



School Health Indicators for California Communities

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Prologue

In its “Community-Based Public Health Policy & Practice” series, the Partnership for the Public’s Health has explored the many factors that are important in determining a community’s health. Previous discussions centered around private nonprofit hospitals, academia, law enforcement, community-based participatory research, local health departments, community-based organizations, and public schools. The second brief of this series, “What Do Schools Have To Do With Community Health?,” reported on a State of California effort to create a framework for discussing the school-health relationship. Interest in this area is so high that further consideration was called for — something that would provide tools for communities to use in working with their schools to maximize their potential as partners in promoting community-based public health. The following discussion describes the possibilities, the challenges, and some of the resources available for employing data indicators in support of coordinated school health in California communities.

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Executive Summary

There are three good reasons to pursue school health indicators:

- 1) student health is vitally important in its own right and as a pre-condition to school attendance, alertness and learning.
- 2) measuring a school system's performance in school health is a critical step in achieving optimal health promotion programs and results.
- 3) a variety of strategies and resources are available to guide communities through this undertaking.

Defining and Using Indicators

An indicator is a data element that points to an issue or condition. It is intended to reflect how well a system is working in a specified area. A good indicator is relevant, understandable and useable, and at the same time is technically sound, that is, reliable and valid for its intended use. An index is a variable that combines two or more indicators to produce a single score, and is used to summarize a general or multi-component area. It might assign more weight to some component indicators than others. Multiple indicators are usually employed together as part of an indicator set or system. An indicator system might contain indicators, indexes or a combination of both.

Social and health indicators are commonly used in seven ways, on a continuum representing the increasingly rigorous demands of each use. Indicators are used to: describe, monitor, set goals, advocate, evaluate, and to hold school systems, public health agencies and community organizations accountable for either processes or outcomes.

What Makes a Good Indicator?

Good indicators are:

- ◆ **Relevant and meaningful.**

Indicators should provide important and useful information that appeals to a variety of interested stakeholders.

- ◆ **Understandable.**

Indicators should be understandable to all intended audiences, including parents and the public.

- ◆ **Feasible and Affordable**

Indicators should be based on accessible data that already are collected and available, or on data that can be collected within the limits of available resources.

- ◆ **Reliable.**

A reliable indicator is one that is free from measurement error.

- ◆ **Valid.**

An indicator in itself is neither valid nor invalid. It is the intended use of an indicator that determines validity – a valid indicator is one that is meaningful and appropriate for its intended use.

Existing Indicator Systems for School Health

A short list of existing indicators for school health includes process indicators, such as the School Health Index (SHI) and the School Health Policies and Programs Study (SHPPS), both developed by the Centers for Disease Control and Prevention (CDC). Outcomes indicators of student-health-related behaviors and environments can be built around the National Health Education Standards and the Health Education Assessment Project's test items. Student self-report surveys of health behavior include the California Healthy Kids Survey (CHKS), the California Student Survey (CSS) and the CDC's Youth Risk Behavior Survey (YRBS).

Developing a Local School Health Report Card

Developing a local school health report card should start with a consensus development process to approach indicator selection and use, involving representatives of all potential users: partners, students, school and health agency staff, school board members, and other community leaders. Early agreement on a framework, such as the Coordinated School Health Framework, is important. The next step is to review and assess existing indicator systems, keeping in mind how the intended indicator will be used and the level of quality standards required. Once indicators are selected and obtained, they should be shared as widely as possible, to continue the process of soliciting suggestions and discussion from a wide array of interested parties.

School Health Indicators and California's SARC

All public schools in California are required to prepare and disseminate information about themselves to the public through an annual School Accountability Report Card (SARC). One of the most important indicators in the SARC is the Academic Performance Index (API), which measures the academic performance and growth of schools, using a numeric index from 200 to 1000. To calculate the API, individual student scores from several academic achievement tests are combined into a single number (index) to represent the performance of a school.

The SARC includes two school-health related assessments: safety, cleanliness, and adequacy of school facilities; and classroom discipline and climate for learning, including suspension and expulsion rates. It also includes the aggregate results of the mandated California Physical Fitness Tests (CPFT) for grades 5, 7 and 9.

Next Steps: State-level Policy Recommendations

Measuring a school system's health performance is a critical step in achieving optimal programming and policies. To the extent that this

can be done, it is reasonable to expect positive effects on both student health and student achievement.

Beyond SARC, we need to consider the requirements of the federal No Child Left Behind Act, which postdates most California legislation in this area. Any changes to the SARC will have to conform to these federal requirements. A second issue is the technical concerns and controversies revolving around the fairness, reliability and appropriate use of the API. Finally, the role of the CPFT in the system is a question. A more meaningful role for the CPFT might improve the overall reliability and validity, and address concerns of low academic performance districts. However, we must realize that other potential school health accountability indicators with high levels of feasibility, reliability and validity will be scarce.

