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Learning to Be Healthy, Being Healthy to Learn



Integrating the Snohomish Health District's Obesity Prevention Work in Schools Agency Report

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Executive Summary

Purpose

Schools and public health agencies are increasingly limited by reductions in revenue and staff capacity. By working together, they have a better chance at improving student performance *and* health outcomes, particularly those related to childhood obesity. This report considers ways the Snohomish Health District could further integrate its obesity prevention and school-related work to align with the agency's strategic prioritization of chronic disease prevention.

Report Objectives:

- Identify best practices in school-based approaches that promote better nutrition and increased levels of physical activity in youth.
- Summarize an assessment of childhood obesity-related policies and activities in Snohomish County schools.
- Inventory the Snohomish Health District's current school-related activities.
- Identify gaps in services and synergistic opportunities where the Snohomish Health District can partner with schools to promote chronic disease awareness and obesity prevention.

Background

Between 1980 and 2002 obesity prevalence in the United States tripled among children ages 6 to 19 years. Recent estimates suggest 17% of U.S. children are overweight. At the local level, in 2004, more than 1 in 5 Snohomish County youth (grades 8, 10, 12) were either obese or at risk. Being obese as a child puts kids at greater risk for adult obesity, increases their likelihood of developing diabetes, heart disease, cancer, and arthritis, and results in significant financial and social strains to communities. In 2003, obesity-related medical expenditures for Washington's Medicare and Medicaid recipients were \$365 million. In youth, obesity is correlated with poor academic achievement and depression.

Schools are ideal environments for addressing childhood obesity because they have fitness instructors and facilities, an infrastructure to implement health promoting curriculum, and offer seven concentrated hours five days/week for establishing healthy routines. However, limited time and the internal and external pressures for high academic performance, among other things, constrain schools from implementing obesity-related policies and activities. In many instances, coordination and technical assistance from a local health jurisdiction could bridge this gap. Categorical funding that historically prioritized infectious disease and the need to preserve legally mandated services means the Snohomish Health District's school-related work centers largely on environmental health (e.g., safety inspections for playgrounds and chemistry labs) and curbing communicable diseases (e.g., investigating outbreaks), not chronic disease prevention.

At the time of this report, the Chronic Disease Prevention team was involved with one school-based project -coordinating a Safe Routes to School Project at Everett's Hawthorne Elementary School, but was interested in expanding. During the month of March 2011, the

Health District surveyed a sample of Snohomish County schools to identify existing obesity-related policies and activities and opportunities for future partnerships.

Methods

Information for this report was collected by examining peer-reviewed literature and conducting interviews with school staff and chronic disease prevention specialists. The school survey was developed in consultation with faculty at the University of Washington's School of Public Health and the Health District's health officer and lead epidemiologist.

Key Findings from School Survey

- Ninety percent (90%) of respondents believed preventing childhood obesity is “very important” for the health of Snohomish County.
- Respondents listed Drug Use (46%), Nutrition (25%), and Physical Activity (18%) as the most important health issues affecting students in Snohomish County.
- Thirty-six percent (36%) of respondents were aware of the Centers for Disease Control's Coordinated School Health Framework.
- The majority of schools said “comprehensive wellness” or the combination of “PE and Health/Nutrition classes” was their “best” physical activity or nutrition-related program.
- The majority of schools would like their next obesity-related initiative to be improvements in the school food environment.
- Sixty-five percent (65%) of schools said “lack of time” is the main barrier to providing physical activity and/or nutrition-related activities.
- Ninety-six percent (96%) of schools indicated an interest in working with the Snohomish Health District on future projects to address childhood obesity.

Recommendations

Health District staff and leadership interested in prioritizing childhood health can use this information to guide future policy development, forge new school-based coalitions, and improve health outcomes and school performance. As Snohomish County vies with other regions in Puget Sound to be one of the “best places” to live, this investment becomes part of a long-term strategy towards also making this region one of the “healthiest places” to live. To support this work, the following recommendations were developed based on the internal and external assessments and can be used when considering the agency's next steps.

- Continue to promote evidence-based policy and environmental approaches to improving nutrition and physical activity in youth.
- Increase understanding of local approaches to childhood obesity prevention by inventorying community-based organizations' work with schools.
- Dedicate staff time and resources to chronic disease prevention in schools.

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Table of Contents

PROJECT INTRODUCTION	5
PROBLEM STATEMENT	6
LITERATURE REVIEW.....	7
PROJECT ACTIVITIES: Needs Assessment.....	12
Internal Inventory: The Snohomish Health District’s School-Related Activities	12
Assessment of Childhood Obesity-related Policies and Activities in Snohomish County Schools.....	13
Survey Results: Key Findings.....	14
PROJECT OUTCOMES.....	17
A. Implications for the Agency.....	17
B. Implications for Chronic Disease Prevention Staff.....	18
C. Implications for The Board of Health and Public Health Advisory Council.....	19
RECOMMENDATIONS.....	21
Appendix 1:	22
Appendix 2:	25

Integrating the Snohomish Health District's Obesity Prevention Work in Schools

Purpose

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PROJECT INTRODUCTION

Local context: Snohomish County, Washington

Economic development and proximity to Seattle dramatically affected Snohomish County during the past 40 years. Expansion brought jobs and families to the region yet population growth now strains community resources. Covering roughly 2,000 square miles, Snohomish County has one of the fastest growing populations in the United States.ⁱ Population density is highest in the western half of the county in coastal cities and along the I-5 corridor. The eastern half, home to recreation destinations and agriculture, stretches to the Cascade Mountains. According to the Washington State Office of Financial Management, in 2000, the county's population, was 88.6% White, 2.3% Black, 2.4% Native American Indian, 7% Asian, 0.6% Native Hawaiian or Pacific Islander, and 2.8% as "some other race."ⁱⁱ Latinos accounted for 4.7% of the population. In general, communities of color are increasing while white populations are decreasing in absolute numbers.

