

RESEARCH BRIEF

Challenges in Implementing School-Based Oral Health Programs:

Short- and Long-Term Impact of COVID-19

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Introduction



In early 2021, CareQuest Institute for Oral Health and the Association of State and Territorial Dental Directors conducted a survey that evaluated the impact of COVID-19 on the capacity of state oral health programs to plan and implement school-based oral health programs, identify successful strategies and barriers, and develop policy recommendations. The survey was sent to state and territorial dental directors. A total of 37 dental directors responded to the survey.

COVID-19 has disrupted K-12 learning and has limited children's access to oral health services and programs. School-based oral health programs (SBOHPs) are an essential access point for children to receive preventive oral health services. Also, SBOHPs promote dental visits for children, and for some children, it is their only access to oral health services (Minter-Jordan 2020)¹.

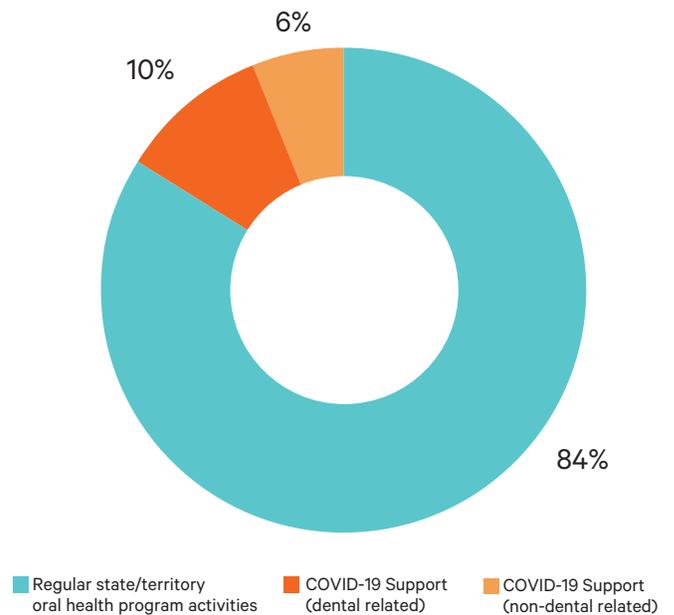
Challenges faced by State and Territorial Dental Directors

The pandemic continues to threaten oral health programs for several reasons. State and territorial Oral Health Program directors reported that 16% of their time was taken away from state oral health program activities to support COVID-19-related activities for the state. There was a lack of uniformity on how the dental directors spent their time on activities to support COVID-19 and their regular oral health program activities.

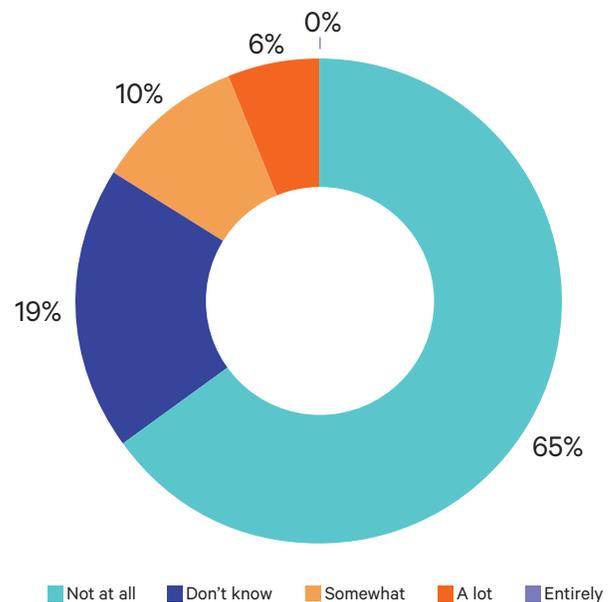
Seventy percent of the dental directors said they had conducted a needs assessment of oral health programs to understand the effect of COVID-19 school shutdowns and, in particular, how SBOHPs were affected. These assessments were conducted in several different ways: 40% were conducted using email and phone calls, 34% were conducted through virtual meetings, and 22% used a survey format for the needs assessment that was sent via emails. Most of the needs assessments were completed by school-based sealant providers, sealant managers, school-based dental hygienists, and other school-based providers. Most of the dental directors who reported that they did not conduct a needs assessment indicated that it was because they lacked the personnel for survey implementation and data analysis.

