

**School-Based Health Centers
A Program of the New York City
Department of Health and Mental Hygiene (DOHMH)**

PROGRAM REVIEW SUMMARY

This overview of the New York City Department of Health and Mental Hygiene (DOHMH) CEO-funded school-based health centers (SBHC) is based on a program review conducted by Westat/Metis staff for the evaluation of the Center for Economic Opportunity (CEO) initiatives. The data were collected between January and July 2008 through interviews with relevant staff of the CEO, DOHMH, provider agencies of the SBHC sites, SBHCs, principals from the host schools, and the Mailman School of Public Health Center for Community Health and Education (CCHE)¹ at Columbia University and a review of program documents from SBHCs and program documents and monthly/quarterly data and management reports from DOHMH through June 2008.

Sponsoring Agency: New York City Department of Health and Mental Hygiene (DOHMH)

Provider Agencies: Montefiore Medical Center (provider for Evander Childs Campus and Lehman Campus); Morris Heights Health Center (provider for Health Opportunities Campus); Health and Hospital Corporation, North Brooklyn Network (provider for Acorn High School); Health and Hospital Corporation, Queens Hospital Center (provider for Springfield Gardens Campus)

Start Dates:	Evander Childs Campus	September 4, 2007
	Lehman Campus	March 10, 2008
	Health Opportunities Campus	May 27, 2008
	Springfield Gardens Campus	September 2, 2008
	Acorn High School	June 23, 2008

CEO Budget: FY08: \$1.3 million (program expenses); \$1 million (capital expenses)²

Target Population: The target population for this program is any high school student, regardless of insurance status, registered in target public school campuses in the Bronx, Brooklyn, and Queens that are serving economically disadvantaged youth. Across all campuses, the majority of students were eligible for free lunch and were Black or Hispanic/Latino.

Statement of Need: Teen pregnancy and birth continue to be serious health and poverty issues in New York City. In 2004, there were 8,415 births and 13,859 abortions to 15-19 year old females citywide. Teen pregnancy rates are highest among Black and Hispanic teenagers.^{3,4} Teen mothers are also less likely to complete high school and earn an adequate living. As a result, young mothers are more likely to require public assistance to support themselves and their children.⁵ In addition, increased school absenteeism has been documented in adolescents with chronic diseases including diabetes and asthma, subsequently leading to decreases in school performance.⁶

¹ Provides technical assistance and training to DOHMH's SBHCs on the delivery of reproductive health care services.

² Information on funding levels for specific SBHCs was not available to the evaluators at the time of this writing.

³ Data from DOHMH Bureau of Vital Statistics.2006

⁴ Data from DOHMH Bureau of Vital Statistics. Analyses conducted by Bureau of Maternal, Infant & Reproductive Health, 2006.

⁵ Sawsan, A.S., Gantt, A., and Rosenthal, M.S. (October 15, 2004). "Pregnancy Prevention in Adolescents." *American Family Physician*.

⁶ Schwimmer, J.B., Burwinkle, T.M., & Varni, J.W. (2003). "Health-Related Quality of Life of Severely Obese Children and Adolescents." *Journal of the American Medical Association*, 289: 1813-1819.

Goal and Services: The main goal of SBHC is to reduce the incidence of teen pregnancy and birth by providing a full range of on-site confidential reproductive health care services, including risk reduction counseling, STI testing and treatment, HIV testing, family planning counseling, pregnancy testing, and dispensing of contraceptives, including emergency contraception. In addition, the program aims to improve the physical and mental health status of students enrolled in these schools by guaranteeing them access to primary and preventive care; improve student knowledge of preventive health practices in order to reduce risk-taking behaviors and encourage health-promoting behaviors; provide early detection of acute and chronic disorders; provide initial treatment of emergent conditions and make referrals when appropriate; and detect and provide counseling for emotional or psychosocial stress. Mental health services are being provided in four of the five SBHCs; mental health referrals will be made in all SBHCs.

Eligibility Criteria: Registration in the school for any program is the only eligibility requirement. In order to enroll and receive all services offered by the SBHC, students are required to submit an enrollment form signed by a parent.⁷ If a student who is not enrolled needs primary care, depending on the seriousness of the condition, SBHCs usually contact a parent to obtain permission or request that the student submit a signed enrollment form. However, students do not need parental consent if they need emergency contraception or other reproductive health/confidential care based on state law. All students can receive first aid, regardless of enrollment status.

Targets/Outcomes: The target and actual numbers for the categories presented below, as well as the percentage of each target obtained, are as of June 31, 2008.

Table 1. Enrollment and Utilization in SBHCs⁸

Schools	Schools Enrollment Numbers	Target Enrollment Numbers ⁹	SBHC Enrollment Numbers	Percent of Enrollment Target Met	Utilization #	Utilization Rate ^a
Evander	2,681	1,072	1,033	96%	304	29%
Lehman	4,691	1,876	836	45%	115	14%
Health Opportunities	982	393	153	39%	142	93%
Acom	644	258	30	12%	-	-
Springfield Gardens	N/A ^b	-	-	-	-	-

^a Utilization rate = Utilization #/SBHC enrollment number.

^b Springfield Gardens did not provide data.

Source: For Evander, Lehman, and Health Opportunities, data from the Q2 2008 Quarterly Reports from DOHMH to CEO are reported.

Acorn's figures are based on the monthly report from DOHMH to CEO dated July 9, 2008.

⁷ Students ages 18 and over can sign up for SBHC services on their own.

⁸ Information in this table is based on most recent Quarterly Reports in order to avoid duplicate counts.

⁹ As noted earlier, during the first year of operation, the target numbers are based on 40% of the school enrollment.

Selected Key Findings

Fidelity to the Program Model. For the two sites (Evander and Lehman) that were in operation for much or all of the 2007-08 school year, evidence suggests that the program maintains fidelity to its theoretical model. For the remaining three sites, it is too early to assess fidelity to the theoretical model, particularly with respect to the delivery of services.¹⁰ However, we know from interviews that these sites were beginning to recruit and enroll students, building their staff, and meeting with principals and other school staff to coordinate support for the SBHCs.

Characteristics of the Clients Served in Comparison to the Target Population. According to the CEO data from April through June 2008, at Evander more than one third of enrolled users of the SBHC were Black (37%) or Hispanic (37%). Although half (50%) of those enrolled in the SBHC were male, a higher proportion of males (55%) used the SBHC compared to females (45%). At Evander, most users (44%) did not have health insurance; more than a third (37%) had Medicaid. At Lehman, the majority of users were Hispanic (61%), followed by Black (25%). The great majority of users were female (65%). The majority did not have health insurance (54%); more than a third (38%) had Medicaid.

Service Delivery. SBHCs are open during the school year during school hours as well as immediately after school. Typically, a student can walk into the Center and receive services or schedule an appointment through the office manager or medical assistant, depending on the seriousness of the problem. The medical provider conducts physical examinations, treats chronic and acute conditions, administers immunizations, and dispenses medication. The mental health/social worker provides individualized counseling and therapy as needed. A student may also be referred to the health educator, if needed. SBHCs are required by CEO to arrange with the provider agency for its enrollees to have 24-hour-a-day access to emergency care and access, as needed.

Provider Capacity. All four provider agencies are deeply rooted in their communities, have extensive experience in running SBHCs, and can provide a network of services to participants outside of the SBHC. Montefiore operates a total of 15 SBHCs: seven on high school campuses (representing over 20 schools), two in middle schools, and six in elementary schools. Morris Heights, which began as a community development initiative in 1979, supported its first SBHC in 1982 and currently operates seven additional SBHCs. With the new CEO-funded SBHC at Acorn High School, the North Brooklyn Health Network is now operating three SBHCs. Queens Hospital Center has operated an elementary school SBHC since 1997. However, the emphasis on reproductive health was a new element for the school-based programs and some of the Center staff. Although provider agencies have demonstrated the capacity to implement their programs, first-year experience indicates that providers are not able to easily manage the processing and reporting of data.

Agency Management. DOHMH is highly committed to building the capacity of SBHCs to deliver comprehensive health care services, including reproductive health and chronic illness management. DOHMH started funding SBHCs in 1993. In addition to the five CEO-funded SBHCs, the Department supports seven additional SBHCs. The availability of CEO funding allowed it to develop a process for including comprehensive reproductive health services in the SBHCs. In order to get the SBHCs up and running for the CEO program, the Director of Special Projects and the Manager of SBHCs in the Office of School Health were required to shepherd the preparation efforts for licensing. DOHMH provided ongoing support through site visits, frequent telephone calls, and careful and thorough review of monthly and quarterly data. Because of the variation in when programs started, there have not been meetings, other than the technical assistance provided on reproductive health, where agency staff shared experiences with the implementation of the SBHCs.

¹⁰ Health Opportunities did provide services, but did not open until the end of the school year.

Early Outcomes. Early implementation efforts showed many positive aspects of the initiative. A well-defined reproductive health protocol has been one of the strongest elements. Other strengths include the providers' clearly defined approaches to comprehensive health services, strong support from the principals, and an understanding of auxiliary efforts needed to engage school administrators, teachers, and other key stakeholders.

It takes considerable time and effort to build enrollment. The timing of recruitment events can affect a site's ability to enroll students, and most of the SBHCs started well into the school year or at the end of the school year. Most sites experienced delays in obtaining state certification. Other hindrances to enrollment included negotiating different requirements from multiple high schools co-located in the building; getting parents to sign enrollment forms (e.g., forms may not get to the parents, students already have a provider, parents have concerns about reproductive health services), and issues associated with having both middle school and high school populations on campus (e.g., two types of consent forms).

As a result of the efforts of DOHMH to prioritize CEO-funded Centers with both DOE and NYSDOH, three of the SBHCs were serving youth during the 2007-2008 school year. Table 2 provides an overview of some of the services provided.