The Snohomish Health District

The Snohomish Health District (SHD) was established in 1959. Its main office is located in Everett, WA. At the beginning of 2011, the FTE equivalent of 170 staff oversaw the health and safety of over 700,000 people living throughout six geographic health

planning areas. Because of its small size relative to the larger community, staff relies heavily on community partnerships to promote health interventions.

The SHD is a municipal corporation responsible for Snohomish County but is not part of county government and has no taxing authority. Like all local health jurisdictions, SHD is forced by limited resources to set priorities among competing public health issues. Most funding comes from grants to support specific programs or general county funds and few funds exist for other priorities. In 2009 and 2010, SHD cut nearly \$2,500,000 and \$1,500,000 respectively in services; altogether these cuts represented >20% of expenditures and resulted in cuts of >25% of staff. More visible public health concerns like emergency preparedness and the 2009 H1N1 scare obscure the immediate and future burden of chronic disease in the community. The Health Officer, Gary Goldbaum, MD, MPH, emphasizes that investing in obesity prevention would save money in the future while improving the present quality of life among residents.

Role of the Snohomish Health District Board of Health

Regional city and county council members, as well as mayors, sit on the Health District's 15 member Board of Health (BOH) and approve all policy and budgeting decisions.ⁱⁱⁱ The five county council members on the BOH strongly influence fiscal decisions because they control the county budget. Although ten city representatives sit on the board, they have less influence because cities do not contribute funding.

The BOH is a heterogeneous group. Some members are public health advocates who support policy measures to address environmental changes while others see the role of public health largely as providing direct services in the community. Dr. Goldbaum and the BOH work closely to develop short and long-range plans for the District and have recently prioritized chronic disease prevention in their strategic plan. Supporting the BOH is a Public Health Advisory Council (PHAC). The PHAC consists of ten community leaders, appointed by the Board, representing business, education, tribes, medicine, and other sectors. The PHAC considers public policy issues and forwards recommendations to the BOH.

PROBLEM STATEMENT

The story of childhood obesity is complicated.¹ In thirty years the national adolescent obesity rate has increased from 1 in 20 to 1 in 6.^{iv} At the local level, in 2004,

¹ Overweight refers to increased body weight in relation to height. Obesity is defined by excessive amounts of body fat or adipose tissue in relation to lean body mass. Obesity is estimated through Body Mass Index (BMI), a calculation of weight in relation to height that estimates levels of body fat. (Body Mass Index = weight (kg)/[height (m)]²). Adults with a BMI between 25 and 29.9 are considered overweight. They are classified obese if their BMI is ≥ 30 . For children and teens, BMI is age and sex specific and is referred to as BMI-for-age.

more than 1 in 5 Snohomish County youth (grades 8, 10, 12) were either obese or at risk. According to the District's 2007 report, Snohomish County's youth obesity rate of 9.1% is almost twice as high as the Healthy People 2010 goal of 5%.^v Health District staff is aware that early life patterns extend into adulthood and is particularly concerned about reversing this trend.

Although national data suggest overall childhood obesity levels may be plateauing, youth of color and those with lower income and education levels remain at greater risk. In children ages 12-19 obesity rates are highest among Non-Hispanic Black girls and Hispanic boys. Obesity is twice as common among Native American children (31%) than White children (16%).^{vi} Being obese puts kids at greater risk for adult obesity and increases their chance of developing heart disease, cancer, and arthritis. Obesity is the most significant factor for type 2 diabetes. In youth, it is correlated with poor academic achievement and depression. Obesity prevention programs targeting youth and high risk groups would likely have a greater impact on reducing this disparity and could save money to be better spent on education and occupational training.

Currently, the SHD's school-related work centers largely on legally mandated environmental health activities and the prevention of communicable diseases. At the time of this report, the Chronic Disease Prevention team was involved with one school-based project -coordinating a Safe Routes to School Project at Everett's Hawthorne Elementary School, but was interested in expanding. This report considers ways the Snohomish Health District could further integrate its obesity prevention and school-related work to improve health outcomes, school performance, and regional economic sustainability.

LITERATURE REVIEW

Introduction

The 2001 U.S. Surgeon General's *Call to Action to Prevent and Decrease Overweight and Obesity* is considered a clarion call that recognized the obesity epidemic as a community problem and provided guidelines for environmental interventions.^{vii} In addition to explaining Body Mass Index (BMI) and national obesity prevalence, the report promoted the Health and Human Services (HHS) and United States Department of Agriculture (USDA) jointly published Dietary Guidelines for Americans as the foundation for national obesity prevention and control. The report also called for roughly 30 different investigations into the root causes of obesity including: incentives for better nutrition, methods for assessing health inequalities, and evaluations of the impacts of vending

Youth are classified obese when their BMI-for-age is at or above the 95th percentile. Overweight youth have a BMI-for-age between the 85th and 95th percentile.

contracts in schools. Ten years later, public health practitioners can use this research to guide policy development. Of note, research gaps exist for children 0-6 years and males.^{viii}

Obesity-related Conditions

Excess weight is a risk factor in chronic diseases such as cancer, hypertension, arthritis, and heart disease. Obesity is the most significant factor for type 2 diabetes. It often reduces quality of life and contributes to excess death. In 2004, Mokdad et al., suggested “poor diet and physical inactivity may soon overtake tobacco as the leading cause of death.”^{ix} They argue that half of all U.S. deaths in 2000 could be attributed to preventable behaviors and exposures and that increasing smoking cessation and access to physical activity as well as improving diet should be prioritized.

