

2017 Report to the General Assembly

Revised 1/30/2018

**Services Provided by Virginia Department of Health Dental
Hygienists Pursuant to a “Remote Supervision” Protocol**

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Executive Summary

The program for Virginia Department of Health (VDH) dental hygienist services provided under a “remote supervision” protocol was first established in 2009. The evolution of the “remote supervision” protocol from pilot to established program is detailed in prior VDH annual reports on the [General Assembly’s Legislative Information System website](#).

This legislative action has enabled VDH dental hygienists to provide preventive dental services without the general or direct supervision of a dentist. This effort has improved access to preventive dental services for those at highest risk of dental disease, as well as reduced barriers and costs for dental care for low-income individuals. This report summarizes the burden of relevant oral disease statewide as updated by the 2014 Virginia 3rd Grade Basic Screening Survey (BSS) and documents the services provided in FY17 by the dental hygienists and dental assistants employed by VDH under the “remote supervision” protocol.

In FY17, 4,123 children returned a permission form and were screened by a dental hygienist in a school-based setting; 2,863 received sealants, and 8,851 fluoride varnish applications were provided in initial and follow-up visits. A total of 1,519 children were identified as having other oral health needs and referred to community providers. In clinic settings, through the VDH “Bright Smiles for Babies” (BSB) program, 6,649 infants and children were screened, and 5,602 fluoride varnish applications were provided. In FY17, the combined “remote supervision” hygienist workforce provided clinical services with a market value exceeding \$2.7 million in 16 VDH health districts. As this and previous reports indicate, the remote supervision model offers an effective alternative method of delivery for safety net dental program services that increases access for underserved populations.

History and Overview of Remote Supervision Program

Although tremendous strides have been made in the reduction of tooth decay among many Virginians over the past fifty years, primarily due to community water fluoridation, the decline in disease prevalence and severity has not been distributed uniformly across all segments of the population. Race and socioeconomic disparities continue to be predictors of tooth decay, and geographic considerations affect access to care in many parts of the Commonwealth. Racial and ethnic minorities, persons with low-income, and individuals with special health care needs are all less likely to have access to regular dental care and resources, further compounding the impact of oral disease. The need for creative solutions to dental care access challenges have led to the development of alternative practice models for dental hygienists in the Commonwealth, such as the “remote supervision” protocol in the VDH.

In 2009, the Virginia General Assembly passed legislation to revise § 54.1-2722 of the Code of Virginia “License; application; qualifications; practice of dental hygiene” to allow dental hygienists employed by VDH, and working in the Cumberland Plateau, Lenowisco, and Southside Health Districts, to provide preventive dental services in selected settings without the general or direct supervision of a dentist. This legislation aimed to improve access to preventive dental services for those at highest risk of dental disease, as well as reduce barriers and costs for dental care for low-income individuals. The legislation also had potential for significant changes to the practice of public health dentistry in the Commonwealth, a model that had not changed since the state dental program was established in 1921.

When the legislation passed, there were only two VDH dental hygienists (one full-time and one part-time) located in priority health districts. Therefore, efforts were made to secure funds through grants and other opportunities to increase staff that could work under this new protocol. As a result, by early 2010 there were six full or part-time VDH dental hygienists practicing under remote supervision in Lenowisco, Cumberland Plateau and Southside Health Districts, and one part-time hygienist working exclusively with the fluoride varnish program.

The primary prevention services provided by VDH using the remote supervision protocol were school-based dental sealant and fluoride varnish programs in the targeted health districts. Dental sealant and fluoride varnish programs are evidence-based and cost-effective means to reduce the dental disease burden of a population. The hygienists were also able to provide many other additional preventive services for the individuals in these communities under existing practice protocols, including screenings, education, and referrals.

In addition to the sealant programs provided under the pilot remote supervision protocol, preventive services were provided under existing practice protocols in the target health districts. These included 1) a fluoride varnish program in Special Supplemental Nutrition Program for Women, Infants and Children (WIC) clinics and Care Connection for Children (CCC) clinics; 2) dental education programs; 3) oral health screenings and referrals; and 4) a program that involved home visits (this program ended after the first year).

The pilot program was originally slated to last until July 1, 2011. However, due to the program’s success, it was extended during the 2011 Legislative Session for another year – until July 1, 2012. On July 1, 2012, the Virginia Code was amended to permit any VDH dental hygienist

throughout the Commonwealth to practice under the “remote supervision” protocol, not just those practicing in one of the three designated health districts.