Table 2. SBHC Primary Health, Mental Health and Reproductive Health Care¹¹

Total # Enrolled	# Utilizing Center (female/male)	# Primary Health Patients (Female/Male)	# of Mental Health Visits	# of Repro. Health Visits
2022	1624 (899/733)	1454 (853/601)	866	846

Source: Quarterly Reports

Conclusions and Recommendations.

As implemented, the CEO-funded SBHCs are in alignment with the stated goals. Early implementation efforts showed positive aspects of the program.

- Well-defined reproductive health protocol, with ongoing support, has been one of the strongest elements of the program.
- CEO funding to the five SBHCs leveraged DOHMH's ability to increase the provision of reproductive health services to other city-funded SBHCs.¹⁴
- Clearly defined approaches to comprehensive health services are reflective of the providers' experience in this area (identification of assessments, forms, staffing needs).

¹¹ Numbers reflect totals for the quarters that schools were in operations. Data may duplicate students served in multiple quarters.

¹² Evander and Lehman reported only on enrolled users. Health Opportunities figure includes enrolled and non-enrolled users.

¹³ Health Opportunities reported 41 enrolled users (34 female, seven male), and 101 non-enrolled users (95 female, five male).

¹⁴ A grant has been recently awarded to CCHE to expand the reproductive health protocol to all 40 high school SBHCs throughout NYC over the next 3 years.

- The programs had support from the principals and an understanding of auxiliary efforts needed to engage school administrators, teachers, and other key stakeholders (Wellness/Advisory Councils, Center tours, participation in other school events and meetings).

The SBHCs had some difficulties. First, recruitment efforts proved more difficult than anticipated, primarily because recruitment was not synchronized with school opening in the fall and because recruitment cannot really begin until NYSDOH certification is received.

A number of recommendations were suggested or have resulted from the program review.

- DOHMH and/or providers may want to consider additional support/technical assistance on recruitment, fine-tuning recruitment strategies to better reach the target population (more outreach to males and grades above 9, and making enrollment packets available for students to pick up and take home anonymously).
- Determine which recruitment strategies have been most effective in getting students to enroll to date and step up efforts in these areas (for example, ask students when they enrolled how they found out about the program).
- Develop strategies to deal with any real (getting enrollment forms to parents) or perceived barriers (dispelling misconceptions about the contraceptives, the Centers themselves, and the youth's privacy rights) to seeking services in the Centers. One medical director commented on the need for additional patient information brochures (such as brochures that discuss what contraceptives work and patients rights) to circulate among youth.
- Develop a system to track students who have been seen for reproductive health issues.
- Track receipt of parents who received enrollment packet and have not yet enrolled; follow up with students and parents to urge enrollment.
- Establish better tracking of health education sessions, differentiating between individual and group sessions, and reporting what topics were covered.
- Establish better tracking of mental health services, reporting specifically what services are provided. Consider establishing targets for the provision of mental health services.
- Expand SBHC reporting requirements to include reporting of gender and race/ethnicity for users of mental health services, as is done for RH services.
- Conduct a formal assessment of the quality of service data submitted by providers. This assessment should establish that the data reported to the agency and CEO can be verified with clinic usage information that is collected by provider staff as visits occur and services are provided.
- Once programs are fully implemented, begin to examine outcomes such as changes in reproductive health knowledge, risk behaviors, school absences, and graduation rates.
- Offer technical assistance to increase the use of automation and uniformity of data collection processes.

**School-Based Health Centers
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PROGRAM REVIEW REPORT

1. Introduction

The Center for Economic Opportunity (CEO) has funded approximately 40 initiatives across some 20 sponsoring agencies aimed at reducing the number of working poor, young adults, and children living in poverty in New York City. CEO is committed to evaluating its programs and policies and is developing a specific evaluation plan for each of its initiatives. For example, several major new initiatives will implement random assignment evaluations or other rigorous designs. Some programs are slated to receive implementation and outcome evaluations, while others may be evaluated using readily available administrative data. This differentiated approach reflects the varied scale of the CEO interventions, data and evaluation opportunities, and finite program and evaluation resources. Westat and Metis Associates are evaluating many of these programs on behalf of CEO. The purposes of the evaluations are to collect and report data on the implementation, progress, and outcomes of the programs in the CEO initiative to inform policy and program decision-making within CEO and the agencies that sponsor the programs.

The first phase of the Westat/Metis evaluation is to conduct a systematic review of selected CEO programs. The program reviews involve Westat/Metis staff reviewing program documents, obtaining available implementation and outcome data, interviewing program administrators, and, where appropriate, going on-site to observe program activities and interview direct service staff and participants. The results are used to assess the program design and implementation, develop a logic model to represent the underlying theory of each program, determine the extent to which the program meets key CEO criteria, examine the measurement and information systems for the program, and provide options for next steps.

Information and data for this Program Review Report are based on interviews conducted by Westat/Metis between January and July 2008 with relevant staff of the CEO, DOHMH, provider agencies of the SBHC sites, SBHCs, principals from the host schools, and the Mailman School of Public Health Center for Community Health and Education (CCHE)¹ at Columbia University, as well as a review of program documents from SBHCs and program documents and monthly/quarterly data and management reports from DOHMH through June 2008.

This Program Review Report provides an overview and assessment of the five CEO-funded SBHCs on several dimensions, including their goals, fidelity to the program model, target population and clients served thus far, program services, and agency management. CEO and the relevant sponsoring agency were invited to identify specific questions of interest to be included as part of these standardized program reviews.

A key analytic tool in the program review is development of a logic model that serves as a visual representation of the underlying logic or theory of a program. The program logic model details the

¹ Provides technical assistance and training to DOHMH's SBHCs on the delivery of reproductive health care services.

program's context, assumptions, and resources and their relationships to one another. By examining the program's internal logic and external context, the evaluation team and reader are able to determine if the program design is consistent with overall goals and capable of achieving its intended outcomes. Toward this end, this brief focuses on early outcomes and the challenges faced in achieving them.

The School-based Health Centers (SBHC) program is designed to address poverty through provision of comprehensive health care and health education addressing health issues that can result in decreased school attendance, behavioral problems, or poor performance. The initiative provides services at five high school campus sites in three boroughs of New York City (NYC).

Adolescents are the least likely of any age group to have health insurance or to seek health care at a provider's office, even when insured. School-based health centers were originally developed to address the low health care utilization rates of school-aged children.⁸ Increased school absenteeism has been documented in adolescents with chronic diseases including diabetes and asthma, subsequently leading to decreases in school performance.²

Teen pregnancy and birth are also serious health and poverty issues in NYC, resulting in poor educational and employment outcomes for teen parents, especially young mothers. Prospects for the children of teen mothers are even worse; these children are at higher risk of low birth weight, child abuse, and behavior disorders.³ The most recent findings from the 2007 Youth Risk Behavior Survey found that among NYC high school students:

- 48 percent have had sex, and 30 percent are sexually active;
- 11 percent reported having sex before age 13;
- 69 percent use condoms (as compared to 63 percent nationwide);⁴ and
- 8 percent use the birth control pill (versus 18 percent nationwide).

In addition, studies have shown an increase in the use of contraception and a decrease in the rate of teen pregnancy when school-based health centers provide reproductive health services.^{5,6}

Research suggests that SBHCs that offer onsite reproductive health care services can help to increase use of contraception among teens and reduce the incidence of teen pregnancy. These services include one-on-one counseling, the provision of contraceptives and condoms, and the dissemination of educational materials.^{7,8} Kirby (2001) conducted a review of research on a wide

² Schwimmer, J.B., Burwinkle, T.M., & Varni, J.W. (2003). "Health-Related Quality of Life of Severely Obese Children and Adolescents." *Journal of the American Medical Association*, 289: 1813-1819.

³ New York City DOHMH (August 2007). "Teen Sexual Activity and Birth Control Use in New York City." *NYC Vital Signs*, 6(3).

⁴ The higher percentage of condom use reported by NYC youth may be the result of the Department of Education (DOE) condom distribution program instituted in NYC high schools in 2006.

⁵ Zabin, L.S., Hirsch, M.B., Smith, E.A., Streett, R., & Hardy, J.B. (May-June, 1986). "Evaluation of a Pregnancy Prevention Program for Urban Teenagers." *Family Planning Perspectives* 18(3): 119-126.

⁶ Koo, H.P., Duntzman, H., George, C., Green, Y., & Vincent, M. (Sept.-Oct., 1994). "Reducing Adolescent Pregnancy Through a School- and Community-Based Intervention: Denmark, South Carolina, Revisited." *Family Planning Perspectives*, 26(5): 206-211, 217.

⁷ Zabin, L.S., Hirsch, M.B., Smith, E.A., Streett, R., & Hardy, J.B. (May-June, 1986). "Evaluation of a Pregnancy Prevention Program for Urban Teenagers." *Family Planning Perspectives*, 18(3): 119-126.

⁸ Koo, H.P., Duntzman, H., George, C., Green, Y., & Vincent, M. (Sept.-Oct., 1994). "Reducing Adolescent Pregnancy Through a School- and Community-Based Intervention: Denmark, South Carolina, Revisited." *Family Planning Perspectives*, 26(5): 206-211, 217.

range of programs to prevent teen pregnancy.⁹ According to this review, many studies of schools with health centers have consistently shown that the provision of condoms or other contraceptives through schools *does not* increase sexual activity. These studies also show that substantial proportions of sexually experienced students have obtained contraceptives from these programs. Two studies suggested that SBHCs or school-linked centers *did* increase use of contraception when they focused much more on contraception, gave clear messages about abstinence and contraception, and provided or prescribed contraceptives. Because SBHCs provide comprehensive primary care services, they also offer a non-stigmatized environment for reproductive health services.