Recommendations

1. Immediately implement the SB 1868 authorization to include the California Physical Fitness Test in determining a school's honorary designation as a "distinguished school."
2. Add additional school health indicators to the School Accountability Report Card, for example, health course offerings, health standards-based student assessments, teacher training in student health, health services available, and ratio of school nurses to students.
3. In addition to the aggregate result of the California Physical Fitness Test as now reported on the School Accountability Report Card, provide results by racial/ethnic groups, similar to disaggregated results for academic test scores.
4. Develop a Health Performance Index (HPI) based on the California Physical Fitness Test to report along with the Academic Performance Index on the School Accountability Report Card.
5. Employ the HPI in conjunction with the Academic Performance Index to determine allocation of monetary rewards and sanctions.

6. Identify and assess other reliable and valid school health indicators for potential use in conjunction with the Academic Performance Index to determine allocation of monetary rewards and sanctions.
7. Develop a California Health Education Assessment (CHEA) – a standardized paper and pencil test of student health knowledge and skills based on the blueprint provided by the National Health Education Standards and the National Health Education Assessment Project.
8. Incorporate the CHEA into the Academic Performance Index. This could be accomplished by using the CHEA as a separate test, or by incorporating it as a new content area into the Stanford 9 Achievement Test, the California Standards Tests, or the California High School Exit Examination.
9. Commission a feasibility study to address the technical as well as practical issues involved in implementing recommendations four through eight above.
10. Commission a pilot study involving several geographically and demographically varied Partnership for the Public’s Health sites to develop local school health accountability systems based on a community consensus process and following the guidelines provided in this document. The results of this study not only would be useful to the communities involved, but also as potential models for a statewide systems, and as model processes for other community efforts.

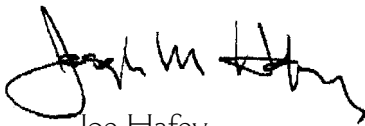
Foreword

Between 2001 and 2004, the Partnership for the Public's Health published a series of policy briefs titled *Community-Based Public Health Policy & Practice*. In this series we explored the power and utility of developing linkages and collaborative relationships between local public health departments and a range of partners in other sectors. These briefs have offered profiles of promising models for working with nonprofit hospitals, academia, law enforcement, community-based organizations and neighborhood groups, the faith community, and public schools to improve community health. Lists of resources to supplement these profiles also were included in the Briefs. In addition, a wide array of tools for working with these partners was presented, including community-based participatory research, participatory evaluation and the use of policy advocacy for improving public health.

The second brief of this series, *What Do Schools Have To Do With Community Health?*, reported on a State of California effort to create a framework for building school-community health partnerships. Interest in this area is very high and still growing. For example, according to a recent op-ed piece in the Los Angeles Times by Dr. Jonathan Fielding, Director of Public Health for the Los Angeles County Department of Health Services, and David Abel, chairman of the Board of New Schools/Better Neighborhoods, "...obesity, not flu or tuberculosis, is the biggest epidemic of Los Angeles. It influences a child's attendance at school, (because) obese children are more

prone to a variety of ailments, and it also affects lifelong career opportunities, quality of life and life expectancy.” Assuring access to nutritious food and appropriate levels of physical activity is one critical area where schools and local health departments can engage community members and other partners to provide California’s children with school environments that support their healthy growth and development.

To succeed in this important and ambitious work requires a means for school-community partnerships to measure current status and progress over time toward meeting their goals. School health data indicators help fulfill this need. The following report builds on the earlier school health *Brief*, and describes the possibilities, the challenges, and some of the resources available for employing school health indicators as tools to support coordinated school-health efforts in California communities.



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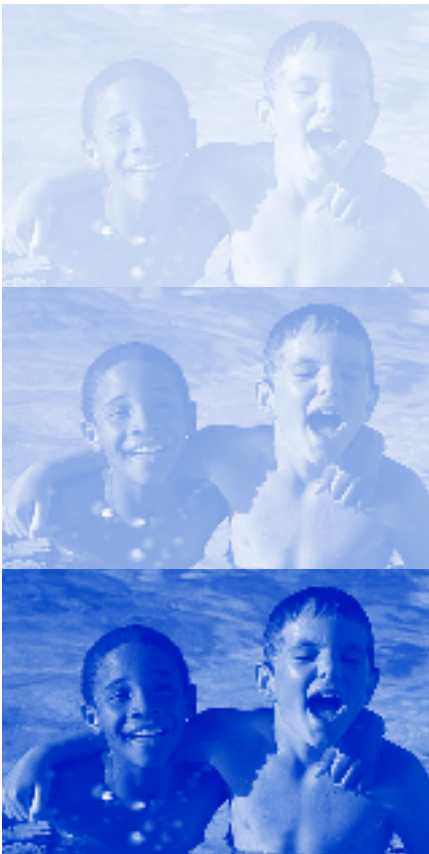
Introduction

The selection and use of school health indicators is anything but simple. Indicators are a type of data, and these data have to be collected or otherwise obtained, usually requiring effort, expertise, and expense. Good data – data that are relevant, reliable, and valid for their intended

use – rarely come easily. Data have to be interpreted, and even the best data are often misunderstood or misused. Finally, once the investment is made in obtaining good data and drawing reasonable and appropriate conclusions, the data might convey a not very welcome message – for example, that a district’s and community’s school health performance is not up to expectations. Why would anyone want to open this can of worms?