The Economics of Obesity

Economists and policy makers have also recognized the obesity epidemic. In early 2010 President Obama signed an executive order initiating a national campaign to reduce childhood obesity in a generation largely because it is the single biggest driver of long term healthcare spending. The Patient Protection and Affordable Care Act (PPACA) has several provisions that address childhood obesity through population-based approaches (improved nutrition labeling) as well as grants for community (healthier school lunches) and individual (promoting breastfeeding) based interventions. Obesity experts agree it will take a collection of coordinated environmental and individual incentives to, as the Presidential Task Force on Childhood Obesity says, “bend the curve” of obesity rates.

When considering health policies, administrators and elected officials cannot overlook the economic drivers in their region. Indeed, multiple interests compete for their attention, but the economic burden of obesity is a pressing problem both locally and nationally. One national estimate suggests excess weight and obesity result in \$75 billion in annual health care spending.^x According to Finkelstein et al., “The average tax payer spends \$175/year to finance obesity related medical expenditures for Medicare and Medicaid recipients.”^{xi} In 2003, obesity-related medical expenditures for Washington’s Medicare and Medicaid recipients were \$365 million.^{xii} The financial costs of obesity to employers include lost worker productivity, absenteeism, and increased health insurance premiums.²

² At the time of this report, obesity-related costs specific to the health district were not available.

Approaches to Preventing Childhood Obesity: Schools are one Piece of the Puzzle

Individual, community, and societal factors influence a child's weight. Cultural norms around food, aggressive advertising, and neighborhood amenities contribute to an 'obesogenic' environment (one that promotes weight gain) and must be considered along with family income and a child's biology when planning interventions. In this vein, schools are just one factor in a coordinated approach to reducing obesity. (see Figure 1). The Centers for Disease Control and Prevention (CDC) prioritizes policy and environmental approaches to reducing obesity because they are more effective than one-on-one methods. Core strategies in school-based approaches include improving nutrition and increasing access to physical activity.

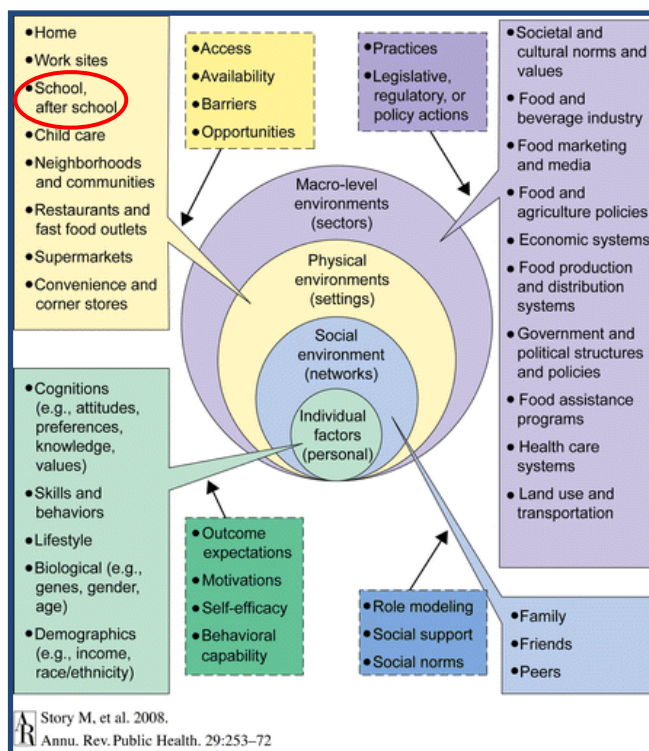


Figure 1: In the Social-Ecological Model improving the school environment is one of many considerations for reducing obesity.

A. NUTRITION

Exercise is important for strengthening bones, decreasing the risk of heart disease, and preventing weight gain, and should be encouraged in youth. But, because it is easier to decrease caloric intake than increase physical activity to amounts sufficient enough to reduce obesity, dietary intervention has greater impacts on weight control.

Best Practices and Policies for Improving School Nutrition

The CDC, the Institute of Medicine (IOM), and the White House Task Force on Childhood Obesity all recommend taxing Sugar Sweetened Beverages (SSBs) because they are thought to be the largest caloric contributor to obesity but the easiest factor to modify. They recommend SSB taxes be used as part of a comprehensive strategy to alter the beverage environment which also includes increasing the availability of free, safe drinking water and other healthy beverages, requiring nutrition labeling on products and at point of purchase, and lowering the cost of healthy foods relative to less healthy items.^{xiii}

Beverage taxes can generate revenue that can be used to subsidize healthy foods or fund prevention programs. Because low-income groups are the largest consumers of SSBs per capita, they will be disproportionately affected by the tax. But, since they are also disproportionately burdened by diseases related to SSB ingestion (obesity and diabetes), they will likely see the greatest health gains from decreased consumption. Experts urge

shifting from a debate about regressive taxes to a conversation on how beverage companies aggressively market their products to the poor.^{xiv} Although the SHD BOH cannot impose taxes on SSB consumers or retailers, staff and board members can leverage their influence to educate community members and support future state legislation on this issue.