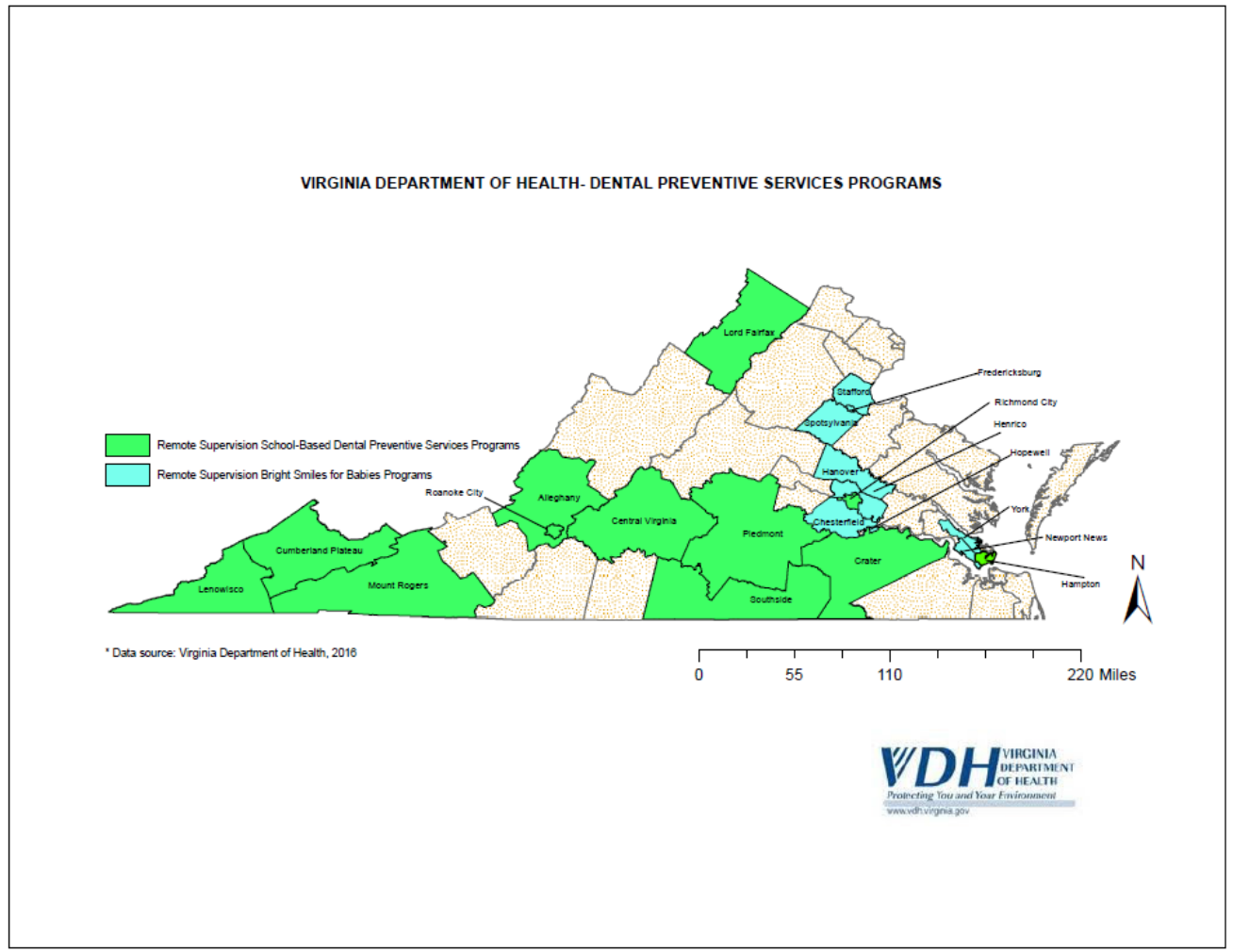
With the support of the new legislation, VDH enrolled all existing VDH hygienists providing patient care services into the remote supervision protocol in FY13. This expanded the service capabilities of hygienists who had previously been working under more restrictive supervision and improved efficiency in professional oversight. To fund dental hygienist positions working under the new practice protocol, VDH applied for and received a federal Oral Health Workforce Grant from the U.S. Health Resources and Services Administration (HRSA). Additionally, some local VDH Districts contributed funding to support hygienists practicing in their areas.

In FY14, VDH initiated implementation of the VDH Dental Transition Plan to emphasize more community-based prevention services. Resources previously committed to VDH Districts were identified for redirection to add new remote supervision hygienist programs in targeted areas of the Commonwealth. The transition plan identified localities based on applied metrics of greatest need, for placement of additional hygienists to expand the “Dental Preventive Services Program.”