There are three good reasons. First, student health is vitally important — both in its own right and as a necessary condition for optimal attendance, alertness, and learning (see *What Do Schools Have To Do With Community Health?* in this

series, and Novello, et al, 1992). Second, measuring a school system’s performance in school health can be a critical step in achieving health promotion programs and





results. Finally, in spite of the challenges involved, a variety of strategies and resources are available to guide a community through this undertaking from start to finish.

This paper begins with a discussion of indicators and several approaches to their use. Criteria for good indicators are reviewed, and some of the practical issues and challenges to be faced are discussed. A variety of data tools and strategies that might be used as part of a school health indicator system are then explored. Next, a recommended process for developing a local school health indicator system is presented. This is followed by a discussion of California's School Accountability Report Card (SARC), and inclusion of school health indicators in SARC. The paper concludes with recommendations in this regard.

What Are Indicators?

The term indicator is derived from the Latin verb *indicare*, meaning “to point out or proclaim.” An indicator is a data element that points to an issue or condition. It is intended to reflect how well a system is working in a specified area. In the present context, this would be how well a school system is performing in one or more of the component areas of coordinated school health. A good indicator is relevant, understandable, and useable, and at the same time, is technically sound, that is, reliable and valid for its intended use (as discussed below). Expectations for technical soundness become more rigorous as the stakes related to an indicator’s use increase. Examples of potential school health indicators include the number of health education hours per student, the percentage of students meeting all six healthy

fitness zone standards on the California Physical Fitness Test, a school district’s teen birth rate, and the percentage of students reporting participation in community service activities.

An index is a special kind of indicator that combines two or more individual indicators to produce a single data element, and is used to summarize a general or multi-component area. For example, academic achievement comprises different subjects, but is often represented by a single score, as in a grade-point average. An index might assign more weight to some component indicators than others. The terms indicator and index are sometimes used interchangeably, but it is useful to distinguish between an individual data indicator, such as the percentage of students achieving a specified test score, and a measure derived from a combination of individual indicators, such as California’s Academic Performance Index.





In addition, a comprehensive performance assessment system that might provide additional detailed information and follow-up activities is sometimes referred to as an index. One example of such a system is the US Centers for Disease Control and Prevention’s School Health Index (see page 12).

Multiple indicators are usually employed together as part of an indicator system. An indicator system might contain indicators, indexes, or a combination of both. Indicator systems for high-stakes situations, such as program evaluation or accountability, usually include fewer indicators. This is largely due to the higher demands for technical soundness—requiring greater selectivity in choice, and often requiring greater expense in collection. The composition of an indicator system should be guided by a solid conceptual framework that is logically coherent and based in research. A widely accepted framework that can be employed to inform the selection of school health indicators is the Health Framework for California Schools (see page 21).

How Are Indicators Used?

School health indicators and indexes are commonly used in seven ways¹. An indicator can be used for more than one purpose in the same application. It is unrealistic, however, to expect indicators on their own to serve a useful function. For all seven uses, indicators provide content to be employed as part of a more comprehensive set of activities that are critical to the successful use of any set of indicators. For example, a reduction in student self reports of smoking from one year to the next cannot be assumed to indicate the effectiveness of a new tobacco prevention program that was implemented in the interim, unless this indicator was included in a skillfully designed evaluation. As another example, teen birth rate and cost indicators are inherently

interesting to many school and community health personnel, but to genuinely influence policy, advocacy activities will need to be implemented around those indicators.

The seven potential uses of indicators can be laid out on a continuum roughly representing the increasingly rigorous demands of each use. The intended uses of an indicator system affect the number of indicators used, the level of technical standards they will have to meet, and the types of activities that will need to be undertaken. In general, as we move up the list of seven uses from description through accountability, the stakes and expected standards of technical soundness increase, as does the effort that will be required to use the indicators properly.



1. *Description*

To provide descriptive information about school health systems and outcomes for the purpose of generating knowledge and understanding. A special case of descriptive use is the mandated reporting of indicators to a government agency or other funder, where no accountability rewards or sanctions are involved.

2. *Monitoring*

To track school-health-related outcomes that might require policy changes or interventions.