The SBHCs operate under the jurisdiction of the New York State (NYS) Department of Health (DOH), which reviews and approves applications to establish the centers and provides oversight for their ongoing operation. In NYC, the SBHCs are managed by the Office of School Health, a joint office of the NYC Department of Health and Mental Hygiene (DOHMH) and the Department of Education (DOE). At present, there are 122 SBHCs in NYC, of which 40 are based in NYC high schools.

According to staff from DOHMH, the CEO SBHCs, which receive their funding from the city, are distinct from the NYS-funded SBHCs in three key areas: level of funding, services offered, and process and timeline for start-up:

- The State-funded SBHCs receive allocations to support a staffing plan based on overall enrollment in the Center, with funding levels varying depending on the size of the school, the provider, etc. Providers supplement State funds through Medicaid reimbursements for services delivered, in-kind resources from the parent agency, and other funding sources (e.g., grants). In contrast, the CEO/City-funded SBHCs received approximately twice the amount of funding provided by NYS DOH so that they could provide the full spectrum of services incorporated into the SBHC model as originally conceived.
- In addition to providing a full range of primary/preventive health care services (and in many cases mental health services), the CEO-funded sites are funded at higher levels in order to provide reproductive health care, including risk reduction counseling, STI testing and treatment, HIV testing, family planning counseling, pregnancy testing, and dispensing of contraceptives, including emergency contraception. Funding restrictions as well as other factors (e.g., lack of support from school and/or provider agency, lack of provider capacity) prevent other SBHCs from offering these reproductive health care services. The other seven City-funded sites provide comparable services. DOHMH also funded SBHCs since 1993. When CEO funding was provided, DOHMH made the decision to bring all City-funded SBHCs to the same level. Funding was cobbled together for these agencies to expand their service provision to include reproductive health services.
- The CEO-funded SBHCs benefitted from an expedited approval process. While much of the groundwork had been laid for a number of years prior to the CEO initiative for some of the City-funded SBHCs (e.g., at Evander), the priority that the CEO initiative placed on this program helped to facilitate the multiple steps involved in getting the requisite approval

⁹ Kirby, D. (May 2001). *Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy*. The National Campaign to Prevent Teen Pregnancy.

from DOH (e.g., review by and approval from the DOE’s Portfolio Committee, renovations to the SBHC facilities, and state inspection/approval).

CEO funded five SBHCs beginning in Fiscal Year (FY) 08. The five Centers are run and staffed by professionals from four medical health Centers. Table 1 displays the provider agencies and their respective SBHC sites and start-up dates.

Table 1. SBHC Provider Agencies and Sites

Provider Agency	SBHC Site	Start-Up Date
Montefiore Medical Center	Evander Childs Educational Campus ¹⁰ (Bronx)	September 4, 2007
	Herbert H. Lehman Educational Campus ¹¹ (Bronx)	March 10, 2008
Morris Heights Health Center	Health Opportunities Educational Campus ¹² (Bronx)	May 27, 2008
NYC Health and Hospitals Corporation (HHC)/North Brooklyn Network	Acorn High School for Social Justice (Brooklyn)	June 23, 2008
HHC/Queens Hospital Center	Springfield Gardens Educational Campus ¹³ (Queens)	September 2, 2008

2. Overview and Assessment of the Program

Program Goals. As shown in the logic model, the main goal of SBHC is to reduce the incidence of teen pregnancy and birth by providing a full range of on-site confidential reproductive health care services, including risk reduction counseling, STI testing and treatment, HIV testing, family planning counseling, pregnancy testing, and dispensing of contraceptives. The guiding assumption is that when SBHCs provide comprehensive reproductive health services, use of contraception among teens will increase and the rate of teen pregnancy and birth will decrease, leading to more positive educational and employment outcomes for young people, especially young women. In addition, the program aims to improve the physical and mental health status of students enrolled in these schools by guaranteeing them access to primary and preventive care; improve student knowledge of preventive health practices in order to reduce risk-taking behaviors and encourage health-promoting behaviors; provide early detection of acute and chronic disorders; provide initial treatment of emergent conditions and make referrals when appropriate; and detect and provide counseling for emotional or psychosocial stress. Mental health services are being provided in four of the five Centers; mental health referrals are made in all Centers.

All five high school campuses are new sites for SBHCs (one SBHC on each campus); however, all of the provider agencies have experience in implementing other SBHCs in their respective

¹⁰ Includes six small high schools: Bronx Academy of Health Careers, Bronx Aerospace High School, Bronx High School for Writing & Communication Arts, Bronx Lab School, High School for Contemporary Arts, and High School of Computers & Technology.

¹¹ Includes Herbert H. Lehman High School and Renaissance High School of Musical Theater & Technology.

¹² Includes Health Opportunities High School and the Community School for Social Justice.

¹³ Includes Excelsior Preparatory High School, George Washington Carver High School for the Sciences, Preparatory Academy for Writers, and Queens Preparatory Academy.

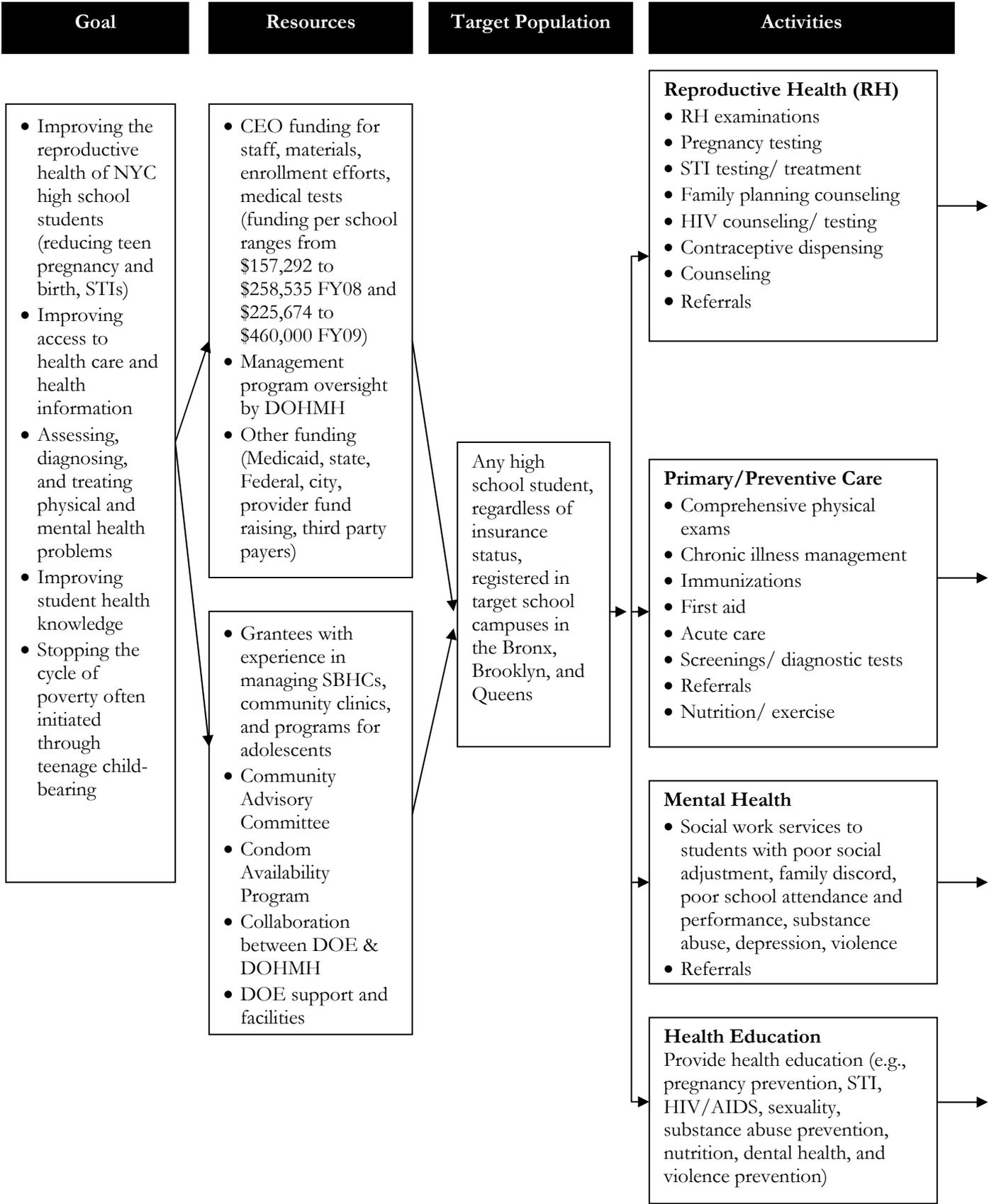
communities. The sites were selected by CEO based on locations within specific community districts that had high rates of poverty and teen pregnancy and birth;¹⁴ available clinical space appropriate for a SBHC, needing only limited renovation or construction; and support from the principal, including principals of all schools co-located in the same building.¹⁵ CEO added funding in FY09 for an additional Center.

