School-Based Health Centers: Accessibility and Accountability

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Purpose: To examine the current experience of school-based health centers (SBHCs) in meeting the needs of children and adolescents, changes over time in services provided and program sponsorship, and program adaptations to the changing medical marketplace.

Methods: Information for the 1998–1999 Census of School-Based Health Centers was collected through a questionnaire mailed to health centers in December 1998. A total of 806 SBHCs operating in schools or on school property responded, representing a 70% response rate. Descriptive statistics and cross-tab analyses were conducted.

Results: The number of SBHCs grew from 120 in 1988 to nearly 1200 in 1998, serving an estimated 1.1 million students. No longer primarily in urban high schools, health centers now operate in diverse areas in 45 states, serving students from kindergarten through high school. Sponsorship has shifted from community-based clinics to hospitals, local health departments, and community health centers, which represent 73% of all sponsors. Most use computer-based patient-tracking systems (88%), and 73% bill Medicaid and other third-party insurers for student-patient encounters.

Conclusions: SBHCs have demonstrated leadership by implementing medical standards of care and providing accountable sources of health care. Although the SBHC model is responsive to local community needs, centers provide care for only 2% of children enrolled in U.S. schools. A lack of stable financing streams continues to challenge sustainability. As communities seek to meet the needs of this population, they are learning important lessons about providing acceptable, accessible, and comprehensive services and about implementing quality assurance mechanisms. © Society for Adolescent Medicine, 2003

KEY WORDS: Access to care Adolescents School-Based Health Centers

States have assumed a leadership role in instituting health care reforms, primarily through implementing managed care financing and health care delivery strategies. In so doing, they confront a central issue: how to ensure adequate access to health care services while controlling expenditures. Despite recent expansions in coverage, meeting the health care needs of many school-aged children and youth remains a challenge. More than two-thirds of the 11.2 million uninsured children and adolescents in the United States were eligible for Medicaid or the State Children’s Health Insurance Program but were not enrolled in 2000 [1].

Inadequate coverage for preventive and mental health care and cost-sharing requirements create additional barriers for privately insured children and youth [2]. Even when adolescents have insurance
coverage, gaining access to care is problematic. For example, 20% of adolescents in one study went without health care when they thought they needed it [3]. Furthermore, when adolescents actually access care, many report that their needs go unmet for critical guidance and education to support sound decision-making [4,5]. Thus, for many school-aged children and adolescents, location, convenience, confidentiality, and trust matter a great deal. As a result, it is not surprising that, concurrent with efforts to institute general health care reforms, concerned professionals have worked to expand the nationwide availability of school-based health services.

The impetus for providing health services in school settings is the recognition that an increasing number of children and adolescents not only lack access to health care but also need care beyond traditional medical care. This situation is particularly evident for adolescents, for whom morbidity and mortality rates have been unacceptably high over the past decade [6].

In the early 1970s, School-Based Health Centers (SBHCs) were established to meet many of these needs [7]. Although initially focused on preventing teenage pregnancy and serving inner-city high school students with unmet health needs and inadequate health care sources, SBHCs soon began providing comprehensive primary health care services in the most accessible environment, responding to students’ physical and emotional development needs. The original proponents recognized that, to overcome traditional barriers, services must be provided in a manner that was culturally sensitive, confidential, comfortable, and safe. The one-stop model allowed students to be evaluated, diagnosed, treated on-site, and, if appropriate, returned to the classroom [8]. On-site laborator services and prescriptions reduced the need for off-site referrals and promoted better student adherence. For students with more complicated health problems, referrals were provided to community health resources, including SBHC-sponsoring agencies.

Although SBHCs initially relied almost exclusively on grant funding, over time financing sources diversified. Still, however, despite persistent efforts to establish provider arrangements with insurers and managed care plans, insurance revenues are well below what might be expected, given the insurance status of children and adolescents served. Studies of school-based health care revenues consistently find insurance an elusive means of financial support [9]. Although community experiences differ, several factors account for lower-than-expected insurance revenues, which average only 5% to 10% of health center operating budgets [9–11]. These factors include: difficulty securing information from families and students, concerns about confidentiality, perceptions of overlapping responsibilities with primary care providers, and the provision of unreimbursed preventive interventions.

