake form.

Healthy Start Programs and Schools

There is no single model of services being implemented among the Healthy Start grantees; rather, Healthy Start reflects the view that "a community must develop an approach and tailor program design to capitalize on its particular strengths and opportunities and to respond to its citizens unique combination of needs and expectations" (Levy and Shepardson, 1992). Healthy Start grantees are self-generated collaboratives that are planning and implementing services that they believe will meet the needs of the students and families they have targeted. The program designs range broadly, form intensive, family-centered programs at single schools that involve ongoing relationships between family service advocates and client families, to district-wide screening and referral programs that served multiple schools. Programs also varied in their use of school versus outside service personnel. For example, some programs used professionals form community-based organizations and interns to staff on-campus clinics and centers, whereas other programs relied heavily on school and district personnel and on existing coordination mechanisms, such as student study teams. Finally, some programs were focused on specific target populations, such as adolescents or new district enrollees, whereas other programs offered services to all students and family members within their schools.

Healthy Start programs can be grouped into four basic types. The first three types, which focus primarily on families and young children (i.e., those in elementary school), are distinguished mainly in how consumers enter the service delivery system. The first type of program, family resource center, is distinguished by having an identifiable space on a school campus to which consumers can come on their own initiative. The distinguishing feature of satellite family service centers, the second type of program is the existence of a center located somewhere other than at an operating school, where families can go to obtain a variety of services. The third type of program, family service coordination teams, is known less as a place than as a function. In these programs, the primary way in which consumers gain access to services is through referrals to a multidisciplinary team of service professionals. Although most of the programs in the other categories have such teams, the central role of these multidisciplinary teams in how clients enter the service delivery system distinguishes them form other programs. The fourth group, youth service programs, includes programs that focus primarily on the needs of adolescents. In summary the typology of school-linked services programs includes the following groups:

School-site family resource centers. The most common model of Healthy Start program is the family resource center at a school. This is an identified space at an operating school to which families can come for a variety of services on their own initiative or by referral form teachers, other service providers, or a service coordination team. Sixteen of the projects fit this model, and all of them are located at elementary schools. Most of the family resource centers (12) serve families form a single school; however, 4 of them serve multiple schools, including 2 programs that serve families form a neighboring junior high and high school.

Satellite family service centers. Four sites involve a service center that is not located at an operating school site, a fact that potentially has implications for the breadth of clients the center can serve and its accessibility to clients. These satellite service centers vary in the extent to which they provide services directly to clients at the center. Two of the centers emphasize identification of family needs and referral to community resources, rather than incorporating a strong component of direct service provision, whereas two include more direct services. These projects serve more than one school; two are districtwide programs.

Family service coordination teams. This model does not base its services around any physical location; rather, it features a team of service professionals who review the needs and status of students who have been identified as at risk or whose parents have asked for help. The team often is an outgrowth or extension of the student study team that functions in most schools. Through Healthy Start, these teams often have added new members to extend the range of services and expertise that can be obtained in support of particular children and families. Members of the team can function as direct service providers to a child or family. Twelve projects generally fit this model, with 10 involving elementary schools only and 2 including one or more junior high or high schools. Seven of these sites involve a single school, while five are multischool projects.

Youth service programs. Eight projects focus their services on addressing the health, education, and social needs of adolescents. Five projects organize themselves around a school-based or school-linked student health clinic. Two other programs are identified by their target clientele—pregnant teens and school-age parents and their children—while one program serves a broader population of secondary school youth. Six of the teen support sites operate at and serve single schools, one site provides services at three secondary schools, and one adolescent health clinic is located off campus and serves two nearby secondary schools.

Despite their differences, all Healthy Start programs shared the common experiences of trying to maintain interagency collaboration and of providing school-linked services that focused on serving the combination of educational, health, mental health, and social service needs of their participants. In this way they are similar to other collaboratives for school linked services (Mattessich and Monsey, 1992; Melaville and Blank, 1993). Moreover, the goals of

most Health Start programs reflected the principles of the initiative—to create a service system that is more outcome focused, comprehensive, integrated, accessible, family focused, preventive and culturally appropriate.

Healthy Start Schools

All Healthy Start programs are linked to schools. Although the 40 operational programs involve 124 schools, the majority of programs (23) operate at single schools. Most of the others operate in groups of 2 to 5 schools, and three programs are district- or county-wide, involving more than 10 schools each.

Table 1

CHARACTERISTICS OF HEALTHY START SCHOOLS

	Percentage of Healthy Start Schools
School level	
Elementary	75
Intermediate	8
High	14
Other (special education school, juvenile hall, countywide/ districtwide program, public alternative/opportunity program)	3
Enrollment	
Small (fewer than 250 students)	21
Medium (250 to 499 students)	21
Large (500 to 999 students)	36
Very large (1,000 or more students)	22
Metropolitan status	
Urban	29
Suburban	42
Rural	29
N	124

Healthy Start grant funds have gone to schools that represent all levels and enrollment sizes and all different types of geographic areas. Three quarters of the schools are elementary schools, reflecting the distribution of schools in the state as a whole (Market Data Retrieval, 1990) (Table 1). The enrollment in these schools ranges form very small to very large. The smallest school is in a rural one-school district with 19 students that is part of a countywide program operating in 25 schools. The largest Healthy Start school is an urban high school with 3,263 students. Healthy Start schools are located in urban, suburban, and rural areas, with suburban schools having higher representation than others (42% vs. 29% each for urban and rural schools).

