

Building Healthy Schools

Health Impact Assessment on Planning School Construction Projects in Minnesota

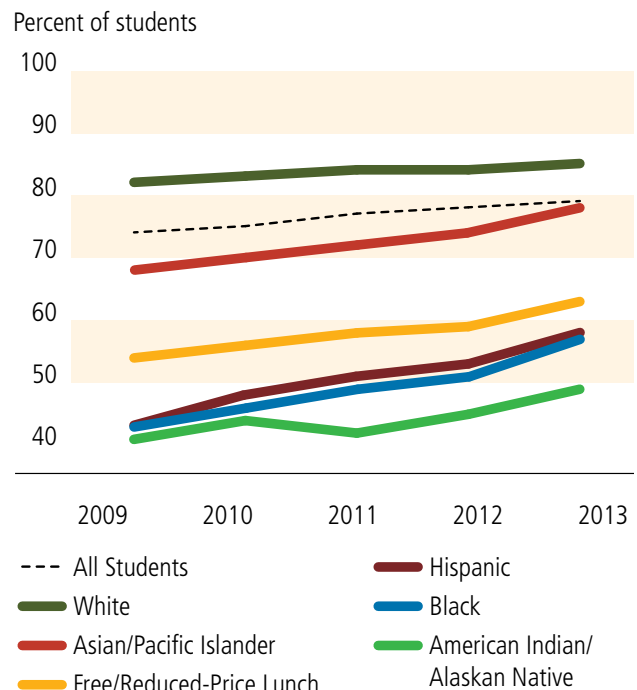
Executive Summary

Purpose and Background

Where students learn matters — the quality and safety of a school’s indoor and outdoor spaces, the range of services the school offers, how close the school is to students’ homes and other frequently visited places such as libraries, parks, recreation or community centers, child care centers, health clinics, and grocery stores, and the types and ease of transportation options, are all important factors that contribute to students’ ability to thrive in school settings. Health is critical not only to students’ academic success, but also to their physical and emotional well-being.

Although Minnesota has a well-earned reputation for excellence in education, substantial disparities persist in educational outcomes and school financing (Figure 1). Children and adults who live in poverty or

FIGURE 1: Minnesota 4-year high school graduation rates, by race/ethnicity and socioeconomic status



Note: MDE calculates the rate as the number of students who graduate within four years of entering 9th grade.

Source: MDE, statewide graduation rates, 2009-2013

in under-resourced areas often experience disparities in access to quality schools, safe, multi-modal transportation options, healthy food, quality health care, and safe, inviting places to play. Certain subpopulations may feel the effects of decisions about school siting and construction more so than others — including communities of color, lower-income households, the disabled, individuals with pre-existing health conditions, rural residents, or any other priority population that may be less able to participate in decisions that impact their lives or lack the resources necessary to avoid unhealthy elements in their environments.

Given the considerable amount of time children spend in school, decisions about school construction and siting have the potential to greatly affect the health of all Minnesota K–12 students, numbering nearly 851,000, and the health of all others who work at or use these school facilities. It is therefore essential to consider the health impacts on student and community populations when making substantial, long-term investments in grades K–12 infrastructure.

This Health Impact Assessment (HIA) (HIA) uses a health lens to analyze how specific sections of the Minnesota Department of Education (MDE) [*Guide for Planning School Construction Projects in Minnesota*](#) (*Guide*) may affect student and community health. The *Guide* is a user-friendly compilation of laws, regulations, design standards, and best practices. MDE developed the *Guide* in 1988; a major revision was done in 1998–99, followed by a modest revision in 2002–03. Due to lack of resources, the *Guide* has not been revised since that time. Use of the *Guide* by school districts is recommended, but not required.

A fundamental purpose of the *Guide* is to help school districts make well-informed decisions that will enhance student achievement and strengthen school and community partnerships. *To the extent it is kept current*, the *Guide* can be an indispensable resource for school district administrators, teachers and support staff; architects, engineers, and facilities planners; regional planners; public health officials; transportation and zoning experts; and parents, students, and community stakeholders. Its content is intended to be accessible to members of the general public. As the *Guide* has become outdated, it is increasingly falling into disuse among key participants in school construction and siting planning processes, including architects, planners, school administrators, and facilities experts.

Although revision of the *Guide* is anticipated, a revision process has not yet been scheduled by MDE and no apparent resources have been set aside for that purpose. The HIA report and recommendations may help get the revision process started and provide guidance once it gets underway. In addition, the HIA report and recommendations can be put to immediate use by any school district that is

HEALTH IMPACT ASSESSMENT (HIA)

is commonly defined as “a combination of procedures, methods, and tools by which a policy, program, or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population” (European Centre for Health Policy, 1999).

