Partnership for Children's Oral Health

2019 STUDY OF SCHOOL-BASED ORAL HEALTH SERVICES IN MAINE

Acknowledgments

This study was sponsored by the Partnership for Children's Oral Health, a network of Maine organizations and individuals united in a shared mission: to ensure that all children in Maine can grow up free from preventable dental disease.

Partnership for Children's Oral Health

For more information on the Partnership, visit www.mainepcoh.org

The report was prepared by the research team at Market Decisions Research of Portland, Maine and Hart Consulting of Gardiner, Maine.

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Table of Contents

Executive Summary V

Background 1

Methodology 2

School Oral Health Services Status Database 2

School Nurse and Public Hygienist Surveys 2

Complementary School Nurse Phone Surveys 3

Limitations 3

Gaps and Issues 4

Recommendations 5

Existing Models for Delivery of School-Based Oral Health Services in Maine 7

Model 1 – The State School Oral Health Program (universal screening and fluoride varnish) 7

Model 2 – Public health hygienists contracting directly with schools 8

Model 3 – Other non-profit (FQHC, CAP, etc.) going into local schools 8

Model 4 – School-based Health Centers (SBHCs) 8

Models of Practice in Maine 9

Opportunities 10

Challenges 10

Current Reach of School-Based Oral Health Services in Maine 12

A. Model 1: The State's School Oral Health Program (universal screening and fluoride varnish) 16

Services Provided Through SOHP 17

Prevention services delivered through the School Oral Health Program (SOHP) include dental screenings, fluoride varnish applications, and, when applicable, dental sealants. 17

B. Model 2: Public Health Hygienists Contracting Directly with Schools 18

Services Provided Through Model 2 Public Health Hygienists 19

C. Model 3: Other partnerships between local providers and schools 20

Services Provided Through Local Partners Going into Schools 21

D. Model 4: School-based Health Centers 23

Services Provided Through School-Based Health Centers 23

Reach of Oral Health Services based on Model of Delivery 24

Other Data on Oral Health Status and Access to Dental Care 25

Discussions/Opportunities for Improvement 27

Barriers 27

Barriers to Participation in the state's School Oral Health Program 27

Barriers to Students Receiving Oral Health Services in Schools 28

Sustainability 29

Additional Support and Resources Needed 30

Executive Summary

2019 Study of School-Based Oral Health Services in Maine

The Partnership for Children's Oral Health (Partnership) is a network of organizations and individuals united by a common vision: ensuring that all Maine children can grow up free from preventable dental disease. In order to understand more about the current state of school-based oral health services in Maine and identify strategies to expand and strengthen these services, Hart Consulting and Market Decisions Research (MDR) were contracted by the Partnership to conduct an in-depth inventory of the current availability, reach of, and needs for oral health services in Maine schools.

The results of this assessment will be used by the Partnership to guide the development of a strategic plan aimed at increasing the availability of and access to oral health preventive services in school settings, and ultimately improving the oral health (and thus their overall health) of all youth in Maine. This summary provides high-level findings of this study.

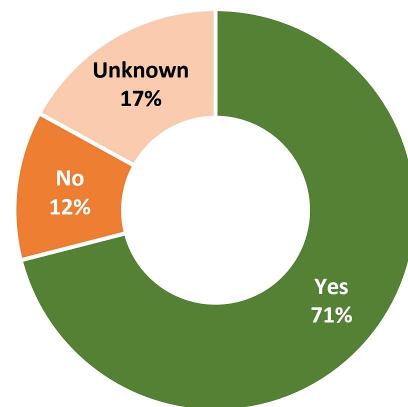
Objectives

The Partnership's goal is to catalyze collaboration and innovation in order to expand Maine's capacity to ensure that effective prevention, education, and treatment tools reach all children in Maine. In order to achieve this goal, the Partnership is focused on increasing oral health preventive services in school settings.

Current Reach of School-based Oral Health Services

Overall, nearly three-quarters (71%) of public schools in the state of Maine currently offer some type of school-based oral health services directly to students. This includes 80% of all public elementary schools statewide and 40% of public high schools.

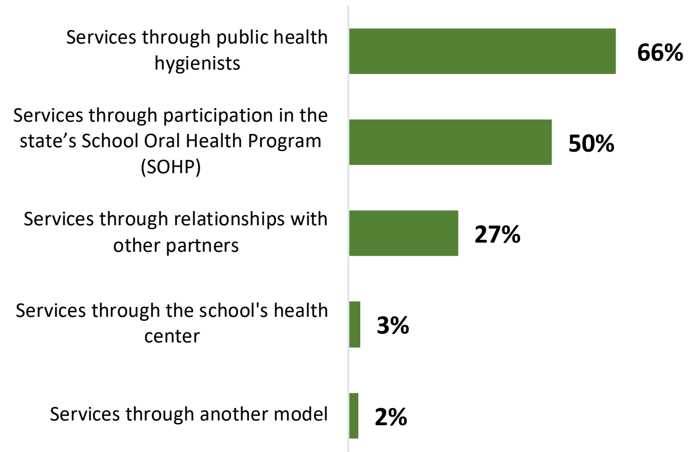
Provide Services Directly to Students



Models of Delivery

Multiple models are used in Maine for delivery of school-based oral health services. Half of schools that provide services participate in the state's School Oral Health Program (SOHP). SOHP is a statewide population health approach coordinated by the Maine CDC in which, public elementary schools are eligible based on the percentage of students eligible for the Free and Reduced Lunch Program. The majority of Maine public schools (66%) that offer oral health services to students contract with public health hygienists to provide those services. In this model, public health hygienists that work directly with schools to provide comprehensive individual preventive services such as cleanings, sealants, and temporary

School-Based Oral Health Services Delivery Models in Maine



filings. Over one quarter (27%) of schools partner with other non-profits. In this model, non-profit and community based dental providers work directly with schools through a variety of arrangements to schedule and coordinate services, such as on-site dental clinics. Only 3% of schools provide services through their own School Based Health Centers.

Top Challenge

Long-term sustainability of school-based oral health programs is an issue due to uncertain funding, availability of providers, program administration, and parent engagement.

Recommendations

- Create a statewide task force to address the issue of providing sustainable statewide school-based oral health services.
- Facilitate grant opportunities to help develop sustainable business models for school-based preventive services, including navigation supports, and/or administrative assistance for school nurses to help manage logistics.
- Increase the availability of dental providers, particularly hygienists and dentists who accept MaineCare.
- Develop and facilitate educational opportunities and training for school nurses and hygienists.
- Provide information and education to help parents understand the importance of oral health, what causes dental disease, and the most effective ways to prevent it.

"The SOHP has made a huge difference in the oral health of children. We still have a long way to go but if that program were to go away, oral health would become an even more significant problem."

"I would love to have hygienists come in to educate and do screenings."

According to the 2019 PCOH Data Brief that analyzes dental insurance coverage and dental claims rates from the Maine Health Data Organization's (MHDO) All-Payer Claims Database:

- Almost half of Maine children and youth under age 21 had either no dental coverage or had coverage for only part of the year.
- About 3 out of 10 children with commercial dental benefits, and 4 out of 10 children with MaineCare, had no claims for preventive dental care in 2017.
- Preventive dental care among Mainers with dental benefits peaks in elementary school aged children and declines through adolescence.
- The differences between preventive dental care rates for publicly-insured and privately-insured children vary widely across Maine's counties.

For more information, visit https://mainepcoh.org/publications/databrief.pdf

Partnership for Children's Oral Health

MARKET DECISIONS RESEARCH

HART CONSULTING

Background

The Partnership for Children's Oral Health (Partnership) is a network of organizations and individuals united by a common vision: ensuring that all Maine children can grow up free from preventable dental disease. Creating a Maine where no child experiences dental disease will demand bold solutions, collaborative action, and system changes on many levels. The Partnership's goal is to catalyze collaboration and innovation in order to expand Maine's capacity to ensure that effective prevention, education, and treatment tools reach all children in Maine. One area that the Partnership is focusing on in order to achieve this goal is increasing oral health preventive services in school settings.

As the Partnership Council attempted to frame the scope of what an action team focused on school-based oral health might work on, it became increasingly clear that not enough information was available on the current state of school-based oral health services in Maine. While it is known some schools participate in in the state's School Oral Health Program, and other schools have relationships with local hygienists or other providers, it is not known how many families are using the services, or how many schools might lack oral health services. Little is known about the range of preventive oral health services that are being offered in different schools at different grade levels, how these services are being funded, beyond the costs covered by the School Oral Health Program, or how sustainable they are. In order to identify strategies to strengthen school-based oral health services, there was a need for an in-depth analysis of the current status of these services.

The purpose of this assessment was to inventory school-based oral health services among public schools in the state to understand service reach and to identify gaps in services and in data. The assessment had two components – a review of existing data on oral health service offerings and the collection of primary data with school nurses and public health hygienists to further populate the inventory. The study includes an analysis of the primary data as well as the inventory of school-based oral health services in Maine, including descriptions of the various models in practice, reach (who is being served and who is not), geographic spread and disparities, funding structures, strengths, weaknesses, gaps, and opportunities.

The results of this assessment will be used by the Partnership to guide the development of a strategic plan aimed at increasing the availability of and access to oral health preventive services in school settings, and ultimately improving the oral health of all youth in Maine.

Methodology

School Oral Health Services Status Database

Michael LeVert/Stepwise Research compiled a comprehensive database of all public schools in Maine. The database included publicly available oral health information as well as enrollment, demographic, and free and reduced lunch eligibility data for all schools. Data on the schools were pulled in January 2019 from the following two MDOE online databases into an Excel workbook. School enrollment data are from DOE and available here: https://www.maine.gov/doe/data-reporting/reporting/warehouse/student-enrollment-data. Free and reduced lunch data are also available from DOE, in their "NEO" database, available here: https://neo.maine.gov/doe/neo/nutrition/ReportDashboard. Participation in the Maine CDC's School Oral Health Program was determined from a list of participating schools provided by with the Maine CDC staff who oversee that program.

School Nurse and Public Hygienist Surveys

To complement the Maine school database and gather opinions and feedback from those who work directly in or with schools to provide oral health services to students, Market Decisions Research conducted two (2) online surveys. The primary goal of these surveys was to understand more about the current reach of school-based oral health services in Maine. A school nurse survey was conducted from June 10, 2019 to July 7, 2019, while a public health hygienist survey was conducted from September 13, 2019 to October 22, 2019.

The survey instruments were designed by MDR in collaboration with the Partnership for Children's Oral Health and Hart Consulting. They included questions asked in previous research efforts, as well as new questions providing information about emerging issues. The final surveys took approximately 15 minutes to complete. Participation in the surveys was voluntary and participants were able to withdraw at any time during the survey or skip any question that they did not want to answer.

A total of 173 school nurses responded to the survey and provided usable responses for analysis. In addition, since some nurses responded on behalf of more than one school, a total of 247 public schools were recorded in the survey.

Fourteen (14) public health hygienists serving 193 public schools throughout the state responded to the public health hygienist survey.

Complementary School Nurse Phone Surveys

A short complementary telephone survey was conducted by MDR among schools whose status of programming remained unknown following the school nurse and hygienist surveys. A total of 218 schools were called from November 7, 2019 to November 26, 2019. Ninety-nine (99) schools participated in this survey.

Limitations

Because of the self-selecting nature of both the nurse and hygienist surveys, it is important to use caution when interpreting survey results as they do not necessarily reflect the opinions of the entire population of school nurses and public hygienists in the state, but the views of individuals responding to the survey.

Gaps and Issues

This assessment identified several gaps and issues in the current delivery of oral health services to students in the state.