3. *Goal setting*

To help focus and coordinate school health activities across school systems, public health agencies, and community organizations.

4. *Advocacy*

To promote funding allocation, program adoption decisions, or policy change. (See page 7)

5. *Evaluation*

To answer questions about the implementation and effectiveness of specific school health programs and policies, and to elucidate reasons for success or failure.

6. *Process-based accountability*

To hold school systems, public health agencies, and community organizations responsible for meeting program implementation, collaboration, and policy goals.

7. *Outcomes-based accountability*

To hold school systems, public health agencies, and community organizations responsible for meeting prescribed or agreed-upon student health or health behavior goals.

Advocacy Use of Indicators: The No Time for Complacency Campaign

“This study gives every legislator a definitive picture of the impact that teen pregnancies are having on their districts and their constituents. This is an issue that all legislators must continue to take seriously.”

—Assembly Majority Floor Leader Marco Antonio Firebaugh,
Chair of the California Latino Legislative Caucus

A key factor in the success of the California Teen Birth Rate Study and the associated No Time for Complacency advocacy campaign was the effective use of local indicators by community spokespersons and others in their advocacy efforts. Conducted by PHI’s Center for Research on Adolescent Health and Development in collaboration with Brown-Miller Communications, and funded in part by a grant from the California Wellness Foundation, this project examined trends and activities related to teen childbearing of the last decade, statistical expectations for the future, and estimated taxpayer and societal costs. To accentuate the local and political relevance of these findings, teen birth indicators (birth numbers, birth rates, and estimated costs) were provided for each California legislative district. Finally, comprehensive state and local policy recommendations were developed.



No Time for Complacency: Teen Births in California...

Continued from previous page

These legislative-district-level indicators were used to frame a coordinated advocacy campaign around the following question: *Given the notable progress in California during the last decade, as well as the unmistakable need for further progress and to prevent reversals, what has California been doing right, and what more needs to be done?* The district indicators were presented in an analytic advocacy report titled: *No Time for Complacency: Teen Births in California* (Constantine & Nevarez, 2003). PHI also provided support to local community-level spokespersons and advocates throughout the state on talking with local newspapers and using the indicators to educate legislators.

This indicator-based advocacy campaign produced extensive media coverage around the state, gained numerous commitments of support from state legislators and advocacy groups, and substantially influenced the discussion and debate around four legislative bills. For example, in her opening statement to the Assembly Education Committee on Senate Bill 71, the *California Comprehensive Sexuality and HIV/AIDS Prevention Education Act*, bill author Senator Sheila Kuehl cited the report and its teen birth indicators three times (the bill was signed into law on October 2, 2003). In addition, the campaign has been widely credited as a key factor in retaining tens of millions of dollars of state funding for a variety of teen pregnancy prevention programs, during a year of unprecedented state budget crisis.

What Makes a Good Indicator?

All indicators, of course, are not created equal. At a minimum, an indicator should be relevant and meaningful, understandable to parents and the public, feasible and affordable, reliable, and valid for its intended use.

1. Relevant and meaningful. Indicators should provide important

and useful information that appeals to a variety of interested school and community stakeholders. A complete indicator system should cover a wide range of processes and outcomes, such as those related to nutrition, mental health, safety, tobacco use, and other specific health areas. For outcome indicators, both positive outcomes (for example, percentage of students meeting physical health standards) and negative outcomes (for example, smoking rates) should be included.

2. Understandable. Indicators should be easily understandable to all intended audiences, including parents and the public. Their meaning should be clear and consistent across groups and over time.

3. Feasible and affordable.

Indicators should be based on accessible data that are already collected and available, or data that can be collected in a rigorous and reliable manner within the limits

of the resources available. For example, data on teen births by zip code can be readily obtained from a county health department





or from the California Department of Health Services. Data on teen pregnancies are much more difficult to obtain and typically require a student self-report survey. This difficulty, combined with the lower reliability of self-report data, can make teen births a superior choice over teen pregnancies as an indicator, based on the dual considerations of ease of access and reliability.

4. *Reliable.* A reliable indicator is one that is free from measurement error. Such error can arise from various sources, for example:

- (a) collecting data from samples of students that are not representative of the full population of students of interest,
- (b) student carelessness, confusion, or dishonesty in completing survey questionnaires,
- (c) insufficiently rigorous procedures employed in collecting, compiling, or transcribing data, and,
- (d) non-standardized data collection procedures that vary from year to year or from school to school.

5. *Valid.* An indicator in itself is neither valid nor invalid—it is the intended use of an indicator that determines its validity. A valid indicator is one that is meaningful and appropriate for its intended use (Reliability is generally considered to be a necessary, but not sufficient, condition for validity.) For example, if the rate of student participation in community service activities is used as an indicator to help evaluate the effectiveness of a new youth devel-

opment program, this would be of little validity if collected before the program was fully implemented. However, if used to identify the need for a new youth development program (i.e., goal setting), this rate could be a valid indicator of need prior to any program implementation. As another example, if teen births were used to compare the effectiveness of sexuality education programs in several schools, birth numbers would be of questionable validity because they don't take into account differences in number of teens in each area, while birth rates would be more appropriate. However, either teen birth numbers or rates might be sufficiently valid indicators of the need for comprehensive sexuality education programs.

