Policy Statement:

Integrating Oral Health into School Health Education Curricula Using the Whole School, Whole Community, Whole Child School Health Model

Adopted: December 2024

Policy Statement: ASTDD supports the use of the CDC Whole School, Whole Community, Whole Child (WSCC) model as a framework for integrating oral health into school health education curricula, as well as other models, along with oral health promotion activities and dental disease prevention programs. State and territorial oral health programs can be essential partners in collaboration with other state agencies, community partners, parent groups, and health professional associations to assure optimum oral health for school-age children and youth.

Summary

The Association of State and Territorial Dental Directors (ASTDD) fully supports and endorses strategic efforts to integrate oral health into schools. In particular, this paper advocates following the Centers for Disease Control and Prevention's (CDC's) Whole School, Whole Community, Whole Child (WSCC) school health model approach, while also recognizing that other models may be adopted to achieve similar goals. The WSCC model is a student-centered framework with 10 components for addressing health in schools that highlights the role of the community in supporting schools, the connections between health and academic achievement, and the importance of evidence-based school policies and practices. It also emphasizes the psychosocial and physical environment and the increasing roles that community agencies and families play in improving childhood health behaviors and development.

Oral health is essential for the overall health and well-being of students. Schools provide opportunities for oral health education and preventive intervention programs that include dental screening, sealants, fluoride varnish, silver diamine fluoride and minimally invasive care (MIC) therapies. State and territorial oral health programs (S/TOHPs) are essential partners in promoting school-based oral health and the WSCC model; they have the knowledge and resources to assist school and community partners in improving the oral health of students. By working together, S/TOHPs, parents, school staff, community organizations, community health workers and others can employ strategic approaches to improving students' oral health by advocating for oral health education, prevention, and/or treatment programs as

integrated into each of the 10 components of the WSCC model and reflected in related school health and education policies.

The WSCC model and school-based and school-linked oral health programs notwithstanding, schools and school health programs present an underrealized opportunity for oral health education in the school setting and integrating it with regular school health curricula. This statement addresses that continuing need, providing context with selected data about oral health status, challenges and risks for children and youth, along with discussion of disparities and social and structural determinants of health. Health and oral health literacy, social media, and the general characteristics of the school environment are also discussed.

Problem

Introduction: Background

In August 2013, ASTDD's policy statement, *Integrating Oral Health Education into Health Education Curricula in Schools,* pointed out relationships between and among health, oral health, and the ability to learn, and called out a lack of understanding of oral health as a health issue. The statement also described oral health challenges for school-aged children, noting that "implementation of oral health education in schools represents a unique opportunity for early prevention of both oral and general health problems." It recommended that a comprehensive school health curriculum should include an oral health component.[1]

In 2014, in partnership with the Association for Supervision and Curriculum Development (ASCD), known primarily by its acronym, the CDC expanded the research-based Coordinated School Health Program (CSHP) model developed in 1987 from eight components to 10. The result was an expanded approach called the *Whole School, Whole Community, Whole Child (WSCC) Model,* incorporating the principles of a "whole child" approach to education. The goal was "to address the education, public health and school health requests for greater alignment, integration and collaboration between education and health to improve each child's cognitive, physical, social, and emotional development."[2]

ASTDD issued a follow-up statement in 2015, *Integrating Oral Health into the Whole School, Whole Community, Whole Child School Health Model,* that highlighted the CDC's WSCC model, and noted that chronic disease risk factors related to oral health frequently were not addressed in school settings. The 2015 statement included the WSCC model's 10 components and endorsed utilizing a strategic approach to improve students' oral health by "ensuring that oral health education, prevention, and/or treatment programs are integrated into each component of the WSCC model and clearly reflected in related school health policies." If a school or school system did not mandate health education, it proposed that other course curricula be designed to include oral health subject matter. The ASTDD statement concluded that "this holistic and targeted integration can provide children and youth with the knowledge, skills, social support and environmental and community reinforcement needed to adopt long-term behaviors for optimal oral health."[3]

In 2017, ASTDD published a Best Practice Approach Report (BPAR), *Improving Children's Oral Health through the Whole School, Whole Community, Whole Child (WSCC) Model*. It summarized issues in children's and adolescents' oral health, tooth decay and unmet need for dental care, as well as oral

health's relationship to learning and academic success. It also outlined strategies for preventing tooth decay in the school setting, including dental sealants, access to water fluoridation and topical fluoride, limiting sugar-sweetened beverages (SSB), and professional dental care.[2] The BPAR acknowledged that school-based or school-linked oral health programs most likely had been developed and implemented outside of the WSCC model. These programs address at least one or more of the model's 10 components; the BPAR suggests they should be encouraged to integrate with the WSCC initiative: "Integrating oral health into the remaining components will assure continuity for preventive health measures, establish a foundation for optimal (oral) health behaviors, and promote life-long oral health." Further discussion of the BPAR's recommendations appears in the Methods section of this statement.