The 30-year history of SBHCs affords an opportunity to reflect on exponential SBHC growth, forces that have shaped the field, and emerging trends that may challenge or sustain these programs. This article examines the experience of SBHCs in meeting the needs of children and adolescents, trends and changes in services provided and program sponsorship, and program adaptations to the changing medical marketplace.

**Data Sources**

This profile is based on a national survey of SBHC directors and providers collected by the National Assembly on School-Based Health Care (National Assembly). The National Assembly, a multidisciplinary membership association concerned with increasing access to school-based health care for children and adolescents, conducted the 1998–1999 Census of School-Based Health Centers. To guide the conduct of this census, the National Assembly established a technical advisory committee of researchers to advise on questionnaire preparation, sampling design, data analysis, report writing, and result dissemination. The census builds on previous efforts to track and report on SBHCs by Advocates for Youth and its former Support Center for School-Based and School-Linked Health Centers.

The purpose of the census was to collect specific information on the status of SBHCs, including services, clinic policies, staffing, utilization, and populations served and to assess program quality assurance mechanisms. The pool of eligible SBHC sites was identified from a wide variety of sources. Lists of SBHCs were obtained from the National Assembly membership database, Advocates for Youth, the Robert Wood Johnson Foundation Making the Grade Initiative, the federal Healthy Schools, Healthy Communities program, and the National Association of Community Health Centers. School and adolescent health coordinators in state health and education departments, state school-based health-center associations, and individual National Assembly members were also asked in 1998 to identify health centers. After purging duplicate records, 1415 school-based and school-linked health centers were identified.
After pretesting in nine health centers in December 1998, a paper-and-pencil survey was sent to individuals most knowledgeable about the health center clinical care health. The questionnaire included six content areas: SBHC characteristics, student demographics, staffing and operations, services, health center policies, and technical assistance needs. Nonrespondents received a postcard in February 1999 and a second questionnaire in April 1999. Nonrespondents were contacted by telephone or mail and asked seven questions to allow us to calculate nonresponse by program type and to eliminate from the database health centers that were no longer open or not providing primary care.

Of 567 nonresponding programs, 97 (17%) had closed, 77 (14%) were not SBHCs (these were primarily school nursing, non–primary care programs), 329 (58%) were SBHCs, 19 (3%) were school-linked health centers (e.g., services were provided off-site, with close referral patterns between schools and health services), 21 (4%) were mobile van programs, and 24 (4%) remained unknown after repeated attempts to collect data. Adding responders and nonresponders, we estimated that there were 1135 SBHCs (in schools or on school property), 47 school-linked health centers, and 32 mobile programs. Estimates for school-linked health centers and mobile programs are considered undercounts because many of these programs were not included in our initial identification process. Our analyses were thus limited to 806 SBHCs (70% response rate) located either in school or on the school campus.

Respondents were offered a copy of a report summarizing the survey findings and either a guidebook on SBHC evaluation [12] or a $25 coupon for registration at the National Assembly’s annual conference. The study was reviewed for protection of human subjects at the Centers for Disease Control and Prevention and determined to be exempt from review by an institutional review board.

Results
Profile of School-Based Health Centers
The 1135 SBHCs are located in 45 states; 56% are in urban areas, 30% in rural areas, and 14% in suburban areas. The types of public school settings were elementary (30%), combined elementary–middle (7%), middle (12%), combined middle–high (5%), high (41%), and combined K–12 (5%). Half of the health centers (51%) were located in schools that included high school grades. Average school size for all schools was 1004 students. Average enrollment by school type included 698 students in elementary schools, 811 in middle schools, and 1316 in high schools.

Nationally, an estimated 1.1 million students (approximately 2% of the nation’s school enrollment) attended schools with a SBHC in 1998–1999. Among students who had access to SBHCs, just over one-third were white (36%), 29% were African-American, 26% Hispanic, 4% Asian, 3% Native American, and 2% other. Another 310,000 to 750,000 students attended schools that were linked to a health center.