Issue	Description
Reach and Needs	No single model for school-based oral health will address all student needs in the state. The Maine School Oral Health Program provides a narrower range of services (typically screenings, fluoride varnish, and education) but is able to reach more students within participating schools. On the other hand, school partnerships with public health hygienists, relationships with other non-profits and school-based health centers often provide more comprehensive services (including cleanings, sealants, temporary fillings, and referrals for follow-up care) that reach a smaller percentage of students within the schools. As a result, many schools use a combination of multiple models.
Cost	Payment and insurance issues restrict the ability of some students to receive services. Many services are not provided for free and require billing either to MaineCare or commercial insurance or must be paid for directly by parents.
Parents	Parents are a key collaborator in school-based oral health services because students must have permission forms signed by their parents in order to access the services. Therefore, parents’ buy-in and participation is essential to the success of a school program.
Partners and Collaboration	Partnerships and collaboration are important for the smooth implementation of a school-based program – particularly among the school nurse, school administration and local hygienists or provider groups to share goals and coordinate efforts.
Time	The amount of time and administration required to run a program can be a challenge, especially for school nurses who have many other duties in addition to oral health. The amount of time spent providing and following up on dental referrals can be significant for some nurses and hygienists.
Education	Additional oral health education was a top need identified by school nurses.
Provider Availability	Availability of providers (particularly in rural areas) needs to be addressed. In some areas of the state there are few if any dental offices able to take referrals, particularly for children with MaineCare or who are uninsured.

Issue	Description
Sustainability	Long-term sustainability of oral health programs is an issue due to uncertain funding, availability of providers, program administration, and student participation.
Urgent Needs	In 2019, 22% of kindergarten and 3rd grade students in the state had untreated dental caries identified during screenings as part of the Maine Integrated Youth Health Survey. This indicates the importance of universal screening and access to preventive services and referrals through school-based oral health programs. Too many children have oral health needs that are going unmet for too long, which has a detrimental effect on both their current and future health and well-being.

Recommendations

- School nurses are calling for the creation of a statewide task force to address the issue of providing sustainable statewide school-based oral health services. The Partnership for Children's Oral Health could be the convener of this multi-sector task force and help it address the major barriers, gaps, and issues identified in this assessment. This could inform the development of a long-term strategy to provide for an optimal combination of models available in all schools.
- Not surprisingly, many involved in providing school-based oral health advocate for increased funding for these program and services. While that will likely always be true, there is currently an urgent need to address financial and/or other barriers that are preventing many students from receiving preventive oral health care. This could include advocating for better coverage of preventive care by MaineCare and commercial dental and health insurance plans, as well as facilitating grant opportunities to help fund services, navigation supports, and/or administrative assistance to schools to ease the burden on school nurses for coordinating oral health services.
- Working to increase the availability of dental providers is key to the growth and sustainability of services across the state. Most of the public health hygienists reported that they do not have the capacity to take on any more schools. Especially in rural areas, a lack of providers may be preventing schools from either implementing a program or expanding services.
- Similarly, helping schools identify and collaborate with hygienists and other partners can be a key role for the Partnership. The Partnership can connect schools and providers to help grow and sustain the programs.

- The Partnership can also support educational opportunities and training for school nurses, hygienists, and others who are interested in providing school-based services. This education and training may help expand services into schools that currently do not offer any services by increasing the capacity and number of trained personnel and by increasing awareness of the need for services.
- Similarly, providing information and education to parents about the importance of oral health, and how their child's school plays an important role in promoting oral health, is key to a successful school-based program. Getting buy-in from parents was noted as one of the biggest barriers from school nurses but is critical to student participation in these programs and ultimately the long-term oral health of students.

Existing Models for Delivery of School-Based Oral Health Services in Maine

Multiple models are used in Maine for delivery of school-based oral health services. School-based oral health services can help make screenings, fluoride varnish, and dental sealants accessible to children from families with low incomes; this is a safe, low cost way to impact a child's health. [1] School-based services may be provided by dental hygienists working under "Public Health Supervision" status that allows them to provide services in school and community settings without a supervising dentist present. Some are contracted individually by schools; some work for private organizations that make arrangements with schools; some are contracted by the state's School Oral Health Program and may also work directly with schools to serve individual students. Less commonly, the services may also be provided through a partnership with a local dental office, or a non-profit organization such as a Federally Qualified Health Center, non-profit dental clinic, Community Action Program, or as part of a school-based health center. For the purposes of this study, four (4) primary models have been identified through which Maine schools are offering school-based oral health services:

Model 1 – The State School Oral Health Program (universal screening and fluoride varnish)

Model 1 primarily consists of the Maine School Oral Health Program (SOHP), a statewide population health approach coordinated by the Maine CDC, within the Maine Department of Health and Human Services (DHHS). Public elementary schools are eligible to join the program if they have at least 40% of their students eligible for Free and Reduced Lunch. The SOHP contracts with public health hygienists to visit participating schools twice per year in order to provide oral health education, screenings, fluoride varnish applications (and in some cases sealants), and referrals for follow-up care. Hygienists that are contracted by the SOHP provide these services on-site, with no special equipment needed. This model provides quick and easy access to basic oral health care services in only 10 minutes per student.

Included under Model 1, there are also a few examples of SOHP-like programs, where a hygienist is employed by a non-profit partner (often a Community Action Program with a grant to serve schools that haven't been able to join the State program) to go into schools that are not part of the SOHP and deliver the same services that the SOHP provides, i.e. screenings, fluoride varnish, education, referrals for follow-up treatment, and in some cases sealants.

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[1] "Dental Public Health Activities: Descriptive Summaries." ASTDD Where Oral Health Lives, Feb. 2013, www.astdd.org/state-activities-descriptive-summaries/?id=43.

Model 2 – Public health hygienists contracting directly with schools

Model 2 includes public health hygienists that work directly with schools to provide comprehensive individual preventive services such as cleanings, sealants, and temporary filings thorough regular full-length appointments similar to what a child might experience in a dental office. These hygienists may have a contract with the school or a long-standing relationship that allows for the coordination of services. The hygienists bring their own mobile equipment and are able to bill MaineCare and other forms of insurance. Both Models 1 and 2 rely on champions within the schools such as school nurses to help with paperwork, scheduling, and overall coordination of the programs. Some schools combine Models 1 and 2 to provide a wider range of oral health services to students, and some hygienists provide both models. The overlap can be confusing and even school nurses can be unclear on the differences between these two models.

The key differences between Model 1 and Model 2 are:

- whether the hygienist is contracted and paid with funds from the State Oral Health Program vs through a business model that relies primarily on reimbursement and parent payments
- what services are provided and how many students can be served due to the length of time needed for the services. While under Model 1 very basic preventive care can reach a large number of students quickly, under Model 2 the hygienist is seeing individual students for longer appointments, and thus they may only be able to see 6-10 students in a day.

Model 3 – Other non-profit (FQHC, CAP, etc.) going into local schools

Model 3 describes other non-profit and community based dental providers who work with schools through a variety of arrangements to schedule and coordinate services, such as on-site dental clinics. The services provided may be delivered by hygienists or dentists and may be similar to the individual services delivered under Model 2, or may consist more of classroom education and parent outreach services. If individual clinical services are provided, some Model 3 providers may be volunteering these services pro bono and others may bill MaineCare and other forms of insurance.

Model 4 – School-based Health Centers (SBHCs)

Model 4 is the School Based Health Center (SBHC) model, a health center located in a school that provides a variety of healthcare services to students. Typical services offered at a SBHC may include, but are not

limited to, primary medical, behavioral health, psychiatric, and sometimes dental services. Providing these services on-site keeps children in school and learning, and provides easy access to care. Some, but not all SBHCs in Maine, are able to offer dental services. SBCHs are supported by state funds, medical centers, local hospitals, health systems, FQHCs, and other community-based programs. Due to funding cuts in recent years, there are a small number of SBHCs remaining in Maine and only some of them include dental services. Our surveys only identified 6 schools providing oral health services through Model 4.

Models of Practice in Maine

Table 1. Oral Health Delivery Models Description

Name	Description	Delivery Type	Reimbursement	Key Partners
Model 1 (SOHP)	Population health approach providing oral health screening, referrals, and fluoride varnish through the **State's School Oral Health Program (SOHP).**	Hygienists are contracted by the SOHP. No special equipment needed and services are a relatively quick and basic intervention.	Paid for by SOHP and other grant funds	State Oral Health Program, SOHP Hygienists, School Administrators, School Nurses
Model 2 (School partners with PH Hygienist)	Public health hygienists provide traditional cleanings, generally working directly with the school to offer on-site preventive appointments.	Hygienists see one child at a time to deliver comprehensive preventive care: cleanings, sealants, temporary fillings, usually with mobile equipment.	Accepts MaineCare, other insurance, parent payments	Public Health Hygienists, School Administrators, School Nurses
Model 3 (Collaboration with local partners)	**Non-profits, community-based programs, FQHCs, city health departments** and others provide oral health interventions in schools.	Example: A Federally Qualified Health Center sends a hygienist and/or dentist to see children who may not be able to get to the health center for appointments.	Accepts MaineCare, other insurance, and sliding scale fees	Community Partners, School Administrators
Model 4 (School Based Health Center)	Students receive oral health services through their **school's own co-located health center**.	Dental hygienists or dentists employed by the SBHC provide prevention services: screenings, varnishes, cleanings, etc.	Accepts MaineCare, other insurance, sliding scale fees, parent payments	School Nurses, Health Center Providers, Hygienists, School Administrators

Opportunities

- Every school district is different; many are doing their best to offer both Models 1 and 2 (or 3, depending on the availability of other local partners).
- Building relationships is the most important factor in access and sustainability.
- Hygienists often have long standing relationships with the schools and are trusted providers in their community.
- School nurses are key champions for oral health and work hard to ensure children have access to prevention programs and other health care services.
- Using dental and/or dental hygiene students in rural areas has been a success in some counties, as well as innovative projects engaging interprofessional teams of students.
- Technology, such as electronic communications tools and student records, is helpful when engaging parents.
- Hygienists and schools welcome any assistance and clarity on what is happening in their communities and how-to coordinate services.

Challenges

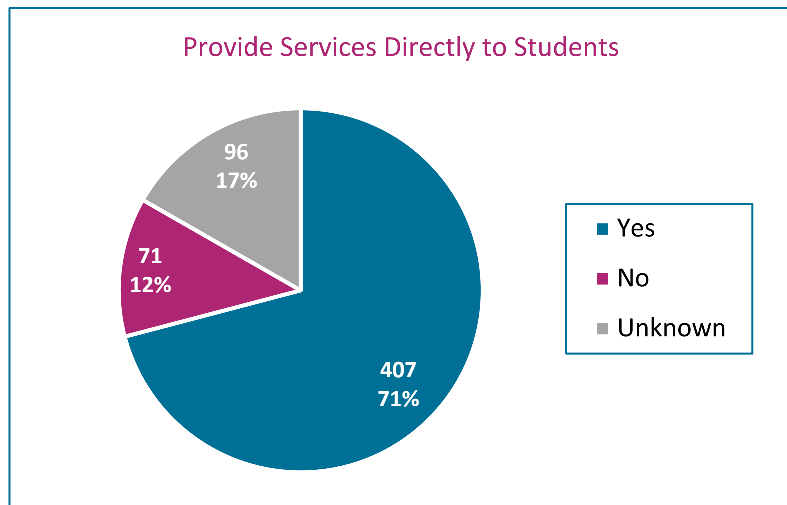
- School administration and school nurses can be overwhelmed by the variety of program designs and necessary coordination.
- School staff can find the different models confusing and may decline services if they don't understand them. For example, if the school recently had a SOHP hygienist provide oral health screenings and varnish applications (Model 1), they might decline services from a community-based dental clinic or contracted hygienist to come to the school for cleanings, sealants, and fillings (Model 2 or 3). This is unfortunate since both could be helpful to students in different ways.
- High staff turnover and loss of a champion in the school can be a barrier to continued care for students and sustainability of programming.
- Paperwork is a barrier and takes up a lot of time for the school nurse, the hygienists, or both. There is a lot of time spent on coordination of services and attempts to reduce overlap.
- Larger school districts that are near community hospitals or health systems are more likely to have a school-based health center (this includes Portland, Brewer, Lewiston and Oxford Hills, etc.) limiting the opportunity for using this model in smaller rural communities.