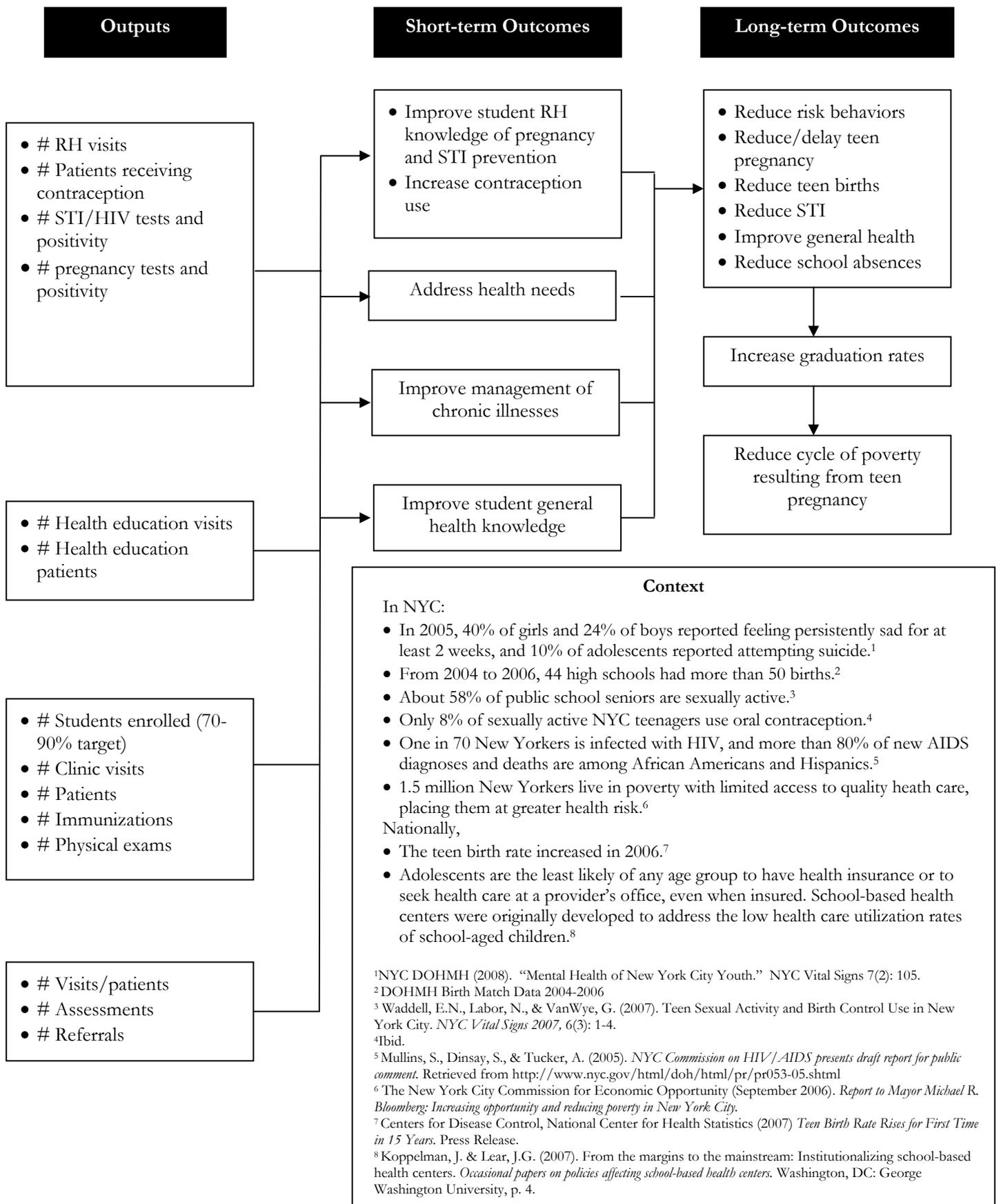
The SBHC program model is displayed in a logic model—or theory of action—format on the following two pages. The logic model includes the program’s context, assumptions, and resources. Each activity is linked to the number of individuals targeted to participate in the different activities (outputs), as well as short- and long-term participant outcomes.

¹⁴ Please note that students may live outside of the community district where their school is located. Poverty is measured by the percentage of students receiving free and reduced cost lunch.

¹⁵ Of the five campus locations where CEO funded clinics, only Acorn is a single high school. The Evander Childs campus includes six schools, Herbert H. Lehman two schools, Springfield Gardens four schools, and Health Opportunities two schools.

**School-Based Health Centers
Logic Model**





Fidelity to the Program Model. Research has shown that SBHCs are an important resource for providing adequate health care for school-aged youth and are integral to fostering academic achievement.¹⁶ In general, SBHCs are located in schools or on school grounds; work cooperatively within the school to become an integral part of the school; provide a comprehensive range of services that meet the physical and behavioral health needs of students; employ a multidisciplinary team of providers to care for the students; provide clinical services through a qualified health provider such as a hospital, health department, or medical practice; require parents to sign written consent for the children to receive the full scope of services provided at the SBHC; and have an advisory board consisting of community representatives, parents, youth, and family organizations to provide planning and oversight.¹⁷

As noted above, all SBHCs, regardless of funding or sponsorship, are certified and licensed by the New York State Department of Health. Of the 212 SBHCs operating at the end of the 2008 school year in New York State, 122 were located in NYC, of which 40 were based in public high schools.¹⁸ Selection of the SBHC sites is based on demonstration of high unmet need. Services are provided at no cost to the student. If a student has a primary care provider, the SBHC is allowed to bill for services; all treatment is coordinated with the primary care provider. The SBHC model for comprehensive, age-appropriate services include:

- Comprehensive physical health and mental health assessments;
- Diagnosis and treatment of acute illnesses and chronic conditions (e.g., asthma);
- Screenings (e.g., vision, hearing, dental, nutrition, tuberculosis);
- Routine management of chronic diseases (e.g., asthma and diabetes);
- Health education;
- Mental health counseling and referral;
- Immunizations;
- Sports and employment physicals and completion of required forms;
- Referral and follow up; and
- Population-based primary prevention.

Each Center is required to have space adequate to accommodate the multidisciplinary staff, in order to afford the client verbal/physical privacy and allow for ease in performing necessary clinical, clerical, and laboratory activities. The Center space should be approximately 1,000 to 2,000 square feet of space for a SBHC with enrollment of 700 (size of this space may be adjusted according to school enrollment, the staffing plan, local needs, and available resources). Each Center requires one exam room (preferably two) per full-time provider; a sink, either in the exam room(s) or within reasonable access; a counseling room/private area; a laboratory area; an accessible toilet facility; a designated waiting area; secure storage space for sterile supplies, pharmaceutical supplies, and other materials; a clerical area; a supervised infirmary area; designated clean and soiled space for Center functions; and a private telephone and fax line as well as Internet connection.

¹⁶ Butin, D. (2000). *School Health Centers*. Washington, D.C.: National Clearinghouse for Health Education Facilities.

¹⁷ National Assembly on School-Based Health Care. <http://www.nasbhc.org>

¹⁸ Information about the source of funding for the SBHCs in public high schools was not available to the evaluators at the time of this writing.

The reproductive health care model being incorporated into the CEO-funded SBHCs includes on-site comprehensive reproductive health care services, including risk reduction counseling, STI testing and treatment, HIV testing, family planning counseling, pregnancy testing, and dispensing of contraceptives, including emergency contraception. The Mailman School of Public Health CCHE¹⁹ provides technical assistance to all high school DOHMH SBHCs around the delivery of reproductive health care services. The model requires substantially more funds than most SBHCs receive in order to dispense contraceptives and conduct pregnancy and HIV/STI testing. In addition to providing comprehensive reproductive health services and primary and preventive care, the CEO-funded SBHC model also includes mental health care and health education.

As shown previously in Table 1, each of the five sites began operations at various points in time during 2007-08. For the two sites (Evander and Lehman) that were in operation for much or all of the 2007-08 school year, there is evidence to suggest that the program maintains fidelity to its theoretical model. Based on interviews with staff from the SBHCs and the provider agencies and monthly and quarterly data, these SBHC sites delivered an array of services to students—primary and preventive care, reproductive health care, mental health care and health education (see more detailed information in Program Services and Outputs and Outcomes section below). These sites employed a multidisciplinary team of providers and had plans to hire additional providers. They also worked cooperatively with principals and other school staff and met regularly with an advisory board/wellness council on each campus to coordinate support. For the remaining three sites, it is too early to assess fidelity to the theoretical model, particularly with respect to the delivery of services.²⁰ However, we know from interviews that these sites were beginning to recruit and enroll students, build their staff, and meet with principals and other school staff to coordinate support for the SBHCs.

Target Population and Clients Served. The target population for this program is any high school²¹ student, regardless of insurance status, registered in target school campuses in the Bronx, Brooklyn, and Queens. The program is serving an economically disadvantaged population in the targeted high-poverty areas. As shown in Table 2, the number of registered students at each campus ranged from 550 (Acorn) to more than 4,500 (Lehman). Across all campuses, the majority of registered students were eligible for the free and reduced-price meals program (FARMS).²² The student population across all campuses is predominantly Black or Hispanic/Latino. Of the five campuses, females were the majority in three campuses, males the majority on one campus, and males and females were evenly represented in one campus.

¹⁹ The CCHE also runs several other SBHCs in NYC, all of which are based on a model of preventing teen pregnancy, and has provided comprehensive reproductive health services since their inception.

²⁰ Health Opportunities did provide services, but did not open until the end of the school year.

²¹ At Springfield Gardens, the Prep Academy for Writers includes middle school students; therefore, middle school students are also part of the target population. As mentioned previously, SBHC sites were selected due to their location in the communities targeted for their high rates of teen pregnancy.

²² FARMS is a federal program that provides meals in schools (either free or at a reduced price for students) for children whose families meet income eligibility guidelines, currently 130% of poverty for free meals and 185% of poverty for reduced-price meals.