SBHC enrollment and utilization data illustrate the centers’ success in attracting students. The average student body enrollment rate (students who registered with the clinic and had a consent form on file) was 64%, reflecting acceptance by most students, parents, and guardians. Health center utilization by 84% of enrollees also significantly validates the centers’ ability to meet diverse student needs. Descriptions of health center users from various studies have shown that the demographic makeup of users reflects school populations [13–15]. Health center users are also reported to be those with the greatest physical and mental health needs [16,17].

Growth and Change Over Time
Survey findings clearly attest to the vitality of these programs, many of which were developed during the recent health care reform era. The health centers’ median age was 4 years, the average was 6 years. Six percent of health centers opened within the last year, 17% within the past 2 years. Nearly 60% of all SBHCs have been in operation 4 years or less and only 20% have been operating for 10 years or more.

The geographic distribution of programs shows a shift from inner city to rural communities, with 30% of clinics in rural and 14% in suburban communities. Over time, there have been substantial changes and expansions in the types of sponsoring agencies that operate SBHCs, from primarily a community clinic base to one that includes hospitals and schools. Partnerships are especially critical when developing programs and in operations and staffing, clinician supervision, provision of medical back-up, and after-hours care. Hospitals, local health departments, and community health centers represented 73% of sponsors. Other medical sponsors included university medical centers (5%) and nonprofit agencies (9%). Although less common, 10% were administered by schools or school districts.
Services Provided On-site
Most sites (92%) used a combination of physicians, physician assistants, and nurse practitioners to provide physical health services. Physical health services are provided an average of 27 hours per week. Mental health professionals were part of the clinical team in 57% of centers, for an average of 33 hours a week. Other clinical support provided by registered or practical nursing staff was found in 55% of centers for an average of 33 hours per week. Other support staff included health aides (39% of centers), administrative assistants (52%), health center directors (24%), health educators (19%), social work staff members (19%), and nutritionists (14%). Less than 5% of centers had dental health professionals. The most substantial change over time was in the level of offered mental health services. For example, in 1991–1992, less than 30% of health centers employed mental health professionals; over the next 7 years, that figure reached nearly 60% [11,18–20].

Profile of Services
Most centers (89%) provided primary preventive care, including comprehensive health assessments, anticipatory guidance, vision and hearing screenings, and immunizations; treatment of acute illness; laboratory services; and prescription services. Thus, the spectrum of physical health services delivered in centers closely resembles services provided in other primary care practice settings.

Mental health and counseling services included crisis intervention (79%), case management (70%), comprehensive evaluation and treatment (69%), substance abuse counseling (57%), and learning problems assessment and treatment (39%). Centers also used group counseling for peer support (59%), grief counseling (53%), classroom behavior modification (49%), substance use prevention and treatment (41%), and gang prevention (26%). Most clinics used computer-based patient tracking systems (88%), and 73% billed Medicaid and other third-party insurers for student-patient encounters.

Commitment to Quality Standards and Establishing Systems of Accountability

Professional standards of care. Health centers were asked to identify which of five nationally recognized clinical health care standards they used. Ninety-two percent indicated the use of at least one standard, and 69% use two or more. Centers used Medicaid’s Early Periodic Screening, Diagnosis, and Treatment standards most frequently (73%). The American Medical Association’s Guidelines for Adolescent Preventive Services standard was used for adolescent populations (41%), whereas the American Academy of Pediatrics’ clinical standards (60%) and the federal Maternal and Child Health Bureau’s Bright Futures were used more frequently in elementary grades (21%). The remaining clinics used the U.S. Preventive Services Task Force (5%) or other (10%) standards.

Quality assurance measures. Quality assurance benchmarks in health care are used as performance assessment tools. Two prominent industry standards are the Health Plan Employer Data and Information Set, developed by the National Committee on Quality Assurance (identified by 8% of health centers), and the Joint Commission on Accreditation of Healthcare Organization’s (JCAHO) assessment guide (identified by 35%). Several state departments have also created performance review tools specific to school-based health care, and 31% of health centers reported use of these tools. A majority of health centers (65%) reported using their own or a sponsoring agency’s quality assurance benchmarks.