- The SOHP is not available to all schools – it is currently open only to elementary schools with at least 40% of their student enrollment receiving Free and Reduced Lunch. Currently state funding is not sufficient to enable all eligible schools to participate.
- There are not enough Public Health Hygienists currently offering school-based services to enable Model 2 services in all schools. There is also no mechanism for coordinating the outreach of these hygienists to ensure availability of Model 2 services across the state.
- It is not clear whether the business models for Models 2, 3, and 4 business models are financially sustainable on reimbursement alone. However, sustaining programs on grant funding is also very challenging and an inefficient use of time for clinical providers who could be better utilized providing direct services.

Current Reach of School-Based Oral Health Services in Maine

Nearly three-quarters (71%) of public schools in the state of Maine (407 schools) currently provide some type of school-based oral health services directly to students. Slightly more than one-in-ten public schools (71 schools) reported that they do not offer oral health care to their students. The status of 17% (96) of Maine public schools was not determined through the study. (MDR and Partnership for Children's Oral Health made multiple attempts to reach representatives from every public school in the state.)

Figure 1. Percentage of Schools Offering Oral Health Services to Students



The Central, Midcoast, and Western Public Health districts contain the largest number of schools that offer direct oral health services (79, 64, and 61 schools, respectively) while Cumberland contains the largest number of schools that do not offer oral health services (20).

Figure 2. School-based Oral Health Services by Public Health Districts

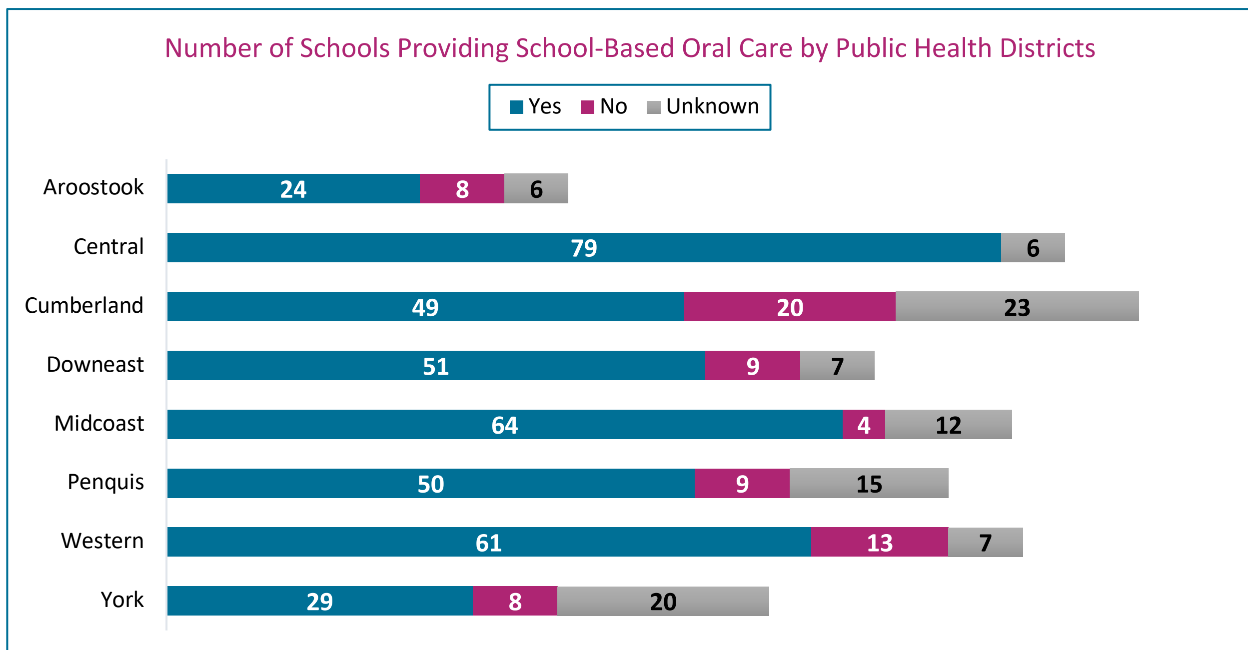
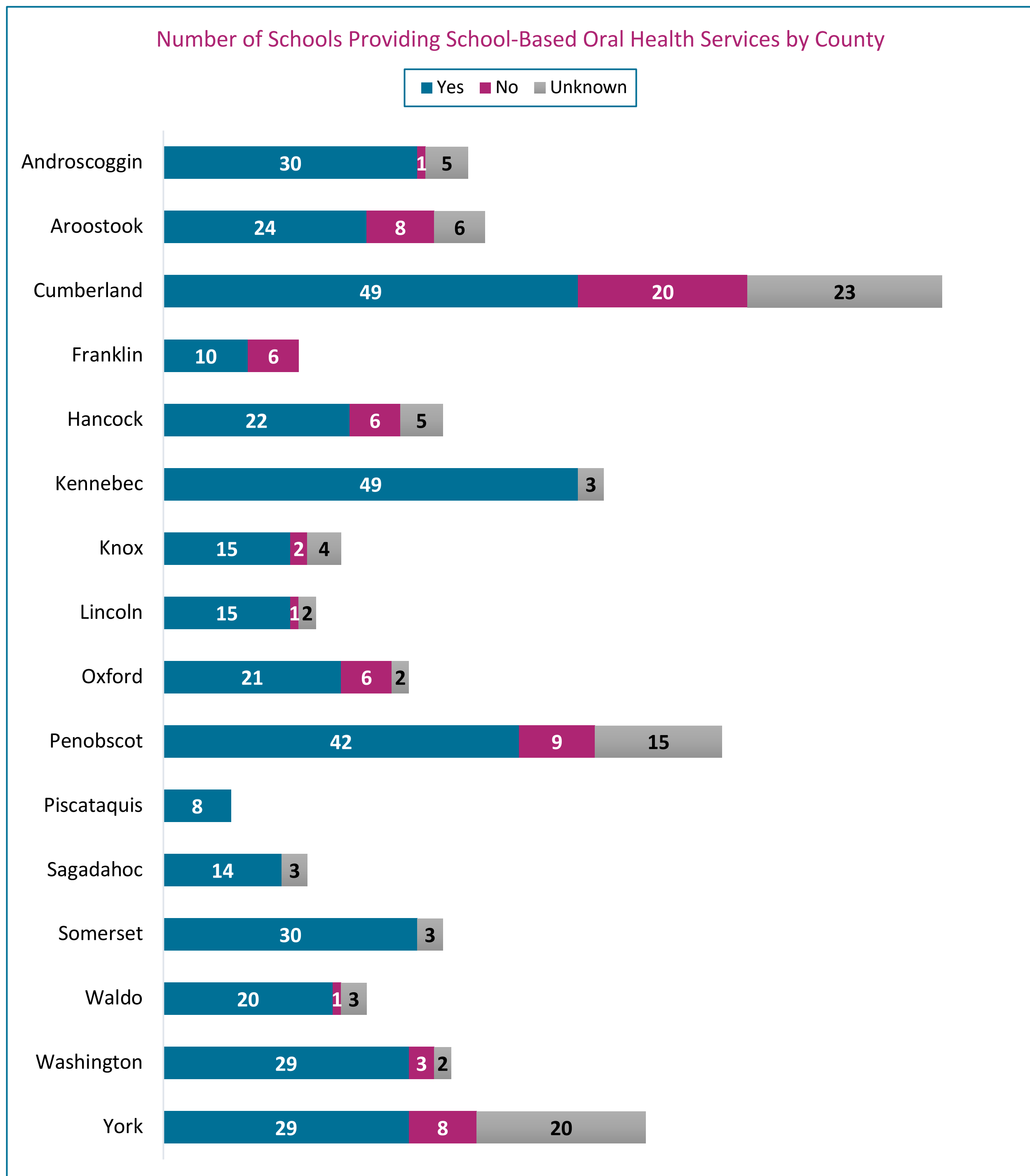
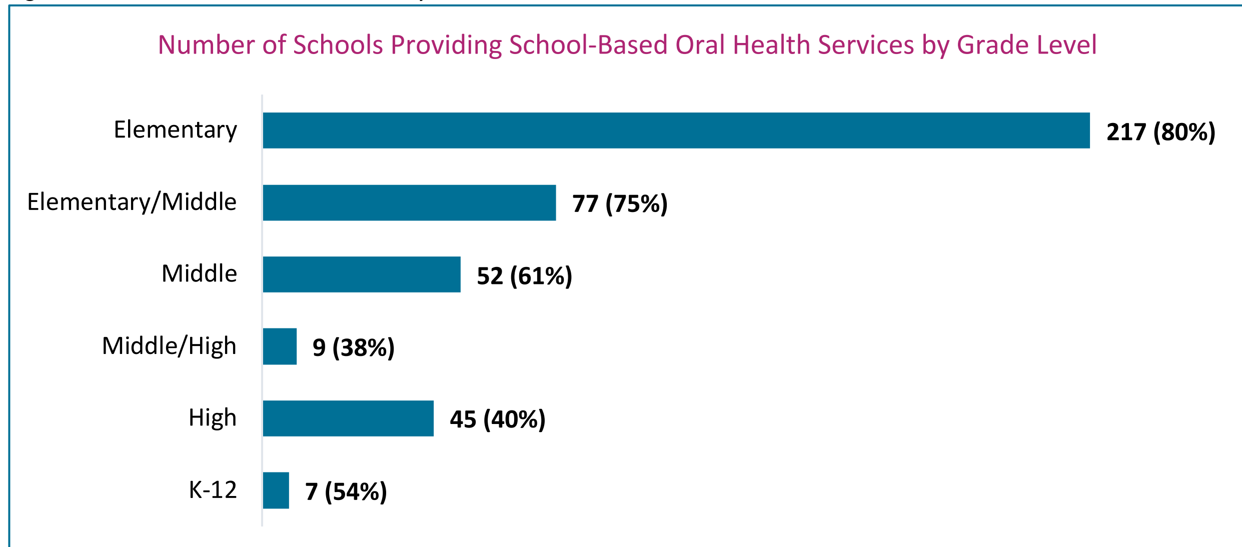


Figure 3. School-based Oral Health Services by Geographic Regions



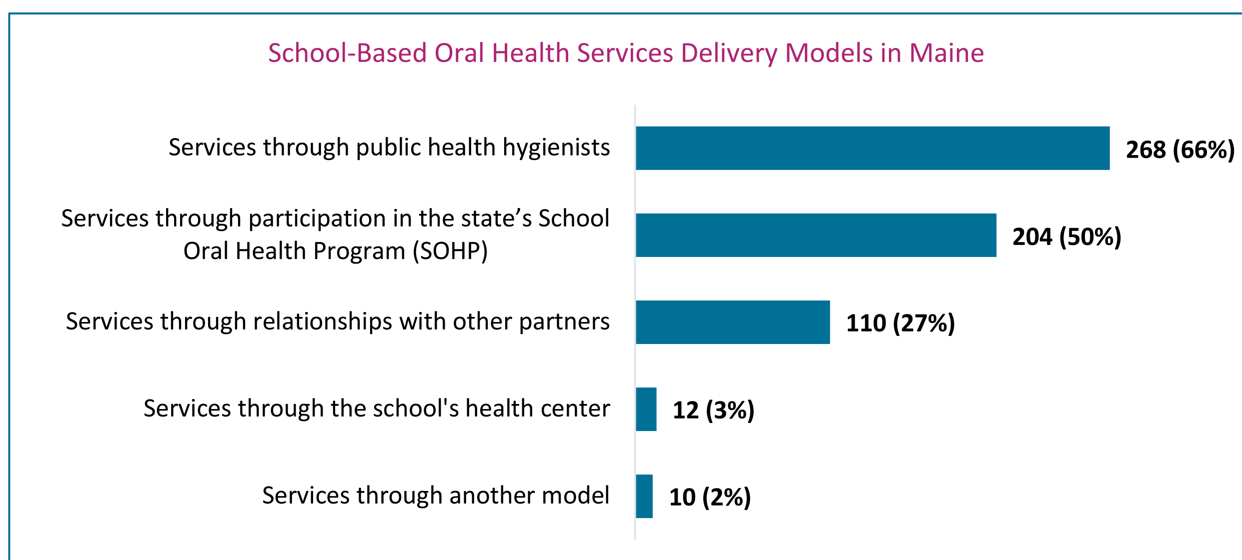
Overall, 80% of all public elementary schools (217 total) statewide provide school-based oral health services to students while 40% of public high schools in Maine offer some oral health services.