Oral Health Status, Challenges and Risks for Children and Youth

Dental caries (tooth decay) persists as the most common chronic disease among youth aged 6 to 19 years in the United States.[4] In 2018, the National Center for Health Statistics reported the prevalence of total tooth decay, untreated and treated, in primary or permanent teeth among youth aged 2–19 years was 45.8%. The prevalence of total tooth decay was highest for Hispanic youth, and the prevalence of untreated tooth decay was highest among non-Hispanic Black youth.[4]

If left untreated, tooth decay may lead to pain, inflammation, and the spread of infection to bone and soft tissue. Results may include difficulty in eating, poor nutrition, delayed physical development, dysfunctional speech, poor self-image, and challenges in socialization, as well as the inability to concentrate and participate fully in school.[5,6] These results have repercussions. For example, Former U.S. Surgeon General and pediatrician Antonia Novello reflected on the consequences of poor oral health among children, stating that "children who can't eat well, can't sleep and are constantly hurting will become undereducated and underachievers."[7] According to one report using national data, acute and or unplanned dental care accounted for a loss of 34 million school hours annually; the likelihood of losing any school hours due to acute dental care for children in high-income families was 31% less than for children from low-income families.[8]

Along with tooth decay, there are other challenges to school-age children's oral health. Tobacco use typically starts during adolescence and young adulthood.[9] In 2022, tobacco use among high school students was 16.5%; among middle school students, it was 4.5%.[10] Non-tobacco nicotine use is also a risk. Trend data from 2011-2021 from the Youth Risk Behavior Surveillance System (YRBSS) indicates that the percentage of youth using electronic vape products did not change significantly between 2015 and 2021, staying at 18 percent.[11] The potential adverse effects of tobacco and other oral nicotine-containing products on oral health are cumulative, start when the habit is established, and are well documented:

> *Tobacco and other nicotine-containing products' impact on oral health includes increased risk of mouth, lip, cheek, and throat cancer, particularly when combined with alcohol use, as well as increased risk for gum disease, oral mucosa (soft tissue) lesions, tooth loss, and gingival (gum) recession. Use of these products has been associated with various cancers as well as with heart disease, stroke, emphysema, bronchitis, and chronic airway obstruction*.[12]

Consumption of SSB increases risk for tooth decay. These beverages are any liquids sweetened with various forms of added sugars.[13] National data from 2011-2014 indicated that 63 percent of youth and

49 percent of adults drank a SSB on a given day. Among youth, SSB intake was reported to be higher among boys, adolescents, non-Hispanic Black youth, or youth in families with low incomes.[14] A study that examined caregiver and youth attitudes about sports drinks (SDs) and the association of those attitudes with youth SD intake concluded that caregivers, particularly minority and less educated caregivers, may need more education about SD use. The odds of youth consuming SD one or more times per week were significantly higher among those whose caregivers agreed that SDs are good, healthy drinks for children and among youth whose caregivers agreed that children need SDs for hydration.[15]

The sugar content of foods is also a factor in tooth decay, but research and evidence-based clinical strategies supporting interventions, including those that could be implemented in schools, have been lacking. [16,17] As a result of actions by the U.S. Department of Agriculture, however, changes in the National School Lunch Program recognizing "the negative health impact of added sugars, including increasing the risk of diabetes, heart disease, and some cancers" are intended to go into effect starting in the fall of 2025.[18]

Disparities and Social and Structural Determinants of Health

Despite significant progress in the prevention and treatment of oral diseases, disparities remain that are related to social and structural determinants of health (SDoH).[19,20] According to the U.S. CDC's *Oral Health Surveillance Report: Dental Caries, Tooth Retention, and Edentulism, United States, 2017–March 2020*, there was about a 10 percent decrease between 2016 and 2021 in the proportion of low-income children and adolescents (aged 1–17) who had a past-year dental visit for preventive dental care.[21]

Disparities in oral health exist among all age groups by sex, poverty status, race and ethnicity, education level, and smoking status.[21] The following illustrate oral health disparities among U.S. children and adolescents (aged 2 to 19):

- Untreated cavities were almost three times more common in children aged 2 to 5 years living in low-income (18%) than in higher income households (7%).[21]
- 7 in 10 Mexican American children (70%) aged 6 to 9 years have had cavities in their primary (baby) or permanent teeth compared with 4 in 10 non-Hispanic White children (43%).[21]
- About 3 in 5 children (60%) aged 6 to 9 years from lower income households have had cavities in their primary (baby) or permanent teeth, compared with 2 in 5 children (40%) from higher income households.[21]
- Untreated cavities were more common among adolescents aged 12 to 19 from low-income households (14%) than adolescents from higher income households (8%).[21]
- The difference in estimated hours lost from school is evidence of socioeconomic disparities.[8]

In families where working-age adults (aged 20 to 64) experience oral health disparities, children and adolescents are also likely to experience disparities.