Two IOM reports provide recommendations for food and beverages served at school. The *2009 School Meals: Building Blocks for Healthy Children* is the basis for all USDA-related school breakfast and lunch menu planning. The *2007 Nutritional Standards for Foods in Schools* provides recommendations for beverages served outside the school lunch program. Other recommendations include comprehensive advertising bans in areas with high youth traffic, restrictions on or elimination of vending machines in schools and youth recreation centers, and encouraging adherence to nutritional standards for vending machine products. (For additional best practices in school-based nutrition activities see those listed in Table 2 on p.16.)

B. PHYSICAL ACTIVITY

Anecdotal reports from pediatricians reveal evidence of a cultural shift in that many parents perceive structured recreation (e.g., sports teams, dance classes, etc.) as the most important kind of physical activity for youth. This shift is related to increased levels of perceived neighborhood danger and results in parents' desire for children to either play indoors or be supervised while outdoors. Because of this, many children only participate in structured activities one or two days per week, and children with less discretionary income for class fees and supplies and those who lack transportation are often unable to participate at all. For these reasons, schools may be the only venue where many children access physical activity.

Best Practices and Policies for Enhancing Physical Activity at School

Physical activity recommendations for school-aged children vary slightly by authoritative body and grade group. The National Association for Sport and Physical Education recommends at least 150 minutes of weekly recess in grades K-6 and at least 225 minutes of physical activity in grades 7-12.^{xv} The American Academy of Pediatrics recommends 30-60 minutes of physical activity per day^{xvi} and that at least 30 minutes of it occur at school.^{xvii} The Washington Administrative Code's physical education requirements include at least "100 instructional minutes per week" for grades 1-8 and "a one credit course or its equivalent" for grades 9-12.^{xviii}

Two well-known evidence based practices are "Recess before Lunch" and the Safe Routes to School Program (SR2S). "Recess before lunch" is a nationally recognized practice of scheduling physical activity before lunch so kids get hungry and eat more healthy foods during mealtime. In 2005, Congress appropriated \$612 million for Safe Routes to School, a state administered program promoting children's use of active transportation (e.g., walking

and biking) to school, a practice observed by less than 15% of children ages 5-18 years.^{xix} At the local level, many health departments provide funding and technical assistance to help schools determine the best route(s) and create customized maps. Highlighting one or two best routes encourages the majority of students to use the same paths, creating visibility and more opportunities for parents to interact while reducing pedestrian injuries. (For additional best practices in school-based physical activity promotion see Table 3 on p.17.)

Comprehensive Model Uniting Public Health and Schools

For the past 15 years schools have been thought to be ideal environments for addressing youth's nutritional and physical activity needs and reducing obesity because they have fitness instructors and facilities, an infrastructure to implement health promoting curriculum, and offer seven concentrated hours five days/week to establish healthy routines. (see example below)

The Coordinated School Health Model (see Figure 2)

Washington is one of 23 state and tribal governments that received CDC funding to pilot Coordinated School Health Programs (CSH).^{xx} This model incorporates eight components: nutrition services, physical education, health education, health services, counseling and support services, healthy school environment, health promotion for staff, and family and community involvement to maximize health and improve school performance. Washington's efforts focus on increasing HIV and STD programs, professional development for health education teachers, improving quality of food served outside the school lunch program, and helping schools assess their nutrition, physical activity, and tobacco prevention efforts and increasing the use of curriculum that integrates the three. At the time of this report, four state-level CSH employees were working to build infrastructure and capacity for program expansion. A handful of schools have implemented the model, but as one nurse cautioned, "CSH looks different in each district."



Figure 2: The CDC's Coordinated School Health Model

PROJECT ACTIVITIES: Needs Assessment

Methods

The following three steps were taken to better identify gaps in services and opportunities where the Snohomish Health District can partner with schools to promote obesity prevention. (1) Review published literature for best practices in school-based approaches to promoting better nutrition and physical activity in youth. (see pages 7-11) (2) Interview staff to inventory the Health District's current school-related activities. (3) Create and conduct an assessment of childhood obesity-related policies and activities in Snohomish County schools. The survey was developed in consultation with faculty at the University of Washington's School of Public Health and the Health District's health officer and lead epidemiologist.

Internal Inventory: The Snohomish Health District's School-Related Activities

According to several staff, SHD has no unified protocol for school-based work and projects change according to funding, community capacity, and need. (see Appendix 1) For example, several oral health specialists previously worked on fluoride rinse and sealant projects in elementary schools. In addition to applying sealants in schools, staff helped increase provider capacity in the community for low-income families. At the same time, they were advocating for community-wide water fluoridation; and when cities began fluoridation they felt confident in discontinuing the sealant projects.

Staff describes their current work as "a programmatic approach." For example, environmental health workers inspect playground equipment and kitchens for safety compliance; and communicable disease prevention staff work with schools to control outbreaks and increase their immunization rates. Because each of these groups operates out of its own program, multiple staff may visit the same school throughout the year. Cross-training or an integrated service model could reduce these multiple visits but may be unreasonable due to the specialized nature of job duties. A more coordinated approach could give staff a greater appreciation for their colleagues' work and present a more united public image.

At the time of this report, the Chronic Disease Prevention team consisted of one supervisor, five field staff, and an administrative assistant and primarily conducted activities related to tobacco prevention and control, access to nutrition and physical activity, and improving oral health. This team executes the Health District's core chronic disease prevention efforts and, depending on funding, conducts projects with either individual schools or community coalitions with school representatives (e.g., a previously

funded Healthy Communities project). Currently, the team is involved with one school-related project -coordinating a Safe Routes to School Project at Everett's Hawthorne Elementary School.