Table 2

CHARACTERISTICS OF HEALTHY START SCHOOLS RELATIVE TO GRANT ELIGIBILITY CRITERIA

	Percentage of Healthy Start Schools
Proportion of student body:	
Receiving Aid to Families with Dependent Children	
0% to 24%	64
25% to 49%	27
50% to 74%	7
75% to 100%	2
With limited English proficiency	
0% to 24%	48
25% to 49%	24
50% to 74%	19
75% to 100%	9
Eligible for free or reduced-price meals	
0% to 24%	16
25% to 49%	15
50% to 74%	43
75% to 100%	27
N	124

Despite the diversity of Healthy Start schools, many students and families at Healthy Start schools had serious and multiple needs, as implied by their high poverty levels, low English proficiency, and high academic needs (Table 2). To qualify for funding, schools must have 50% or more of their students either receiving Aid to Families with Dependent Children, or having limited English proficiency, or being eligible to receive free or reduced lunch.

The students attending Healthy Start schools represent diverse ethnic backgrounds. More than half of the schools (51%) had student bodies in which the majority were children of color. Of those schools with the highest percentages of children of color, many were comprised largely of Latino students. Thirteen percent of all Healthy Start schools had a Latino population of 75% or greater, 6% of schools had a Latino population of more than 90%.

The mobility rates of students attending Healthy Start schools can be quite high, hampering the ability of students to have a consistent, integrated educational experience or to establish social bonds at their school. In nearly one-third of Healthy Start schools (31%) one-quarter to one-half of students moved away during the 1991-92 school year. In 10% of the schools, more than half of the student population moved away during the school year.

The academic needs of students attending Healthy Start schools can also be quite high. The percentage of students enrolled in Chapter 1 compensatory education programs provides some insight into the general achievement levels of the students participating in Health Start. Students are identified for services in Chapter 1 schools based on their educational achievement. Forty percent of Healthy Start schools had at least half of their students enrolled in Chapter 1. Fourteen percent had three-fourths or more of their student population enrolled in Chapter 1.

Educational Outcomes of Core Healthy Start Students

Healthy Start students clearly faced several obstacles to their successful performance in school. Many are poor, with limited English skills, high mobility rates and high academic needs. As presented in Table 3, almost one third of the families of core students with school records received AFDC (29%) and almost one third had limited English proficiency (31%). Healthy Start programs were designed to begin addressing some of the needs students bring with them to school. This section focuses on changes in student school performance, before and after their involvement in Healthy Start

Table 3

CHARACTERISTICS OF HEALTHY START CORE STUDENTS WITH SCHOOL RECORDS

	Percentage of core students with school record information
Ethnicity	
American Indian	<1
Asian	21
African-American	15
Latino	50
Pacific Islander	<.1
White	14
Grades	
K-3	36
4-8	24
9-12	40
Gender	
Male	55
Female	45
Family receives AFDC	29
Limited English proficient	31
N	268

Three measures of school performance: teacher ratings of student behaviors, attendance, and grades, will be described here Research suggests that these aspects are intimately related. As a measure of student engagement in the educational process, high absenteeism is noted as one of the most powerful predictors of poor grades and early school leaving (Wagner, Blackorby, and Hebbeler, 1993). Without meeting the minimal expectation of

attending school, students cannot benefit form their educational experiences. Yet high mobility and poor health among Healthy Start families often leads to high absenteeism. Students' behaviors in class also can influence performance, particularly as reflected in teacher judgments regarding classroom grades. It is often in this behavioral aspect of performance that individual and family stresses first are evidenced in the classroom. Finally, student grades are highlighted as a summary measure of academic achievement.

Educational outcomes are presented as they pertain to core students—those most intensively served by Healthy Start programs. These are the students for whom the greatest impact might be expected; educational impacts reported here should not be assumed to result for all Healthy Start students. Indeed, as indicated earlier, the students for whom we have information are only a sample of all core students. Not all school records returned by schools had a full grading period both before and after the student's participation in Healthy Start, a requirement to be included in this analysis. It is also important to note that we have school records for only a short period of time after students became Healthy Start core clients. It is early to see the impact of Healthy Start involvement, and this analysis should be considered preliminary until the 1993-94 school information is collected and included in the analysis. Given this understanding of who core clients were and the information available about them, the following sections highlight changes in educational outcomes for Healthy Start core students.