Table 2. Demographic Characteristics of Students on Campuses

School	Community District	Enrollment ^a	Male ^a (%)	Female ^a (%)	Black ^a (%)	Hispanic ^a (%)	White ^a (%)	Other ^a (%)	Attendance (2006-07) ^a (%)	Eligible for Free Lunch ^b (%)	4-Year Outcomes for Class of 2006 Graduated ^c (%)	2005-2006 Drop Out Rate ^c (%)
Acorn High School for Social Justice	Brooklyn 3 - Bedford Stuyvesant	550	50	50	80	20	0	0	69	62	37	1
Evander Childs Educational Campus												
Bronx Academy of Health Careers	Bronx 12 - Northern Bronx	444	28	72	50	44	1	9	84	68	2007 cohort was first to graduate	0
Bronx Aerospace High School	Bronx 12 - Northern Bronx	365	79	21	35	62	1	2	93	78	91	1
Bronx High School for Writing & Communication Arts	Bronx 12 - Northern Bronx	444	38	62	53	45	1	1	88	70	Data not found	3
Bronx Lab School	Bronx 12 - Northern Bronx	420	50	50	40	57	2	1	88	73	Data not found	0
High School for Contemporary Arts	Bronx 12 - Northern Bronx	433	45	55	48	50	1	1	91	70	Data not found	2
High School of Computers & Technology	Bronx 12 - Northern Bronx	452	76	24	39	53	3	3	87 (school year not indicated)	69	Data not found	1
Campus Wide		2,558	53	47	44	52	2	3	89	71	Campus wide data not available	1
Herbert H. Lehman Educational Campus												
Herbert H. Lehman High School	Bronx 10 - Eastern Bronx	4,179	57	43	24	57	12	6	83	Data not found	60	3
Renaissance High School of Musical Theater & Technology	Bronx 10 - Eastern Bronx	428	29	71	35	61	3	1	85	66	Data not found	2
Campus Wide		4,607	43	57	30	59	8	4	84	Campus wide data not available	Campus wide data not available	2

Table 2. Demographic Characteristics of Campuses (continued)

School	Community District	Enrollment ^a	Male ^a (%)	Female ^a (%)	Black ^a (%)	Hispanic ^a (%)	White ^a (%)	Other ^a (%)	Attendance (2006-07) ^a (%)	Eligible for Free Lunch ^b (%)	4-Year Outcomes for Class of 2006 Graduated ^c (%)	2005-2006 Drop Out Rate ^c (%)
Springfield Gardens Educational Campus												
Excelsior Preparatory High School	Queens 13 - Jamaica	377	43	57	81 (2006-07)	9 (2006-07)	0	10 (2006-07)	90 (2005-06)	68	First graduation of 4 year students in 6/08	1
George Washington Carver High School for the Sciences	Queens 13 - Jamaica	421	48	52	72	17	2	9	85 (2006-07)	50	75	2
Preparatory Academy for Writers	Queens 13 - Jamaica	212	47	53	83	11	1	5	88 (2006-07)	Data not found	The school opened in 2006 and will have its first graduation class in 2010.	Data not found
Queens Preparatory Academy	Queens 13 - Jamaica	255	49	51	84	10	2	5	86 (2006-07)	52	The first cohort will graduate in summer 2009.	Data not found
Campus Wide		1,265	47	53	80	12	1	7	87	Campus wide data not available	Campus wide data not available	Campus wide data not available
Health Opportunities High School Campus												
Health Opportunities High School	Bronx 1 - South Bronx	633	28	72	43	55	2	1	85	73	66	4
Community School for Social Justice	Bronx 1 - South Bronx	346	45	55	37	61	1	1	82	Data not found	72	Data not found
Campus Wide		979	37	64	40	58	2	1	84	Campus wide data not available	69	Campus wide data not available

^a Data from NYC DOE Quality Review Report 2007-08 with the exception of Excelsior Preparatory High School (enrollment data only found on school website).

^b Data from New York State School Report Card: Accountability & Overview Report 2005-06.

^c Data from NYC DOE Class of 2006 Four-Year Longitudinal Report and 2005-2006 Event Drop Out Rates. The event dropout rate represents the percentage of students who dropped out of high school during the 2005-2006 school year regardless of when they entered the school system. Students are counted as dropouts if they left school by the end of the 2005-2006 school year without re-enrolling in another educational setting leading to a high school diploma or GED. Only students who were first-time dropouts during the 2005-2006 school year are counted in the dropout rate for this time period.

As shown in Table 3a, by June 2008 the new Centers had enrolled 2,022 students at Evander, Lehman and Health Opportunities; nearly a quarter (24%) of the total population across these campuses. For Acorn and Springfield Gardens, both of which opened at the tail-end of the school year (June 2008), enrollment data will be reported in the next school year.

Table 3a: Enrollment in SBHCs

SBHC	Quarter	Site Population Total	Center Enrollment Total	Female	Male
Evander	Jul-Sep 2007	2,725	648 (24%)	289 (45%)	359 (55%)
	Oct-Dec 2007	2,681	693 (26%)	316 (46%)	377 (54%)
	Jan-Mar 2008	2,681	923 (34%)	453 (49%)	470 (51%)
	Apr-Jun 2008	2,681	1,033 (39%)	517 (50%)	516 (50%)
	TOTAL	2,681	1,033 (39%)	517 (50%)	516 (50%)
Lehman	Jan-Mar 2008	4,691	773 (16%)	426 (55%)	347 (55%)
	Apr-Jun 2008	4,691	836 (18%)	464 (56%)	372 (44%)
	TOTAL	4,691	836 (18%)	464 (56%)	372 (44%)
Health Opportunities	Apr-Jun 2008	982	153 (16%)	N/A	N/A
TOTAL	All Quarters	8,354	2,022 (24%)	N/A	N/A

Source: Quarterly Reports

As shown in Table 3b, according to the CEO data from April through June 2008, at Evander more than one-third of enrolled users of the SBHC were Black (37%) or Hispanic (37%). Although half (50%) of those enrolled in the SBHC were male (see Table 3a), a higher proportion of males (55%) used the SBHC compared to females (45%), possibly due to a higher occurrence of sports injuries among the males. At Evander, most users (44%) did not have health insurance; more than a third (37%) had Medicaid. At Lehman, the majority of users were Hispanic (61%), followed by Black (25%). The great majority of users were female (65%). The majority did not have health insurance (54%); more than a third (38%) had Medicaid.

Table 3b: Enrollment in SBHCs – Demographic Characteristics of SBHC Users

SBHC	Quarter	Center Users Total	Gender		Race/Ethnicity					Enrollee Insurance Type ²³				
			Female	Male	Asian	Black	White	Hispanic	Other ²⁴	Medicaid	Child Health Plus	Private	Don't Know	None
Evander	Jul-Sep 2007	63	39 (62%)	24 (38%)	0 (0%)	27 (43%)	1 (2%)	28 (44%)	7 (11%)	24 (38%)	1 (2%)	11 (17%)	2 (3%)	25 (40%)
	Oct-Dec 2007	280	141 (50%)	139 (50%)	1 (0%)	106 (38%)	2 (1%)	115 (41%)	56 (20%)	115 (41%)	3 (1%)	41 (15%)	7 (3%)	114 (41%)
	Jan-Mar 2008	304	123 (40%)	181 (60%)	1 (0%)	111 (37%)	2 (1%)	106 (35%)	84 (28%)	111 (37%)	9 (3%)	34 (11%)	8 (3%)	142 (47%)
	Apr-Jun 2008	304	123 (40%)	181 (60%)	1 (0%)	111 (37%)	2 (1%)	106 (35%)	84 (28%)	111 (37%)	9 (3%)	34 (11%)	8 (3%)	142 (47%)
	TOTAL ²⁵	951	426 (45%)	525 (55%)	3 (0%)	355 (37%)	7 (1%)	355 (37%)	231 (24%)	361 (38%)	22 (2%)	120 (13%)	25 (3%)	423 (44%)
Lehman	Jan-Mar 2008	115	78 (68%)	37 (32%)	3 (3%)	25 (22%)	8 (7%)	75 (65%)	4 (3%)	64 ²⁶ (56%)	0 (0%)	21 (18%)	2 (2%)	64 (56%)
	Apr-Jun 2008	416	265 ²⁷ (64%)	159 (38%)	14 (3%)	107 (26%)	26 (6%)	251 (60%)	18 (4%)	136 ²⁸ (33%)	3 (1%)	54 (25%)	8 (2%)	224 (54%)
	TOTAL ²⁹	531	343 ³⁰ (65%)	196 (37%)	17 (3%)	132 (25%)	34 (6%)	326 (61%)	22 (4%)	200 (38%) ³¹	3 (1%)	75 (14%)	10 (2%)	288 (54%)
Health Opportunities	Apr-Jun 2008	142 ³²	130 (92%)	12 (8%)	N/A	N/A	N/A	N/A	N/A	14 (9%)	3 (2%)	8 (5%)	0 (0%)	128 (84%)
TOTAL	All Quarters	1,323	712 (54%)	611 (46%)						575 (43%)	28 (2%)	203 (15%)	35 (3%)	839 (63%)

Source: Quarterly Reports

²³ Although the Quarterly Report asks for *Enrollee Insurance Type*, Evander and Lehman reported on insurance type for users only. Health Opportunities reported on insurance type for enrollees; percentages are based on the total number of enrollees (N=153).

²⁴ For Evander and Lehman, this includes “unknown.”

²⁵ Totals are summed from the quarters the SBHCs were active. Data may duplicate students served in multiple quarters.

²⁶ For Lehman, because users’ insurance status may change from one visit to the next, the combined number of users by insurance type (151) exceeds the total number of users (115); therefore, percentages add to more than 100%.

²⁷ The combined number of female and male users (424, plus one unknown) exceeds the total number of users (416); therefore, percentages add to more than 100%.

²⁸ For Lehman, because users’ insurance status may change from one visit to the next, the combined number of users by insurance type (425) exceeds the total number of users (416); therefore, percentages add to more than 100%.

²⁹ Totals are summed from the quarters the SBHCs were active. Data may duplicate students served in multiple quarters.

³⁰ The combined number of female and male users (539, plus one unknown) exceeds the total number of users (531); therefore, percentages add to more than 100%.

