



# Adolescent Health Research Updates

## Supplement to the Adolescent Health Plan

No 5 — July 1997

Research Updates are periodically distributed from the Alaska Adolescent Health Advisory Committee (AHAC). AHAC believes that effective planning for the health of Alaska's adolescents should have a strong scientific basis. *Alaska's Adolescents: A Plan for the Future*, the 1995 publication by AHAC, was the product of the committee's review of research related to adolescent health at that time. In order to stay current with new information, AHAC continually reviews research dealing with a broad range of adolescent health topics. Summary reports are prepared by AHAC members for distribution to people interested in teen health, especially those who use *Alaska's Adolescents* as a guide for their efforts in the field. Feedback about the usefulness of these updates is welcomed.

## School-Based Health Centers

In 1985 there were forty school-based health clinics or centers (SBHC) in the United States. In 1994 there were more than 500, and by 1996 there were 900.<sup>1,2</sup> Alaska has one SBHC, located in Juneau.<sup>2</sup> Clearly, there is a movement in parts of the nation toward operating health centers in schools.

*What is a school-based health center?*

*Do they work?*

*Would we benefit from having more of them in Alaska's communities?*

These are the questions this Adolescent Health Research Update will address.

### History

Although school-based health clinics or centers are often referred to as a modern approach to the ills of adolescents, they are not new. The concept of providing health services in schools has been around for a century, as communities responded to threats such as lice, malnutrition, and infectious diseases. In other eras, we have had doctors, dentists, and nurses, as well as free food and social services, available in our schools. The extent of health and other non-academic services located within schools has waxed and waned partly as a result of the political moods of the country.<sup>3,4</sup>

Today only fifteen percent of schools in this country have full-time nurses. There is a growing interest in locating more health care and other family- and community-oriented services within schools. The concepts of "one stop shopping" for access to health care and social services and of "full-service schools" are being considered and tried in a number of places.<sup>4</sup> The underlying assumptions behind these efforts are that:

- 1) education is valuable;
- 2) children learn better if they are not hungry, sick, or afraid; and
- 3) the longer one stays in school the better the subsequent adult life.<sup>5</sup>

The first modern SBHC was in Dallas in 1970. By the early 1980's there were ten. The early ones included some pregnancy prevention components.<sup>4</sup> Published results, particularly from St. Paul, indicated that school pregnancy and birth rates had been lowered as a result of having a school-based health center. This news sparked many more SBHC efforts and the concept snowballed across the country. Later research indicated that the drop in teen pregnancy rate noted in the earlier studies from St. Paul was part of a community fluctuation, unrelated to school clinics.<sup>6</sup> Meanwhile, however, the emphasis had shifted somewhat from pregnancy prevention to general medical and psychosocial care. States began taking on the role of supporter/guider of SBHC.<sup>4</sup> Today more than fifty percent of SBHC's receive at least some state funding.<sup>2</sup> Health centers exist at every educational level—grade school, middle school and high school.

## Components of School-Based Health Centers

A school-based health center can be any health clinic or service, located within a school. SBHC's are usually provided by some community group that is separate from the school and are most often funded by entities separate from the school.<sup>4</sup> A school-based health clinic or center is like a cafeteria in that it can have any number of items on the menu of services. Joy Dryfoos in *Full Service Schools* gives a list of possible components of a health clinic. She goes on to say that virtually every health, mental health, psychosocial, family, or community program could be and has been considered and tried on the SBHC smorgasbord platter.<sup>4</sup>

A report written for the Centers for Disease Control lists more than

thirty-five medical services considered essential for a high school health center.<sup>7</sup> These can be loosely grouped as follows:

- 1) preventive services, including various health screenings, dental screening, immunizations, and physical exams;
- 2) care of minor illnesses and injuries, prescribing and dispensing of medications for both acute and chronic conditions, and sexually transmitted disease (STD) diagnosis and treatment;
- 3) mental health services;
- 4) health education, including substance abuse, nutritional guidance, and pregnancy prevention and family planning;
- 5) social services, including case management and referral services; and
- 6) basic lab tests.

## **Do School-Based Health Centers Work?**

The extent to which health clinics in schools “work” can only be answered in terms of for whom and for what problems the clinics have been established. Where a positive impact has been shown, it is helpful to know which aspects—which items from the menu of services—are the most important.

Answering these questions is problematic, however. Measuring effectiveness is expensive and difficult to do with statistical accuracy. Good controls are almost impossible to find, as schools rarely differ in just one component. Community-based private or public agency programs have not necessarily been rigorously evaluated for comparison. Measures such as birth rates and drop-out rates are gross measurements and may not reflect more subtle benefits that might occur, especially in the area of mental health. Despite the difficulties of evaluations, the following summaries offer conclusions gleaned from available reviews of SBHC’s.

### **Getting Needed Services**

Just as location, location, and location are the three most important factors in the real estate business; access, access, and access are deemed to be the most critical factors in delivering health care services to adolescents. Specifically,

- physical access (accessibility)
- economic access (affordability), and
- lifestyle access (comfort and convenience)

are believed to be major determinants in adolescents' ability to use health resources. It is believed that teens will not be as likely to go to hard-to-get-to sites, that many can't afford to get private care, and that the convenience of school-located facilities makes SBHC's particularly helpful for high-risk teens needing multiple visits for multiple problems.