Components of quality assurance systems. Health centers identified six common components of a quality assurance system they used to measure quality of care. Among the 97% that responded to at least one category, staff credentialing (85%) and chart audits (84%) were identified most often, followed by SBHC policies (80%), patient surveys (70%), Clinical Laboratory Improvement Act Certification (68%), and environmental standards (65%).

Thirty-one percent of health centers were successfully participating in their sponsoring institution’s JCAHO accreditation. One-third of health centers (34%) also reported being certified by a state government entity.

Effects of Sponsorship on the Provision of Care
Health centers sponsored by public health departments and schools had fewer on-site primary care hours (20 and 19 hours, respectively) than did hospitals (28 hours), universities (24 hours), nonprofit organizations (26 hours), and community health centers (29 hours) (Table 1). They were also less likely than other sponsors (94% to 98%) to offer comprehensive services such as prescriptions (77%). Although far fewer mental health services were available, school and university sponsorship was
Table 1. School-Based Health Center Staff, Operations, Services, Policies, and Acceptance by Sponsor Type, School Year 1998–1999 (N = 805)

<table>
<thead>
<tr>
<th>Health Department</th>
<th>Community Health Center</th>
<th>School</th>
<th>Hospital</th>
<th>University</th>
<th>Nonprofit Organization</th>
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<tbody>
<tr>
<td>Staff on site</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Primary care h/wk</td>
<td>20</td>
<td>29</td>
<td>19</td>
<td>28</td>
<td>24</td>
</tr>
<tr>
<td>Mental health h/wk</td>
<td>14</td>
<td>18</td>
<td>23</td>
<td>16</td>
<td>24</td>
</tr>
<tr>
<td>Operation hours</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>&gt;30 h/wk, %</td>
<td>71</td>
<td>72</td>
<td>76</td>
<td>65</td>
<td>73</td>
</tr>
<tr>
<td>Summer operations, %</td>
<td>48</td>
<td>41</td>
<td>41</td>
<td>56</td>
<td>54</td>
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<tr>
<td>Services on-site</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Comprehensive health assessments, %</td>
<td>95</td>
<td>97</td>
<td>84</td>
<td>95</td>
<td>98</td>
</tr>
<tr>
<td>Prescriptions, %</td>
<td>77</td>
<td>97</td>
<td>77</td>
<td>95</td>
<td>98</td>
</tr>
<tr>
<td>Medications dispensed, %</td>
<td>52</td>
<td>39</td>
<td>37</td>
<td>70</td>
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<tr>
<td>STD diagnosis and treatment, %</td>
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<td>63</td>
<td>54</td>
<td>34</td>
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<tr>
<td>Birth control, %</td>
<td>29</td>
<td>22</td>
<td>13</td>
<td>25</td>
<td>15</td>
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<tr>
<td>Psychologic development assessment, %</td>
<td>68</td>
<td>71</td>
<td>58</td>
<td>79</td>
<td>93</td>
</tr>
<tr>
<td>Individual substance abuse counseling, %</td>
<td>56</td>
<td>53</td>
<td>67</td>
<td>53</td>
<td>51</td>
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<tr>
<td>Tobacco prevention in classroom, %</td>
<td>57</td>
<td>41</td>
<td>56</td>
<td>51</td>
<td>62</td>
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<tr>
<td>Policies</td>
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<tr>
<td>Parental consent for every visit, %</td>
<td>9</td>
<td>9</td>
<td>17</td>
<td>12</td>
<td>24</td>
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<tr>
<td>Bill third party, %</td>
<td>82</td>
<td>85</td>
<td>51</td>
<td>64</td>
<td>76</td>
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<tr>
<td>Chart audits, %</td>
<td>90</td>
<td>89</td>
<td>71</td>
<td>87</td>
<td>88</td>
</tr>
<tr>
<td>Patient survey, %</td>
<td>70</td>
<td>80</td>
<td>59</td>
<td>70</td>
<td>68</td>
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<tr>
<td>Acceptance of SBHC</td>
<td></td>
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<td></td>
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<tr>
<td>Students enrolled, %</td>
<td>66</td>
<td>68</td>
<td>55</td>
<td>64</td>
<td>66</td>
</tr>
<tr>
<td>Students visited at least once, %</td>
<td>64</td>
<td>50</td>
<td>60</td>
<td>46</td>
<td>90</td>
</tr>
</tbody>
</table>

STD = sexually transmitted disease.