³¹ For Lehman, because users’ insurance status may change from one visit to the next, the combined number of users by insurance type (576) exceeds the total number of users (531); therefore, percentages add to more than 100%.

³² Health Opportunities reported 41 enrolled users (34 female, seven male), and 101 non-enrolled users (95 female, five male).

Outreach and Recruitment. In order to enroll and receive all services offered by the SBHC, students under age 18 are required to submit an enrollment form signed by a parent. If a student who is not enrolled needs primary care, depending on the seriousness of the condition, SBHCs usually contact a parent to obtain permission or request that the student submit a signed enrollment form. However, students do not need parental consent if they request reproductive health/confidential care based on State law. In fact, students ages 18 and older can enroll in the SBHC on their own. All students can receive first aid, regardless of enrollment status.

Evander, Lehman, and Health Opportunities used a variety of methods to recruit students to enroll in the SBHCs, including new student orientations, classroom presentations, meetings with school administration and staff, reaching out to parent coordinators to distribute information at Parent Teacher Association meetings and Parent Teacher Nights, health fairs, SBHC staff attending other school functions, fliers posted around the school, and mailings. Student word-of-mouth was often cited by site staff as an important strategy for recruitment.

The largest push for recruitment occurs during new student orientations, especially freshman orientations, where students and parents are informed of SBHC services (usually by the community health organizer), and enrollment packets are distributed. These types of orientations typically occur in the spring semester in preparation for the next school year and target primarily 9th graders. In preparation for the 2008-09 school year, all sites reached out to students and parents through new student orientations. In one site, however, it appears that far fewer parents attended the spring orientation than expected (e.g., at a freshman orientation for 1,600 students, only 60 parents attended).

Principal support was reported to be a major determinant of SBHC enrollment. Several of the sites had to contend with multiple schools co-located in the building, and hence multiple principals. Even though principals had expressed their support, multiple principals require unique mailings (specialized letters from the principal and the school-specific letterhead) for each school. One principal wanted the school nurse to continue in the medical suite once the SBHC began. This made for a difficult protocol in terms of whom the child should see. At Evander, Lehman, and Health Opportunities, staff met monthly with a wellness or advisory council at each campus that was made up of principals, assistant principals, physical education instructors, parent teacher association representatives, parent coordinators, teachers' association representatives, guidance counselors, and any other interested staff. Acorn staff is in the process of creating its advisory council and intends to include students as members.

At Evander and Health Opportunities, the community health organizer and health educator, respectively, played important roles in recruitment. They were responsible for working with and maintaining relationships with school principals, teachers, and guidance counselors to coordinate recruitment and enrollment efforts, develop systems of support in order for the Center to run smoothly (e.g., appointment reminders, pass systems for getting students down to the Center), and to plan for health education sessions in the classrooms. At Lehman, which was in the process of hiring a community health organizer, SBHC staff members reported that they used a recruitment flier. They were also developing an online enrollment form for use beginning in the summer.

In addition, staff reported that many students are recruited into the SBHC when they are in need of a physical examination to participate in school sports or to obtain working papers. At Evander, because the Center is located near the school gymnasium, most of the students recruited in the

beginning of the school year came in for sports injuries. However, during the course of the year, as students learned about the services of the SBHC, the types of visits expanded.

The late start-up of most of the sites was an inhibiting factor in reaching enrollment targets. It takes considerable effort and coordination to build enrollment. According to interviews with provider agencies and SBHC staff, SBHCs cannot begin enrollment until they have received State certification. It was difficult to recruit students without a definite start-up date, and in some cases, this was a moving target. Staff members at the SBHCs do not want to encourage participation when they cannot deliver. In at least two of the SBHCs, for example, staff members reported that they will have to “start over” with recruitment because start-up was delayed until the end of the school year. Site openings were primarily delayed due to the long waiting time between inspection and certification and construction hold-ups due to rules about doing work during school hours. Although Evander was open for the entire school year, critical recruitment opportunities were missed because the exact date that state certification would be granted was unknown.

Enrollment alone does not define the users of the SBHCs. Users include those needing first aid (enrolled and not enrolled in the SBHC), those requesting reproductive health services (enrolled and not enrolled), those needing health information (enrolled and not enrolled), and those requesting comprehensive health services (enrolled only).

Program Services. Aligning with the program’s objectives, Evander and Lehman provided comprehensive reproductive health care services, including risk reduction counseling, STI testing and treatment, HIV testing, family planning counseling, pregnancy testing, and dispensing of contraceptives; a full range of primary and preventive health care services, including comprehensive physical exams, chronic illness management, immunizations, first aid, acute care, screenings/diagnostic tests, referrals, and nutrition counseling; mental health care services, including counseling and referrals; and health education, including group and individual sessions. Health Opportunities had just begun to provide reproductive health care services and primary and preventive care. The health educator, who had been working on campus prior to the opening of the SBHC, had already been conducting group health education sessions in the classrooms. Mental health services were not yet available as of July 2008, and it was unclear when these services would begin.

With respect to service flow, typically, a student can walk into the Center and receive services or schedule an appointment through the office manager or medical assistant, depending on the seriousness of the problem. The licensed practical nurse (LPN)/medical assistant evaluates any emergencies to determine whether the student needs to see the medical provider (physician, nurse practitioner, or physician assistant). The medical provider and mental health worker identify physical and mental health issues through the administration of a health supervision form or Guidelines for Adolescent Preventive Services (GAPS) form. Staff reported the GAPS as an invaluable tool in their work.

The medical provider conducts physical examinations, treats chronic and acute conditions, administers immunizations, and dispenses medication. Each child is encouraged to have a complete medical exam each year. If students have other primary care providers, every effort is made to obtain the results of their most recent physical (or at least identify when the exam occurred). Several medical directors reported difficulties in obtaining this information from other primary care

providers. The medical provider also provides reproductive health care services, such as PAP smears, pregnancy tests, STI/HIV tests, and the dispensing of contraception.

The mental health/social worker provides short- or long-term individualized counseling and therapy as needed. A student who tests positive for an STI or HIV is usually seen by the mental health/social worker. Similarly, a student who tests positive for a pregnancy test is also provided with counseling, recognizing that this is an important decision-making point and a stressful time in a young woman's life. At Evander, the mental health provider/social worker receives referrals from guidance counselors, but most of her work is with medical providers. If a medical provider identifies a mental health issue, the provider will refer the student to the mental health/social worker for an assessment. After conducting an assessment, and depending on the severity of the issue, the mental health/social worker may provide individualized counseling and therapy to the patient or refer the patient out. At Evander, sometimes referrals are made to another mental health provider (Federation Employment and Guidance Services, or FEES) co-located in the SBHC, which has a psychiatrist.

A student may also be referred to the health educator as needed (e.g., a student at risk for obesity may see the health educator for nutrition information). The health educator conducts workshops in classrooms and individual sessions with students. At Health Opportunities, the health educator works with principals, teachers, guidance counselors, and parents to identify topics for classroom presentations. The most frequently requested topics were STI/HIV prevention and reproductive systems. Students may drop in at the Center or schedule an appointment for an individual visit with the health educator. At both Evander and Lehman, the community health organizer is largely responsible for health education.

SBHCs coordinate health care with the student's primary care provider (PCP), if any. If a student needs to be referred outside of the Center, the SBHC usually contacts the PCP, if any, since referrals usually need to be made through the PCP. At Health Opportunities, the medical assistant can make referral appointments in the Morris Heights computer system. At Acorn, referrals are managed by the nurse practitioner. Depending on the student's insurance carrier, he/she is usually referred to a provider in the provider agency network. SBHC staff may also communicate with the PCP to coordinate care and obtain necessary medical information (e.g., physical examination results). If a student who does not have health insurance requires a referral outside of the Center, someone from the provider agency usually works with the family to obtain health insurance.

SBHCs are required by DOHMH to arrange with the provider agency for its enrollees to have 24-hour-a-day access to emergency care and access, as needed, to specialty and in-patient care at a provider agency facility, if appropriate. An emergency hotline number is available after hours, which connects students to the provider agency.

SBHC services must be provided without charge, although the provider agency is expected to bill Medicaid for billable visits by Medicaid recipients.³³

Staffing. SBHCs usually start out with a staffing structure to serve 1,000 to 1,500 students, growing the practice as enrollment increases. At a minimum, SBHCs must have a nurse practitioner, physician assistant, collaborating/supervising physician, and a medical/health assistant. A program

³³ Although it seems that that billing Medicaid could raise privacy issues because in that way students' families might learn about services that the students received, this concern was not mentioned by SBHC staff.

manager is also part of the core staffing. In addition, SBHC core services must address mental health needs, either on-site or by referral. If provided on-site, the following staff is required: mental health provider and mental health services coordinator of consultation/collaboration. Other staff can include: health educator, community outreach worker, school nurse, nutritionist, dental hygienist, dental assistant, and supervising dentist. The office manager/receptionist was also reported as integral to the SBHC, particularly at Evander, which experienced high turnover for this position. In some sites, the medical assistant serves this function.

All of the sites met the basic staffing structure; most were in the process of hiring additional staff, such as the community health organizer, health educator, or social worker. Four of the sites (Evander, Lehman, Health Opportunities and Acorn) provide or plan to provide on-site mental health services. At one site, staff reported a need for another part-time mental health/social worker, even with another mental health provider onsite. Staff also anticipates the need for another medical provider. The following additional staff members are to be hired at the sites: a community health organizer at Lehman; a social worker at Health Opportunities, although it has been difficult finding someone bilingual; and a health educator at Springfield.

Outputs. As shown in the logic model, the program has specified intended outputs. These include number of reproductive health visits; patients receiving contraception; STI/HIV and pregnancy tests; sexually active patients participating; Center visits and patients for primary/preventive care; visits, patients, assessments, and referrals for mental health care; and patients and visits for health education. Provider agencies reported results for these outputs through monthly and quarterly reports submitted to DOHMH. DOHMH reviews these reports and works with the providers to address data anomalies. The cleaned quarterly reports are then submitted to CEO.