Student Behavioral Performance

Many students, particularly those in elementary school, receive grades or other forms of teacher ratings of their behavior. Behavior ratings in Healthy Start elementary schools generally focused on conduct and study habits. Conduct factors included such behaviors as self-control, working well with others, being respectful and considerate, having a positive attitude, and following class and school rules. Study skills factors included working independently, completing homework, following directions, participating in discussions, staying on task, and using time in a productive way. The variety of forms of grades students received for these two types of behaviors were converted to a 3-point scale, with a value of 3 for excellent or good behavior, 2 for satisfactory behavior, and 1 for behavior deemed to need improvement or that was unsatisfactory. An average student behavior performance score was then created, combining grades received for conduct and study skills.

Table 4

STUDENT BEHAVIORAL PERFORMANCE, BY QUARTILE

	Ratings before Healthy Start	Ratings after Healthy Start	Change in Ratings after Healthy Start	n
All students with ratings	1.97	2.04	**.07+**	106
Initial behavioral quartile				
Lowest	1.34	1.55	**.21***	24
Mid/low	1.79	2.00	**.21*****	20
Mid/high	2.08	2.14	**.06**	37
Highest	2.57	2.42	**-.15**	25

+p<.10; * p<.05; ***p<.001.

Overall students' behavior ratings increased marginally after enrollment in Healthy Start programs, form a mean of 1.97 to a mean of 2.04 (p<.10). Yet these average ratings obscure the fact that students varied widely in their conduct and learning styles, some performing poorly while other surpassed teacher expectations. Table 4 shows elementary school children that had behavior ratings divided into quartiles based on their ratings and shows the difference in behavior scores given before and after their enrollment in Healthy Start. Students who exhibited the poorest behaviors made the largest improvements, with children in both the lowest and mid-to-low behavioral quartiles increasing their behavior ratings by .21 (p<.05 and .001).

Attendance

Because many schools keep attendance information only for the current school year, the attendance analysis is limited to school record information collected in the 1992-93 school year (the school year in which most 1992 Healthy Start operational grantees began to enroll core clients throughout the spring), while other school analyses include 1991-92 as well as 1992-93 information. Thus, attendance before Healthy Start is for a period of 1 semester to 3 quarters, whereas information after Healthy Start if for 1 quarter to 1 semester. Further, schools vary widely in the time period they use to report attendance data. To create a uniform reporting period for all schools, actual absentee information has been prorated to reflect the number of days a student would have been absent per school year.

With absentee rates of 12 and 13 days per school year, there was no significant difference in school attendance before or after Healthy Start involvement. Because our attendance information for most students is for less than 1 semester after they became involved with Healthy Start, it is early to expect these data to show impacts on attendance rates. Further, it also is important that if a student's intake date fell within the first third of a grading period, that grading period was considered to be "after Healthy Start." Thus, for those receiving semester grades, up to 2 months of attendance information included in the after-Healthy-Start category might actually have occurred before Healthy Start enrollment. It is possible that poor attendance during these few months just before intake was one of the precipitating reasons for the student's being referred to Healthy Start. Because at this time we are unable to completely distinguish attendance before and after Healthy Start, it is premature to analyze absentee rates fully or to conclude anything about impacts on them. When the evaluation obtains student records for a longer period of time after Healthy Start enrollment, more definitive analyses will be possible.

Grades

Schools vary widely in the metrics they use to grade students' academic performance. Some grades involved checks, pluses and minuses, whereas others are on a 5-point scale of A through F. To create a consistent grading scale across schools, grades for elementary and middle school students were converted to a 3-point scale, where 3 was assigned to outstanding or good grades (the equivalent of A or B), 2 to satisfactory grades (the equivalent of C), and 1 to grades that needed improvement or were unsatisfactory (the equivalent of D or F). Grades for high school students were more uniform and often corresponded to the traditional 5-point scale, where 4 is assigned to an A, 3 to a B, 2 to a C, 1 to a D, and no credit to an F. Where the metric of high school grades differed form this, grades were converted to this scale. Mean performance scores, or grade point averages (GPAs), were then created for each student for the interval of time in the 1991-1993 school years before the student became a Healthy Start core client, and for the period following the student's involvement in Healthy Start.

Table 5

STUDENT GRADE PERFORMANCE (GPA), BY QUARTILE

	GPA before Healthy Start	GPA after Healthy Start	Change in GPA after Healthy Start	n
Overall	2.08	2.15	**.07***	268
Initial GPA quartile				
Lowest	1.26	1.47	**.21***	67
Mid/low	1.83	1.87	**.04**	66
Mid/high	2.27	2.43	**.07**	68
Highest	2.90	2.93	**.03**	67

* p<.05; **p<.01.

As presented in Table 5, grades showed a marginal, though statistically significant improvement after students became Healthy Start core clients, with the average GPA for all students increasing form 2.08 to 2.15 (p<.05). As indicated earlier, we have school records for only a short period of time after students became Healthy Start core clients (often only 1 quarter); yet, surprisingly, even in that short time, positive gains in students' grades are noted.

Further, Table 5 indicates that the strongest gains were clearly made by those struggling the most with grade performance. Students in the lowest grade quartile experienced a .21 gain in GPA (p<.05), a gain 7 times greater than that experienced by those in the highest quartile.