Figure 4. School Oral Health Services by Grade Level



The majority of Maine public schools (66%) that offer oral health services to students partner directly to bring in public health hygienists to provide those services. Half of schools (50%) participate in the state's School Oral Health Program while over one quarter (27%) of schools partner with other local dental providers. Only 3% of schools provide services through their own School Based Health Centers.

Figure 5. Delivery Models of Schools Based Oral Health Services



Notes: Percentages do not add up to 100% given that schools may be offering services through more than one model.

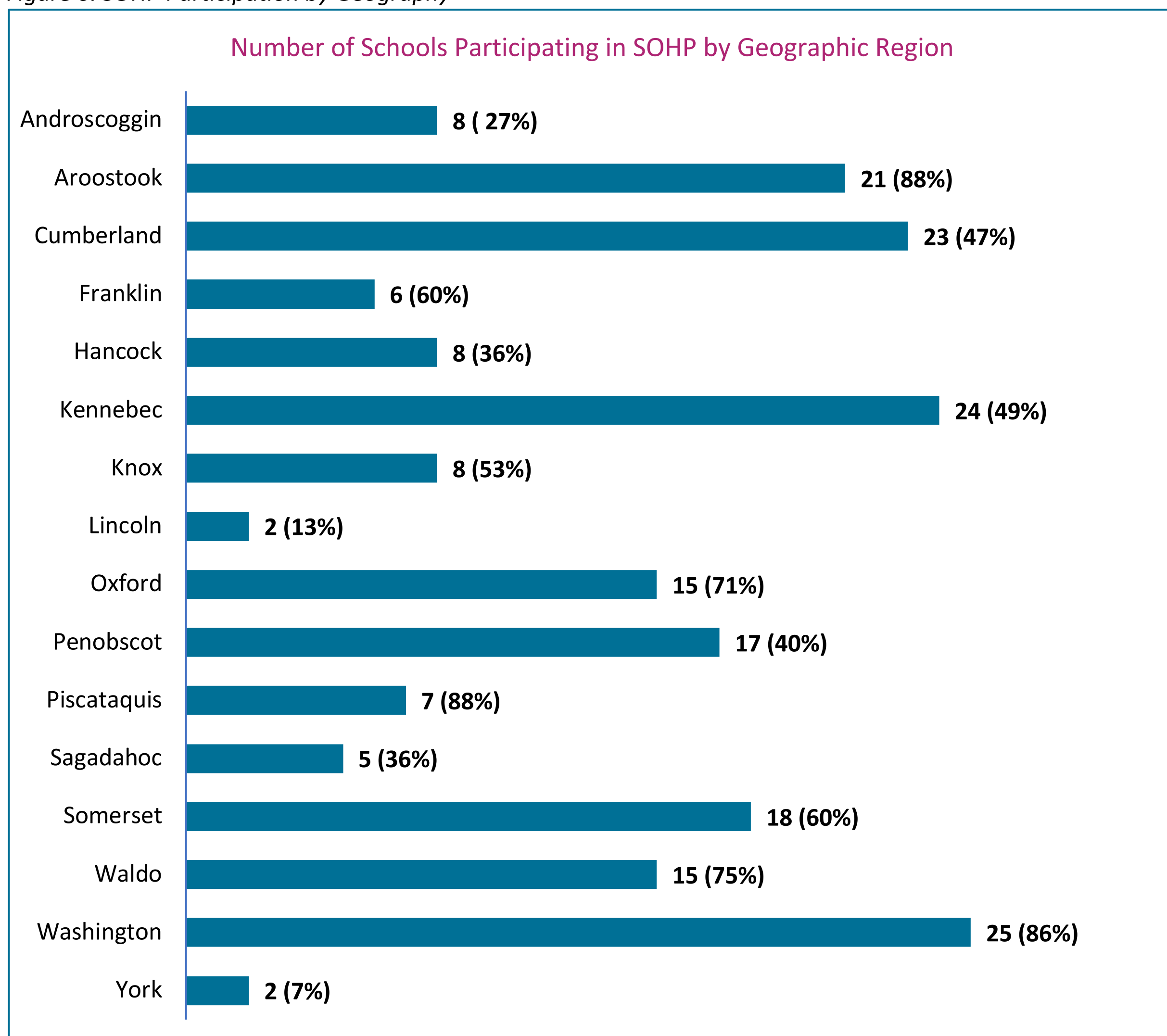
Table 2. Oral Health Delivery Models by Geographic Location

	Services through participation in the state's School Oral Health Program (SOHP)	Services through public health hygienists	Services through relationships with other partners	Services through the school's health center	Services through another model	Total
Androscoggin	8	26	3		1	**30**
Aroostook	21	4	9	2		**24**
Cumberland	23	29	18	2	2	**49**
Franklin	6	8	1			**10**
Hancock	8	7	13			**22**
Kennebec	24	48	10			**49**
Knox	8	7	8			**15**
Lincoln	2	13	2			**15**
Oxford	15	16	4			**21**
Penobscot	17	24	10	3	2	**42**
Piscataquis	7	6	3			**8**
Sagadahoc	5	11	3	1		**14**
Somerset	18	29	5	3	1	**30**
Waldo	15	11	2			**20**
Washington	25	18	4		1	**29**
York	2	11	15	1	3	**29**
Total	**204**	**268**	**110**	**12**	**10**	**407**

A. Model 1: The State's School Oral Health Program (universal screening and fluoride varnish)

A total of 204 schools currently participate in the Maine School Oral Health Program; this includes schools that signed up for the 2018-19 school year as well as new schools that have joined as of January 2020. The counties with the highest proportion of schools participating are Aroostook (88%), Washington (86%), and Waldo County (72%). York and Lincoln Counties have the smallest percentage of schools who participate in the state's SOHP.

Figure 6. SOHP Participation by Geography



Overall, 58% of public elementary schools participate in the state's School Oral Health Program. There is an opportunity for the state to increase participation in SOHP among public elementary schools.

Services Provided Through SOHP

Prevention services delivered through the School Oral Health Program (SOHP) include dental screenings, fluoride varnish applications, and, when applicable, dental sealants.

What are the school nurses saying about the SOHP:

"The SOHP has made a huge difference in the oral health of children. We still have a long way to go but if that program were to go away, oral health would become an even more significant problem."

"The SOHP has been decreasing funding yearly. Hopefully the State will be able to continue to fund."

"We are state funded for the SOHP and would not be able to provide funding without that program."

Note: Because Aroostook and Washington counties and Portland have historically had some enhanced grant support from the state's SOHP to address oral health disparities, these areas are able to offer some Model 2-type services in most/all elementary schools (and some middle and high schools) through a community-based program that is funded by a combination of SOHP funds and billing reimbursement. This makes distinguishing Models 1 and 2 a little more challenging in some counties as their approach may be more integrated.

B. Model 2: Public Health Hygienists Partnering Directly with Schools

Partnering directly with public health hygienists to bring in preventive care services is by far the most common oral health delivery model among Maine schools (with 268 schools indicating they use this model). Every school in Somerset County offers oral health services to their students through this model and 98% of schools within Kennebec County contract with hygienists.

Figure 7. Model 2 Services Through Public Health Hygienists by Geography

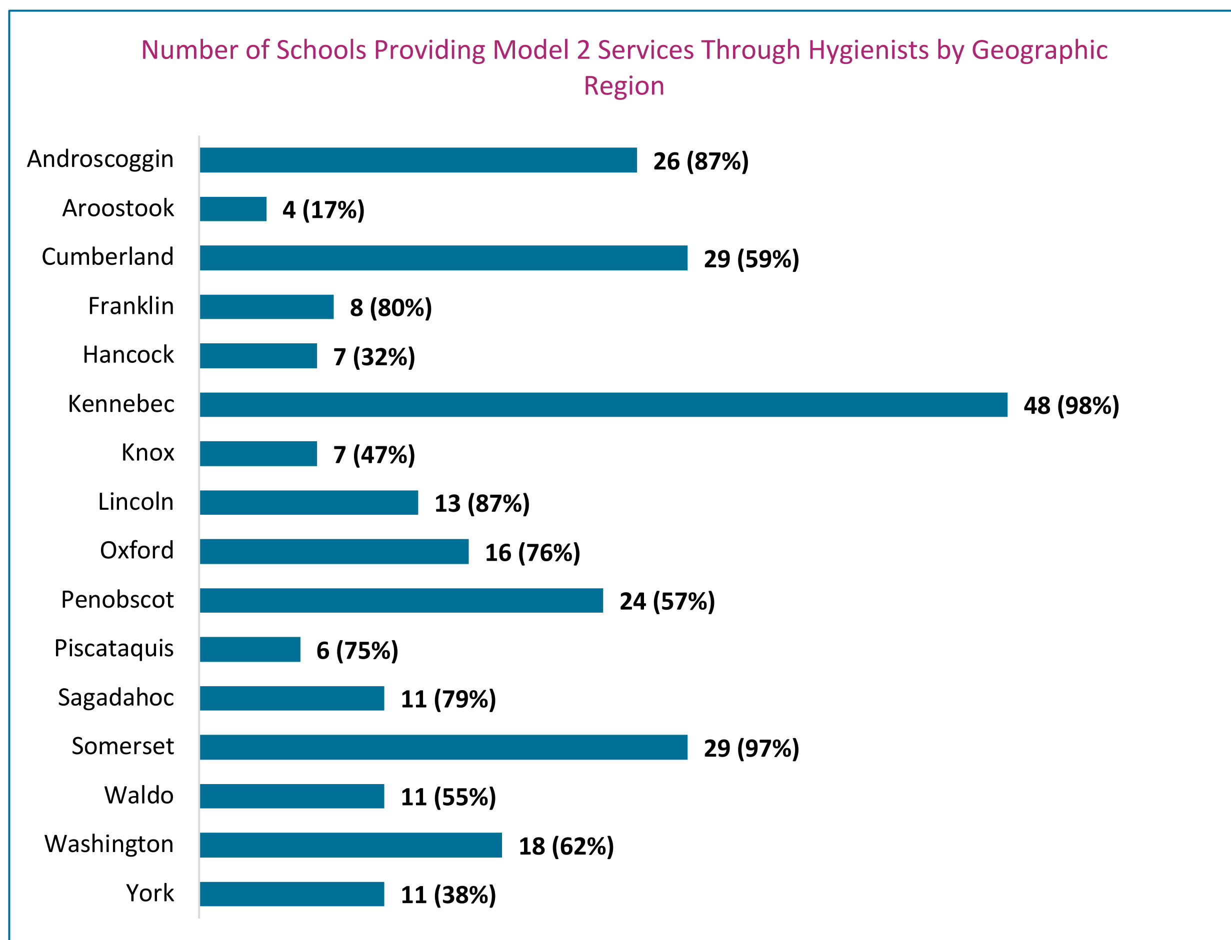
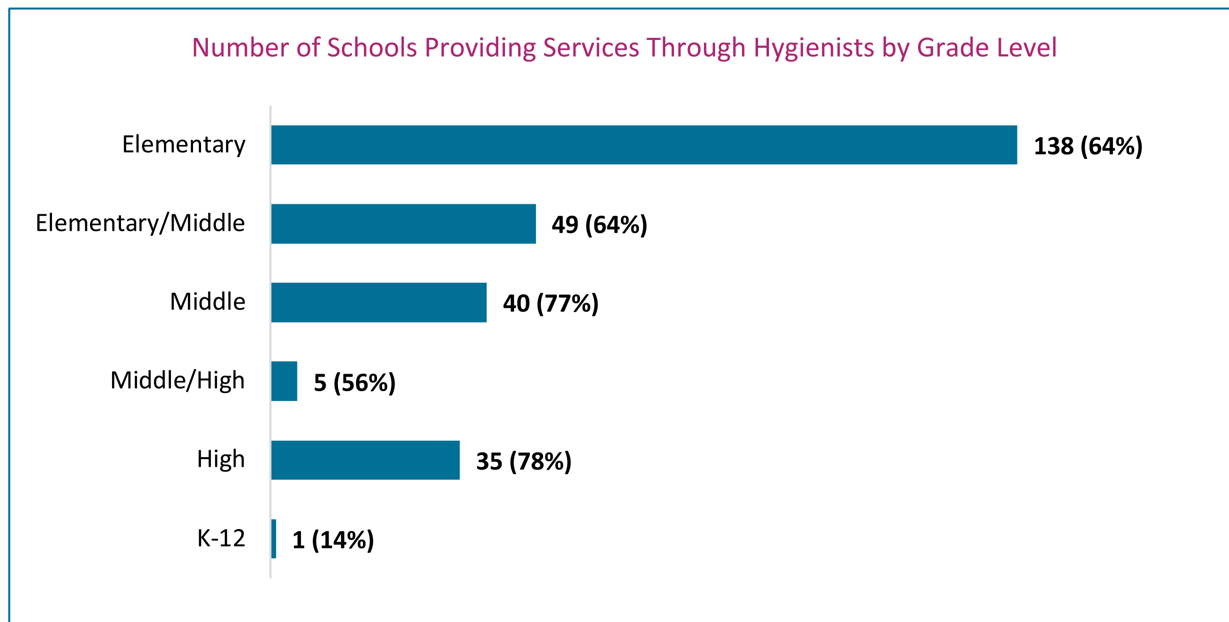