Targets. DOHMH established several targets for the providers and the individual SBHCs.³⁴ These targets are:

- Enrollment—40 percent of the school population after the first year of operation and 70 percent by the end of the second year.
- Testing—100 percent of all requests for pregnancy testing, STI, and HIV testing on-site.
- Contraception—Implement emergency contraception (including Single Dose) to requesting students; provide condoms to sexually active students; make oral contraception, Depo-Provera, and Ring available; use QuickStart as the standard method of initiation for all contraceptive measures; 18 percent of the sexually active females should be using oral contraceptives by the second year of operation.³⁵ Use of QuickStart birth control by Emergency Contraception patients—increase by 10 percent each year.
- Education for sexually active patients—sexually active patients should be 32 percent of the Center users by the second year.³⁶

³⁴ It is important to note that, according to DOHMH, these are retrospective targets set in the summer of 2008, and were not in place at the start of implementation.

³⁵ This target was set to meet reports from the 2007 YBRS that nationally, 18 percent of high school students are on the birth control pill; the NYC average is 8 percent.

³⁶ This target was based on the 2007 YBRS estimate of 30 percent of high school students are sexually active; 48 percent had had sex.

- Health information sessions—10 per year.

Outcomes. As shown in Table 4, Evander was the only school that operated for a full year, and it met 96 percent of its target enrollment (n=1,033). As discussed under Outreach and Recruitment, it takes considerable time and effort to build enrollment. The timing of recruitment events can affect a site’s ability to enroll students, and most of the SBHCs started well into the school year or at the end of the school year. Most sites experienced delays in obtaining state certification. Other hindrances to enrollment included negotiating different requirements from multiple high schools co-located in the building; getting parents to sign enrollment forms (e.g., forms might not get to the parents, students already have a provider, parents have concerns about reproductive health services), and issues associated with having both middle school and high school populations on campus (e.g., two types of consent forms). Evander staff believes the Center will meet the 70-percent target for the coming school year. The three Centers that were opened late in the school year (and continued to operate at some level over the summer) were well on their way to meeting their first year target. By the end of June, Lehman had met 45 percent of its target (n=836), Health Opportunities enrolled 39 percent of its target (n=153); and Acorn was just getting started and enrolled 30 students (12% of target).

Utilization rates (based on SBHC enrollment) are 29 percent for Evander, 14 percent for Lehman, and 93 percent for Health Opportunities. Note that students can use the Centers for first aid and reproductive health services without being enrolled.³⁷

Table 4. Enrollment and Utilization in SBHCs³⁸

Schools	School Enrollment Numbers	Target Enrollment Numbers ³⁹	SBHC Enrollment Number	Percent of Enrollment Target Met	Utilization #	Utilization Rate ^a
Evander	2,681	1,072	1,033	96	304	29
Lehman	4,691	1,876	836	45	115	14
Health Opportunities	982	393	153	39	142	93
Acorn	644	258	30	12	-	-
Springfield Gardens	N/A	-	-	-	-	-

^a Utilization rates=Utilization #/SBHC enrollment number.

Source: For Evander, Lehman and Health Opportunities, data from the most recent Q2 2008 Quarterly Reports from DOHMH to CEO are reported. Acorn’s figures are based on the most recent monthly report from DOHMH to CEO.

In at least one SBHC, health education sessions were presented on a variety of topics to individuals and groups, including pregnancy prevention, STI/HIV prevention, sexuality, and nutrition. Most of the SBHCs had not yet hired a health educator. At Evander, the community health organizer responsible for health education could not be reached; therefore, we can not report on the health education sessions that were provided there.

As shown in Table 5, Evander reported 62 health education visits, Lehman reported 142 visits, and Health Opportunities reported seven visits. Health Opportunities reached 749 students with

³⁷ It is unclear whether students can use the Centers for other types of services without being enrolled.

³⁸ Information in this table is based on most recent Quarterly Reports in order to avoid duplicate counts.

³⁹ As noted earlier, during the first year of operation, the target numbers are based on 40% of the school enrollment.

classroom health education; data are unavailable for Evander and Lehman. There are a couple of perplexing issues with these data:

- It is not clear from quarterly data reports whether health education visits were conducted with individual students, groups of students, or both. Assuming that Evander and Lehman tracked these numbers in the same way, it appears that utilization is higher at Lehman even with a shorter period of implementation.
- There is also of question of what constitutes a health education visit. Lehman had a community health organizer for only part of the April-through-June period, but reported 142 health education visits. Lehman explained that in some cases (the exact number is unknown), student contact was counted as health education visits even if students did not actually meet with a health educator.

Table 5. Health Education Visits

SBHC	Quarter	Health Education Visits	Number of Students Reached by Classroom Health Education
Evander	Jul-Sep 2007	5	N/A
	Oct-Dec 2007	16	N/A
	Jan-Mar 2008	26	N/A
	Apr-Jun 2008	15	N/A
	TOTAL	62	N/A
Lehman	Jan-Mar 2008	0	N/A
	Apr-Jun 2008	142	N/A
	TOTAL	142	N/A
Health Opportunities	Apr-Jun 2008	7	749
TOTAL	All Quarters	211	

Data reported on health education outputs are limited and need further clarification; it is difficult to assess the extent to which this target was met. In addition to the data issues mentioned above, there is no accurate quantitative information on the types and number of topics presented at these sessions, as sites were not asked to report this. At Health Opportunities, the health educator stated that she worked with principals, teachers, and guidance counselors to schedule classroom sessions and identify topic areas. Students could also schedule individual appointments with the health educator or simply drop in at the SBHC.

In addition to enrollment and health education visits, sites were required to track outputs related to reproductive health services, primary and preventive care services, and mental health services. Table 6 summarizes data on the number of primary care visits and patient. General patterns emerge from the data. As shown in Table 6, in general, as enrollment grew at the SBHCs, the numbers of visits and patients for primary care also grew.

Table 6. Primary Health Care

SBHC	Quarter	# Enrolled (Female/Male)	# Utilizing Center⁴⁰ (Female/Male)	# Center Visits	# Primary Health Care Visits (Female/Male)	# Primary Health Patients (Female/Male)
Evander	Jul-Sep 2007	648 (289/359)	63 (39/24)	140	113 (80/33)	63 (39/24)
	Oct-Dec 2007	693 (316/377)	280 (141/139)	835	670 (430/240)	277 (140/137)
	Jan-Mar 2008	923 (453/470)	304 (123/181)	1,014	748 (517/231)	302 (180/122)
	Apr-Jun 2008	1,033 (517/516)	304 (123/181)	1,014	809 (577/232)	352 (226/126)
	TOTAL ⁴¹	1,033 (517/516)	951 (426/525)	3,003	2,340 (1,604/736)	994 (585/409)
Lehman	Jan-Mar 2008	773 (426/347)	115 (78/37)	209	194 (142/52)	45 (8/37)
	Apr-Jun 2008	836 (464/372)	416 (265/159 ⁴²)	928	927 (640/287)	415 (260/155)
	TOTAL ⁴³	836 (464/372)	531 (343/196)	1,137	1,121 (782/339)	460 (268/192)
Health Opportunities	Apr-Jun 2008	153 (n/a)	142 (130/12) ⁴⁴	257	N/A	N/A

Source: Quarterly Reports.

⁴⁰ Evander and Lehman reported only on enrolled users. Health Opportunities figure includes enrolled and non-enrolled users.

⁴¹ Total number enrolled is based on the most recent quarterly report. However, for the rest of the columns, totals are based on aggregates of all quarters; therefore, number of users may include duplicates.

⁴² The combined number of male and female users (424, plus one unknown) exceeds the total number of users (416).

⁴³ Total number enrolled is based on the most recent quarterly report. However, for the rest of the columns, totals are based on aggregates of all quarters; therefore, number of users may include duplicates.

⁴⁴ Health Opportunities reported 41 enrolled users (34 female, seven male), and 101 non-enrolled users (95 female, five male).

Table 7. SBHC Mental and Reproductive Health Care

Quarter	# of Mental Health Visits	# of Reproductive Health Visits
July – September 2007	23	N/A
October – December 2007	165	201
January – March 2008	281	297
Apr – June 2008	397	348
TOTAL	866	846

*Mental Health services include MH counseling and therapy; diagnosis and treatment; case management; screening, pre/post test counseling for HIV/STIs; and options counseling.

**Reproductive Health services include but are not limited to: pregnancy testing; family planning and risk-reduction counseling and education; prescribing and dispensing of contraceptives; and sexually transmitted infection testing and treatment.

Although it is early to see any trends in these data, the numbers of visits for reproductive health services are indications of the serious need for comprehensive reproductive health services at these sites. And in light of the even higher use of mental health services, the data suggest that young people in these communities face difficult challenges.

With only one site that operated the entire school year, the program is still in an early stage of implementation. As shown in Table 6, there was a rapid increase across the school year in delivery of all primary health services. Once programs are up and running, examining outcomes such as changes in reproductive health knowledge, risk behaviors, school absences, and graduation rates would be advised. Looking for such outcome changes should be considered for the end of the school year in 2009, 2010, and later.

Provider Capacity. All four provider agencies are deeply rooted in their communities, have extensive experience in running SBHCs, and can provide a network of services to participants outside of the SBHC. Montefiore operates a total of 15 school Centers: seven on high school campuses (representing over 20 schools), two in middle schools, and six in elementary schools. It first became involved in SBHCs in 2003 when it began operating a clinic targeting pregnant and parenting teens. Morris Heights, which began as a community development initiative in 1979, always addressed health issues. It supported its first school Center in 1982 and currently operates seven additional SBHCs. With the new CEO-funded SBHC, Acorn High School, the North Brooklyn Health Network is now operating three school Centers, one in a high school and one on a campus with a middle school and three high schools. Queens Hospital Center has operated an elementary school SBHC since 1997. However, the emphasis on reproductive health was a new element in the school-based program and for some of the Center staff.