One type of historic intersection between public health and schools, the teen health center, does not exist in Snohomish County. However, school nurses, a key component of that model, are an important point of contact for Health District staff. According to one public health nurse, fifteen or twenty years ago most schools had nurses *and* health educators. Today, shrinking state funding has shifted resources to academic performance testing and reduced clinical staff capacity in a way she describes as "a long cascade of loss." Now many schools and districts share a nurse; and school contracts for activities once filled by SHD nurses are mainly granted to private sector nurses, performed in-house, or eliminated.

While the number of nurses in schools has decreased, the need for more on-site acute care and attention to chronic disease has increased. According to nursing staff at the Northwest Educational Service District, because of evolving equal access laws, more kids in schools today have life threatening illnesses. Nurses must manage care plans, coordinate medication schedules, and communicate with doctors, while also attending to immunization compliance, sports injuries, and infectious disease control. These busy days leave little time for chronic disease prevention efforts. During interviews, many nurses suggested other health-trained staff take responsibility for prevention activities since they do not require clinical skills. Coordination and technical assistance from the Health District could fill this need.

Assessment of Childhood Obesity-related Policies and Activities in Snohomish County Schools

Methods

During the month of March 2011, the Health District asked the 14 superintendents in Snohomish County to allow a sample of their principals to complete an online survey to identify existing obesity-related policies and activities and opportunities for future partnerships.³ Some school districts chose not to participate; others completed the survey at the district level. The original list contained 85 schools. Of the 55 schools who received the survey link, 29 completed it. The survey results are specific to Snohomish County and cannot be generalized to other health districts or departments in Washington.

³ The Snohomish County school districts include: Arlington, Darrington, Edmonds, Everett, Granite Falls, Index, Lake Stevens, Lakewood, Marysville, Monroe, Mukilteo, Snohomish, Stanwood-Camano, and Sultan.

Similarly, the low response rate indicates results may not accurately represent all Snohomish County schools' perspectives.

The survey link was sent to the same schools that participated in the 2010 Healthy Youth Survey, a representative sample of the Health District. The Healthy Youth Survey, conducted by the Washington State Department of Health, is a bi-annual school-based survey of 6th, 8th, 10th, and 12th graders' health risk behaviors. (Results are often reported only for 10th graders because they represent the group average.)

Survey Results: Key Findings

- Ninety percent (90%) of respondents believed preventing childhood obesity is “very important” for the health of Snohomish County.
- Respondents listed Drug Use (46%), Nutrition (25%), and Physical Activity (18%), Depression (7%), and Violence at Home (4%) as the most important health issues affecting students in Snohomish County.
- Thirty-six percent (36%) of respondents were aware of the Centers for Disease Control’s Coordinated School Health Framework.
- The majority of schools listed “comprehensive wellness” or the combination of “PE and Health/Nutrition classes” as their “best” physical activity and/or nutrition-related program.
- The majority of schools would like their next obesity-related initiative to be improvements in the school food environment.
- Sixty-five percent (65%) of schools said “lack of time” is the main barrier to providing physical activity and/or nutrition-related activities.
- Ninety-six percent (96%) of schools indicated an interest in working with the Snohomish Health District on future projects to address childhood obesity.

Survey Results: Individual Responses

Table 1:

Survey Respondents' Grade Groups	
6 th grade	67% (n=16)
8 th grade	50% (12)
10 th grade	38% (9)
12 th grade	29% (7)

(Total percent is greater than 100 because some schools work across multiple grades.)

Table 2: School-based Nutrition Programs and Policies

	Program/Policy adopted and implemented.	Program/Policy adopted but not yet implemented.	Program/Policy NOT in place but planning for adoption.	Program/Policy NOT in place and no plans for adoption.	Don't Know
Adhere to USDA nutritional standards in school meals.	92% (23)	—	—	—	8% (2)
Adhere to nutritional standards for competitive foods (e.g., vending machines, a la carte options).	88% (22)	—	—	4% (1)	8% (2)
Adhere to nutritional guidelines for beverages served outside school meals.	76% (19)	4% (1)	—	16% (4)	4% (1)
Limit access to competitive foods (e.g., those found in vending machines and snack bars).	88% (22)	—	—	8% (2)	4% (1)
Limit the use of candy or other sweets as a classroom reward.	50% (12)	13% (3)	—	29% (7)	8% (2)
Offer classroom instruction on healthy eating/cooking.	50% (12)	8% (2)	—	21% (5)	21% (5)
Require the cost of healthy food items to be priced less than unhealthy items in cafeteria.	4% (1)	0%	0%	42% (10)	54% (13)
Require the cost of healthy food items to be priced less than unhealthy items in vending machines.	4% (1)	—	—	42% (10)	54% (13)
Collect Body Mass Index (BMI) information for students.	48% (12)	4% (1)	—	32% (8)	16% (4)
If collecting Body Mass Index information for students, sending a BMI report card to parents.	24% (6)	—	—	40% (10)	36% (9)
Perform non-invasive diabetes screening.	—	4% (1)	—	56% (14)	40% (10)
Participate in a farm-to-school program.	—	4% (2)	—	71% (17)	25% (6)
Operate a school garden.	12% (3)	—	8% (2)	76% (19)	4% (1)