Although it is possible that this improvement results form "regression to the mean"—the tendency for more extreme values measured at one point in time to moderate or tend back to the average value when measured a second time—the GPA measured for core students before their involvement in Healthy Start generally was averaged over more than one grading period, indicating that poor grades were not a one-time measurement phenomenon but a more pervasive problem of poor performers. Thus, a change in that pattern of poor performance is unlikely to occur by chance, but is more likely to result form direct intervention. Regression to the mean also would affect all poor performers equally, resulting in uniform changes across grade levels, for example; findings are not consistent with this scenario.

Here we've examined overall changes school performance for Healthy Start core students. The following section details variations in student grade point average (GPAs) associated with different kinds of Healthy Start programs. Student grades are highlighted as a summary measure of academic achievement.

Individual Variations

To address the question of whether some students were experiencing greater educational benefits form involvement with Healthy Start, we have examined changes in grades by school grade level, student gender and ethnic background.

Table 6

STUDENT GRADE PERFORMANCE (GPA), BY STUDENT CHARACTERISTICS

	GPA before Healthy Start	GPA after Healthy Start	Change in GPA after Healthy Start	n
Student grade level				
K through 8	1.97	2.07	**.10****	159
9 through 12	2.22	2.67	**.05**	109
Gender				
Male	1.96	2.06	**.10***	138
Female	2.24	2.25	**.01**	119
Ethnic Background				
African-American	1.75	1.82	**.08**	41
Asian	2.65	2.72	**.07**	54
Latino	1.96	2.01	**.05**	128
White	2.05	2.20	**.15**	34

* p<.05; **p<.01

As presented in Table 6, students in the primary grades experienced greater growth in their grade performance than did high school students; with students in grades K-8 exhibiting a 10 point gain ($p<.01$), compared with a 5 point gain in GPAs for those in high school. Most of the educational growth experienced by those in grades K-8 were experienced by those in the earliest grades. For example, those in grades K-3 showed a 15 point gain, while those in grades 4-8 only experienced a 1 point gain.

While girls had an overall higher GPA than boys, both before and after becoming Healthy Start core clients, boys experienced larger gains in their GPAs. Boys exhibited a 10 point gain ($p<.05$), while girls only experienced a 1 point gain.

Although student GPAs, both before and after becoming Healthy Start core clients differed by student ethnic background, student gains in GPA did not differ significantly for students with different ethnic backgrounds.

Program Variations

As indicated earlier, although no two Healthy Start programs were exactly alike, they can be grouped into four basic categories:

School-site family resource centers, (n=16) had an identified space at an operating school to which families could come for a variety of services on their own initiative or by referral form teachers, other service providers, or a service coordination team.

Satellite family service coordination teams (n=4) involve service centers that were not located at operating schools. Two of these satellite service centers emphasized identification of family needs and referral to community resources, whereas two provided more direct services.

Family service coordination teams (n=12) did not base their services around a physical location; rather, they featured teams of service professionals who assessed the goals and needs of students or families who had been identified as at risk and developed service strategies to address them. These programs also tended to involve more school personnel as project staff than did other types of programs.

Youth service programs (n=8) addressed the health, education, and social needs of adolescents. Five of these programs organized themselves around a school-based or school-linked health clinic, whereas three were organized to make accessible to their adolescent clients a broad array of services to improve their health, academic achievements, and the likelihood of staying in school.

There were noticeable differences among the four types of Healthy Start programs in the patterns of services they provided, as differences in the educational outcomes experienced by their students.

Table 7

STUDENT GRADE PERFORMANCE (GPA), BY PROGRAM TYPE AND GOALS

	GPA before Healthy Start	GPA after Healthy Start	Change in GPA after Healthy Start	n
Program Type				
School-site family resource centers	1.89	2.02	**.13**	46
Satellite family service centers	-	-	-	15
Family service coordination teams	2.02	2.12	**.10****	103
Youth Service Program	2.21	2.25	**.04**	104
Improving Education Outcomes is a Program Goal				
Yes	2.08	2.16	**.08***	236
No	2.01	2.03	**.02**	32

* p<.05; **p<.01.

As presented in Table 7, while students in Healthy Start programs characterized as school-site family resource centers experienced gains in their GPA, only those in programs characterized as family service coordination teams experienced a significant GPA increase (.10 gain; p<.01). This team-based approach, more heavily involves school staff and teachers than other kinds of programs. These team-based programs also tended to be less family focused and more student focused than were family resource or satellite centers. It is not surprising that students in youth service programs showed the smallest gains, since, as was indicated earlier, students in the earlier grades showed greater improvement in their grades than did those in the later grades, and youth service programs primarily served secondary school students.

Healthy Start programs also varied in the types of goals they hoped to achieve. More than 80% of the Healthy Start programs had specified "improving students' educational outcomes" as being a primary goal. Students in those programs that had a stated goal of improving educational outcomes had even greater educational gains than did those in programs that did not have clearly stated educational goals (a gain of .8, $p<.05$), compared with .2, not a significant improvement).