- Untreated decay is about twice as common among working-age adults with no health insurance coverage (43%) compared with those who have private health insurance coverage (18%).[22]
- Among working-age adults, the prevalence of untreated decay was twice as high for non-Hispanic Black adults (40%) as it was for non-Hispanic White adults (21%) in 2011–2016.[22]

- Periodontitis (gum disease with bone loss) was twice as common (60%) among adults aged 30 or older with low income compared with adults who had higher income (30%) in 2009–2014.[23]

CDC also reported on oral health disparities and dental sealants:

- From 1999 to 2016, there was an overall increase in the presence of dental sealants among all U.S. children aged 6 to 11. However, non-Hispanic Black children continued to have lower presence of dental sealants (32%) than non-Hispanic White (44%) and Mexican American children (44%).[24]
- Dental sealants can prevent cavities for many years,[25] but are currently underutilized for all U.S. children. School sealant programs are an effective way to help prevent cavities among children across the nation, especially those who may not otherwise have access to dental care.[26]

As defined by the U.S. Office of Disease Prevention and Health Promotion (Healthy People 2030), SDoH "are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks." SDoH can be grouped into five domains: 1) economic stability, 2) education access and quality, 3) health care access and quality, 4) neighborhood and built environment, and 5) social and community context.[27] Public health professionals, policymakers, funders and other groups have a continuing interest in defining, evaluating, and addressing SDoH to create more holistic approaches to caring for all populations and underserved populations in particular.[28]

Among the factors related to SDoH and oral health with implications for school health are the following:

- *Limited access to healthy foods and beverages (including fluoridated tap water).* Schools play an important role in helping students establish healthy eating habits by providing nutritious and appealing foods and beverages and instituting healthy food and beverage policies.
- *Limited access to regular oral health care and challenges accessing preventive care*. These may be exacerbated by a lack or shortage of school-based oral health programs that provide or facilitate preventive and therapeutic services such as dental sealants, fluoride varnish and silver diamine fluoride. School-based programs allow children to receive services where they spend most of their time and already have transportation to get there. About half of all American children do not receive regular dental care because of social, economic, and geographic obstacles.[5] Youth who are unstably housed are more likely than their stable-housed peers to experience violence, use substances, and have higher rates of poor mental health;[29] these risk factors also impact their ability to access regular oral health care.
- *Use of telehealth technology*. Although the COVID-19 pandemic may have facilitated use of telehealth technology in oral health care, and utilization of teledentistry has grown as an alternative to some types of in-person visits, its use is still not widespread in spite of its potential for connecting children with oral health needs to providers.[30] The reasons for this are diverse, some related to state-specific laws and regulations, and cannot be fully addressed here.
- *Cultural beliefs*, *issues of acculturation and health literacy.* These may impact dietary practices and the use of both preventive and restorative oral health care. The U.S. population in 2024 is more diverse than ever in terms of racial, ethnic, religious, and other differences that describe us socially and culturally, and this diversity is further expanded by newly arriving immigrant

groups in our communities. These issues represent different and more complex perspectives and orientations to health care, requiring new approaches to meeting oral health care needs. For example, providing consent forms and oral health education materials in multiple languages may help with improving acceptance of care within school-based programs. The availability of interpreters and translation services may be a significant challenge and cannot be minimized.[5] Further details or in-depth discussion of these issues is beyond the scope of this paper.

More effective approaches to preventing and treating tooth decay and other oral health problems are emerging from better understanding of the social determinants of health, high-risk behaviors, and caregiver and health provider oral health literacy.[5] School-based dental disease prevention programs improve access to oral health care and outcomes for all students, not only those at high risk for tooth decay. Providing oral health education, screenings, preventive services, case management, and limited treatment in schools meets students and families where they are, and in a familiar setting.[5]

Using schools to provide oral health care has a long and successful history for some communities. However, a broader impact on children's oral health can be achieved by implementing school-based programs that also address SDoH with attention to the risk factors and disparities identified above, and by integrating oral health education into school health curricula. S/TOHPs can have a role in promoting school-based oral health programs by partnering with schools and communities to develop policies, practices, and programs that protect and promote student health. The WSCC model, a comprehensive approach to school health education, offers underrealized opportunities to integrate oral health promotion and dental disease prevention activities.

Method

The Whole School, Whole Community, Whole Child, or WSCC Model,[1] is CDC's framework for addressing health in schools. CDC and ASCD developed the WSCC model in partnership with key leaders in the fields of health, public health, education, and school health to support and strengthen a unified and collaborative approach intended to improve learning and health in schools. The WSCC model addresses the need to engage students as active participants in their learning and health. Some states and local jurisdictions (i.e., school boards or districts) have implemented their own curricula (see below).

School-based oral health programs intend to address barriers for students, particularly those at high-risk for dental disease, to improve their oral health by offering preventive services that avert or reduce the adverse impacts of tooth decay, and in turn support academic success. Using the WSCC model, these programs can offer oral health education for not only students, parents or caregivers, but all school staff who interact with students and contribute to the school environment.