While everyone involved in indicator selection and use should have a basic understanding of these criteria, it is usually helpful to work with a technical expert who can provide local assistance within this area. Sometimes such experts can be found on the staff of a local health or education agency within the school-community health partnership. In other cases, an outside consultant can be employed. For further discussion of criteria for good indicators, see Moore (1999).

What Are Some Existing Indicator Systems for School Health?

This section describes some of the currently available school health indicator systems and tools that are either intended for, or have potential application to, local community use. Both process and outcome indicators are included. Process indicators are those that represent health promotion policies, programs, activities, and resources, whereas outcome indicators represent potential effects of the processes employed. In addition, both process and outcome indicators can be used in assessing needs.



1. Process Indicators of School Health Policies and Programs

SCHOOL HEALTH INDEX (SHI)

The SHI was developed by the US Centers for Disease Control and Prevention (CDC) as a comprehensive assessment and planning tool for use by school and community partners. It was designed to enable local schools and communities to identify the strengths and weaknesses of their elementary and secondary schools' health promotion policies and programs. It is intended to lead to an action plan for improving student health, ideally involving a partnership of teachers, parents, students, and other community

members. The currently available second edition of the SHI addresses three health behavior areas: physical activity, eating habits, and tobac-



co use. Future editions are planned to cover food safety, asthma management, health-risk behaviors that contribute to intentional and unintentional injury, behaviors that increase the risk of skin cancer, and sexual behaviors.

The SHI is comprehensive, requiring a substantial investment of time for administration and use. It is built around the coordinated school health framework, and each health behavior area has eight distinct modules corresponding to the eight components of the framework:

- 1) coordinated school health education,
- 2) physical education,
- 3) parent/community involvement,
- 4) healthful school environment,
- 5) health services,
- 6) school counseling, psychological and social services,
- 7) nutrition services, and
- 8) health promotion for staff.

In terms of the indicator uses described above, the SHI is best suited to support goal setting. More information about the SHI, including an administration manual and copies of the instrument, is available at: <http://www.cdc.gov/nccdphp/dash/SHI/>

SCHOOL HEALTH POLICIES AND PROGRAMS STUDY (SHPPS)

The SHPPS is a national survey developed and conducted by the CDC to assess school health policies and programs at the state, district, school, and classroom levels. It is intended to answer such questions as:

1. What are the characteristics of the eight coordinated school health components at the state, district, school, and classroom levels nationwide?
2. Who is responsible for coordinating and delivering each component of the coordinated school health program and what kind of education and training do they receive?
3. What collaboration occurs among staff from each coordinated school health program component and with staff from state and local agencies and organizations?

4. How have the characteristics of coordinated school health programs changed over time?

In terms of the indicator use described above, SHPPS is especially well suited for process-based accountability uses. More information about SHPPS, including copies of the questionnaires, can be found by visiting the SHPPS Web site at <http://www.cdc.gov/nccdphp/dash/shpps>. Normative data for California, other states, and many large cities from the year 2000 national survey are available at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/ss4908a1.htm> These data also are presented and discussed in a special issue of the *Journal of School Health* (September, 2001), which can be ordered through the SHPPS Web site.





2. Outcome Indicators of Student Health-Related Knowledge, Behaviors, and Environments

Although no standardized tests of student health knowledge and skills are in wide use, the National Health Education Standards (NHES) provide a comprehensive framework for this type of assessment, and the Health Education Assessment Project (HEAP) provides a large pool of assessment items directly tied to this framework.

NATIONAL HEALTH EDUCATION STANDARDS (NHES)

Developed by the Joint Committee on National Health Education Standards and published in 1995 by the American Cancer Society, the NHES describe the knowledge and skills essential to the development of health literacy. The standards are intended to serve as a framework for organizing health knowledge and skills into curricula at the state and local levels. Seven overarching standards are provided for grades K-4, 5-8, and 9-12, together with a rationale for each standard and a set of performance indicators for each of the three grade ranges. The seven standards are the following:

1. Students will comprehend concepts related to health promotion and disease prevention.
2. Students will demonstrate the ability to access valid health information and health-promoting products and services.
3. Students will demonstrate the ability to practice health-enhancing behaviors and reduce health risks.



4. Students will analyze the influence of culture, media, technology, and other factors on health.
5. Students will demonstrate the ability to use interpersonal communication skills to enhance health.
6. Students will demonstrate the ability to use goal setting and decision-making skills to enhance health.
7. Students will demonstrate the ability to advocate for personal, family, and community health.