HIA can be used to evaluate objectively the potential health effects of a project or policy before it is built or implemented. It can provide recommendations to increase positive health outcomes and minimize adverse health outcomes. A major benefit of the HIA process is that it brings public health issues to the attention of persons who make decisions about areas that fall outside of traditional public health arenas, such as transportation or land use.

contemplating or planning a school construction project in Minnesota and in other states. Many states have guides of their own; however, among states, guidance that considers health impacts is just beginning to emerge.

Since 2003, changes to federal, state, and local laws, and an influx of ambitious public health initiatives — many aimed at reversing the nation’s childhood obesity epidemic, reducing related chronic diseases, and eliminating health disparities — have greatly affected school environments (Appendix V). These changes have signaled a need to update and expand the *Guide* to help stakeholders make well-informed school siting and construction design decisions that can support academic success by optimizing student and community health.

It is important to keep in mind that many factors beyond school siting and construction design influence student health behaviors and outcomes. A school’s location and design will establish a foundation that can help or hinder programming efforts to improve student health and wellness. Success ultimately comes from a combination of sources including designs that promote health, use of evidence-based practices, and strong support from all parts of the school community.

How this HIA Was Conducted

This HIA was conducted from fall 2013 through fall 2014 by a core team from the Public Health Law Center at William Mitchell College of Law and Wilder Research in St. Paul, Minnesota, with in-depth guidance and participation of a steering committee of 15 stakeholder representatives, plus input from several other external advisors and experts in HIA process. The full report summarizes all six steps of the project’s HIA (Figure 2), and focuses on the project’s analysis, findings, and recommendations.

FIGURE 2: The Steps of HIA

1 SCREENING

Determine whether an HIA is needed and likely to be useful.

2 SCOPING

In consultation with stakeholders, develop a plan for the HIA, including identification of potential health risks and benefits.

3 ASSESSMENT

Describe the current health of affected communities and assess the potential health impacts of the decision, policy, or process being studied.

4 RECOMMENDATIONS

Develop practical solutions or changes that can be made within the political, economic, or technical limitations of the project, policy, or process being assessed.

5 REPORTING

Share the findings with decision makers, affected communities, and other stakeholders.

6 MONITORING AND EVALUATION

Monitor changes in the health or the health risk factors of affected communities, and evaluate the effectiveness of the measures that are implemented and the HIA process as a whole.

The HIA process encourages public input at each step.

Source: Adapted from The Pew Charitable Trusts, <http://www.pewtrusts.org/en/about/news-room/news/2014/08/28/the-hia-process>

The project's core team collected and analyzed data from several sources to help address gaps in knowledge about current conditions in Minnesota K–12 schools, assess the impact of proposed revisions to the *Guide*, and support the development of the HIA recommendations. A focused literature review was conducted to determine potential health impacts associated with proposed changes to the content of the *Guide*. The core team reviewed Minnesota's *Guide*, guides developed by other states and non-profits, and related reports and recommendations. Sources of secondary data were reviewed to understand students' current health status and the current health-promoting policies and practices used by schools. Primary data collection methods including online surveys, key informant interviews, and school case studies were used to gather additional information about health-promoting practices currently used by schools, barriers to implementing health-promoting practices and policies, and the degree to which health has been considered in recent school construction and renovation projects. The development of the HIA recommendations has been informed by the literature review, the assessment findings, and feedback from steering committee members and other advisors.

Existing Conditions — Key Findings

Current Health Status of Minnesota K–12 Students

- There is a strong association in Minnesota between positive health behaviors such as physical activity, fruit and vegetable consumption, and measures of student academic performance such as high grades and few disciplinary actions.
- Across a number of indicators of health and academic achievement including obesity and diabetes, students of color and students from lower-income households tend to have poorer outcomes.

Current Health-Promoting Practices among Minnesota K–12 Students

- A number of schools are implementing programs and policies to encourage healthy eating and physical activity among students.
- Schools use multiple strategies to increase physical activity among students, including quality physical education classes, athletics programming, Safe Routes to School (SRTS), and active classroom practices.
- Changes in vending machine and classroom snack policies are used more frequently by schools to create a healthy food environment than broader initiatives such as those that affect the types of food served at meals.
- School construction and design can address some of the main barriers to supporting physical activity and healthy eating behavior among students.
- By constructing facilities and designing interior and exterior spaces that create a healthy environment, schools can begin to address underlying factors that may contribute to health inequities among students.