Ideally, a school-based oral health program is developed in coordination with the school nurse. Students receive oral health screening, fluoride varnish, dental sealants, minimally invasive care (MIC) therapies and referral for further treatment, if needed. However, not all schools have nurses on staff, or may not have a full-time nurse on site. A 2021 survey by the National Association of School Nurses (NASN) found that only 70 percent of urban schools and 56 percent of rural schools employ a full-time (>35 hours per week) school nurse.[31]

The WSCC Model is student-centered and emphasizes the role of the community in supporting the

school, the connections between health and academic achievement, and the importance of evidence-based school policies and practices. Examples of how oral health can be integrated into the model's 10 components include the following[2]:

1. Physical education and physical activity: Enforce the use of head, face, eye, and mouth protection during sport-related activities.
2. Nutrition environment and services: Assure that school nutrition policies promote optimal oral health.
3. Health education: Integrate oral health into the health education curriculum and other appropriate subjects, e.g., biology, nutrition, health, food service, physical education.
4. Social and emotional climate: Establish an environment where oral health promotion and disease prevention practices and programs are supported and valued.
5. Physical environment: Assure the availability of drinking water to students and school personnel throughout the day, and fluoridated water if possible.
6. Health services: Promote a medical/dental integration approach that includes dental sealants and fluorides (i.e., fluoride varnish).
7. Counseling, psychological, and social services: Educate/emphasize the impact that poor oral health has on self-esteem and the ability to learn. For example, students with visible oral problems may experience bullying, or be stigmatized because of their appearance.
8. Employee wellness: Support cessation programs for school personnel using tobacco/e-cigarettes/vaping. Programs for staff are opportunities to engage them as role models for students and emphasize the importance of good health habits.
9. Community involvement: Establish partnerships with local dental and other health and social service professionals to assure student access to needed dental care, the fabrication of mouthguards, coordination with other health services, etc.
10. Family engagement: Promote school and family support for oral health screenings and regular dental care, and incorporate healthy food shopping, buying oral care products, and injury prevention practices such as mouthguard use in sports activities.

S/TOHP leaders and their partners can work with state health and education departments to determine how state health curriculum standards are set and integrated, and whether these are under statewide, regional, or local education association control. Each state adopts its own school health curriculum and standards, but education, oral health, and non-oral health leaders (e.g., school nurses, community health workers, social workers, parents/caregivers) can work together to develop standards using the WSCC model.

There are states and school districts that do not have formally adopted health curricula. The Society of Health and Physical Education® (SHAPE) offers National Health Education Standards to define what a student should know and be able to do as a result of an effective health education program. States and local school districts across the country use these standards to develop or revise existing standards, frameworks, and curricula. The updated National Standards, released in March 2024 by SHAPE, are guidelines for states but are not mandated.[32]

School health programs can involve school personnel (e.g., teachers, school nurses, cafeteria staff,

sports coaches) in facilitating oral health and wellness education and programs. When school staff have the knowledge necessary to transform their own health and wellbeing, they can serve as role models for students and become oral health advocates in their communities and schools.[33] This all-inclusive approach can provide children and youth with the knowledge, skills, social support, and environmental and community reinforcement needed to adopt healthy behaviors for optimal oral health.

The WSCC model provides opportunities to weave oral health education, prevention, and treatment programs throughout school curricula and lead to more successful outcomes. This approach can be reflected in related school health policies. The following examples demonstrate how oral health can be integrated into other health education topics and policies, based on recommendations from the ASTDD Best Practice Approach Report *Improving Children's Oral Health through the Whole School, Whole Community, Whole Child (WSCC) Model*.[2] While this BPAR is several years old, the strategies continue to be relevant for S/TOHPs and their partners looking to integrate the WSCC Model into schools.[3]

- Provide education on oral health and oral disease processes, risk factors, and behaviors to promote oral health.
- Provide tobacco and nicotine product use (e.g., vape) prevention education in grades K-12, and link students, faculty and staff using these products to cessation intervention opportunities.
- Provide health and safety education information to help students adopt and maintain safe behaviors and lifestyles, and advocate for including health and safety education that prevents oral and facial injuries (e.g., facial protection and mouthguards in sports, use of bicycle helmets).
- Develop communication messages that integrate programs and social media platforms to promote prevention and protection from oral and facial injuries, such as by using testimonials and support of professional team players.
- Collaborate with school nutrition staff to integrate oral health into nutrition and meal planning and purchasing, from preschool through secondary school. Develop/adopt a comprehensive and well-balanced school nutrition policy that integrates healthy eating into classroom lessons and fosters a supportive school environment. This policy should advocate for balanced school meals and eliminate junk foods (and beverages) from vending machines. Assist with campaigns that prohibit junk food and other foods that increase the risk of tooth decay (e.g., "Stop the Pop" campaign). Integrate oral health into school programs related to conditions such as obesity, diabetes, and other conditions.
- Provide assistance with starting a school-based program to support effective preventive oral health services including screenings, dental sealants, fluorides, and referrals if needed for students. Assist in efforts to coordinate establishing dental homes for students.
- Promote awareness among school staff and in the community that poor oral health impacts self-esteem and the ability to learn among school-age children.
- Educate students, school staff and families on the importance of oral health self-care habits in the school environment such as toothbrushing, flossing, and rinsing with water after school breakfast and lunch. Encourage students and staff to drink water, especially if it is fluoridated.
- Help to educate school staff on the efficient implementation of strategies by school personnel for the integration of oral health prevention services programming that will fit into the school

routine. Provide program-specific in-service for school staff, athletic coaches, and school nutrition services personnel on oral health.

- Integrate school and family support of school-based programs to prevent tobacco and vaping use for students, their family members, and school staff.