Also in FY14, VDH expanded the eligibility rules for the dental sealant program. Schools are selected for participation in the sealant program based on having a National School Lunch Program (NSLP) participation rate of 50% or greater. Prior to the 2013/2014 school year, individual students had to be identified as participants in the NSLP to be eligible for sealant services through VDH. VDH identified concerns that the requirement for parents to disclose a child’s NSLP status is potentially stigmatizing and poses administrative burdens and is thus a barrier to participation in the program. Therefore, in FY14, eligibility was expanded to all students in the qualifying schools, thus avoiding the need to identify the status of individuals. This has increased the service population, reach and impact of the program in high-need areas.

In August 2015, the recruitment and selection process for expansion of the VDH remote supervision programs, as proposed in the VDH Dental Transition Plan, was completed. In the 2015/2016 school-year, four additional full-time community-based dental hygienists and part-time dental assistants began providing services and by FY17, twelve remotely supervised hygienists were providing services in 16 VDH health districts (Figure 1). In the Mount Rogers Health District, a local grant was not renewed for FY17 which eliminated one of the hygienists in that area. However, the remaining hygienist was able to expand her coverage area in the District, which included the addition of services in Smyth County, and with assistance from nearby remote staff and a local non-profit program also providing services, the localities were not greatly impacted. Midway through FY17, the Chesterfield-based hygienist position was vacated as well and discussions are ongoing to determine if replacement of that position is currently the best use of resources. The VDH dentist in the Office of Family Health Services (OFHS) continues to provide professional coverage to all of these remote supervision programs including ongoing technical assistance, clinical oversight, and quality assurance functions.

Figure 1: Map of VDH Preventive Dental Services in Virginia



Burden of Dental Disease among Children

Tooth decay is estimated to be five times more common than asthma and seven times more common than hay fever in children. Dental issues among children have been demonstrated to contribute significantly to lost school and activity time¹, and lack of dental insurance and access to care complicate dental treatment for those most at risk. Nationally, 28% of children aged 3-5 years were estimated to have some dental caries experience in the 2011-2012 time period, according to data from the National Health and Nutrition Examination Survey (NHANES)². For children aged 6-9 years, the prevalence of dental caries was 57.7%, and for adolescents 13-15 years, the prevalence of caries experience was 53.4%.

¹ Gift H, Reisine S, Larach D. The social impact of dental problems and visits. *Am J Public Health*. 1992;82(12):1663–1668.

² US Department of Health and Human Services. Oral health. *Healthy people 2020*. Available at: <http://www.healthypeople.gov/2020/>. Accessed August 30, 2013.

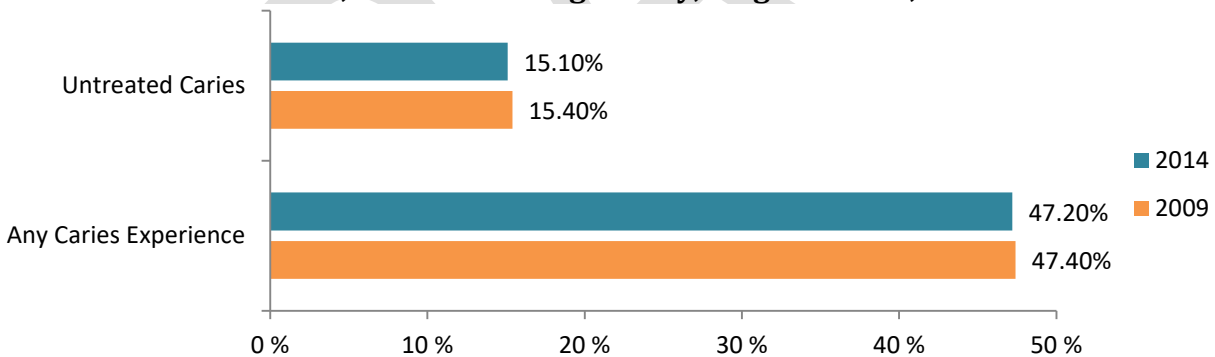
Healthy People 2020 (an initiative of the U.S. Department of Health and Human Services) includes two objectives related to dental caries experience and untreated decay in children that VDH is currently able to monitor at the population level with available data systems:

- OH-1.2: Reduce the proportion of children aged 6 to 9 years with dental caries experience in their primary and permanent teeth.
- OH-2.2: Reduce the proportion of children aged 6 to 9 years with untreated decay in their primary and permanent teeth.