Some beliefs about access are supported by research.<sup>4</sup> School-linked health services that are not located in the school are indeed less utilized. At-risk students within any given school utilize SBHC's at a rate higher than other students.<sup>4</sup>

Access issues also involve hours of operation. High quality preventive care, mental health care, non-acute care, and some primary care can be offered at an SBHC without twenty-four hour coverage. However, young people do not experience their physical illnesses and health care needs only between 8 am and 5 pm on weekdays and only during the school year. Although twenty-four hour coverage is recommended,<sup>7</sup> few SBHC's offer this. Evaluations and large reviews of SBHC's have made little reference to the impact of limited hours of operation on students' health needs.

### Pregnancy

The effect of SBHC's on teen pregnancy and birth rates has been reviewed by many researchers, including Joy Dryfoos<sup>4</sup> and, most recently, Douglas Kirby.<sup>6</sup> Kirby reviewed five studies that looked at SBHC effects on sexual behavior. Each of these studies included three or more schools. Kirby noted flaws in the experimental designs of all five studies, and further concluded that school pregnancy and birth rates are unrelated to either the presence of a SBHC or the availability of condoms in schools. Some multi-component programs with SBHC's have shown modest results, but those desired effects drop off after a program is ended.

A 1993 U.S. Public Health Service report has also described their evaluation research of the effects of SBHC's on teen pregnancy.<sup>8</sup> Their findings are similar to Kirby's, and they too identify a number of problems with the research, such as cohort studies without random assignment and a lack of long-term evaluations. Like Kirby, they cite some decrease in numbers of pregnancies in some multi-component programs.

In a review article by Dryfoos, a California evaluation of programs with specific pregnancy prevention goals showed success in reducing the rate of initiation of sexual activity and increasing contraceptive use.<sup>9</sup>

Dryfoos and Kirby both conclude that no negative effects such as increased sexual behavior, less contraceptive use or more pregnancies result from the presence of SBHCs.

### **Mental Health**

While outcome studies of the mental health components of school clinics seem to be few<sup>10</sup> and not very significant,<sup>11</sup> the utilization of school-based mental health services is high,<sup>4</sup> indicating a strongly felt need on the part of some students. Students with high-risk behaviors are especially heavy users of mental health clinics according to some studies.<sup>9</sup>

### **Physical Health**

Some SBHC's have been associated with less emergency room utilization or hospitalization, some with more visits for health care than before the SBHC were available, and some with more specialty care (family planning, and sports physicals, for example).<sup>9</sup> The actual relationship between SBHC's and improved physical health is unknown.

### **Academic Performance**

Some SBHC's have been associated with decreases in rates of suspensions, in truancy, and drop-outs.<sup>4,12</sup> The effect that a SBHC has upon students' academic performance has not been successfully measured in a significant number of programs.

### **Substance Abuse**

Some SBHC's have been associated with decreases in student substance abuse<sup>4</sup> and school suspensions.<sup>9</sup>

## **Elements of Quality Programs**

Quality of care in the context of health care delivery seems to be an under-examined issue. There is little reference to it in the SBHC evaluation research and reviews. As state initiatives to fund SBHC's have increased, however, many states are providing standards of care guidelines.<sup>1</sup>

Furthermore, several authors have identified elements deemed most important for SBHC's.<sup>6,7,12, 13</sup> They include:

- local needs assessment was conducted<sup>7</sup>
- program is based on theoretical models with demonstrated efficacy<sup>6</sup>
- program has good leaders<sup>12</sup>
- patient confidentiality is maintained<sup>7</sup>
- school staff is valued<sup>12</sup>
- health-related services are integrated into entire school health program<sup>7</sup>
- providers collaborate well<sup>7</sup>
- comprehensive services are provided by a mutidisciplinary team<sup>7</sup>
- program includes 24 hour care and provision of a medical home<sup>7, 13</sup>
- good referral and follow-up are evident<sup>12</sup>
- programs are long term.<sup>6</sup>

## Do We Need More School Based Health Centers in Alaska?

The research literature suggests school-based health centers can help address a number of adolescent health concerns. They have the potential to improve the health status and educational achievement of youth, but they require considerable effort and resources to be effective, and measuring the specific impacts remains problematic. It may be that some services, such as mental health, are especially beneficial for students, but we as yet lack the specific evaluation information.

A community should look at its needs before it decides if a SBHC would benefit them. If a significant number of children or adolescents are not finding one or more of their health requirements met by the existing health care delivery system, then a SBHC may be a good option for the community to consider.

The cost effectiveness of SBHC's is not known.<sup>4</sup> It is not clear from the review literature which system of financing and management of SBHC's is best. What is certain is that long term financing must be in place. The subjects of organizing and financing are beyond the scope of this Research Update, but they are critical if a SBHC is planned.

Individuals considering employing school-based health centers would be wise to first consult books such as *Full Service Schools*<sup>4</sup> and subscriptions to SBHC information centers like *Making The Grade*.<sup>2</sup> Bibliographies are also available with additional information and guidelines.<sup>14</sup> An article by Guernsey in *Health Care in Schools, State of the Art Reviews*<sup>15</sup> provides a good overview. Information about the only Alaskan SBHC (in Juneau) can be obtained through the Juneau Public Health Center, (907-465-3353).

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