Schools that receive funding for the National School Lunch Program are required to have a Wellness Committee that creates a "Local School Wellness Policy." The Policy guides local educational agency's or school district's efforts to establish a school environment that promotes students' health, well-being, and ability to learn.[34] S/TOHPs or oral health coalitions can coordinate with the Wellness Committee that mandates the Local School Wellness Policy for healthy food and beverages.

Health literacy needs to be considered when engaging parents, caregivers, and families. Adults with low health literacy tend to have poor health and to underuse health resources. When parents do not understand that children's oral health is important, they may be less likely to take good care of their child's teeth and take their child for dental visits.[35] Providing consent forms and oral health education materials in multiple languages and formats is paramount for acceptance of care in school-based programs.

Social media platforms are a common means of sharing information, personal experiences, and lifestyle. They can also be used as cost-effective methods for individuals to acquire health information and for the promotion of oral health.[36] Collaborations between and among oral health professionals, organizations, and influencers on social media can amplify credibility and reach. Sharing social media in languages other than English is increasingly important; messages should be developed by native speakers and someone with knowledge of other cultures so that the messages are culturally appropriate. Internet-based applications also allow users to create and share educational information. However, when using any form of messaging, health literacy remains an important consideration. The Healthy People 2030 definition for health literacy is "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions." Components of this definition are to:

- Emphasize people's ability to use health information rather than just understand it.
- Focus on the ability to make "well-informed" decisions rather than "appropriate" ones.
- Acknowledge that organizations have a responsibility to address health literacy.
- Incorporate a public health perspective.[37]

Beginning in 2024, the CDC Healthy Schools Division funded a 5-year cooperative agreement to improve the health and well-being of students and staff in underserved communities. The "National Initiative to Advance Health Equity in K-12 Education by Preventing Chronic Disease and Promoting Healthy Behaviors" has four priority areas. Priority 1 is school health services. Two national organizations received CDC funding to support and provide technical assistance to CDC-funded state education and health agencies, universities, and a tribal nation around Priority 1 activities.[38] The two funded national organizations are:

- The American Academy of Pediatrics (AAP) Enhancing School-based Health and Mental Services through Training, Education, Assistance, Mentoring and Support (TEAMS) project will provide

technical assistance, specialized development and training, and intensive project support to develop, implement, and evaluate evidence-based policies, practices, and programs.

- The National Association of School Nurses (NASN) supports CDC-funded state education agencies, districts, schools, and school nurses to improve the health and well-being of students and school staff across the country. NASN aims to improve the delivery of school health services to students in underserved communities.

S/TOHP can engage in a range of activities focused on school settings. Working with partners, they can support the creation of a community-engaged oral health system. They can facilitate partnering with school nurses, school staff, and communities to support the addition of oral health in school curricula. School-based and school-linked programs can help reach parents and families early in the disease process, as children take home what they learn and are offered in school. Messages delivered by multiple people need to deliver a consistent message, and should be delivered by trusted, culturally competent, members of the community.

ASTDD's 2024 Synopses of State Dental Public Health Programs asked states to report whether they funded, managed, or operated specific oral health services during the 2022-2023 fiscal year, and if they collaborated with their chronic disease programs.[*39] The *Synopses Report* indicates the following activities that can be related to school health:

Services	**Percent of reporting states with activity**
Fluoride Varnish program	43%
Silver Diamine Fluoride program	17.7%
Oral Health Literacy/Education program	68.6%
Programs for Elementary School Children	60.8%
Programs for Adolescents	29.4%
Collaboration with chronic disease programs	**Number of states reporting collaboration**
Oral Cancer	26
Sugar Drinks	22
Tobacco	32
Vaping	25

Working with other partners, S/TOHPs can:

- Educate and assist schools with starting a dental sealant program if they don't already have one. These guidelines, recommendations, and resources can help. Communicate with families about the importance of good oral hygiene and how participation in the school's dental sealant program can help prevent cavities by protecting the chewing surfaces.

[*] The 2024 Synopses questionnaire was returned by 48 states plus the District of Columbia. New York did not return the questionnaire and Wyoming did not have an oral health program during FY 2022-2023.

- Inform families of the school health services available, including care coordination for students with chronic health conditions such as tooth decay. School sealant programs can also develop referral networks with dental practitioners in the community.
- Promote healthy eating and drinking water while at school. Teachers, school staff, out-of-school time program leaders, and administrators can practice healthy eating to reinforce this behavior with students. Staff can also support consistent messages in schools about the importance of good nutrition.
- Encourage that playgrounds and other physical activity facilities are safe to reduce students' risks of oral trauma, and be prepared for any dental emergencies.

When school personnel (e.g., teachers, school nurses, cafeteria staff, behavioral health staff) are integrated into and participate in school health programs that facilitate oral health education and wellness programs, they have access to the knowledge to transform their own health and wellbeing, empowering them to serve as role models for students and become oral health advocates in their communities and schools. This all-inclusive approach can provide children and youth with the knowledge, skills, social support, and environmental and community reinforcement needed to adopt healthy behaviors for achieving good oral health.

See the following pages for a graphic presentation of the WSCC model and a list of additional resources.