On a more positive note, none of the dental directors reported that SBOHP funding for 2020-2021 was entirely threatened because of COVID-19, and 65% said it was not at all threatened.

Time Allocation of Dental Director



State/Territory Run, Funded or Partnered School-Based Oral Health Programs' Funding Threatened Due to COVID-19



Challenges Faced by SBOHPS Because of the COVID-19 Pandemic

Apart from oral health screening, SBOHPS provide several preventive services for children, such as fluoride varnish applications and sealant programs. These preventive programs are imperative in preventing and controlling tooth decay in school children and improving children's oral health.

SBOHPS faced many challenges during 2020 as a result of the COVID crisis. These new and ongoing challenges may persist for years once the pandemic has ended. Several oral health programs, including Basic Screening Survey (BSS), sealant programs, and fluoride varnish programs were significantly impacted during the 2020–2021 school year. The BSS is a tool that provides state and local health authorities with a consistent model for measuring oral disease. Both the planning and implementation of these programs were affected. Only 25% of SBOHPS were both planned and implemented in both Fall 2020 and Spring 2021.

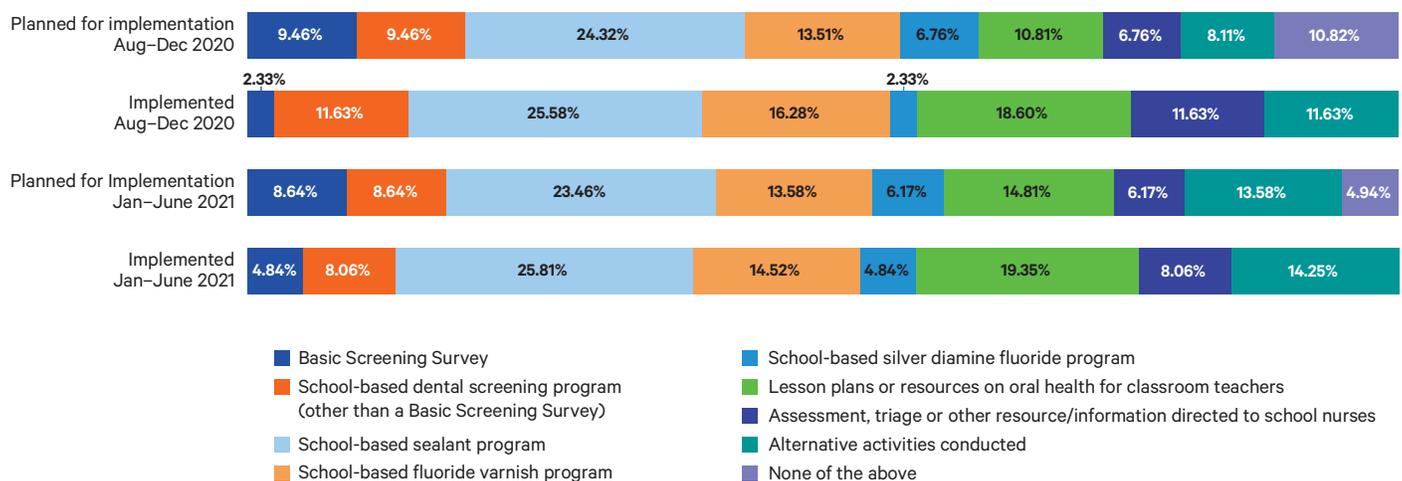
There were slight improvements seen for planned oral health programs in Spring 2021. Although the school sealant programs are still running at 25% capacity, the percentage of lesson plans on oral health provided by schools has improved from 18% to 20% from the Fall 2020 to Spring 2021.

Most of these programs were implemented within school buildings. Only 7% of school-based sealant programs were conducted on school grounds outside the school building. None of the activities, such as fluoride varnish application or screenings, were operated using a drive-through program.