Virginia monitors these indicators through the Virginia Basic Screening Survey (BSS). Conducted every five years and based on guidelines developed by the Association of State and Territorial Dental Directors (ASTDD), the Virginia BSS includes an open-mouth survey of a representative sample of 3rd grade school children in Virginia to assess statewide progress in pediatric oral health indicators. Data are weighted to the population level and are thus representative of all 3rd graders in Virginia. Following the frequency recommended by the ASTDD, the next Virginia BSS will be conducted in 2019. The impact of the Bright Smiles for Babies and school-based fluoride varnish programs initiated in 2010 may be evident at that time. Future third graders screened in some areas could potentially have benefited from VDH preventive services for most of their lives.

Findings from the 2009 and 2014 BSS on the prevalence of untreated caries and dental caries experience are presented in Figure 2.

Figure 2: Prevalence of Untreated Caries and Any Caries Experience among 3rd Graders, Basic Screening Survey, Virginia 2009, 2014



The prevalence of caries varies by region, ethnicity and race. In 2014, Southwest Virginia and Black Non-Hispanic children had the highest rate of untreated caries. This represents a slight shift in racial characteristics for untreated caries since the 2009 BSS. Comprehensive caries data for the 2009 and 2014 BSS are presented in Table 1.

Table 1: Prevalence of Untreated Caries and Any Caries Experience among 3rd Graders, by Region and Race/Ethnicity, Basic Screening Survey, Virginia 2009, 2014

Region	Untreated Caries (%)		Any Caries Experience (%)	
	2009	2014	2009	2014
Northwest	14.3	16.1	45.4	62.6*
Northern	11.5	9.7	40.5	38.0
Southwest	25.3	23.0	59.6	54.9
Central	13.6	16.8	48.3	50.1
Eastern	15.4	16.2	47.7	43.4
Race				
White, Non-Hispanic	13.4	13.1	45.2	44.2
Black, Non-Hispanic	18.2	19.8	50.3	51.8
Hispanic	22.4	14.4	54.0	51.0
Asian/ Pacific Islander	15.5	14.7	51.8	46.4
Other / Multiracial	15.0	16.5	44.5	48.1

*The 2014 sample in NW was significantly smaller compared to 2009. Future BSS data will be needed to inform existence of a meaningful trend.

According to the BSS, most 3rd graders in Virginia in 2009 and 2014 had no obvious dental problems requiring care. Only a very small percentage (1.1%) needed urgent (within 24 hours) dental care in 2009 and this remained relatively unchanged in 2014 (0.9%).

It is also important to note that, when the presence of insurance is considered, according to the VDH BSS of 3rd grade children in 2014, an uninsured 3rd grade child is not only less likely to have sealants, but is also more likely to have at least one tooth with untreated decay, than an insured child.

Progress on these indicators will be tracked periodically through the BSS and findings from subsequent BSS administrations will be evaluated to determine changing patterns of caries experience in the school population over time.

Oral Health Services Provided by VDH through Remote Supervision

Dental Sealants

A dental sealant is a plastic coating applied to the chewing surfaces of the back teeth (molars) to prevent the initiation and progression of dental caries by forming a barrier to plaque and bacteria. It is generally accepted that sealants are most effective when applied to newly erupted first and second permanent (adult) molars. The Centers for Disease Control and Prevention (CDC) Task Force on Community Preventive Services found strong evidence that school-based and school-linked sealant programs are effective in reducing tooth decay, with a median decrease of 60%.³ Nationally, school-based sealant programs targeting low-income children have been in place now

³ Centers for Disease Control and Prevention. Promoting Oral health: Interventions for Preventing Dental Caries, Oral and Pharyngeal Cancers, and Sports-Related Craniofacial Injuries—A Report on Recommendations of the Task Force on Community Preventive Services. MMWR Recommendations and Reports 2001; 50(RR-21):1-13.

for many years. A dental hygienist is widely accepted as equally skilled as a dentist in applying dental sealants. A 10-year retrospective study comparing the longevity of sealants placed by dentists, dental hygienists, and dental assistants found that all operators are effective in applying sealants.⁴