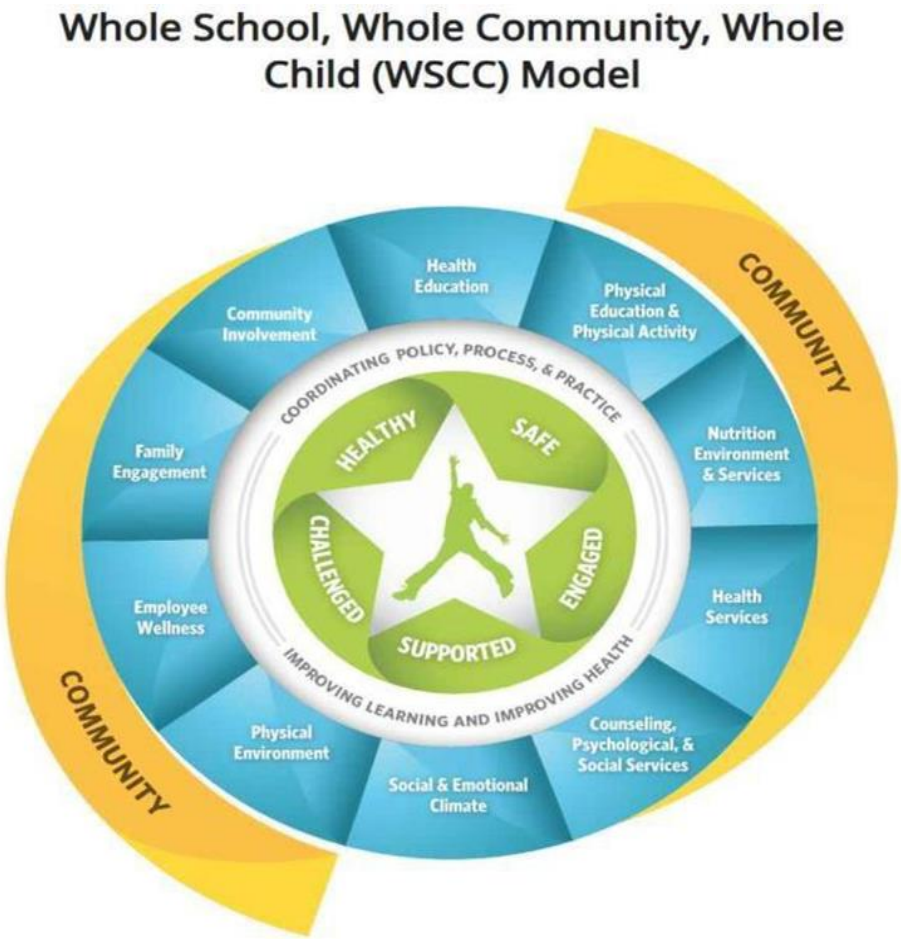
Policy Statement

ASTDD supports the use of the CDC Whole School, Whole Community, Whole Child (WSCC) model as a framework for integrating oral health into school health education curricula, as well as other models, along with oral health promotion activities and dental disease prevention programs. State and territorial oral health programs can be essential partners in collaboration with other state agencies, community partners, parent groups, and health professional associations to assure optimum oral health for school-age children and youth.

The ASTDD Dental Public Health Policy Committee acknowledges Julie Ann Janssen, RDH, MA, and the ASTDD School and Adolescent Oral Health Committee for their work in drafting this document. The committee also acknowledges Katrina Holt, Beth Lowe, and Olivia Pickett for their assistance in conducting literature reviews.

Supported in part by Cooperative Agreement 6 NU58DP006573-05-01 from the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC.

Suggested citation: Association of State and Territorial Dental Directors (ASTDD) Dental Public Health Policy Committee and School and Adolescent Oral Health Committee. Integrating Oral Health into School Health Education Curricula Using the Whole School, Whole Community, Whole Child School Health Model Policy Statement. [monograph on the Internet]. ASTDD, Reno, NV. 15 pp. Available from: http://www.astdd.org.



https://www.cdc.gov/healthyyouth/wscc/index.htm

Additional Resources:

- About CDC Healthy Schools
- American Academy of Pediatrics School Health
- American Academy of Pediatrics Oral Health in Schools
- ADA Mouth Healthy™ Resources for Lifelong Dental Health
- ASTDD Best Practice Approach: Improving Children's Oral Health through the Whole School, Whole Community, Whole Child Model
- ASTDD Capacity Building Tool: Recommendations for Integrating Oral Health into the WSCC Model
- ASTDD Human Papilloma Virus (HPV) and Oropharyngeal Cancer policy statement
- ASTDD Integrating Oral Health Care into Primary Care policy statement
- ASTDD Mobile and Portable School-Based/School-Linked Oral Health Programs: Delivery Models to Expand Care for Children and Adolescents
- ASTDD Oral Health and Nutrition resources