As an example of performance indicators, Standard 5 provides eight indicators for each grade range, including “demonstrate refusal and negotiation skills to enhance health” at grades 5-8. These indicators are intended to serve as a blueprint for organizing both the curriculum and the student assessments.

HEALTH EDUCATION ASSESSMENT PROJECT (HEAP)

The Council of Chief State School Officers’ HEAP is part of the State Collaborative on Assessment and Student Standards (SCASS). This project involves a collaborative process to develop effective health education assessment resources, and to increase members’ capacity to

align curricula, instruction, and assessment to improve student health literacy. More than 1,400 items based on the NHES have been developed, and were distributed to California and other member states in January 2001. Additionally, the SCASS has produced many other products, including approximately 2,800 additional assessment items and a generic scoring system for performance-based items.

The NHES and HEAP systems are relevant to the program evaluation and outcomes-based accountability uses described above, as well as description, monitoring, and goal-setting uses. Although work remains to be done on standardizing and validating the assessments, these resources already can be useful to school districts and partnerships that wish to construct their own NHES-based assessments. The NHES are available at http://www.aahperd.org/aahe/natl_health_education_standards.html. More information about HEAP can be found on the Council of Chief State School Officers' Web site at <http://www.ccsso.org> and HEAP assessment items and supporting materials are available to California school districts through the California Healthy Kids Resource Center, at <http://www.californiahealthykids.org>.

STUDENT SELF-REPORT SURVEYS OF HEALTH BEHAVIOR

Several large-scale student health behavior survey systems exist, and three have been widely used in California. The California Healthy Kids



Survey (CHKS) is a student self-report survey system applicable to grades 5-12 and intended for use at the local district and school levels. It consists of a core survey module that addresses alcohol, tobacco, and other drug use, violence, and physical health, along with five supplemental modules that ask detailed questions on specific topics. More information on the CHKS can be found at www.wested.org/chks. The California Student Survey (CSS) is a mandated statewide project, conducted since 1985. Every two years, the CSS presents a snapshot of students' risky and health-related behaviors, including drug, alcohol and tobacco use; resilience and perception of school violence. More information on the CSS can be found at <http://www.caag.state.ca.us/cvpc/css.html>.



The CDC's Youth Risk Behavior Survey (YRBS) is a similar survey that provides data that can be compared to other states and districts, as well as national comparison data. More information on the YRBS can be found at www.cdc.gov/nccdphp/dash/yrbs/.

These survey systems are in general best-suited for descriptive and goal-setting applications. They often are used to meet mandated reporting requirements, such as those for the Tobacco Use Prevention Education and Title IV Safe and Drug-Free Schools and Communities Act programs. However, they are constrained by several vexing data reliability issues, including:

1. non-representative samples when parent consent and student participation rates are low;
2. participation rates that can vary substantially across years and across districts, thereby precluding meaningful comparisons;
3. conditions for administering the surveys that often are insufficiently standardized; and,

4. student motivation and fatigue issues, partly resulting from the large number of survey items to be completed in one sitting.

As a result, evaluation or accountability uses of these surveys, and especially comparing results across districts or from year to year, should be approached with extreme caution.

NATIONAL AND STATE-BY-STATE SYSTEMS

Typically, these systems contain a variety of community health indicators, with a subset that is especially relevant to school health. Three comprehensive examples are the:

- Annie E. Casey Foundation Kids Count Data system (www.aecf.org/kidscount/)
- Federal Interagency Forum on Child and Family Statistics, America's Children: Key National Indicators of Well-Being system (www.childstats.gov)
- CDC's Tracking Healthy People 2010 goals and indicators (www.cdc.gov/nchs/hphome.htm)

School health indicators with potential applicability to all of the seven categories of indicator use can be found among the numerous indicators included within these systems.

What Is Involved in Developing a School Health Report Card at the School-Community Partnership Level?

As with many activities of a school-community partnership, a consensus development process is the appropriate way to approach indicator selection and use. Representatives from all groups of potential users of the indicator system should be meaningfully involved, including parents, students, school and health agency staff, school board members, and other community leaders. This type of process promotes shared ownership and better acceptance and use of the results, as well as better decisions in selecting and using the best indicators. An excellent guide to engaging in such a process is the American Cancer Society's *Guide to School Health Councils* (available at www.schoolhealth.info). In spite of budgetary limitations and other logistical constraints, there is rarely a justification for omitting or short-changing this process.