Linking Services to Outcomes

Healthy Start programs provided a broad array and intensity of services to Healthy Start families and children. The Healthy Start legislation called for the provision of support services that address at least four areas of children's and families' needs; thus, virtually all programs offered educational, health, mental health, and social services. Most Healthy Start projects went beyond these four areas of service to meet a broader array of clients needs. Furthermore, most projects provided a large number of preventive services in addition to interventions.

Academic services, especially tutoring and other academic interventions, such as homework clubs and peer tutoring programs, represented nearly a quarter of all services delivered (Figure 1). Medical health services, predominantly health screenings, accounted for an additional 19% of services. Basic needs provision (e.g., food, clothing, utilities assistance, transportation assistance, child and after-school care) and mental healthy services (primarily individual and group therapy) accounted for 14 and 13% of all services, respectively. Health education, which incorporated a wide range of topics form health enhancement (e.g., weight and stress reduction) to substance abuse prevention, accounted for 10% of the services. Family functioning services (primarily parenting education) accounted for an additional 5%.

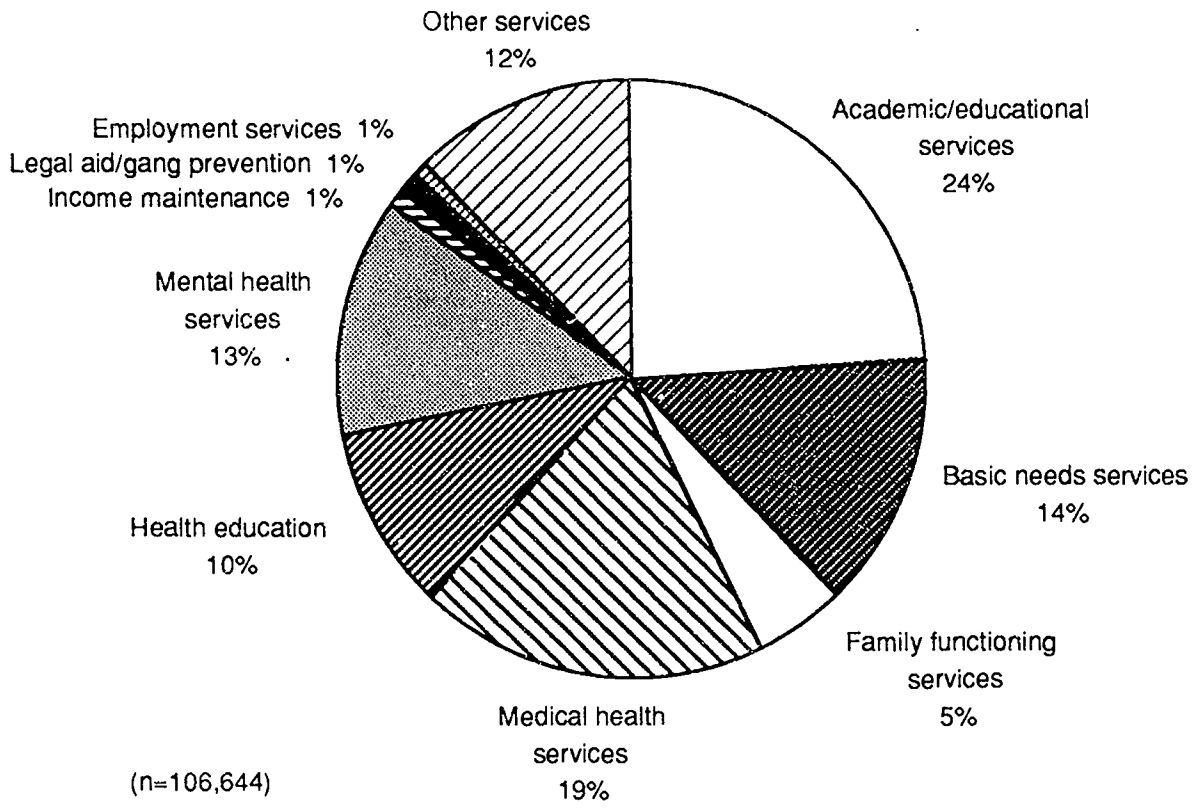

FIGURE 1 DISTRIBUTION OF RECORDED SERVICES DELIVERED

What is the relationship between receiving Healthy Start services and changes in education outcomes?

The conceptual framework, presented in Figure 2, has guided the Healthy Start evaluation form its initial design, and reflects what was known and hypothesized form existing research about comprehensive integrated school linked services. The framework was the basis for determining the components of the project and the contents of the data to be collected in each component. It is also the foundation for the analyses whose findings are reported here.