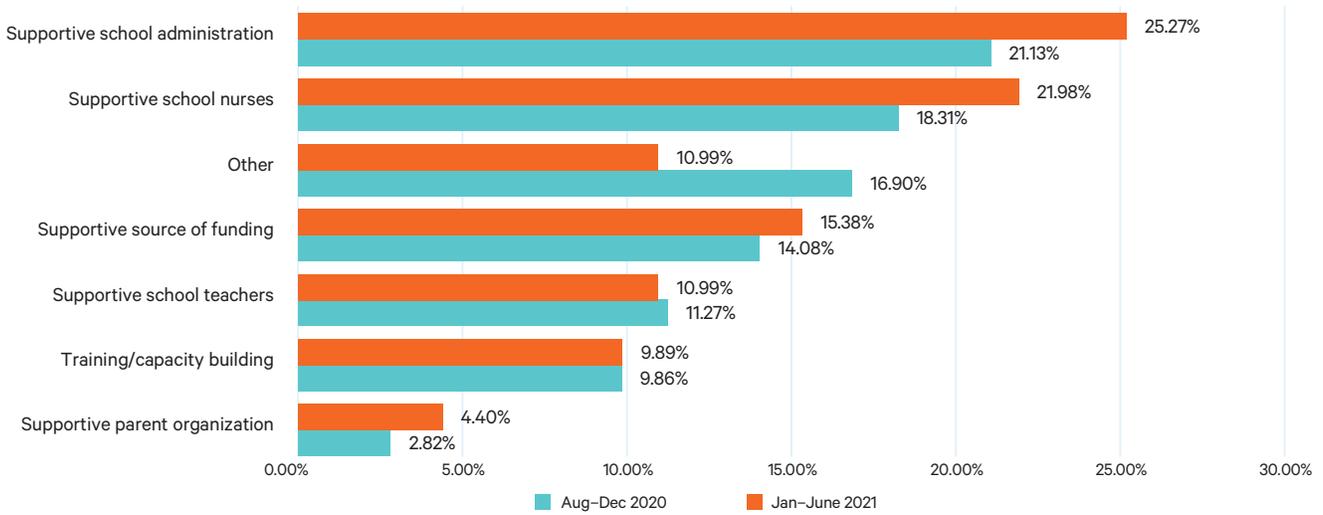
Further inquiry led to reporting about the underlying reasons why some schools could restart oral health programs successfully. It was not surprising to see that school administration and school nurses' support and cooperation were the dental directors' highlighted reasons for the restart of programs both in Fall 2020 and Spring 2021. Dental directors noted that supportive funding sources were an essential factor in the restart of oral health programs in schools.

Most of the dental directors mentioned that they had established long-standing relationships with school administration, staff, and school nurses, which has led to a greater understanding of the importance of oral health prevention programs. Transparency on the part of school administration and education on infection prevention and control encouraged parents to give their consent for these programs. Dental directors also reported that dental hygienists and assistants were in frequent communication with parents.