Current School Facilities Planning Processes in Minnesota

- During a new construction or major renovation planning process, school administrators and other stakeholders focus on designing spaces that will provide rich learning environments for students, sometimes taking community use into account as well. Less emphasis has been placed on considering how the design of school spaces supports student and community health and the reduction of health disparities.
- School design and planning processes do not regularly involve city, county, and regional planners, park board members, or local public health department staff. As a result, local stakeholders with valuable experience and expertise in considering ways to optimize student health may not have meaningful opportunities to influence the school's design or to explore potential community partnership opportunities, particularly in the early planning phases.
- Community residents are not regularly involved in school districts' early discussions about school siting and design plans.

Anticipated Reach

- Nearly 851,000 students attend public schools in Minnesota. Given the amount of time students spend in school each year, schools are uniquely positioned to foster positive student health behaviors.
- The overall age of Minnesota K–12 school buildings suggests a great need for improvements to and/or replacements of school facilities across the state. Sources of information rating or describing how the school environment and building design fosters or impedes healthy behavior are not readily available.
- Each year, relatively few new school construction or major renovation projects take place. These types of projects are most likely to be directly influenced by a major revision of the *Guide*. It will be important for stakeholders to consider student health as they assess and prioritize their future facility needs.
- There is a risk that a revision to the *Guide* may exacerbate health inequities and differences in academic achievement between school districts. Funding for new construction and major renovation projects may be easier to secure in more affluent communities with a larger tax base. Yet, schools with the greatest needs for improvements may be located in districts far less likely to receive voter approval for a new project.



HIA Recommendations for Proposed Changes to the *Guide* and Anticipated Changes in Health Behavior and Outcomes

Because the process of revising the *Guide* has not yet begun, the HIA core team developed hypothetical proposed changes to the *Guide* to create clear decision points to be the focus of the assessment. These proposed changes fell into four broadly stated categories: food environment; location efficiency (defined to include transportation access, shared use, and intergovernmental collaboration); physical activity; and inclusive decision-making. After considering the health impacts likely to occur if these revisions were incorporated into the revision of the *Guide*, recommendations were developed that offer suggestions for language to be adopted in the *Guide* revision and in changes to the revision process itself that optimize student health. The proposed changes to the *Guide* that are summarized below are geared toward facility planners, architects, and designers; school district and school site administrators, teachers, and support staff; students, parents, and community members; public health staff, transportation planners, and other local government staff; policymakers; and state agency staff and officials.

All of the recommendations summarized below align with the results of the assessment step, reflect best practices identified in the literature review, and incorporate guidance from HIA steering committee members and other content experts. A more detailed presentation of these recommendations, and additional recommendations, is provided in the full report, including recommendations that do not propose content changes to the *Guide* but, instead, recommend taking steps to ensure the *Guide* is updated periodically and made more accessible to the public. Here, we present some of the most significant proposals for changes to the content of the *Guide*.

RECOMMENDATIONS FOR CHANGES TO THE *GUIDE* TO IMPROVE THE SCHOOL FOOD ENVIRONMENT

The following proposed changes to the *Guide* would allow school food services staff to store, prepare, and serve more fresh, healthy foods, including fruits and vegetables, and increase the steady availability of healthy food items. They would also provide more specific guidance than currently exists in the *Guide* to help planners, school food service staff, and others consider ways to improve student health and maximize the learning potential of the school food environment. *(Note: Please see the full report for the complete text of these, and additional, recommendations.)*

Improving the School Food Environment

- Add specific guidance for preparing school meals and snacks from scratch, using fresh ingredients.
- Include specific examples of designs that increase the availability and consumption of healthy foods and maximize student time for eating and socializing, including guidance on the number of students per lunch service line and prominent, well-placed displays of fruits and vegetables.
- Consider including design specifications for or examples of “scramble design” stations for secondary school students.
- Include specifications for a salad/fruit and vegetable bar.

Anticipated changes in health behaviors and outcomes: The literature review found strong evidence that implementing these changes would lead to greater consumption of fresh fruits and vegetables and promising evidence that the changes would increase participation in the school meal program, improved classroom attention, and reduced absenteeism among students. More research is needed to predict the degree to which these changes will result in long-term academic success and overall reductions in student overweight and obesity.