Table 2. School-Based Health Center Staff, Operations, Services, Policies, and Acceptance by Age of Center, School Year 1998–1999 (N = 754)

<table>
<thead>
<tr>
<th></th>
<th>&lt;2 y</th>
<th>2–4 y</th>
<th>5–9 y</th>
<th>10+ y</th>
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<tbody>
<tr>
<td>Staff on site</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Primary care h/wk</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>30</td>
</tr>
<tr>
<td>Mental health h/wk</td>
<td>17</td>
<td>14</td>
<td>18</td>
<td>30</td>
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<tr>
<td>Operation hours</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;30 h/wk, %</td>
<td>58</td>
<td>62</td>
<td>72</td>
<td>88</td>
</tr>
<tr>
<td>Summer operations, %</td>
<td>42</td>
<td>49</td>
<td>45</td>
<td>55</td>
</tr>
<tr>
<td>Services on-site</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Comprehensive health assessments, %</td>
<td>93</td>
<td>95</td>
<td>95</td>
<td>93</td>
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<tr>
<td>Prescriptions, %</td>
<td>94</td>
<td>92</td>
<td>84</td>
<td>89</td>
</tr>
<tr>
<td>Medications dispensed, %</td>
<td>65</td>
<td>58</td>
<td>58</td>
<td>72</td>
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<tr>
<td>STD diagnosis and treatment, %</td>
<td>42</td>
<td>52</td>
<td>57</td>
<td>75</td>
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<tr>
<td>Birth control, %</td>
<td>21</td>
<td>19</td>
<td>21</td>
<td>41</td>
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<tr>
<td>Psychologic development assessment, %</td>
<td>70</td>
<td>72</td>
<td>73</td>
<td>72</td>
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<tr>
<td>Individual substance abuse counseling, %</td>
<td>55</td>
<td>53</td>
<td>60</td>
<td>70</td>
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<tr>
<td>Tobacco prevention in classroom, %</td>
<td>54</td>
<td>51</td>
<td>54</td>
<td>52</td>
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<tr>
<td>Policies</td>
<td></td>
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<tr>
<td>Parental consent for every visit, %</td>
<td>13</td>
<td>16</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Bill third party, %</td>
<td>76</td>
<td>69</td>
<td>75</td>
<td>71</td>
</tr>
<tr>
<td>Chart audits, %</td>
<td>82</td>
<td>83</td>
<td>93</td>
<td>91</td>
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<tr>
<td>Patient survey, %</td>
<td>64</td>
<td>73</td>
<td>72</td>
<td>77</td>
</tr>
<tr>
<td>Acceptance of SBHC</td>
<td></td>
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<td></td>
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<tr>
<td>Students enrolled, %</td>
<td>52</td>
<td>66</td>
<td>64</td>
<td>66</td>
</tr>
<tr>
<td>Students visited at least once, %</td>
<td>62</td>
<td>55</td>
<td>53</td>
<td>48</td>
</tr>
</tbody>
</table>

STD = sexually transmitted disease.
associated with more on-site mental health services, 23% and 24%, respectively, in contrast to health departments (14%), community health centers (18%), hospitals (16%), and nonprofit organizations (20%).

School-sponsored health centers were least likely to engage in quality assurance activities, such as patient satisfaction surveys (59%), in contrast to others (68% to 86%) and medical record reviews (71%) in contrast to others (87% to 94%). School-sponsored programs were also least likely to bill for third party revenue (51%) in contrast to 64% for hospitals and 85% for community health centers.

In examining health centers by longevity, different patterns emerged (Table 2). The older the health center, the more likely it was to operate 30 or more hours a week. The oldest programs (10 years or more) were also more likely to offer equal amounts of mental health and primary care, averaging 30 hours a week for both types of providers. That the older health centers reported higher enrollment than younger programs was not surprising because developing a solid base of registrants takes considerable outreach, education, and time. Differences in

SBHC operations and policies were also found by grade level (Table 3) and community type (Table 4).