Planning and Implementation of School-Based Oral Health Programs



Support for Restarting School-Based Oral Health Program

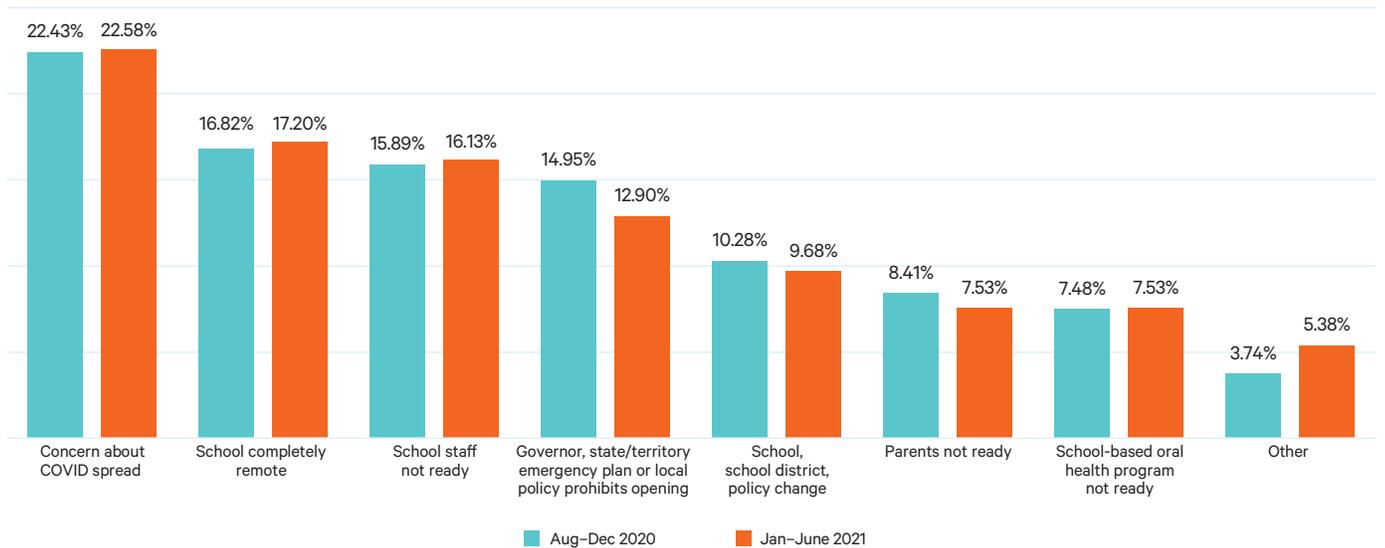


When the schools were using virtual learning, several oral health program activities, such as case management and caregiver education on oral health behaviors, also were conducted virtually.

Some dental directors discussed reasons why schools were not participating in SBOHPs. About one-quarter of dental directors reported concern about COVID-19 spread during the August–December 2020 and January–June 2021 reporting periods. Several other reasons were reported, including schools using remote/virtual learning, staff and parents not being ready, the

constant changes in policies at the school district level, and local policy changes. It is interesting to see a slight shift in the underlying reasons for schools not participating in SBOHPs between August–December 2020 and January–June 2021. Under the “Other” category, dental directors reported that many schools consider SBOHP staff to be visitors based on school rules, and because of this they were not allowed into the schools. In addition, health departments reassigned staff to vaccine clinics or other COVID-19 related work, which took them away from conducting the oral health program.

Reasons Some Schools Did Not Participate in Oral Health Programs



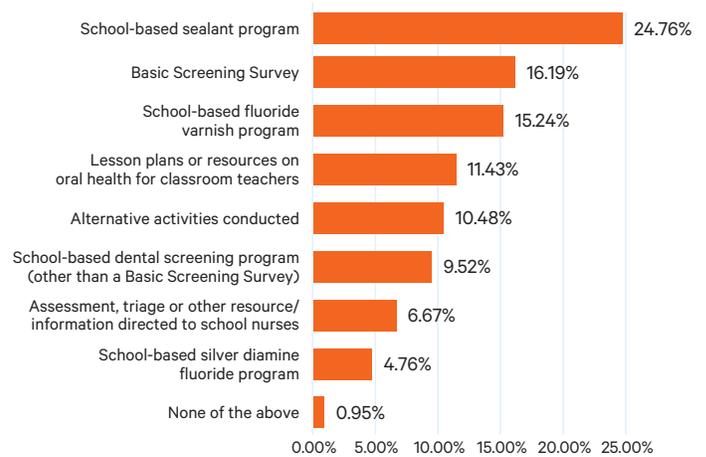
Challenges Anticipated by SBOHPs in the Coming Years

Dental directors were asked about planning for oral health programs for the 2021–2022 school year. Only 25% said they were planning school-based sealant programs, and 16% were planning school-based fluoride varnish programs or a BSS. These figures are similar to the ones for the 2020–2021 school year. About 16% of dental directors reported that they were planning BSS in the 2021–2022 school year. That was better than the 2020–2021 planning figures, which were about 9%. One percent of the dental directors were not planning any oral health programs in 2021–2022. These results show a high level of uncertainty that dental directors and their staff face in planning school-based oral health screening and prevention programs. There are several unknown factors about schools reopening for in-person learning, and readiness of schools, staff, and parents who need to be engaged in these programs.