Montefiore and Morris Heights, both of which ran SBHCs that started in time to provide services, demonstrated the capacity to implement their programs. Montefiore is already implementing the same model in another high school. Additional evidence of provider capacity includes:

- Experienced medical directors who are pediatricians and have adopted the reproductive health orientation as part of their approach to care;

- A staffing structure in accordance with the size of the student population with staff who are interdisciplinary and work together as a team to ensure that participants' needs are addressed;
- Support from principals and the ability to coordinate support for the SBHC with multiple schools co-located in the building;
- Adequate and state-of-the-art space and equipment, including space for group sessions;⁴⁵ and
- Access to a range of services and expertise within the provider agencies (community centers, labs, subspecialty clinics).

Data Collection System. During the time of program implementation, the NYS DOH conducted a major overhaul of its reporting forms to improve their usefulness. All SBHCs in NYC were required to submit an abbreviated report to the state while the forms were being revised. Undoubtedly, this had some impact on the quality and timeliness of data that DOHMH was able to collect from sites. CEO addressed this issue by developing its own reporting format that the sites were required to complete and submit monthly and quarterly.

Although provider agencies have demonstrated the capacity to implement their programs, first-year experience indicates that providers are not able to easily manage the processing and reporting of data. For example, the performance monitoring data required by CEO are collected in various ways, not through use of a single, uniform process. At Evander and Lehman, Montefiore staff collects some data items via a web-based software tool; some data are pulled from provider reporting systems; and some data must be hand-counted. This collection across multiple data sources and methods is very time consuming and jeopardizes data quality. The DOHMH must devote significant time to conduct quality review and data cleaning to ensure data received from Montefiore are complete and consistent. The other sites are collecting data almost exclusively on hard copy forms; consequently, we anticipate aggregating and cleaning data will likely be as arduous or more so. Although SBHC staff are responsible for maintaining records, provider staff at Montefiore and Morris Heights reported being responsible for developing reports. In some cases that requires pulling data from different electronic files, as well as hard copy files, or aggregating from hard copy files. Support from the SBHC staff is often used for aggregating the hard copy data.

Providers do make use of software and infrastructure to store medical records in electronic format. However, these systems were not configured to produce the data of interest to those reviewing or monitoring the type and level of care provided to users of CEO-supported SBHCs; nor do these systems seem easy to modify. At Evander, after the initial enrollment period in September, enrollment tended to grow slowly throughout the year. At the end of September, enrollment was 648; it had grown 7 percent by December 2008, 33 percent by March, and another 12 percent by the end of the school year.

The providers require more oversight and technical assistance to increase their capacity to report data consistently, completely, and in a timely manner. There is much room for improvement, and as

⁴⁵ At Evander, the clinic must share space with FECS, a separate mental health provider. While staff reported that having FECS on-site is an advantage for the clinic, the set-up limits the amount of space for the clinic as well as the clinic's control of the reception area. Furthermore, even if FECS were to vacate the site, the space would not be adequate for group sessions.

the Centers that opened more recently progress and overall SBHC activity picks up, the reporting challenge will grow.

Agency Management. DOHMH is highly committed to building the capacity of SBHCs to deliver comprehensive health care services, including reproductive health and chronic illness management. In addition to the five CEO-funded Centers, the Department supports seven additional Centers. Prior to the initiation of the NYC DOE condom distribution program (1991), the agency was interested in having the SBHCs provide reproductive health services. The availability of CEO funding allowed them to develop a process for including these services in the Centers. The Assistant Commissioner of DOHMH's Bureau of School Health holds a dual appointment, reporting both to the DOE and DOHMH. Through him the two departments collaborate on physical nutrition, mental health, physical education, sexual and reproductive health, and substance abuse, including tobacco. Through a partnership with the Columbia University CCHE and funding from the Bureau of Maternal, Infant, and Reproductive Health, DOHMH adapted a protocol for the delivery of reproductive health care services and provided technical assistance to all city-funded SBHCs (not just CEO-funded Centers) around implementing the protocol and providing templates for tracking reproductive health services.⁴⁶ Each of the providers as well as members of their Centers' staff welcomed the training received on the protocol.

In order to get the Centers up and running for the CEO program, the Director of Special Projects and the Manager of SBHCs in the Office of School Health were required to shepherd the preparation efforts for licensing. First, they contacted the NYSDOH to ensure priority would be given to approving these agencies. Second, they contacted NYCDOE School Construction Authority to speed up efforts to get clearances for required construction, a particular issue with Lehman. These two efforts were initiated in anticipation of receiving CEO funds, but prior to award. Third, these staff members took active roles in ensuring the readiness of the schools prior to inspection, including reviewing architectural requirements. This oversight ensured approval once the state made their inspection.

As mentioned above, DOHMH also took a very active role in training SBHC staff in the provision or reproductive health services. SBHCs have traditionally been staffed using a pediatric model. In most Centers, staff do not have even adolescent health backgrounds. Consequently services have focused on pediatric and chronic care issues. A grant through CCHE was made to provide training in reproductive health to city-funded SBHCS, both CEO and non-CEO funded Centers.

A number of SBHC staff members interviewed also highlighted the support provided by DOHMH through frequent telephone calls and site visits. Because of the variation in when programs started, there have not been meetings, other than the technical assistance provided on reproductive health, where agency staff shared experiences with the implementation of the Centers. Administrative staff at DOHMH are expected to encourage such meetings in the next school year. The Director of Special Projects has had the most contact with these agencies and has continuously sought input on technical assistance needs from the Centers. Her approach is the same across Centers, though her contact with the Montefiore schools has been more frequent because they have been in operation the longest. Additionally, she is responsible for reviewing the data and cleaning quarterly data to measure progress. She has expressed concerns about the quality of the data and problems being

⁴⁶ Most of the SBHCS have begun their programs using the providers' forms. As data collection issues are addressed, more standardized forms across SBHCs and providers may be used.

encountered given the lack of electronic data. She commented on the failure of some Center staff to review data after hand tallying them from the hard copy assessments and charts.

Conclusions. As implemented, the CEO-funded SBHCs are in alignment with the stated goals. Early implementation efforts showed positive aspects of the program:

- The SBHCs appear to have been implemented with fidelity to the model, and they are reaching a low-income population in alignment with CEO’s goals.
- Well-defined reproductive health protocol, with ongoing support, has been one of the strongest elements of the program.
- CEO funding to the five SBHCs leveraged DOHMH’s ability to increase the provision of reproductive health services to other city-funded SBHCs.⁴⁷ However, continued funding for those seven Centers is not yet secured for subsequent years.
- Clearly defined approaches to comprehensive health services reflect the providers’ experience in this area (identification of assessments, forms, staffing needs).
- Support from the principals and an understanding of auxiliary efforts has helped engage school administrators, teachers, and other key stakeholders (Wellness/Advisory Councils, Center tours, participation in other school events and meetings).

The SBHCs had some difficulties. First, recruitment efforts proved more difficult than anticipated, primarily because recruitment was not synchronized with school opening in the fall and because recruitment cannot really begin until DOH certification is received. Centers did not want to advertise what they could not deliver (or did not know when they could deliver it). Another issue is that CEO-funded SBHCs must address requirements across three major bureaucracies—DOE, DOHMH, and New York State DOH. Principals and medical directors expressed concern over not understanding who does what or who has the final say. This might have been a particular problem during Center start-up as the requirements for certification were being addressed. Although this coordination across political lines may be beyond the scope of this project, determination of the affects of these multiple bureaucracies should be noted as the programs ramp up their implementation efforts.

3. Programmatic Recommendations

Recommendations were suggested during or emerged from the implementation evaluation site visits.

- DOHMH and/or providers may want to consider additional support/technical assistance on recruitment, fine-tuning recruitment strategies to better reach the target population (more outreach to males and grades above 9, and making enrollment packets available for students to pick up and take home anonymously).

⁴⁷ A grant has been recently awarded to CCHE to expand the reproductive health protocol to all 40 high school SBHCs throughout NYC over the next 3 years.

- Determine which recruitment strategies have been most effective in getting students to enroll to date and step up efforts in these areas (for example, ask students when they enrolled how they found out about the program).
- Develop strategies to deal with any real (getting enrollment forms to parents) or perceived barriers (dispelling misconceptions about the contraceptives, the Centers themselves, and the youth's privacy rights) to seeking services in the Centers. One medical director commented on the need for additional patient information brochures (such as brochures that discuss what contraceptives work and patients rights) to circulate among youth.
- Develop a system to track students who have been seen for reproductive health issues.
- Track receipt of parents who received enrollment packet and have not yet enrolled; follow up with students and parents to urge enrollment.
- Establish better tracking of health education sessions, differentiating between individual and group sessions, and reporting what topics were covered.
- Establish better tracking of mental health services, reporting specifically what services are provided. Consider establishing targets for the provision of mental health services.
- Expand SBHC reporting requirements to include reporting of gender and race/ethnicity for users of mental health services, as is done for RH services. Providers have the ability to produce this information but the CEO reporting format does not require it.
- Conduct a formal assessment of the quality of service data submitted by providers. This assessment should establish that the data reported to the agency and CEO can be verified with clinic usage information that is collected by provider staff as visits occur and services are provided.
- Once programs are fully implemented, begin to examine outcomes such as changes in reproductive health knowledge, risk behaviors, school absences, and graduation rates.
- Offer technical assistance to increase the use of automation and uniformity of data collection processes.