- ASTDD Promoting Good Nutrition and Healthy Eating in Schools: An Important Strategy for Promoting Oral Health and Preventing Dental Caries policy statement
- ASTDD Smoking, Vaping and Tobacco Use resources
- ASTDD Social Determinants of Health and Improving Oral Health Equity policy statement
- ASTDD Sugar-Sweetened Beverages policy statement
- CDC Healthy Schools Funded Partners (2024)
- CDC School Nutrition
- Harvard Center for Health Law & Policy Innovation. How to Reduce the Consumption of Sugar with Good Policy.
- HRSA Social Media Content – A Healthy Mouth for Every Body Campaign Toolkit
- National Association of School Nurses (NASN) Comprehensive Health Education in Schools Position Statement
- NIH National Library of Medicine: The Role of Mouthguards in Preventing and Reducing Sports-related Trauma
- School-based Health Alliance: How to Start a Program or Improve on Existing Efforts
- Society of Health and Physical Educators® SHAPE America
- WSCC: Expanding the Evidence Base
- WSCC 10 components

---

[1] Association of State and Territorial Dental Directors (ASTDD). Integrating oral health education into health education curricula in schools. Policy statement, 2013.

[2] Association of State and Territorial Dental Directors (ASTDD). School and Adolescent Health and Best Practices Committees. Best Practice Approach Improving Children's Oral Health through the Whole School, Whole Community, Whole Child (WSCC) Model [monograph on the Internet]. Reno, NV: Association of State and Territorial Dental Directors; 2017 March 21. 26 pp. Available from: http://www.astdd.org https://www.astdd.org/bestpractices/wscc-bpar-final-3-2017.pdf

[3] Association of State and Territorial Dental Directors (ASTDD). Integrating oral health into the whole school, whole community, whole child school health model. Policy statement, 2015.

[4] National Center for Health Statistics. Data Brief No. 307, April 2018. Prevalence of total and untreated dental caries among youth: United States, 2015–2016. https://www.cdc.gov/nchs/products/databriefs/db307.htm

[5] U.S. Department of Health and Human Services. Oral health in America: A report of the surgeon general. Rockville, MD. U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health; 2021. https://www.nidcr.nih.gov/research/oralhealthinamerica

[6] Kumar A, Cernigliaro D, Northridge ME, et al. Caregiver acculturation and acceptance of silver diamine fluoride treatment for childhood caries treatment. BMC Oral Health. 19:228. 10.1186/s12903-019-0915.

[7] Novello AC, Degraw C, Kleinman DV. Healthy children ready to learn: an essential collaboration between health and education. Public Health Reports. 1992;107(1)3-15. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1403595.

[8] Naavaal S, Uma Kelekar U. School hours lost due to acute/unplanned dental care. Health Behav Policy Rev. 2018;5(2):66-73. DOI: https://doi.org/10.14485/HBPR.5.2.7

[9] Barrington-Trimis JL, Braymiller JL, Unger JB, et al. Trends in the age of cigarette smoking initiation among young adults in the U.S. from 2002 to 2018. JAMA Netw Open. 2020;3(10):e2019022. doi:10.1001/jamanetworkopen.2020.19022.