Figure 8. Model 2 Services Through Public Health Hygienists by Grade Level



High schools and middle schools (78% and 77%, respectively) are more likely to work directly with public health hygienists than lower grade levels, however the majority of schools at each grade level partner with hygienists to offer Model 2 services.

Services Provided Through Model 2 Public Health Hygienists

Oral screenings, fluoride varnish, oral health education, sealants, cleanings, and referrals for follow up treatment are the most popular oral health services provided by public health hygienists under Model 2 (at least three quarters of hygienists surveyed by MDR reported providing all of these services).

Table 3. Oral Health Services Provided in Schools by Public Health Hygienists

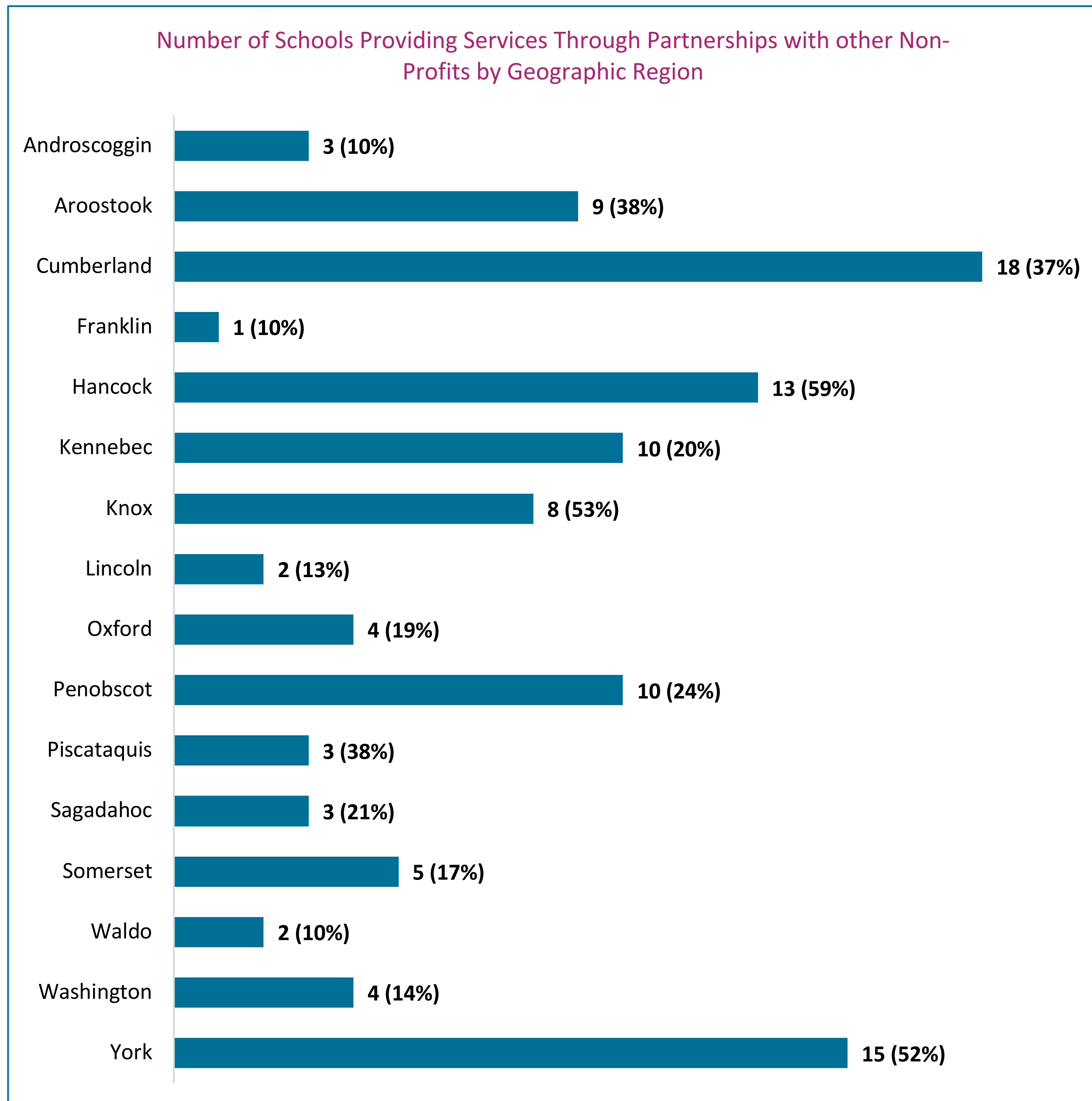
Oral Health Services	%
Oral screenings	92%
Fluoride varnish	92%
Oral health education	92%
Referrals to a local dentist for follow-up care	92%
Sealants	83%
Cleanings	75%
Temporary fillings (Interim Therapeutic Restorations)	58%
Care coordination with the child’s dental home	50%
Silver Diamine Fluoride (SDF)	17%
Other	50%

Source: Public hygienist survey conducted by MDR.

C. Model 3: Other partnerships between local providers and schools

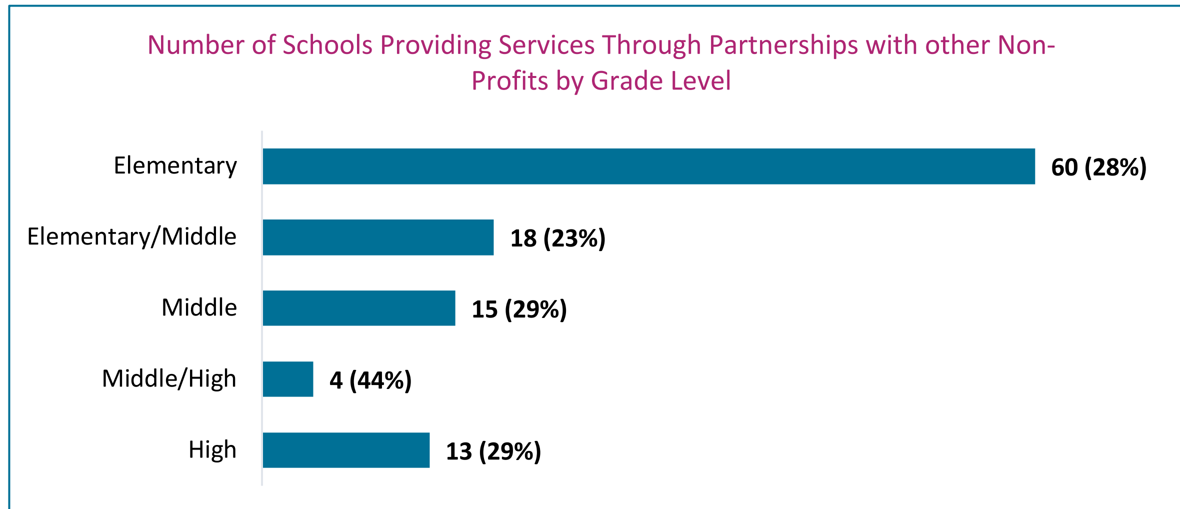
School nurses in Knox and York counties reported more schools (67% and 54% respectively) who partner with other local dental providers, such as local dental offices, Federally Qualified Health Centers, or community dental clinics to offer oral health services.

Figure 9. Services Through Other Non-Profit Relationships by Geography



44% of middle/high schools provide oral health services using Model 3, as well as around a quarter of elementary, middle, and high schools.

Figure 10. Services Through Other Non-Profit Relationships by Grade Level



Services Provided Through Local Partners Going into Schools

Oral screenings and oral health education are the most popular services provided by local partners who collaborate with public schools to provide services.

Table 4. Oral Health Services Provided Through Other Non-Profit Relationships

Oral Health Services	% of schools
Oral screenings	94%
Oral health education	90%
Cleanings	86%
Fluoride varnish	85%
Sealants	80%
Referrals to a local dentist for follow-up care	77%
Temporary fillings and/or Silver Diamine Fluoride to arrest decay	35%
Care coordination with PCP or dental home	33%
Other	10%

Source: School nurse survey conducted by MDR.

Nearly three-quarters (72%) of schools providing oral care through local partnerships report that dental hygienists are typically the providers delivering those services.

Table 5. Type of Providers for Services Through Non-Profits

Providers	% of schools
Dental hygienist(s)	72%
Nurse(s)	37%
Dentist(s)	15%
Other	13%

Source: School nurse survey conducted by MDR.

D. Model 4: School-based Health Centers

Only a limited number of Maine public schools offer direct oral health services to their students through a school-based health center. Out of the six counties that have school-based health centers providing oral health services, Somerset County has the greatest percentage (10%). No matter the grade level, schools are less likely to have their own health center providing oral health services compared to other options. High schools show the highest percentage at 9%.

Services Provided Through School-Based Health Centers

Oral screenings are provided in all school health centers that provide oral health services. Other popular services offered include cleanings, fluoride varnishes, and oral health education.

Table 6. Oral Health Services Provided in School Health Centers

Oral Health Services	% of schools
Oral screenings	100%
Fluoride varnish	89%
Cleanings	89%
Oral health education	89%
Referrals to a local dentist for follow-up care	78%
Care coordination with PCP or dental home	78%
Temporary fillings and/or Silver Diamine Fluoride to arrest decay	44%
Sealants	33%
Other	11%
None of the above	-

Source: School nurse survey conducted by MDR.

Dental hygienists provide oral health services in 89% of the schools that provide services through the school's health center.

Table 7. Types of School-Based Health Center Providers

Providers	% of schools
Dental hygienist(s)	89%
Dentist(s)	22%
Nurse(s)	11%
Other	33%

Source: School nurse survey conducted by MDR.