Once a school health indicator group is formed, an early step is to agree on a framework to guide the selection and use process. A framework is a type of scaffolding that provides a structure to guide the indicator selection and use processes. The Coordinated School Health



Framework is widely used and is well known among school health professionals and community health specialists. It involves eight overarching areas of school health, as listed above in the School Health Index description. This framework is often a logical starting point from which a local partnership will begin its work. It can then be expanded and adapted to the local community's situation and priorities. The Coordinated School Health Framework provided the basis for the

2003 Health Framework for California Schools, available at www.cde.ca.gov/cde-press/health-framework/2003-health-framework.pdf



Once a framework is selected, and modified as necessary, the next step is to review and assess existing indicator systems. There is little reason to reinvent the wheel, nor even to invent a water wheel when a windmill is already available. As illustrated in the previous section, many indicator systems currently exist, and adopting or adapting them, based on systematic review of what is already available from within this pool should be considered before developing new ones. Nevertheless, it is sometimes necessary to develop new indicators to supplement what is already available. At this point, it is imperative to consult a school health indicator expert.

Whether developing new indicators or adopting existing ones, it is important to keep in mind how the intended indicator

will be used and the level of quality standards required. A special consideration in selecting and developing indicators for accountability uses is to be sure that process accountability indicators are not neglected by an inordinate focus on outcome accountability indicators. Processes (such as collaborative planning or program implementation) are critical steps in achieving desired outcomes, and they are often more immediate, and can be easier to measure and interpret than outcomes.



Process accountability indicators also can be critical to understanding outcome indicators. For example, if an outcome goal is not achieved, was it because the approach was wrong, or because the process was not implemented?

Once indicators are selected and obtained, it can be in everyone's best interest to share them as widely as possible, and to continue the process of soliciting suggestions and discussion from a wide array of interested parties. It also is good practice to share the results of your work with other schools and communities, as well as the California Department of Education and the California Department of Health Services.

How Do School Health Indicators Fit into California's School Accountability Report Card?

Up to this point, the discussion has focused on local development and use of school health indicators, as well as on a variety of potential sources of indicators among existing indicator systems. It also is useful to consider the current status and future promise of school health indicators at the statewide level in California. Indicators that are



part of a statewide system would provide comparison data to inform the interpretation of local indicator data, and, at the same time, encourage more focused attention to school health issues at the state policy level. In addition, carefully selected statewide school health indicators would help inform the process of indicator selection at the local community level, while providing for efficiency and standardization across communities.

All public schools in California are required to prepare and disseminate information about themselves to the public through an annual School Accountability Report Card (SARC; see <http://www.cde.gov/ope/sarc>). A variety of indicators and other types of information are displayed in the SARC, organized around several categories of data. School report cards generally begin with a school profile that provides background information about the school and its students. The

profile presents the district's mission and the goals that school administrators, staff, and parents have set for the school. In addition, the report

must address demographic information, school safety and climate for learning, academic data, graduation rates, class size, teacher and staff information, curriculum and instruction, and for secondary schools only, post-secondary preparation.



One of the most important indicators in the SARC is the Academic Performance Index (API). In 1999, Senator Alpert's SB 1, the Public Schools Accountability Act (<http://www.cde.ca.gov/psaa>), established the Public School Performance Accountability Program, consisting of the API, an Immediate Intervention/Underperforming Schools Program, and a Governor's High Achieving/Improving Schools Program. The purpose of the API is to measure the academic performance and growth of schools. It is a numeric index that ranges from 200 to 1000. To calculate the API, individual student scores from several academic achievement tests are combined into a single index to represent the performance of a school.

If a school meets participation and API growth criteria, it may be eligible to receive monetary awards². If a school is ranked in the bottom half of the statewide distribution and does not meet or exceed

its growth targets, it may be identified for interventions. Use of the API for rewards and sanctions (i.e., high-stakes outcome accountability use) has generated continuing controversy since its inception (see Sharon, Tapia, & Campbell, 2002, for a comprehensive critique).

School Health Indicators Currently in SARC

Senate Bill 1632 delineated minimum standardized requirements for SARC, including assessments of the following two comprehensive-school-health-related conditions:

- 1) safety, cleanliness, and adequacy of school facilities, and
- 2) classroom discipline and climate for learning, including suspension and expulsion rates.

SB 1868 extended SARC into the school health domain, requiring school districts to report the aggregate results of the mandated California Physical Fitness Test (CPFT) for grades 5, 7, and 9. The CPFT assesses six major fitness areas:

- 1) aerobic capacity,
- 2) body composition,
- 3) abdominal strength,
- 4) upper body strength,
- 5) trunk strength, and
- 6) flexibility.

Results are reported as the percentage of students, by grade, who meet the Healthy Fitness Zone standards across all six areas. SB 1868



also authorizes — but does not require — the Superintendent of Public Instruction to consider a school's performance on the CPFT in determining whether a school is classified as a distinguished school for purposes of the High Achieving/Improving Schools Program, in addition to any other criteria that are used.