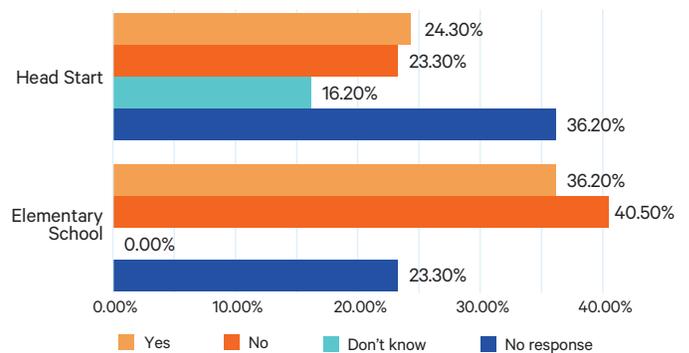
The survey included a question to understand the challenges related to the measurement of dental diseases. Specifically, dental directors were asked whether they would be able to implement a BSS within their typical 5-year cycle, and if not, would their data be older than five years?

At the school level, the BSS is conducted in elementary schools and Head Start programs. Most states conduct a BSS in elementary schools. However, not every state conducts a BSS in Head Start programs; 31 states have conducted a BSS in Head Start programs in past. Thirty-six percent of the dental directors responded that the elementary school BSS data would be 5 years old in 2023, and 24% said the same for their Head Start BSS data. These results show that there could be a lack of current dental disease measurements in the coming years, which could have serious policy and funding implications.

Oral Health Programs Planned for 2021–2022



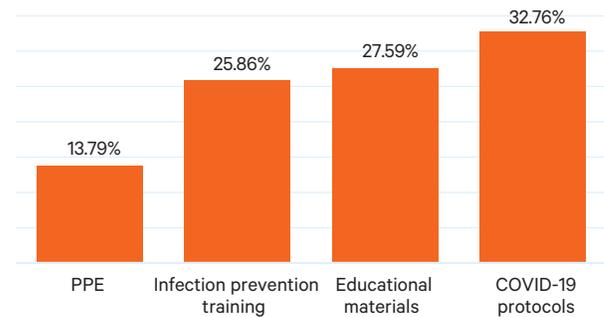
Will the BSS Data Be Older than 5 Years in 2023?



Additional Support from State/Territorial Oral Health Programs for Schools

Sixty-five percent of dental directors were confident they could provide additional support to school-based programs to increase readiness to participate in oral health programs, and 16% indicated that they may be able to provide support. The support that they would provide could include additional personal protective equipment (PPE), educational materials, infection prevention training, and COVID protocols. Dental directors commented that several school-based programs asked for assistance in adding COVID-19 related information to consent forms and other documents that are sent to parents.

Support to Increase Readiness



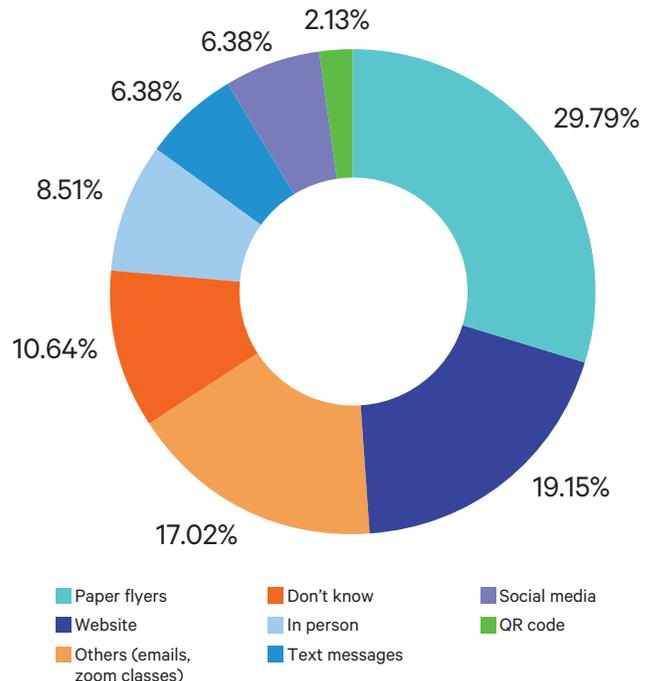
Reassuring Parents and Schools

About 36% of dental directors reported that updates were made to the parent consent forms because of the COVID-19 pandemic. The changes included information about how and where oral health programs were conducted. Information was shared on infection prevention guidelines provided by the Organization for Safety Asepsis and Prevention (OSAP) and COVID-19 related guidelines provided by CDC on social distancing, wearing a mask, and COVID-19 symptom checks.