Reach of Oral Health Services based on Model of Delivery

While schools may have implemented one or more models at a school, it is also important to assess whether the services are open to all students and how many are using them. Many students who are eligible to receive school-based oral health services choose not to do so (Table 6). While schools generally offer services to all students, most are reaching less than half their total student population. The SOHP tends to serve a higher proportion of students compared to the other models.

Table 9. Percentage of Students Receiving Oral Health Services Through Each Model

	Services through participation in the state's School Oral Health Program (SOHP)	Services through public health hygienists	Services through relationships with other partners	Services through the school's health center	Services through another model
A quarter or less	12%	46%	56%	67%	60%
Between 26% and 50%	37%	25%	18%	11%	13%
Between 51% and 75%	30%	1%	1%	11%	27%
Between 76% and 100%	7%	-	-	-	-
Unsure	14%	28%	25%	11%	-

Source: School nurse survey conducted by MDR.

Other Data on Oral Health Status and Access to Dental Care

According to the 2019 Maine Integrated Youth Health Survey (MIYHS)[2], 39% of kindergarten students have already experienced caries (presence of treated or untreated dental cavities) with 24% still displaying untreated dental decay at the time of the screening survey. Almost 1 in 4 kindergarten students screened required a referral for follow up treatment.

*Table 10. 2017 & 2019 MIYHS Oral Health Indicators – **Kindergarten Data***

Oral Health Indicators		% 2017	**% 2019**
Presence of Treated Dental Caries (Observed during oral health assessment)	% Yes	23.7%	**25.4%**
Presence of Untreated Dental Caries (Observed during oral health assessment)	% Yes	17.2%	**23.7%**
Caries Experience (Presence of treated or untreated dental caries)	% Yes	32.7%	**38.8%**
Presence of Sealants (Observed during oral health assessment)	% Yes	5.2%	**7.0%**
Early / Urgent Dental Care Needed (Observed during oral health assessment)	% Yes	18.0%	**23.5%**

Source: 2017 & 2019 Maine Integrated Youth Health Survey - K/3 Detailed Report - Maine (weighted)

Nearly half (45%) of 3rd grade students have already experienced caries (presence of treated or untreated dental cavities) with 19% displaying untreated dental decay at the time of the screening survey. About half (52%) of 3rd grade students had dental sealants on at least one permanent molar.

*Table 11. 2017 & 2019 MIYHS Oral Health Indicators – **3rd Grade Data***

Oral Health Indicators		% 2017	**% 2019**
Presence of Treated Dental Caries (Observed during oral health assessment)	% Yes	27.3%	**33.6%**
Presence of Untreated Dental Caries (Observed during oral health assessment)	% Yes	15.0%	**19.1%**
Caries Experience (Presence of treated or untreated dental caries)	% Yes	36.9%	**44.7%**
Presence of Sealants (Observed during oral health assessment)	% Yes	48.6%	**51.6%**
Early / Urgent Dental Care Needed (Observed during oral health assessment)	% Yes	13.7%	**21.0%**

Source: 2017 & 2019 Maine Integrated Youth Health Survey - K/3 Detailed Report - Maine (weighted)

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[2] For more information about the Maine Integrated Youth Health Survey, please visit: https://data.mainepublichealth.gov/miyhs/

In 2019, the Partnership in collaboration with the University of Southern Maine's Cutler Institute developed a Data Brief[3] which explored dental insurance coverage and dental claims rates from the 2017 Maine Health Data Organization's (MHDO) All-Payer Claims Database for children under age 21 who were covered by MaineCare or commercial dental insurance. The key takeaways from the data brief are:

- Almost half of Maine children and youth under age 21 had either no dental coverage or had coverage for only part of the year.
- About 3 out of 10 children with commercial dental benefits, and 4 out of 10 children with MaineCare, had no claims for preventive dental care in 2017.
- Preventive dental care among Mainers with dental benefits peaks in elementary school aged children and declines through adolescence.
- The differences between preventive dental care rates for publicly-insured and privately-insured children vary widely across Maine's counties.

[3] This data brief is available online at: https://mainepcoh.org/publications/databrief.pdf

Discussions/Opportunities for Improvement

Barriers

Barriers to Participation in the state's School Oral Health Program

Among school nurses who reported that their school did not provide oral health services directly to students, half were unaware of the existence of the State of Maine's School Oral Health Program. About half of the nurses in schools without services said they would be somewhat or very likely to participate in the SOHP if given the opportunity at no cost.

Figure 11. Likelihood of Participating in SOHP Among Nurses Surveyed

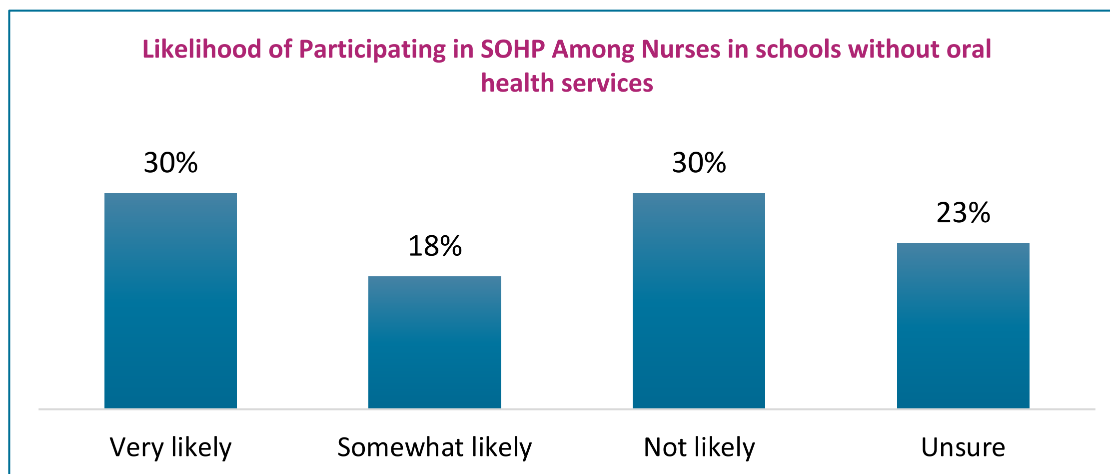


Table 12. Factors Preventing Schools from offering oral health services

Factors	% of nurses
Time, scheduling or space issues	26%
Parents' refusal or disapproval of fluoride	19%
School is a private or high school	16%
Many families already see a dentist	13%
Lack of support from district	6%
Other	13%
None	6%

Source: School nurse survey conducted by MDR.

Time, scheduling, or space issues (26%) were the most frequently mentioned factors by school nurses that might prevent schools from participating in the state's SOHP. This was followed by parents' lack of support (19%).

Barriers to Students Receiving Oral Health Services in Schools

Lack of cooperation from parents as well as time, scheduling, or space issues are also the most prominent barriers to students receiving oral health services even in schools that do offer services.

Results from the public health hygienist survey also suggest that provider capacity may be a barrier to expanding services – only 25% of public health hygienists surveyed said that they had capacity to take on additional schools if the opportunity presented itself.

Table 13. Barriers to Students Receiving Oral Health Services in Schools

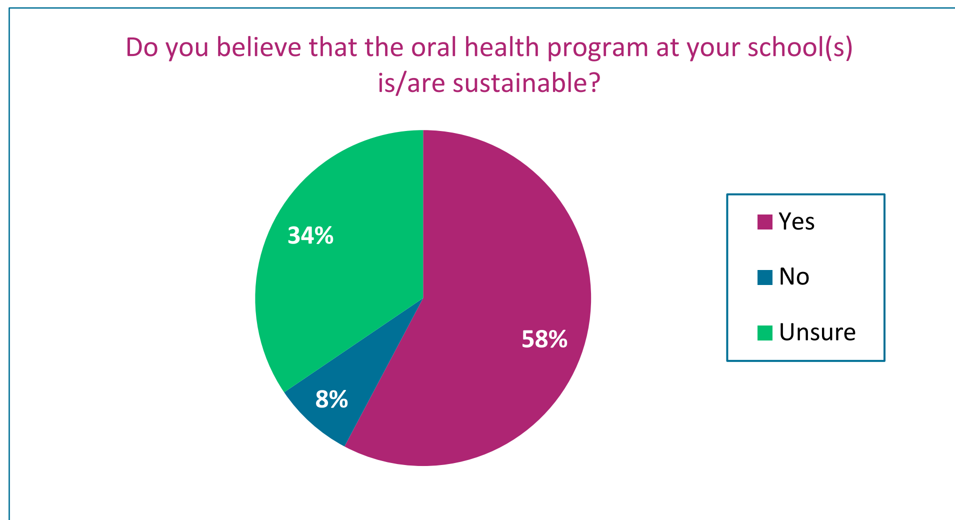
Barriers	% of nurses
Lack of cooperation from parents	33%
Time, scheduling or space issues	17%
Insurance limits participation	14%
Cost to school	11%
Lack of awareness/understanding among parents	9%
Cost to families	7%
Students already get dental care elsewhere	5%
Students are absent on scheduled days	5%
Lack of support	1%
Other	7%
None/No barriers	25%
Unsure	2%

Source: School nurse survey conducted by MDR.

Sustainability

Over one half (58%) of school nurses believed that their school(s) have the resources needed to continue to provide oral health services to students in future years. Similarly, one half of public health hygienists believe that the oral health program at their school(s) is sustainable.

Figure 12. Sustainability of School-Based Programs



Source: School nurse survey conducted by MDR.

Cost and funding issues (44%) were most commonly mentioned by school nurses who believe their school's program was unsustainable or those who were unsure.

Table 14. Challenges to Sustainability of School-based Oral Health Services

	Total
Program costs, funding	44%
Availability/lack of dental care providers	22%
Low enrollment/participation from students	14%
Program administration is a challenge	8%
Difficulty getting parental cooperation	6%
Lack of partnership with providers	3%
Other	3%
Unsure	11%

Source: School nurse survey conducted by MDR.

Additional Support and Resources Needed

Additional oral health education and more participating providers are key resources needed in schools to maintain and improve on the services offered. When asked about additional support or resources that schools need to improve the education, promotion, and services that are provided, nearly a quarter of school nurses (24%) said more education sessions, a similar number (23%) mentioned more participating dental care providers.