### Changes in Types of School Settings

More than one-half of all SBHCs are at least 4 years old, and the 1998–1999 census data demonstrate that the SBHC movement is growing. In Arizona, Missouri, Mississippi, Ohio, Oklahoma, West Virginia, and Wisconsin, 9 in 10 health centers opened within the past 4 years. Seventy percent of new centers were in elementary and middle schools, and one in two were administered by community hospitals, reflecting the growing interest of hospitals in sponsoring school-based programs.

The adoption of SBHCs by communities and schools not associated with the models’ early history suggests an expansion of SBHC’s domain. Health centers operating for 10 years or more were more likely to be in urban schools and to serve adolescents. Newer programs were more frequently found in rural schools. The prospect of reducing acute and minor illnesses and of introducing preventive health services at earlier ages has prompted growing elementary school participation in SBHCs. One of the most interesting changes may be the implementation

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**Table 3.** School-Based Health Center Staff, Operations, Services, Policies, and Acceptance by Grades Served, School Year 1998–1999 (n = 805)

<table>
<thead>
<tr>
<th></th>
<th>Elementary Grades</th>
<th>Middle Grades</th>
<th>High Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Staff on site</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary care, h/wk</td>
<td>20</td>
<td>24</td>
<td>28</td>
</tr>
<tr>
<td>Mental health, h/wk</td>
<td>12</td>
<td>19</td>
<td>23</td>
</tr>
<tr>
<td><strong>Operation hours</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt;30 h/wk, %</td>
<td>57</td>
<td>72</td>
<td>78</td>
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<tr>
<td>Summer operations, %</td>
<td>47</td>
<td>48</td>
<td>49</td>
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<tr>
<td><strong>Services on-site</strong></td>
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<tr>
<td>Comprehensive health assessments, %</td>
<td>96</td>
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<td>Prescriptions, %</td>
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<td>Medications dispensed, %</td>
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<tr>
<td>STD diagnosis and treatment, %</td>
<td>30</td>
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<tr>
<td>Birth control, %</td>
<td>22</td>
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<tr>
<td>Psychologic development assessment, %</td>
<td>72</td>
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<td>73</td>
</tr>
<tr>
<td>Individual substance abuse counseling, %</td>
<td>42</td>
<td>57</td>
<td>70</td>
</tr>
<tr>
<td>Tobacco prevention in classroom, %</td>
<td>45</td>
<td>59</td>
<td>57</td>
</tr>
<tr>
<td><strong>Policies</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental consent for every visit, %</td>
<td>18</td>
<td>10</td>
<td>8</td>
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<tr>
<td>Bill third party, %</td>
<td>75</td>
<td>78</td>
<td>71</td>
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<tr>
<td>Chart audits, %</td>
<td>84</td>
<td>89</td>
<td>88</td>
</tr>
<tr>
<td>Patient survey, %</td>
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<td>76</td>
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<tr>
<td><strong>Acceptance of SBHC</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Students enrolled, %</td>
<td>70</td>
<td>68</td>
<td>60</td>
</tr>
<tr>
<td>Students visited at least once, %</td>
<td>63</td>
<td>58</td>
<td>50</td>
</tr>
</tbody>
</table>

STD = sexually transmitted disease.
Discussion

SBHCs have become an increasingly acceptable source of medical care for children and adolescents from elementary to high school. The number of centers has increased 10-fold, from 120 in 1988 to nearly 1200 in 1998 [7]. No longer primarily in urban high schools, health centers now operate in diverse areas in 45 states, serving students in every grade. The expansion of these centers into rural and suburban schools is a powerful reminder that access to health care is not only a problem for inner-city teenagers. Although the proportion is relatively small of schools with on-site comprehensive health services and the number (an estimated 1.1 million students) of students reached, the wide variety of communities in which such centers operate illustrates how SBHCs help meet the needs of widely divergent communities and individuals [8]. In addition to traditional primary care, centers increasingly provide mental health services, targeting some of the most challenging health behaviors of children and adolescents. Additionally, many centers have systems for evaluating operations and monitoring the quality of care.