RECOMMENDATIONS FOR CHANGES TO THE *GUIDE TO IMPROVE LOCATION EFFICIENCY*

The proposed revisions emphasize the relationship between a school's location and the community it serves and encourage consideration of all forms of transportation to school, not only transportation by automobile and bus. The proposed changes, and the additional HIA recommendations discussed in the full report, focus on influencing decisions concerning the amount of land needed for a school facility and grounds and guidance regarding the proximity of schools to students and community users. The recommendations show particular potential for strengthening school-community relationships, a stated goal of the *Guide*. (Note: Please see the full report for the complete text of these, and additional, recommendations.)

Improving Location Efficiency

- Remove minimum acreage text but encourage planners to consider adequacy of spaces for outdoor play, shared use agreements, future expansion needs, on-site storm water drainage, and well-planned student arrival/departure areas.
- Revise school siting guidance to include maximizing the number of students who live within a school's walk zone, and re-define "center of community/school district" to mean a location near current or anticipated centers of student population growth.
- Recommend conducting a walkability/bikeability assessment when a new school site is being considered, including discussion of plans to address infrastructure challenges.
- Provide guidance to help school districts explore options for co-locating a school facility with another community asset, e.g., a park building, recreation/community center, health center, or public library.

Anticipated changes in health behavior/health outcomes: The literature review found strong evidence that the proposed revisions to the *Guide* would lead to increases in student physical activity if the infrastructure surrounding a school provides students with safe walking and biking routes. In addition, there is promising evidence that when students are able to walk or bike to/from school, they are more attentive in their classes and achieve better academic outcomes. More research is needed to understand whether these changes will ultimately lead to changes in rates of student overweight and obesity.

RECOMMENDATIONS FOR CHANGES TO THE *GUIDE TO IMPROVE PHYSICAL ACTIVITY*

The current *Guide* provides little guidance on how indoor and outdoor school spaces can be best utilized to support and encourage physical activity among students, staff, and community members. The recommendations for proposed changes to the *Guide* emphasize the importance of providing specific guidance on the design of spaces with this goal in mind. (*Note: Please see the full report for the complete text of these, and additional, recommendations.*)

Improving Physical Activity

- **Athletic facilities:** Change the square footage guidance to reflect capacity needs for physical education instruction and physical activity during the school day, and consider, separately, gymnasium space needs for team practices, community use, afterschool activities, and opportunities for shared use with community facilities that can leverage available spaces.
- **Active classroom:** Recommend design features that support active classrooms such as guidance on easily movable classroom furniture and configurable learning spaces that enable physical activity breaks, flooring and acoustical materials that reduce distracting noise, and placement of classrooms in close proximity to outdoor spaces and/or an indoor commons area that can be used for brief periods of physical activity.
- **Use of school grounds:** Recommend designing outdoor activity areas to include natural landscape and green spaces and, for elementary and middle schools, play areas with hard surface areas for organized/competitive sports, playground equipment, and green spaces for unstructured play and outdoor education curricula.

Anticipated changes in health behavior/health outcomes: The proposed changes to the *Guide* would encourage schools to design indoor and outdoor spaces to be used for a range of activities that would likely appeal to the varying interests of a diverse student body and to better estimate the spaces needed to meet school and community needs for places to be physically active. There is strong evidence that the proposed changes would result in increased levels of physical activity if the enhanced indoor and outdoor spaces are used for physical activity by the school, and promising evidence that improved classroom attentiveness, academic performance, and mental health outcomes could also result from these changes. More research is needed to determine whether these proposed changes could result in long-term reductions in student overweight and obesity.

RECOMMENDATIONS REGARDING INCLUSIVE DECISION-MAKING

The recommendations on inclusive decision-making address cross-cutting topics that support the *Guide's* central aim — to help school districts design healthy schools that foster academic success and physical and emotional well-being while also strengthening community partnerships, student and family involvement, and community cohesion. *(Note: Please see the full report for the complete text of these, and additional, recommendations.)*

Inclusive Decision-making

- Strengthen the statement of purpose of the *Guide* to explicitly adopt a Health in All Policies approach to school construction and siting planning and decision-making processes.
- Encourage school districts to expand the scope of participants in the planning process.
- Encourage school districts to publicize their plans to support pedestrian, bicycle, and transit connections; maximize cooperative use and inter-governmental and non-profit collaborations; and consult with local or state transportation officials to address multimodal access and safety.
- Identify and encourage opportunities for intergovernmental collaboration and information-sharing.
- Encourage school districts to emphasize health considerations in facilities plans submitted to MDE, if applicable, and in school wellness policies.



ATS&R PLANNERS/ARCHITECTS/ENGINEERS

The references section and a set of appendices are included with the complete report, which is available at PUBLICHEALTHLAWCENTER.ORG/BUILDINGHEALTHYSCHOOLS