Table 3: School-based Physical Activity Programs and Policies

	Program/Policy adopted and implemented.	Program/Policy adopted but not yet implemented.	Program/Policy NOT in place but planning for adoption.	Program/Policy NOT in place and no plans for adoption.	Don't Know
Operate a walking school bus program.	0%	0%	4% (1)	68% (17)	28% (7)
Participate in Safe Routes to School Program.	33% (8)	0%	0%	25% (6)	42% (10)
Have an established policy to provide at least 30 minutes of recess in grades K-6.	65% (11)	0%	0%	6% (1)	29% (5)
Have an established policy to provide at least 45 minutes of physical activity in grades 7-12.	57% (12)	5% (1)	0%	19% (4)	19% (4)
Have an established policy that does not allow teachers to withhold recess from students.	9% (2)	0%	0%	48% (11)	44% (10)
Have a joint use agreement with other agencies to share recreational facilities.	52% (12)	0%	4% (1)	22% (5)	22% (5)

Table 4: School-based Wellness Policies

	Program/Policy adopted and implemented.	Program/Policy adopted but not yet implemented.	Program/Policy NOT in place but planning for adoption.	Program/Policy NOT in place and no plans for adoption.	Don't Know
For Students:					
Have a wellness policy with physical activity goals for the students we serve.	52% (13)	12% (3)	8% (2)	20% (5)	8% (2)
Have a wellness policy with nutrition goals for the students we serve.	56% (15)	4% (1)	7% (2)	22% (6)	11% (3)
For Staff:					
Have a wellness policy with physical activity goals for our staff.	14% (4)	—	4% (1)	68% (19)	14% (4)
Have a wellness policy with nutrition goals for our staff.	12% (3)	4% (1)	—	68% (17)	16% (4)

Additional Responses

Agencies that currently collaborate with schools to implement nutrition and physical activity programs:

Responses included: None (3), District grant (2), YMCA (3), Navy, Other schools in district, Local sports teams, State of Washington, In-house (Food Service, PE and Health Instructors), School Nurse, and the Washington State Dairy Council.

Proposed partner agencies to implement future nutrition and physical activity programs:

Responses included: State Legislature (2), Parents (2), PTA, Food Service Department (2), Teachers (2), OSPI, the Health District (2), Vending machine companies, and the Federal Government.

PROJECT OUTCOMES

A. Implications for the Agency

Categorical funding that historically prioritized infectious disease and the need to preserve legally mandated services means the SHD's school-related work centers largely on environmental health and curbing communicable diseases, not chronic disease prevention. This is not unique as it mirrors the efforts of many local health jurisdictions throughout the country. But, the recent federal focus on preventing childhood obesity suggests health jurisdictions that coordinate their school-based activities and align them with national priorities might be better placed to secure future funding.⁴ At a minimum, SHD needs an inventory of community organizations engaged in this work and which SHD programs and schools interact regularly with them.

Public Health's priorities are always shifting. Consider the progression of anti-tobacco policies in the Health District's offices. In the late 1980s the SHD office was located in the courthouse and many people smoked at their desks. At the time, tobacco cessation was not generally viewed as the domain of public health and environmental health, nursing, and sanitation were the agency priorities. Bit by bit, tobacco prohibition advocates fought to eliminate smoking in offices, then in lounges, and finally the entire building. Today, social norms, amended legal codes, and new funding streams have made tobacco prevention and control a significant branch of the Health District's efforts to reduce chronic disease.

⁴ In February 2010, First Lady Michelle Obama launched her "Let's Move" campaign to raise awareness about physical activity. In December 2010, President Obama signed the Healthy Hunger-Free Kids Act (aka "The Childhood Nutrition Act") which will update school nutrition standards, set national goals for physical activity, and increase reimbursements for school lunch programs. In January 2011, the USDA released proposed federal regulation changes for Nutritional Standards in the National School Lunch and Breakfast Programs.

Obesity prevention follows a similar path by emphasizing policy and environmental changes. In the midst of shrinking budgets and growing distrust of government, the Health District must find ways to provide the communicable disease prevention services that categorically built twentieth century public health departments while also addressing the twenty-first century problems of chronic disease, climate change, and population growth. Fortunately, the Health District has a long history of working with local schools. This history is largely related to preventing and controlling communicable disease, and integrating a chronic disease component will take time and resources. However, survey results reveal many schools are aware of obesity-related issues and have begun work on the problem. In April 2010, the Northwest Educational Service District conducted a workshop on the Coordinated School Health Model so it is likely several Snohomish County schools know of this approach. The Northwest Educational Service District's list of action steps can help begin the dialog to coordinate efforts or create a school health team within the agency. (see Appendix 2)

B. Implications for Chronic Disease Prevention Staff

Working with schools takes patience and persistence. Limited time and the internal and external pressures for high academic performance, among other things, constrain them from implementing new obesity-related policies and activities. In many instances, coordination and technical assistance from a local health jurisdiction could bridge this gap. Survey results suggest partnering has advantages and challenges.

Advantages to partnering

The fact that schools listed a variety of current and future community partners could indicate their flexibility, willingness to work with outside agencies, and acknowledgement of the need for comprehensive approaches to childhood health. Lack of time, not unwillingness of staff, is the major barrier to implementing new programs and policies. Respondents' desire to improve school nutrition correspond to best practices in that research suggests dietary interventions have greater impacts on weight control than those emphasizing physical activity.