SBHCs have highly variable sponsorship, services, staffing, and geographic locations and provide care for only 2% of children enrolled in U.S. schools. Thus, even with another 10-fold increase, it is unlikely that SBHCs will fill the service gap for millions of uninsured and underinsured children and adolescents. Despite steady and promising growth, in most states SBHCs represent a small, albeit important, proportion of the health care system.

Given the challenges of replicating the model to scale, important questions remain about the SBHC operation and services. When is full implementation of the model most appropriate? Are there efficiencies to be gained—and what effects are compromised—with minimal staffing or limited on-site operating hours? What drives the growth in hospital sponsorship? Why have the number of elementary school clinics increased? Does the gradual shift from high school to elementary schools reflect broader policy changes; for example, the increasing number of women in the workforce or welfare reform, both of which encourage communities to implement programs that meet children’s health needs? Are parents pressured not to take time off from work to advocate convenient community primary care access? Are managed care organizations and other health care systems becoming more aware that SBHCs can increase child and adolescent compliance with recommended medical standards or quality performance measures?

SBHCs have clearly made a commitment to ensure an appropriate accountability level in their current practice. Most have adopted widely accepted standards of care. Survey data substantiate that health centers provide an acceptable, comprehensive, accessible, and accountable source of health care. Despite this track record and studies that document clinics’ abilities to reduce emergency room use and that ensure improved access to mental health services, SBHCs face challenges and scrutiny of their value to the health care system.

As states shift health care resources to managed care delivery systems, the outcomes and benchmarks by which SBHCs must demonstrate their contributions to health care and clients are often perceived to be even higher than those of other primary care systems. Although managed care and SBHC systems can be linked to provide accessible, coordinated care for adolescents, a potential underlying philosophical conflict must be acknowledged: SBHC priorities of increasing access to care may conflict with those of managed care programs, which must find ways to contain costs in the medical services marketplace [21].

Although the expansion of Medicaid managed care and the State Child Health Insurance Program will increase insurance coverage and potentially improve access to primary care physicians for many low-income children and youth, states also expect providers to control overall use of services by relying on a system of fiscal gatekeepers. The contrasting intent of SBHCs is to increase appropriate service utilization for groups that traditionally underuse services, with a lesser focus on costs [21,22].

After 30 years of innovation and fueled by a combination of federal, state, and local health care investments, the continued growth of SBHCs suggests they have survived the demonstration phase and are a valued service delivery model for children and adolescents. The ability to sustain their recent growth, however, will depend on continued efforts.
to demonstrate the importance of SBHCs in health care and education environments, both of which have their own accountability pressures. As evidenced by the limited reimbursement for clinics, lack of financial sustainability is a major threat to their existence. The fiscal mosaic that most clinics rely on requires spending considerable resources to seek additional funding streams. Without ongoing and enhanced commitment of federal and state governments to using Title V, Maternal and Child Health Bureau (MCHB) Block Grant, and Bureau of Primary Care Health’s Healthy Schools/Healthy Communities dollars, the number of clinics will likely decline.

In contrast to community health centers, which are afforded more stability because of federal subsidies and Medicaid reimbursement, SBHCs are often fiscally marginalized. Nevertheless, program administrators have creatively pursued increasingly diverse funding streams to ensure fiscal viability. In some states (including Connecticut, Delaware, Louisiana, and New York), commitment by state legislatures has resulted in core program funding [19]. This state-specific role is appropriate, for example in designating MCHB block grant funds to SBHCs based on identified needs. This state-by-state policy, however, contributes to a great deal of variability in funding designated for SBHCs at the state level, whether or not parallel needs or successful political advocacy exist.

The sponsorship of and commitment to supporting SBHCs by private and public hospitals is an interesting trend. More research is needed to ascertain the support level, the rationale behind this investment, and the potential for engaging additional hospital systems in such a population-based endeavor. We need to know whether hospitals contribute to a funding pool that enables all children to be served, or whether only eligible children enrolled in hospital-related managed care organizations are served. Results from this and other studies [19–21,23–30], however, clearly demonstrate that SBHCs contribute significantly to health care access and utilization for children and adolescents. In addition to sponsorship, the expanded domains (rural and suburban communities, elementary and middle grades) signify the universal appeal of SBHC programs for increasing access for children and youth regardless of their age, location, or income. The shift from health department to private hospital sponsorship helps ensure that SBHCs are integrated into a network of providers guided by widely acceptable quality of care standards.