While SB 1868 represents an important and positive step in the direction of including school health in California's school performance accountability system, much remains to be done. Although the CPFT is now a mandated part of the SARC, its use as one of the indicators in selecting California distinguished schools has only been authorized, not required. Further, the California distinguished school designation is not as important to school districts, in a practical way, as are the financial reward and sanction components of the Public Schools Performance Accountability Program. This could be remedied either by including CPFT-based indicators as part of API, or using them in conjunction with API In determining monetary rewards and sanctions.

State-Level Policy Recommendations

This section provides ten policy recommendations related to inclusion of school health indicators on the School Accountability Report Card. The Partnership for the Public's Health, and its parent organization, the Public Health Institute, believe that if implemented, these recommendations would benefit students statewide, while

simultaneously providing a strong foundation for local school health indicator efforts to build upon. To reiterate what was said in opening this paper, student health is vitally important — certainly in its own right, and also as a necessary condition for optimal attendance, alertness, and learning. Measuring a school system's school health performance is a critical step in achieving optimal school health programming and policies. And to the extent that this can be accomplished, it is reasonable to expect positive effects on both student health and student achievement.

In expanding the coverage and weight of school health indicators on the SARC, there are several issues to be considered. One issue is the academic accountability requirements of the federal No Child Left Behind Act (NCLB; see <http://www.ed.gov/nclb/>), which postdates most of the California legislation in this area. Any changes to the SARC will need to

conform to these requirements, and specifically fit within the California State Accountability Plan for NCLB, recently approved by the US



Department of Education. Further analysis will be required to ensure that changes meet these criteria.

A second issue involves the technical concerns and controversies already revolving around the API, involving reliability, fairness, and appropriate use issues (see Sharon, Tapia, & Campbell, 2002). Given these concerns, resistance to any further changes or perceived added burden to the API might be expected. Yet this should be no excuse for avoiding important policy enhancements with excellent potential not only to improve student health, but to improve student academic achievement as well. Because the CPFT is based on physical measurements it has exceptionally high potential reliability and validity, superior to the technical characteristics of academic achievement tests. So arguably, a more meaningful role for the CPFT in the system would improve the overall system reliability and validity, and possibly help address some of the complaints from non-rewarded, low academic performance districts.

Any excitement about more meaningful use of the CPFT, however, must be tempered by the realization that other potential school health outcome accountability indicators with high levels of feasibility, reliability, and validity will be scarce. For example, there is no widely used standardized assessment of student health knowledge, and the larger existing indicator systems, such as the California Healthy Kids Survey, are insufficiently reliable and valid to serve as outcome-based accountability indicators. Yet there are other potential indicators to be explored, ideally via a statewide input and consensus development process that involves a wide range of stakeholders³. Some of these are likely to be suitable for inclusion in the SARC system, and some for the higher stakes outcomes-based accountability use.



Recommendations

1. Immediately implement the SB 1868 authorization to include the California Physical Fitness Test in determining a school's honorary designation as a "distinguished school."
2. Add additional school health indicators to the School Accountability Report Card, for example, health course offerings, health standards-based student assessments, teacher training in student health, health services available, and ratio of school nurses to students.
3. In addition to the aggregate result of the California Physical Fitness Test as now reported on the School Accountability Report Card, provide results by racial/ethnic groups, similar to disaggregated results for academic test scores.
4. Develop a Health Performance Index (HPI) based on the California Physical Fitness Test to report along with the Academic Performance Index on the School Accountability Report Card.
5. Employ the HPI in conjunction with the Academic Performance Index to determine allocation of monetary rewards and sanctions.
6. Identify and assess other reliable and valid school health indicators for potential use in conjunction with the Academic Performance Index to determine allocation of monetary rewards and sanctions.



7. Develop a California Health Education Assessment (CHEA) – a standardized paper and pencil test of student health knowledge and skills based on the blueprint provided by the National Health Education Standards and the National Health Education Assessment Project.
8. Incorporate the CHEA into the Academic Performance Index. This could be accomplished by using the CHEA as a separate test, or by incorporating it as a new content area into the Stanford 9 Achievement Test, the California Standards Tests, or the California High School Exit Examination.
9. Commission a feasibility study to address the technical as well as practical issues involved in implementing recommendations four through eight above.
10. Commission a pilot study involving several geographically and demographically varied Partnership for the Public’s Health sites to develop local school health accountability systems based on a community consensus process and following the guidelines provided in this document. The results of this study not only would be useful to the communities involved, but also as potential models for a statewide systems, and as model processes for other community efforts.

Endnotes

1. This list of indicator uses is based on the work of Brown and Corbett (1997) on social indicators for public policy. It has been adapted to the topic of coordinated school health, and two additional key uses have been added to their original list of five: advocacy and process-based accountability.
2. The future of monetary awards is uncertain due to the current state budget situation.
3. Constantine and colleagues (1997) discuss issues and challenges encountered in a large-scale statewide data standards consensus development process.

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