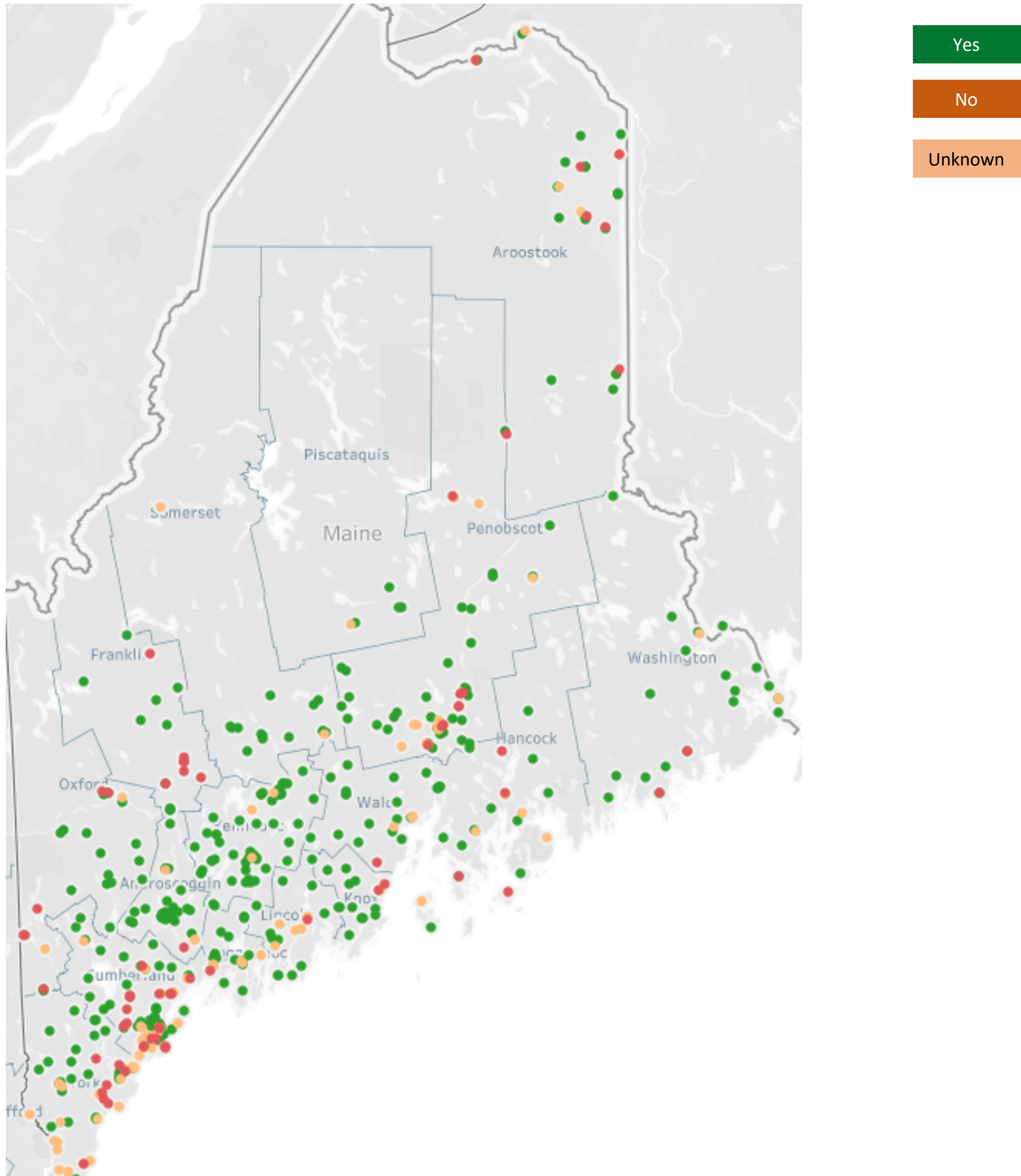
Table 15. Additional Support or Resources Needed

	% of nurses
More education sessions	24%
More participating dental care providers	23%
Funding for schools to provide services	14%
Administrative support	13%
More advertising, awareness building	9%
More dental hygiene supplies	8%
More time for treatments	7%
Parental cooperation	5%
Other	1%
None needed	5%
Unsure	6%

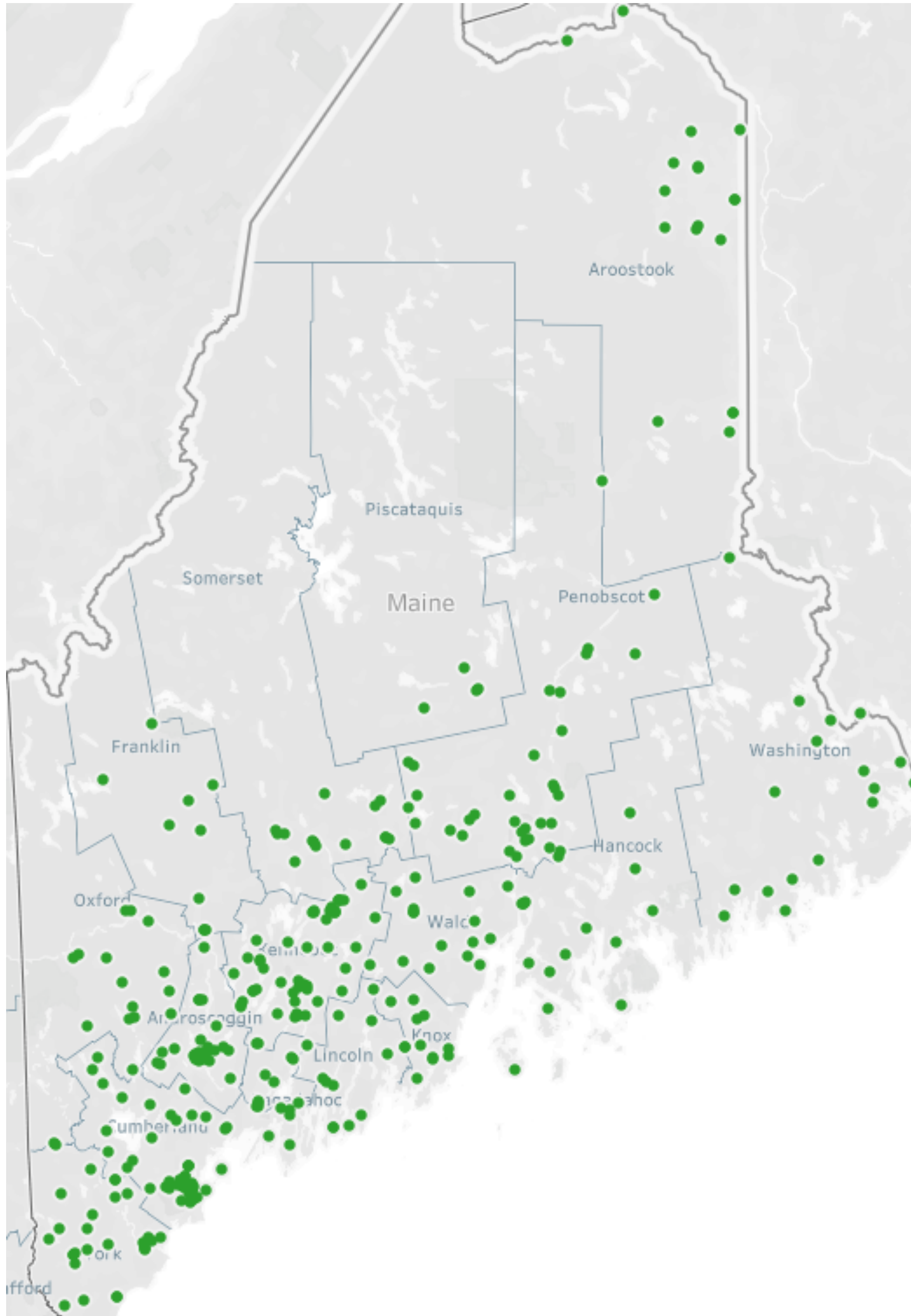
Source: School nurse survey conducted by MDR.

Appendix:

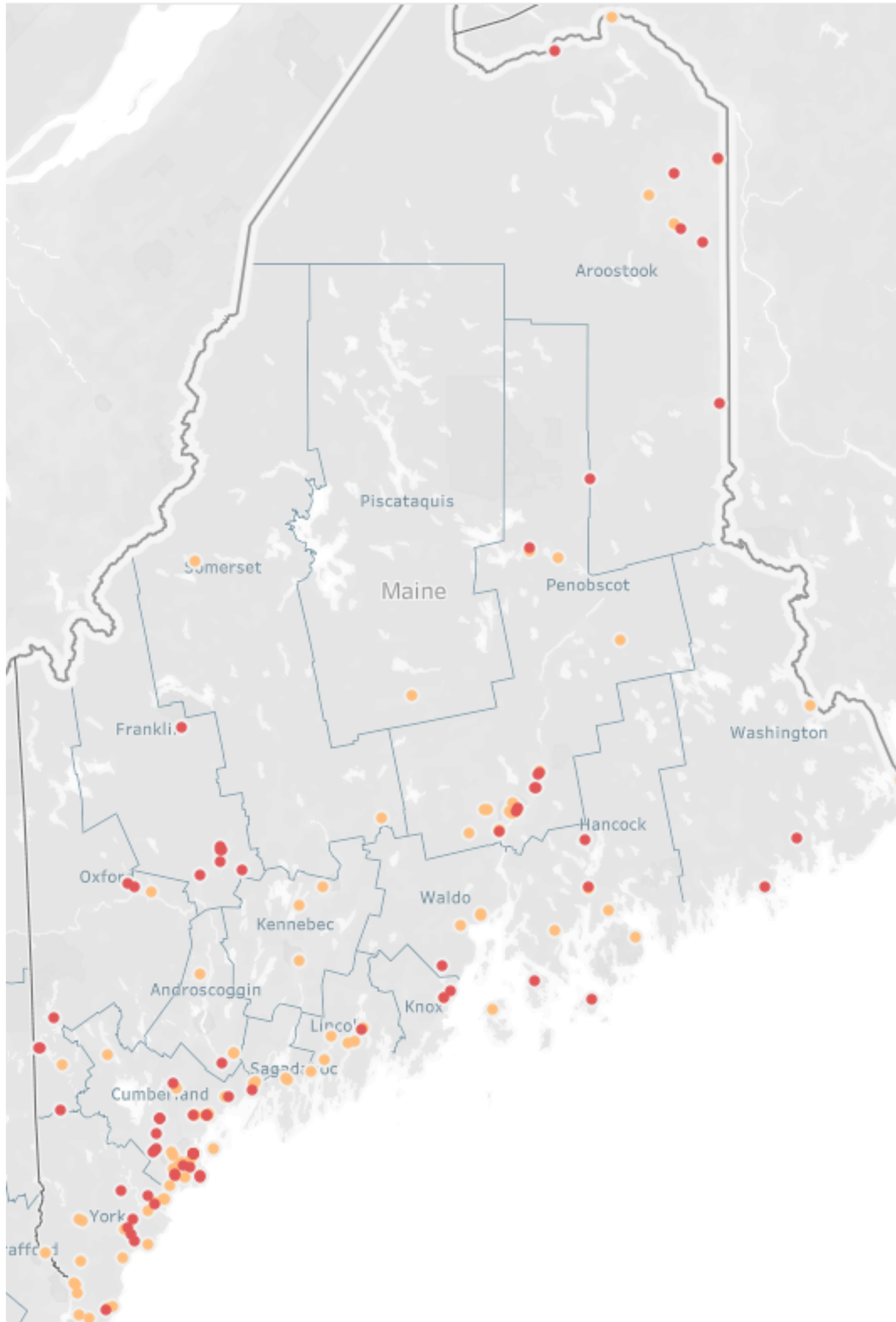
The map below shows Maine public schools by their oral health services status. **Green dots** represent schools that currently offer school-based oral health services to students, **dark orange dots** represent school that do not offer services while light orange dots show school for which the status is unknown.