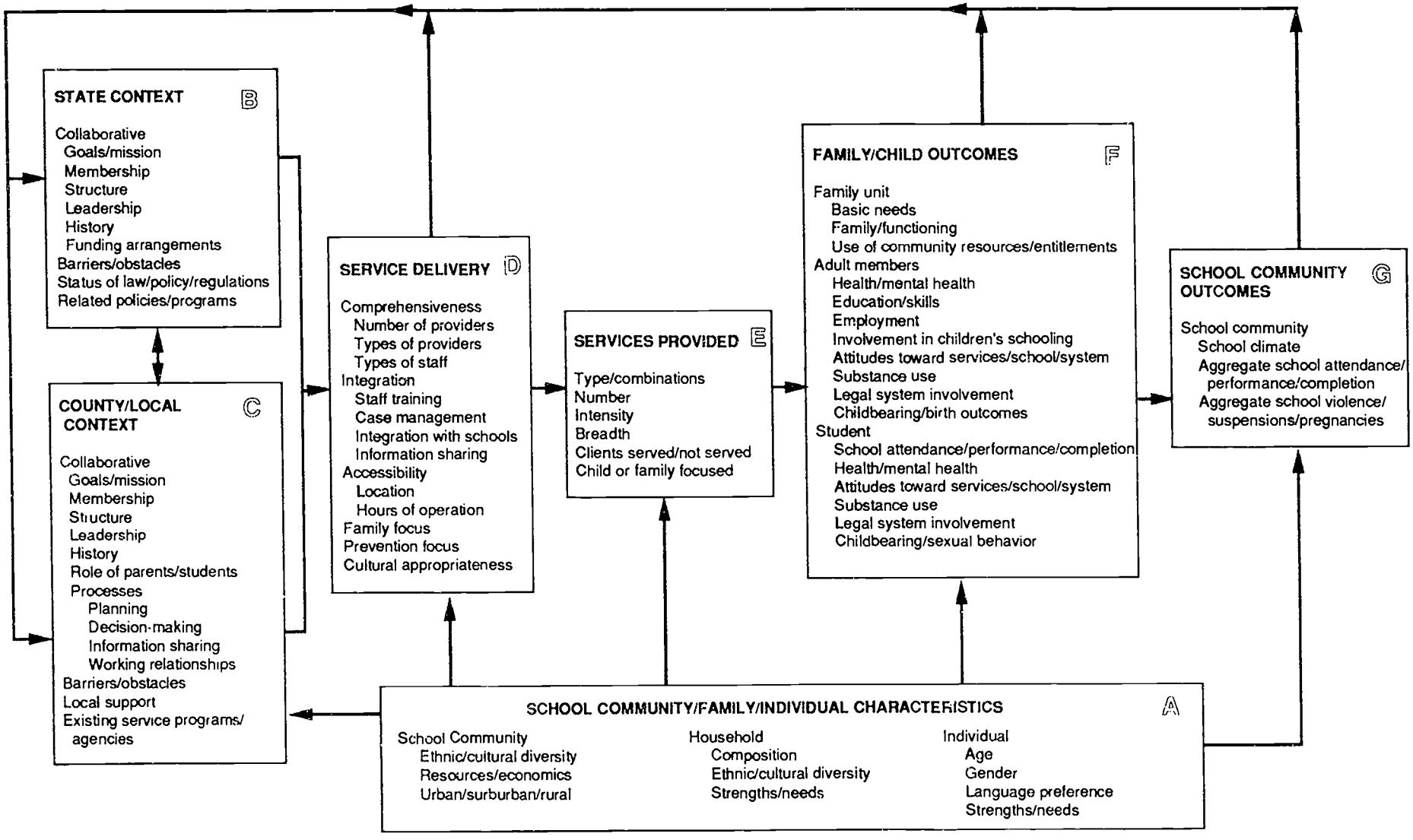

FIGURE 2 CONCEPTUAL FRAMEWORK OF THE HEALTHY START INITIATIVE

The framework suggests that the interrelationships among Healthy Start programs and services and the experiences and outcomes of children and families are many and complex. For example, we have seen that different kinds of Healthy Start programs served different kinds of clients. We also have shown that different programs are associated with different educational outcomes. However, we cannot be sure whether those different outcomes result form the differences in programs, form the differences in the clients served by them, or form other factors.

When factors related to outcomes are interrelated in this way, multivariate statistical analysis is a useful tool to disentangle the relationships between outcomes and the multiple factors that may contribute to them. Multivariate analysis identifies the independent contribution of each independent variable while holding constant the contributions of all other variables in the analysis. Thus, the impact of services on outcomes can be identified for clients that have essentially been made "statistical twins" on all other factors in the analysis. Here we explore the question of whether services contributed to improved educational performance, specifically the changes in their grade point average (GPA) that occurred form the period before intake to Healthy Start, to the semester or so after intake. Linear regression analysis is the technique used to identify contributors to change in this dependent variable.

Healthy Start programs provided a variety of educational services in hopes of improving students' school performance. To identify the contribution of services to changes in students' GPAs, we conducted separate analyses for each of four types of educational services—tutoring, counseling, advocacy, and parent education—as well as one for a combination of the four. We also included in the analysis a variable indicating whether or not the program that served students had a specific goal of improving educational performance. Also included was the grade level of students and the GPA they had earned before intake to Healthy Start, to determine whether earlier results suggesting that younger students and poorer-performing students were showing the greatest grade improvements were confirmed when other differences between students were held constant. The analyses also included aspects of students that other research has shown to be related to variations in educational performance, including the ethnic background of students and whether they received public assistance (Food Stamps or AFDC) as an indicator of poverty. Multivariate regression analyses coefficients are presented in Table 8.