About 40% of the dental directors indicated the SBOPHs prepared new communication materials to engage or inform schools/parents about the safety of these programs during the COVID-19 pandemic. These materials included a COVID-19 safety flyer, a safety brochure to encourage dental sealants despite COVID-19 concerns, social media flyers promoting a return to dental care, a Q&A sheet from the school nurse, and flyers reiterating the importance of maintaining regular oral health care for students during the pandemic. About 40% of dental directors said that communication documents were not evaluated for cultural appropriateness.

The schools used various methods to distribute these communication documents to parents. Paper flyers remained the top choice for sending information to parents. Some schools used technology such as QR codes, social media, Zoom classes, and text messages to provide documents. About 20% posted the materials on their schools' websites.

Distribution of Communication Materials to Parents



Student Population Characteristics

Dental directors reported that the overall Medicaid eligibility for the students increased by 45% in their states, but utilization only increased by 3.2% from the 2019–2020 school year to the 2020–2021 school year. Medicaid eligibility did not decrease, but utilization decreased by 49% in students from the 2019–2020 school year to the 2020–2021 school year. It is important to note that several dental directors did not report the Medicaid eligibility or utilization for students; 39% did not know the change in Medicaid eligibility, and 45% did not know about the shift in Medicaid utilization.

Only 21% of dental directors provided the racial/ethnic percentage breakdown for their student populations receiving oral health services from the programs that were administered or funded by the state/territorial oral health program in 2020. In comparing the racial/ethnic breakdown provided by the dental directors to 2010 U.S. Census data, these SBOHPs provided services mainly to the ethnic minority groups within each of these states. They successfully targeted populations with oral health disparities.

Shift in Medicaid Eligibility and Utilization from 2019–2020 to 2020–2021 School Year

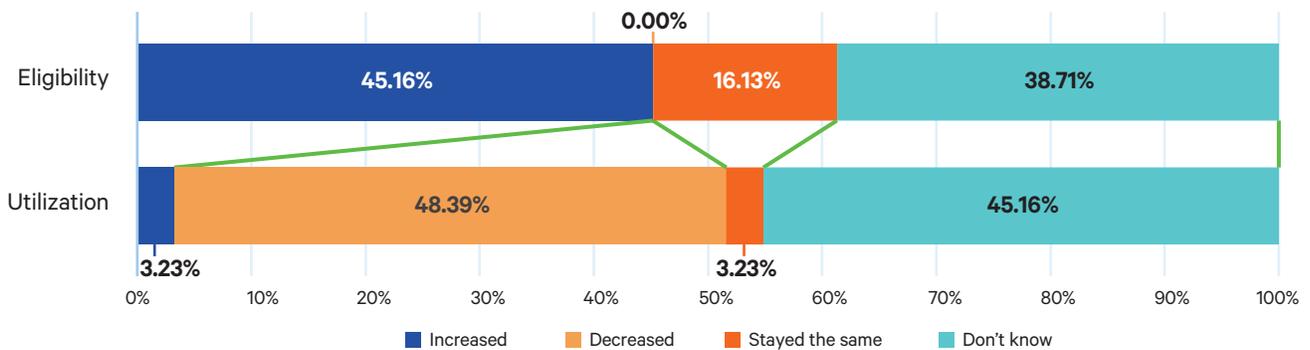


Table 1: Percent of student populations who received oral health services from the programs that were administered or funded by the state/territorial oral health program in 2020. The numbers in the parentheses are the percentages of the population racial/ethnic breakdown in each state:

	Hispanic/Latin (%)	White/Caucasian (%)	Black/African American (%)	Asian/Asian American (%)	American Indian/Alaska Native (%)	Hawaiian/Pacific Islander (%)	Multiracial (%)
Iowa ²	16.3 (6.3)	70.5 (85)	7.6 (4.1)	1.9 (2.7)	0.3 (0.5)	0	0
Maryland ³	30 (10)	15 (50)	40 (31.1)	5 (6.7)	0 (0.6)	0 (0.1)	0
New Mexico ⁴	55 (49)	30 (36.8)	5 (2.6)	0 (1.8)	10 (11)	0	0
Alabama ⁵	8 (4.6)	55 (65.3)	33 (26.8)	1 (1.5)	1 (0.7)	0	2
Commonwealth of Northern Mariana Islands (CNMI) ⁶	1 (0.5)	2 (3.7)	1 (1)	36 (48.2)	0	40 (33.6)	20 (13)
Ohio ⁷	5 (4)	58 (78.4)	28 (13)	2 (2.5)	1 (0.3)	0	0
Missouri ⁸	4.2 (4)	81.16 (79.1)	7.55 (12)	1.52 (2.2)	0 (0.6)	0 (0.2)	4.81



Lessons and Next Steps

This report has provided an in-depth synopsis of how COVID-19 impacted the planning and delivery of state-funded SBOHPs. As a result of the pause and delay in school-based oral health programming during the pandemic, there may be an increase in children's oral diseases in the coming years, and it also is expected that students who are members of some racial/ethnic minority groups will be disproportionately affected by this pause.

This report highlighted the fact that there may be a lack of oral disease surveillance data in the coming years since dental directors and school oral health program staff face enormous challenges in conducting future screening surveys.

Implementation of preventive services, such as fluoride varnish, dental sealants, and silver diamine fluoride, has been challenging. For many SBOHPs, none of these preventive services were implemented during 2020–2021. Even the planning process for the 2021–2022 school year is uncertain. Loss of oral health prevention services at the school level can bring about a tremendous increase in tooth decay in children and increase oral health disparities.

These results suggest strategies for some next steps to help plan and implement school-based oral health programs.

- Improve reporting at the state level about planning and implementing state-funded SBOHPs. A standardized set of questions should be developed and a regular data collection system established. More funding and personnel would be required to improve the reporting system.
- Increase support for COVID-19 protocols. Providing support in developing documentation, procedures, and protocols to safely implement SBOHPs is needed. In addition, protocols should be developed to help parents understand how oral health programs can be safely implemented so that parents are supportive and engaged in these programs.
- The pandemic has shown that reiterating the importance of oral health to school principals, school administration, and school nurses is all the more essential to make sure that dental diseases and oral health inequities do not surge or go unchecked. Good oral health is imperative to all students' overall physical health, mental well-being, learning, and success.

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Methodology:

ASTDD organized a COVID-19 School-Based Programs Workgroup that included state dental directors, staff, and consultants of the CareQuest Institute on Oral Health. The workgroup identified emerging issues associated with conducting oral health services in schools during the COVID-19 pandemic. A subcommittee of the workgroup developed a survey asking the state and territorial dental directors in all the 50 states, District of Columbia, and the U.S.-affiliated territories to share information about their school-based programs.

The survey was sent to all state and territorial dental directors in mid-February 2021 and requested a response in 3 weeks. The results of this survey will be presented in aggregate in a report disseminated by ASTDD and the CareQuest Institute on Oral Health. Permissions were obtained from the eight states to present identifiable data related to the race/ethnicity of their students. The survey implementation was done using Qualtrics software. All data were aggregated and analyzed using Qualtrics outputs and Excel.

CareQuest Institute for Oral Health

CareQuest Institute for Oral Health is a national nonprofit championing a more equitable future where every person can reach their full potential through excellent health. We do this through our work in grantmaking, research, health improvement programs, policy and advocacy and education as well as our leadership in dental benefits, care delivery and innovation advancements. We collaborate with thought leaders, health care providers, patients and local, state and federal stakeholders, to accelerate oral health care transformation and create a system designed for everyone. To learn more, visit carequest.org.

Association of State and Territorial Dental Directors

The Association of State and Territorial Dental Directors (ASTDD) is a national non-profit organization representing the directors and staff of state public health agency programs for oral health. It was organized in 1948 and is one of 20 affiliates of the Association of State and Territorial Health Officials (ASTHO). ASTDD formulates and promotes the establishment of national dental public health policy, assists state dental programs in the development and implementation of programs and policies for the prevention of oral diseases; builds awareness and strengthens dental public health professionals' knowledge and skills by developing position papers and policy statements; provides information on oral health to health officials and policy makers, and conducts conferences for the dental public health community. To learn more, visit astdd.org.

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