Challenges to partnering

Promoting policy and systems approaches to obesity prevention will not be easy. In schools, knowledge is generally transmitted through classroom instruction and exams that emphasize individual behavior change; implementing new activities outside their curriculum-based programming (e.g., farm-to-school programs) is a challenge. Schools reported that PE and nutrition curriculum were what "works best" for obesity prevention, and it is likely that Health District staff who introduce activities outside the classroom setting must be prepared to provide training about additional best practices. Additionally, Health District staff will have to increase community awareness of their obesity prevention

expertise. Only two respondents listed the Health District as a “proposed partner” for future projects.

Ninety-six percent of schools said “yes” or “maybe” to partnering with the Health District on future projects. But, many responses such as “It will never happen.” or “(I) would love to do more with this...but it is bigger than me.” indicate hesitancy towards building collaboration for obesity prevention. If it decides to expand school partnerships, the Health District should first work with the small group of willing schools who provided contact information and encourage word of mouth to engage new partners.

Considerations for Working with Schools

SHD staff who worked on previous community partnerships with schools, cities, and service providers offered the following considerations:

- Administrators often resist short term projects because, when funding ends, parents are upset about the loss of a service.
- Be clear about funding timelines and the required amount of school staff time. Help schools understand the mutual benefits of collaboration.
- Health District staff working with schools should prioritize policy change not programming so activities have a better chance of survival when leadership changes or a project’s champion leaves.
- Schools are ideal settings to test the feasibility of best practices. Although “Recess before Lunch” is an evidence-based best practice, the coordination of playground equipment and personal hygiene often interfere with strictly timed bus schedules and make its implementation difficult. Theoretically, requiring a walking map is an important tool for increasing access to physical activity, but designing and printing it creates extra costs for schools. In the case of one local school, documents must be translated into 18 languages.

C. Implications for The Board of Health and Public Health Advisory Council

The BOH sets county policy for public health, identifies agency priorities, and approves the budget, and thus can significantly influence obesity prevention efforts in the region. The PHAC, representing the community, is an important resource to inform BOH decisions. The following criteria can be used when considering the prioritization of coordinating childhood obesity efforts with schools. ^{xxi}

SHD Advisory Council Criteria for Retaining Programs and Activities

Criterion	Interpretation
1. Is this activity mandated by law?	Neither state nor local laws mandate the Health District provide obesity prevention services to schools. But, in 2005 state law (Senate Bill 5093) required school boards to adopt school wellness policies with nutrition and physical activity goals for students. Coordination and technical assistance from Health District staff can help ensure schools implement these policies with evidence-based practices.
2. Does empirical evidence show the activity will have a significant impact?	Multiple factors affect obesity, and systems and environmental interventions are often difficult to measure. But, research suggests school-based approaches are among the best ways to prevent childhood obesity and its related health outcomes. Studies from other major metropolitan areas reveal 30% of morning traffic is caregivers driving kids to school. ^{xxii} Partnerships between health districts and schools to increase active transportation and decrease motorized travel to schools results in co-benefits for the surrounding community.
3. Does the activity serve a substantial population, especially to reduce health inequities?	Approximately 108,545 students attend Snohomish County's public schools. Because low income families and children of color have the greatest obesity prevalence, prevention programs in schools with high numbers of these children will likely have greater health gains and success in reducing this socio-economic disparity.
4. Is the government the "best" agency to perform this activity?	The Health District has a long history of working with schools and can parlay those connections into obesity prevention activities. Staff also maintains longstanding relationships with partners across communities. Because of this, the chronic disease prevention team is well placed to convene all necessary partners for this interdisciplinary work.
5. Does the activity preserve what is successful and align with public health's response capacity?	SHD has been successful in facilitating policy and environmental approaches to reducing tobacco use. Chronic disease staff have the expertise to help schools use similar approaches to reducing and preventing childhood obesity. Policy work is one of the three core functions of public health.

RECOMMENDATIONS

The following recommendations were developed based on the internal and external assessments and can be used when considering the agency's next steps.

Focus on Evidence-based Approaches

- Continue to promote policy and environmental interventions for improving nutrition and physical activity in youth.

Enhance Community Partnerships

- Increase understanding of local approaches to childhood obesity prevention by inventorying community-based organizations' work with schools.
- Educate schools and other community partners about comprehensive models uniting public health and schools.

Build on Existing Snohomish Health District Programming

- Create a school health team within the agency.
- Dedicate staff time and resources to chronic disease prevention in schools.

Conclusions

This report offers supporting evidence regarding childhood obesity prevention efforts both within the Snohomish Health District and among the county's schools. Health District staff and leadership interested in prioritizing childhood health can use this information to guide future policy development, forge new school-based coalitions, and improve health outcomes and school performance. As Snohomish County vies with other regions in Puget Sound to be one of the "best places" to live, this investment becomes part of a long-term strategy towards also making this region one of the "healthiest places" to live.

Appendix 1:

A Guide to the Snohomish Health District's Early Learning- and School-Related Public Health Activities 2011

Category	Division	Activity	Staff Contact
Building Codes	EH	School Plan Review Review of architectural plans for new building construction or remodels, playgrounds, and the addition of portable classrooms to insure compliance with state school code.	Kevin Plemel
Child Care Centers	CD	Communicable Disease Outreach Program (CDO) EH and PHN (both .5FTE) conduct on-site investigations at child care centers when a notifiable disease is confirmed. Offer distance learning classes and visit >100 centers throughout the county to teach staff about CDO services and provide educational materials.	Micha Horn and Alba Suarez
Chronic Disease Prevention	CH	Safe Routes to School Help schools determine safe walking and biking routes and create maps that encourage non-motorized transportation to the building. Support physical activity among youth and adults; build neighborhood support for pedestrian safety efforts.	Keri Moore
Communicable Disease	CD	Communicable Disease Investigation Investigations conducted for a confirmed or suspected illness that may put others at risk. Decisions and recommendations for control measures given as determined necessary.	Amy Blanchard
	CD	TB Control/Prevention Educational presentations available on TB recognition, screening and prevalence, and control interventions. Also provide directly observed medications to children with TB infection.	Joseph Aharchi
Data Collection	Assessment	Health Risk Behaviors Coordinate the Youth Risk Behavior Survey in select Snohomish County schools. Provide reports and data summaries on a variety of youth risk behaviors on request as available.	Jane Ballard