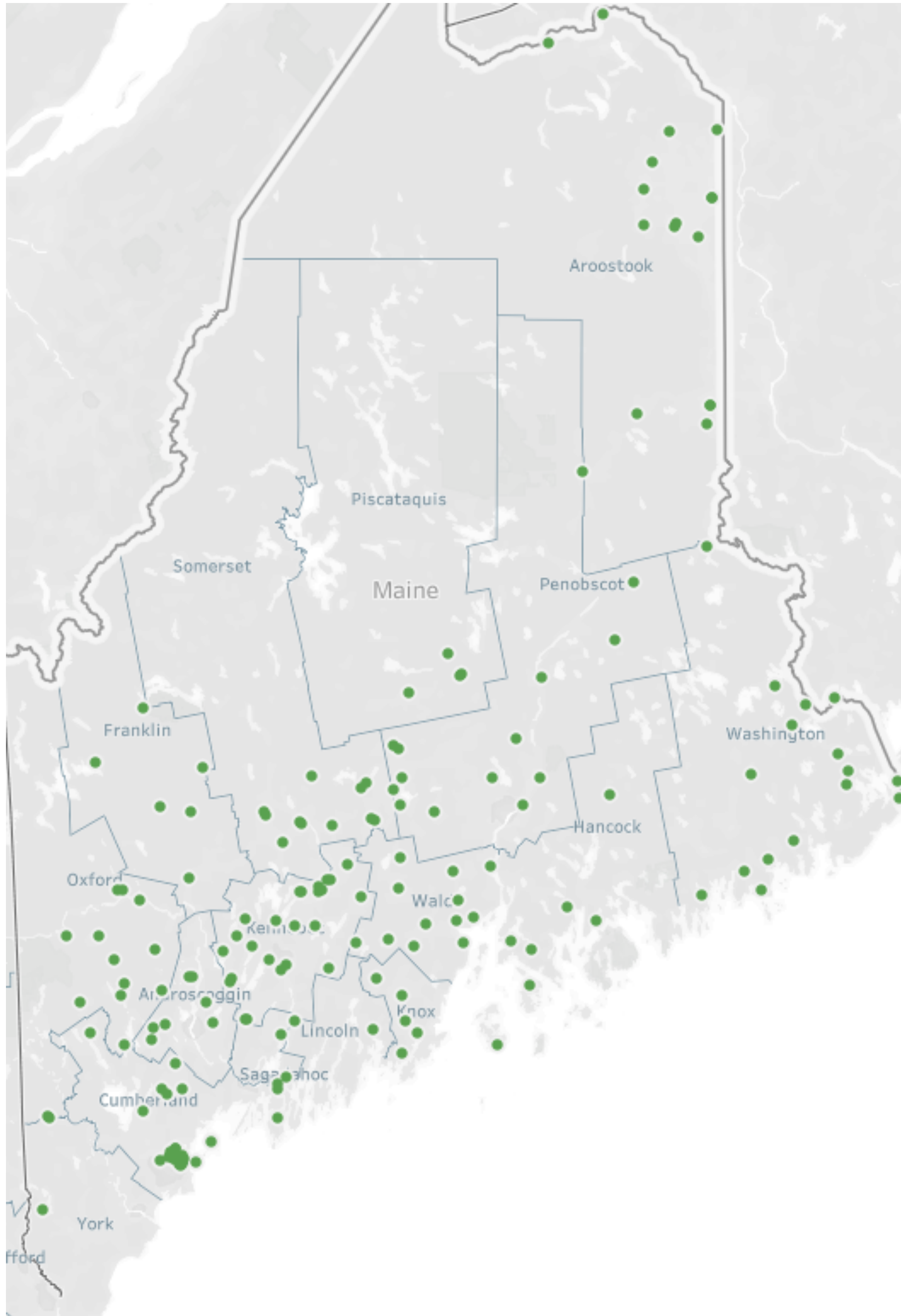
The map below shows Maine public schools that currently offer school-based oral health services to students.



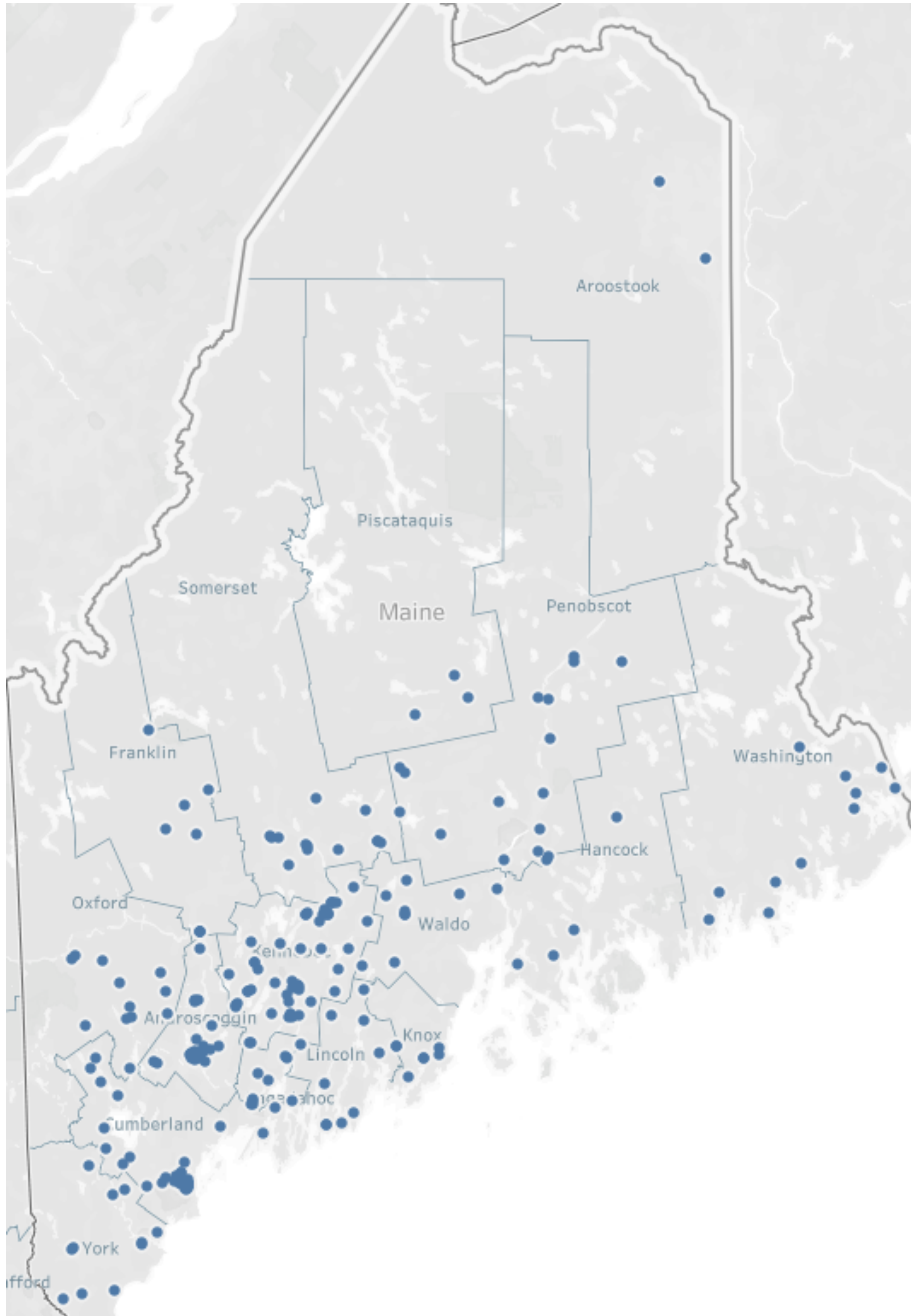
The map below shows Maine public schools that do not offer school-based oral health services to students or schools for which the status is unknown.



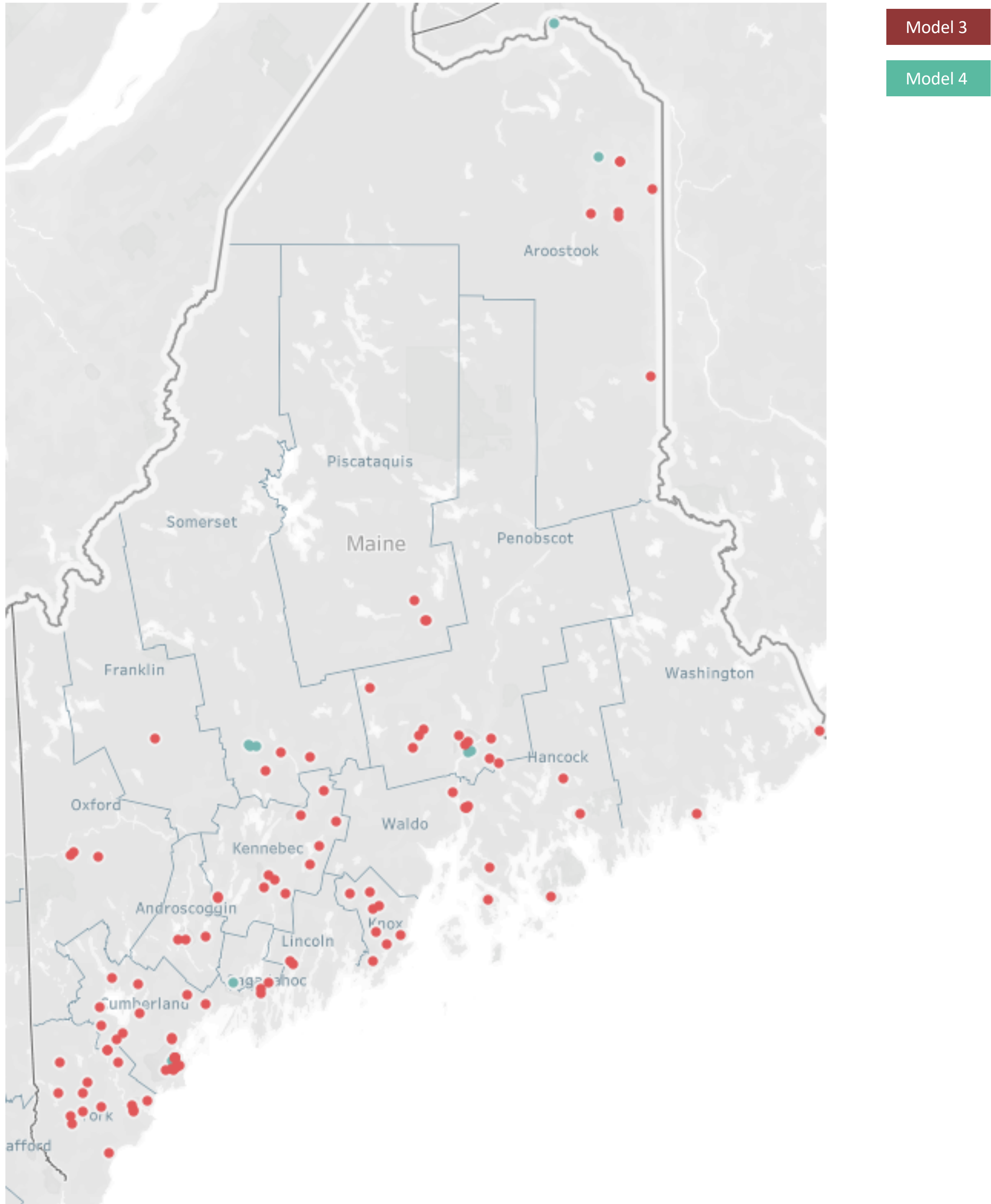
The map below shows Maine public schools that currently offer school-based oral health services to students through **Model 1**.



The map below shows Maine public schools that currently offer school-based oral health services to students through **Model 2**.



The map below shows Maine public schools that currently offer school-based oral health services to students through **Model 3** and **Model 4**.



Guides and other useful reference documents on oral health in schools:

Oral Health 2020 (now Oral Health Progress and Equity Network), White Paper on School Health: An Organizational Framework to Improve Outcomes for Children and Adolescents

http://www.sbh4all.org/wp-content/uploads/2018/04/DQF_WP_SchoolOralHealth_F.pdf

National Maternal and Child Oral Health Resource Center (Georgetown University), Promoting Oral Health in Schools: A Resource Guide

https://www.mchoralhealth.org/PDFs/resguideschooloh.pdf

Rural Health Information Hub, webpage on school-based oral health models and resources:

https://www.ruralhealthinfo.org/toolkits/oral-health/2/school-based-model

American Dental Association, webpage on resources for school-based oral health

https://www.ada.org/en/public-programs/championing-oral-health-in-schools

US Center for Disease Control and Prevention, School Sealant Programs

https://www.cdc.gov/oralhealth/dental_sealant_program/index.htm

Association of State and Territorial Dental Directors, Best Practice Approaches for State and Community Oral Health Programs

https://www.astdd.org/docs/bpar-selants-update-03-2015.pdf

School-Based Health Alliance, archived webinars

https://www.sbh4all.org/events/strategies-for-solving-school-oral-health-consent-challenges/

https://www.sbh4all.org/events/oral-health-messaging-how-policy-and-communications-can-advance-school-oral-health/

https://www.sbh4all.org/events/introducing-the-school-oral-health-resource-library-a-tool-to-strengthen-and-connect-the-oral-health-community-to-resources/