Table 8

LINEAR REGRESSION COEFFICIENTS RELATING SERVICES TO CHANGES IN GPA

	Coefficients form Model Testing Relationship of GPA to:				
Change in GPA Related to:	Tutoring	School Counseling	School System Advocacy	Parenting Education	Total # of Academic Services
Being Latino (vs. white)	-.20	-.19	-.23	-.21	-.20
Being Asian (vs. white)	.08	.09	.05	.07	.09
Being African American (vs. white)	-.06	-.02	-.06	-.04	-.03
Receiving AFDC or Food Stamps	.06	.07	.06	.05	.06
Grade level in school	-.00	-.01	-.00	-.00	-.00
GPA before receiving Healthy Start services	-.23**	-.23**	-.24**	-.24**	-.24**
Each unit of service received	.36	.04	.00	.05	.02
Served by program with goal of improving academic performance	.06	.09	.07	.06	.08
Number of basic needs family has	-.10	-.11	-.11	-.11	-.11
r2	.13	.13	.13	.13	.13
n of students	104	104	104	104	104

When controlling for other factors in the analyses, students' ethnic background and grade level and whether they received public assistance were not significantly related to changes in GPA. However, there was a consistent pattern of Asian students doing marginally better than white students and Latino and African American students doing marginally less well than white students. Also, consistent with earlier analysis, those who were having the most educational problems before Healthy Start experienced the greatest educational growth; students' GPA before Healthy Start was significantly related to changes in GPA ($p<.01$).

Students in programs with a stated goal of improved school performance were consistently more likely to show GPA gains than were students in programs that did not have

an overtly stated educational objective, although differences were quite small and not statistically significant. Also, all measures of educational services were consistently and positively related to improved educational outcomes. with tutoring programs showing the greatest impact. However, again, differences were small and not statistically significant at this early stage in the Healthy Start program. Yet the pattern of effects suggests that independent of other factors, receiving a greater number of tutoring, counseling, or advocacy services or having parents who participated in greater numbers of parenting education sessions each was positively, though not significantly, associated with small improvements in GPA. The sum of all of these kinds of educational services also was marginally but positively related to small GPA improvements.

Thus, the pattern of data suggests that educationally oriented services may contribute to small gains in school performance even after relatively short participation in those services. Yet the Healthy Start Initiative assumes that educational performance can be improved not just through addressing students' educational needs directly, but also through meeting other needs that present barriers to learning, such as poor health, being hungry, or experiencing family stresses. Analyses confirm that, controlling for other differences between them, students form families who had needs for food, clothing, or other such basics were less likely to experience gains in educational performance than students with fewer of such needs. Thus, meeting families' basic needs presents an opportunity to eliminate barriers to learning. Further, we have found a strong and significantly positive relationship between providing basic needs services through Healthy Start and reduction in such needs, suggesting that Healthy Start basic needs services were effective in reducing the problems they were intended to ameliorate and, thus, reducing the barriers to learning presented by deficits in such basics as food and clothing.

In short, it appears that it helps to help. We are beginning to see a pattern of positive associations between providing a variety of services through Healthy Start programs and achieving positive education impacts for children and families, although impacts are small at this early stage and often not statistically significant when differences between students are controlled for. Healthy Start grantees are funded for 3 years, and the statewide evaluation will track their development over that time. We are currently in the process of collecting school performance information for more than 2,000 Healthy Start core students. Further evaluation will assess whether continued participation in services is associated with larger gains over time.

REFERENCES

Adler, L. and Gardner, S. (Eds.), (1994). *The politics of linking schools and social services.* Washington, DC: Falmer.

California Department of Education. (1992). *SB 620/Healthy Start grant application materials.* Sacramento, CA: California Department of Education., p.7.

Gomby, D.S. and Larson, C.S. (1992). Evaluation of school linked services. *The Future of Children,* 2 (1), 68-84.

Levy, J.E. and Shepardson, W. (1992). A look at current school-linked service efforts. *The Future of Children*, 2(1), 44-55.

Market Data Retrieval. (1993). *CIC's school directory, California.* Shelton, CT.

Mattessich, P.W., and Monsey, B.R. (1992). *Collaboration: What makes it work. A review of research literature on factors influencing successful collaboration.* St. Paul, MN: Amherst H. Wilder Foundation.

Melaville, A. I., and Blank, M.J. (1993). *Together we can. A guide for crafting a profamily system of education and human services.* Washington, DC: U.S. Department of Education, U.S. Department of Health and Human Services.

United States General Accounting Office (1993). *School-linked human services. A comprehensive strategy for aiding students at risk of school failure.* Report to the Chairman, Committee on Labor and Human Resources, U.S. Senate, Washington, DC. Human Resources Division.