[10] Park Lee E, Ren C, Cooper M, et al. Tobacco product use among middle and high school students – United States, 2022. MMWR Morb Mortal Wkly Rep 2022;71:1429–1435. doi: http://dx.doi.org/10.15585/mmwr.mm7145a1.
[11] Centers for Disease Control and Prevention. National Center for HIV, Viral Hepatitis, STD, and TB Prevention, Division of Adolescent and School Health. Youth Risk Behavior Survey Data Summary & Trends Report: 2011-2021 https://www.cdc.gov/healthyyouth/data/yrbs/pdf/yrbs_data-summary-trends_report2023_508.pdf
[12] Association of State and Territorial Dental Directors (ASTDD) Dental Public Health Policy Committee. Preventing tobacco products use and promoting oral health [monograph on the Internet]. Reno, NV: Association of State and Territorial Dental Directors; 13 pp. Available from: http://www.astdd.org.
[13] U.S. Department of Agriculture, U.S. Department of Health and Human Services. Dietary Guidelines for Americans 2015-2020. 8th Edition. Washington, DC: U.S. Government Printing Office; 2015.
[14] Rosinger A, Herrick K, Gahche J, et al. Sugar-sweetened beverage consumptions among U.S. youth, 2011-2014. NCHS Data Brief. No 271 Hyattsville, MD: National Center for Health Statistics. 2017.
[15] Zytnick D, Park S, Onufrak SJ. Child and caregiver attitudes about sports drinks and weekly sports drink intake among U.S. youth. Am J Health Promot. 2016 Jan-Feb;30(3):e110-9. doi: 10.4278/ajhp.140103-QUAN-8. Epub 2015 May 14. PMID: 25973970. https://pubmed.ncbi.nlm.nih.gov/25973970/.
[16] Division of Adolescent and School Health, National Center for Chronic Disease Prevention and Health Promotion. Whole School, Whole Community, Whole Child (WSCC). https://www.cdc.gov/healthyyouth/wscc/index.htm
[17] Fox MK, Gearan EC, Schwartz C. Added sugars in school meals and the diets of school-age children. Nutrients. 2021 Jan 30;13(2):471. doi: 10.3390/nu13020471. PMID: 33573299; PMCID: PMC7911531
[18] Hoke, Kathleen. Network for Public Health Law. reducing kids' consumption of sugar and salt through changes in the national school lunch program. May 1, 2024. https://www.networkforphl.org/news-insights/reducing-kids-consumption-of-sugar-and-salt-through-changes-in-the-national-school-lunch-program/
[19] Sgan-Cohen HD, Evans RW, Whelton H, et al; IADR-GOHIRA Steering and Task Groups. IADR Global oral health inequalities research agenda (IADR-GOHIRA(R)): a call to action. J Dent Res. 2013 Mar;92(3):209-11. doi: 10.1177/0022034512475214. Epub 2013 Jan 24. PMID: 23349520.
[20] Northridge ME, Kumar A, Kaur Raghbir. Disparities in access to oral health care. Annu. Rev. Public Health 2020. 41:513–35. https://doi.org/10.1146/annurev-publhealth-040119-094318.
[21] Centers for Disease Control and Prevention. Oral Health Surveillance Report: Dental Caries, Tooth Retention, and Edentulism, United States, 2017–March 2020. U.S. Dept of Health and Human Services; 2024. Accessed October 17, 2024. https://www.cdc.gov/oral-health/php/2024-oral-health-surveillance-report/index.html
[22] Williams S, Wei L, Griffin SO, et al. Untreated caries among U.S. working-aged adults and association with reporting need for oral health care. J Am Dent Assoc. 2021;152(1):55–64. doi.org/10.1016/j.adaj.2020.09.019.
[23] Eke PI, Thornton-Evans GO, Wei L, et al. Periodontitis in U.S. adults: National Health and Nutrition Examination Survey 2009–2014. J Am Dent Assoc. 2018;149(7):576–588. https://doi.org/10.1016/j.adaj.2018.04.023.
[24] Centers for Disease Control and Prevention. Oral Health Surveillance Report: trends in dental caries and sealants, tooth retention, and edentulism, United States, 1999–2004 to 2011–2016. U.S. Dept of Health and Human Services; 2019. Accessed January 18, 2024.
[25] Ahovuo-Saloranta A, Forss H, Walsh T, et al. Pit and fissure sealants for preventing dental decay in permanent teeth. Cochrane Database Syst Rev. 2017;7(7):CD001830. doi:10.1002/14651858.CD001830.pub5
[26] Griffin SO, Naavaal S, Scherrer C, et al; Community Preventive Services Task Force. Evaluation of school-based dental sealant programs: an updated Community Guide systematic economic review. Am J Prev Med. 2017;52(3):407–415. doi: 10.1016/j.amepre.2016.10.004
[27] Office of Disease Prevention and Health Promotion, Office of the Assistant Secretary for Health, Office of the Secretary, U.S. Department of Health and Human Services. Social Determinants of Health. https://health.gov/healthypeople/priority-areas/social-determinants-health
[28] Association of State and Territorial Dental Directors (ASTDD). Social determinants of health and improving oral health equity. Policy statement, 2023.
[29] Smith-Grant J, Kilmer G, Brener N, Robin L, Underwood JM. Risk behaviors and experiences among youth experiencing homelessness—Youth risk behavior survey, 23 U.S. states and 11 local school districts, 2019. J Community Health. 2022;47(2):324–333.]
[30] Glassman, P. Using teledentistry to maintain services and contact with patients during the time of COVID-19 physical distancing. Elk Grove, CA: College of Dental Medicine California Northstate University; 2020.
[31] Willgerodt MA, Tanner A, McCabe E, et al. Public school nurses in the United States: National school nurse

workforce study 2.0. The Journal of School Nursing. 2024;0(0). doi:10.1177/10598405241253565 https://www.nasn.org/research/school-nurse-workforce

[32] Society of Health and Physical Educators. National Health Education Standards https://www.shapeamerica.org/standards/health/default.aspx

[33] Action for Healthy Kids. Staff as Healthy Role Models. https://www.actionforhealthykids.org/activity/staff-as-healthy-role-models/#. Accessed May 2024.

[34] U.S. Department of Agriculture. Food and Nutrition Services. Local School Wellness Policies. https://www.fns.usda.gov/tn/local-school-wellness-policy. Accessed. May 2024

[35] Dudovitz R, Teutsch C, Holt K, et al. Improving parent oral health literacy in Head Start programs. J Public Health Dent. 2020 Jun;80(2):150-158. doi: 10.1111/jphd.12361. Epub 2020 Feb 21. PMID: 32083725.

[36] Farrokhi F, Ghorbani Z, Namdari M, et al. Social media as a tool for oral health promotion: A systematic review. Published online 2023 Dec 19. doi: 10.1371/journal.pone.0296102

[37] U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, Office of the Assistant Secretary for Health, Health Literacy in Healthy People 2030, https://health.gov/healthypeople/priority-areas/health-literacy-healthy-people-2030. Accessed May 2024.

[38] Healthy Schools Funded Nongovernmental Organizations https://www.cdc.gov/healthy-schools/partners/ngo.html?CDC_AAref_Val=https://www.cdc.gov/healthyschools/ngo.htm

[39] Association of State and Territorial Dental Directors. 2024 Synopses of state dental public health programs. Data for FY 2022-2023. June 2024. www.astdd.org [Members Only webpage].