Critical questions include: Are SBHCs substitutive or complementary care providers for children and adolescents? Will the health care system support multiple points of entry for children and adolescents? How can SBHCs help ensure that this population is enrolled in health care insurance programs for which they qualify, that children and adolescents learn to use the health care system effectively, and that they can identify a medical home?

Although federal and state policymakers strive to meet the needs of underserved children and adolescents, they will likely face additional challenges in the upcoming decade as population growth in the 10- to 19-year age group is anticipated to increase to nearly 43 million by 2020 (a nearly 20% increase from 36 million in 1993), with an increasing proportion of adolescents belonging to diverse racial and ethnic groups [6]. Thus, it is highly likely that a substantial population will continue to lack access to health insurance and will require a safety net for primary care services.

SBHCs have clearly documented their ability to reach this population. Among students who had access to SBHCs, nearly two-thirds were ethnic minorities. The tradition of establishing SBHCs in communities with unmet health needs and inadequate health care resources is reflected in the substantial number of schools in low-income communities in which racial or ethnic minorities often live. For many uninsured and underinsured students, health centers often become the default primary providers. In practice, most health centers appear to fulfill many functions of a primary care provider, serving as first contact, providing continuous care, and ensuring coordination through referrals and linkages to other sources of care [21–23,31].

For communities that operate SBHCs, issues are raised pertaining to their inclusion and integration into existing and emerging systems of care. Providing cost-effective care through a system of SBHCs will help meet the needs of uninsured students. Furthermore, research documents that, even among adolescents with other sources of care, including Medicaid, access and use of SBHCs is a viable option given their greater accessibility and acceptability. Ensuring that SBHCs remain vibrant in a managed care environment, including their inclusion as a plan provider, should, thus, be considered.

At a minimum, SBHCs need to be considered a potential tool by private and public funding sources, insurance purchasers, and providers in ensuring that quality-of-care standards are met. This includes ensuring adequate access to care and meeting the
requirements of annual examinations, immunizations, and appropriate screenings such as for chlamydia. As documented in this study, SBHCs have demonstrated a professional commitment to ensuring quality of care by selecting and implementing widely accepted standards of practice. Their combined experience in testing viable systems for assessing quality of care can lend community-based and clinic provider's insights into developing such protocols.

Future Vision

In considering the future of SBHCs, it is clear that expansion into new domains, including elementary and middle school grades, as well as suburban, rural, and urban communities, has helped open new dialogues about the role of such service providers. In addition to providing traditional primary care services, the centers increasingly offer mental health and health education services that target some of the most challenging health behaviors and concerns of children and adolescents across socioeconomic lines. Owing to their strategic location in schools, SBHCs have a unique opportunity to meet student needs and the ability to implement broad-based community or school outreach and prevention activities. Not all existing programs have pursued such an active agenda, however, in great part to insufficient resources. Currently, more than one-half the centers do not participate in classroom-based health education or health promotion and risk reduction activities. These shortcomings would no doubt be resolved with additional funding and expanded staff.

In part, barriers raised by a lack of financial resources would be eliminated if we broadened the SBHC concept beyond serving underserved populations to include meeting the needs of families for convenience, coordination, and satisfaction. This hybrid public health and clinical service provider model would remove barriers for families, children, and youth. If this model were the case, a funding base could be developed that reflected both public and private sources.

Some community health plans may currently have incentives and payment systems that create political and financing issues that make these programs vulnerable. Community and health system consensus is needed on the responsibilities of health care payers to the child and adolescent population and on additional federal and state support to remove barriers to health care access. The timing may be right for conducting controlled trials that document whether or not the added value of SBHCs warrants a far greater level of public financial investment.

Until such time, challenges to U.S. health care systems are likely to keep SBHCs positioned as an attractive child- and adolescent-focused strategy for improving health care access. Enabling SBHCs to provide services in coordination with managed care and other systems would go far to ensure adequate access to care and appropriate attention to the special needs of children and adolescents in a timely and cost-effective manner.

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