Wagner,M., Blackorby, J., and Hebbler, K. (1993). *Beyond the report card: The multiple dimensions of secondary school performance for students with disabilities.* Menlo Park, CA: SRI International

Appendix A

OVERVIEW OF DATA COLLECTION

Healthy Start Instrument/Survey Matrix

Instrument/Survey	Respondent Pool	Data Collection Time Interval	Number Collected	Response Rate
Instruments for Documenting Collaborative Processes:				
Phone Interview--coordinator	All Healthy Start coordinators	February 1993	40	100%
Phone Interview--agencies	A sample of public agency personnel involved in the collaborative (4-6 per site)	February 1993	151	90%
Collaborative Membership List	All Healthy Start coordinators	March 1993 October 1994	37	93%
Principal Survey	Principals of all schools affiliated with Healthy Start programs	Spring 1993 Spring 1995	82	65%
School Staff Survey	Random sample of school personnel in schools affiliated with Healthy Start programs	Spring 1993 Spring 1995	509	70%
Healthy Start Project Staff Survey	All Healthy Start project staff members	Spring 1993 Spring 1995	249	76%
Coordinator Survey	All Healthy Start coordinators	Spring 1993 Spring 1994 Spring 1995	36	90%
Public Agency Survey	All remaining public agency personnel involved in the collaborative who were not interviewed by phone	Spring 1993 Spring 1995	68	68%

Healthy Start Instrument/Survey Matrix (continued)

Instrument/Survey	Respondent	Data Collection Time Interval	Number Collected	Response Rate
Instruments for Documenting Services				
Encounter Log/Form	Healthy Start project staff	Every time a project staff member has contact with a client	15486	Not applicable
Referral Follow-up Log/Form	Healthy Start project staff	Every time a project staff member follows up on an external referral s/he made	802	Not applicable
Attendance Sheet	Healthy Start project staff	Every time a small group event occurs	2317	Not applicable
Event Description Form	Healthy Start project staff	Every time a large service event occurs	662	Not applicable
Instruments for Documenting Client Outcomes				
Intake/Assessment Form	Healthy Start project staff	Each time a new core family or youth is enrolled for services	1796	Not applicable
Follow-up Assessment Form	Healthy Start project staff	Approximately 6 months after corresponding intake assessments	400	Not applicable
Parent/Caregiver Questionnaire	Self administered by parents	At intake assessment and all follow-up assessments	486	Not applicable
Student Questionnaire	Self administered by secondary school youth	At intake assessment and all follow-up assessments	369	Not applicable

Healthy Start Instrument/Survey Matrix (concluded)

Instrument/Survey	Respondent	Data Collection Time Interval	Number Collected	Response Rate
Instruments for Documenting School-level Outcomes				
Student Abstracts	Healthy Start project staff or school personnel	Winter 1994 Spring 1995	545	81%
School Background Survey	Principals of all schools affiliated with Healthy Start programs	Fall 1993 Spring 1995	100	79%
Average Daily Attendance Survey	Healthy Start coordinators and Budget and Finance directors	Winter 1994 Spring 1995	108	85%

Appendix B

OTHER REPORTS BASED ON THE HEALTHY START EVALUATION

Reports and Papers Available from the Statewide Evaluation of California's Healthy Start Initiative

Order No.	Title	Unit Price	Quantity	Total Price
197	*Collaborative Planning for School-Linked Services: An Evaluation of California's Healthy Start Planning Grants*, by Mary Wagner, February 1994 (70 pages)	$10.00 + $.83 tax within Calif.		
198	*Implementing School-Linked Services: A Process Evaluation of the First Year of California's Healthy Start Initiative*, by Mary Wagner, Debra Shaver, Lynn Newman, Marjorie Wechsler, Fiona Kelley, & Shari Golan, February 1994 (94 pages)	$12.00 + $.99 tax within Calif.		
199	*A Healthy Start for California's Children and Families: Early Findings from a Statewide Evaluation of School-Linked Services*, by Mary Wagner, Shari Golan, Debra Shaver, Lynn Newman, Marjorie Wechsler, & Fiona Kelley, June 1994 (158 pages)	$18.00 + $1.49 tax within Calif.		
205	*Developments in Collaborative Planning for School-Linked Services: Findings from the Second-Year Evaluation of Planning Grants in California's Healthy Start Initiative*, by Shari Golan, Fiona Kelley, and Mary Wagner, February 1995 (88 pages)	$12.00 + $.99 tax within Calif.		
			Add $10 handling fee if payment is not enclosed:	
			Subtotal:	
			(In CA add appropriate state and local sales tax) **Tax:**	
Shipping and handling within the U.S., Canada, and Mexico are included. Payment must accompany order. If payment not included, $10.00 service charge for invoicing.			**Total:**	

Ship to:

Name _____

Affiliation _____

Address _____

_____

City, State, ZIP _____

Mail order form and payment (payable to the order of SRI International) to:

SRI International
Room BS178
333 Ravenswood Avenue
Menlo Park, CA 94025-3493
Telephone: (415) 859-5109
Fax: (415) 859-2861

Note: Our federal tax ID number is 94-1160950
Our California tax ID number is SR BHA 20-141387