Dental Care Access	CH	No Cavity Club Link Medicaid-insured children with community dentists. Participating dentists are available in most parts of the county. Will assist with Medicaid applications.	LeeAnn Hoaglin-Cooper
Food Safety	EH	Food Protection Program Provide routine inspections and educational programs to ensure all food service facilities operate in accordance with the State Board of Health's Rules and Regulations for Food Service.	Rick Zahalka
	EH	Food Handler Card Classes Classes on the proper/safe way to prepare food, information on foodborne illness and how to prevent them, and follow-up testing for issuance of food handler cards. A food service manager education and certification course is also available.	Rick Zahalka
Health Care Access	CH	Healthy Kids/Healthy Options Access Project Outreach to children (birth through 18 years) and pregnant women who may be eligible for Medicaid health benefits, and assistance with the application process and referrals to providers.	LeeAnn Hoaglin-Cooper
HIV/AIDS	CD	START (Students Teaching AIDS Reality to Teens) HIV/AIDS education presentations to increase awareness and skills around sexual health issues by training and empowering teens both in and out of school. Methods of instruction both in and out of school include: theater, media, and one-on-one outreach.	Jessica Burt
	CD	Speakers Bureau Panel presentations with two speakers and a facilitator to help students understand the effects of HIV/AIDS in their community; increase awareness of HIV/AIDS facts and encourage safe behavior to prevent future infections.	Jessica Burt
Injury Prevention	EH	Moderate Risk Waste Program Inspections available to ensure proper handling, storage, and removal of chemicals. A "Chemical Use and Disposal" questionnaire is also available to provide information to instructors who handle these materials.	Gary Hanada
	EH	School Safety Program Routine safety inspections of schools focusing on playground safety, chemistry labs, shop rooms, and chemical storage and labeling. Consultation regarding indoor air quality is also available.	Kevin Plemel

	EH	Water Recreation Facility Program Routine inspections of school swimming pools to insure standards for water quality and safety.	Kevin Plemel
Oral Health	CH	Dental Screening, referrals, and follow-up for 3-5, 6-8, and 15 year old children. Oral health presentations and educational materials to students and staff.	LeeAnn Hoaglin-Cooper
Public Information	Admin	Coordinate messaging and media efforts for school specific events (e.g., school closures from outbreaks and emergencies and planned events that promote collaboration)	Suzanne Pate
Sexually Transmitted Infections	CD	Lectures, videos, and interactive STI/HIV presentations in classroom or assemble settings to increase the awareness of risk and prevention issues. Primarily available for grades 9-12, but also for middle school students if applicable.	Jessica Burt
Tobacco Prevention	CH	Technical assistance and prevention materials designed to empower students, teachers, parents, school and health professionals, and others to prepare and administer prevention and education programs aimed at reducing tobacco use primarily in grades 4-12. (By request only.)	Pam Wessel-Estes
	CH	Partner with Early Childhood Education and Assistance Program (ECEAP) and Head Start to train family advocates, behavior health specialists, and health advocates in brief tobacco cessation interventions. Work to increase their skills, knowledge, and confidence about promoting quitting smoking to parents of ECEAP and Head Start children, thus reducing pediatric exposure to secondhand tobacco smoke.	Jonnae Tillman
Vaccine Preventable Diseases	CD	Technical assistance for school-based nurses Clarify changes in vaccination schedules and evaluate confusing student immunization records when requested by a school nurse; especially for recent immigrants. Assist with immunization clinics and advocate for schools to use CHILD Profile (Washington State immunization registry).	Mary Merrell and Gayle Lainer

Appendix 2:

Northwest Educational Service District Prevention Center Coordinated School Health (CSH) Workshop April 19, 2010

Name: _____ Date: _____

School/Organization: _____

Phone: (____) _____ E-Mail: _____

Instructions: Listed below are several actions that you could take as a result today's workshop. Please select **at least TWO** actions from the list or write your own. Turn in one copy and keep one for yourself.

DURING THE NEXT THREE MONTHS, I WILL:

- Discuss information presented today with colleagues that also participated in the workshop.
- Discuss information presented today with colleagues that did not attend the workshop.
- Download and review resources and information on the topic.
- Discuss CSH with administrators or other school policy decision makers.
- Present information about CSH at a staff meeting.
- Present information about CSH to support staff.
- Present information about CSH to other staff including: _____
- Present information about CSH to a parent group meeting.
- Schedule a meeting with ESD staff to discuss strategies for implementing CSH at our school.
- Review Healthy Youth Survey results from my school and propose an action plan.
- Meet with community partners to discuss opportunities for CSH collaboration.
- Survey staff or students about school health policies and procedures.
- Convene a School Health Advisory Council meeting at my school.
- Complete a school health environment assessment (*Ex: School Health Index, Healthy School Report Card*).
- Develop a school health improvement action plan.
- Implement an existing school health improvement action plan.
- ...Other: _____

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