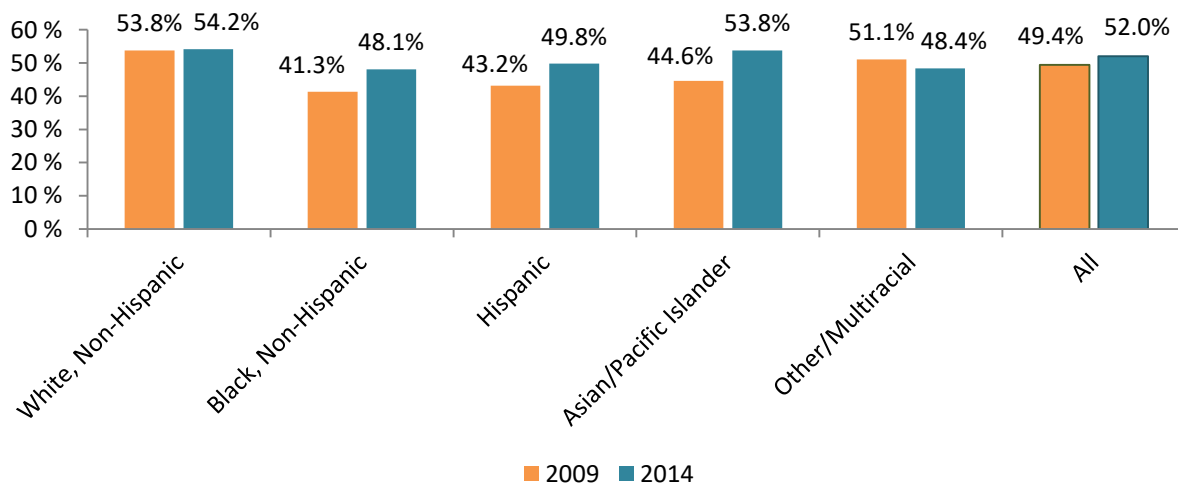
According to NHANES, 31% of children aged 6-8, 49% of children aged 9-11, and 43% of adolescents aged 12-19 had at least one dental sealant on a permanent tooth⁵ in the 2011-2012 survey period. Dental sealant prevalence is known to vary by socio-demographic factors. According to an analysis of NHANES data from 2009 and 2010, children aged 6-9 years living below the federal poverty level were less likely to have sealants on permanent molars than children of that age living above the federal poverty level (26% vs. 34%)⁶. This analysis additionally found that sealant prevalence was lower among black adolescents (32%) than white adolescents (56%). Recent survey data for Virginia suggest the sealant prevalence disparity is not as great as the national findings.

VDH currently monitors the following Healthy People 2020 objective on dental sealants.

- OH-12.2 Increase the proportion of children aged 6 to 9 years who have received dental sealants on one or more of their permanent first molar teeth.

Sealant prevalence is tracked by VDH through the BSS. Virginia 2009 and 2014 BSS data on dental sealant prevalence by race/ethnicity are presented in Figure 3. There was a slight improvement noted in 2014 over 2009 for sealant prevalence on “All” children.

Figure 3: Prevalence of Dental Sealants on Permanent Molars, 3rd Graders, Basic Screening Survey, Virginia 2009, 2014



⁴ Folke BD, Walton JL, Feigal RJ. Occlusal Sealants Success over Ten Years in a Private Practice: Comparing longevity of sealants placed by dentists, hygienists and assistants. *Pediatric Dentistry*. 2004; 26: 426-432.

⁵ Dye BA, Thornton-Evans G, Li X, Iafolla TJ. Dental caries and sealant prevalence in children and adolescents in the United States, 2011–2012. NCHS data brief, no 191. Hyattsville, MD: National Center for Health Statistics. 2015.

⁶ Dye B, Xianfen L, Thornton-Evans G. Oral health disparities as determined by selected Healthy People 2020 oral health objectives for the United States, 2009-2010. 2012. Available at: <http://www.cdc.gov/nchs/data/databriefs/db104.htm>. Accessed October 4, 2013.

Topical Fluorides, Fluoride Supplements, and Varnishes

Topical fluorides (gels, varnishes, pastes, and mouth rinse) and fluoride supplements are all interventions proven effective in reducing the risk of dental decay. In a 2013 systematic review of dental literature, the authors attributed a 43% reduction in decayed, missing, and filled tooth surfaces to the use of fluoride varnish alone.⁷ Fluoride varnishes are a topical fluoride delivery vehicle that instantly “stick” to tooth surfaces where applied and eliminates the risk of significant patient ingestion. This facilitates the use of topical fluorides on infants and children of all ages in a variety of settings.

Dental Visits

Dental visits are an important component of good oral health. Routine preventive dental visits, particularly, provide opportunities for oral health education, professional cleaning, fluoride applications, and oral cancer screenings. Delivery models for school-based preventive services significantly reduce many of the typical barriers to accessing preventive care visits facing some families⁸. Healthy People 2020 includes the following related objective that VDH tracks through BSS and the Behavioral Risk Factor Surveillance System (BRFSS):

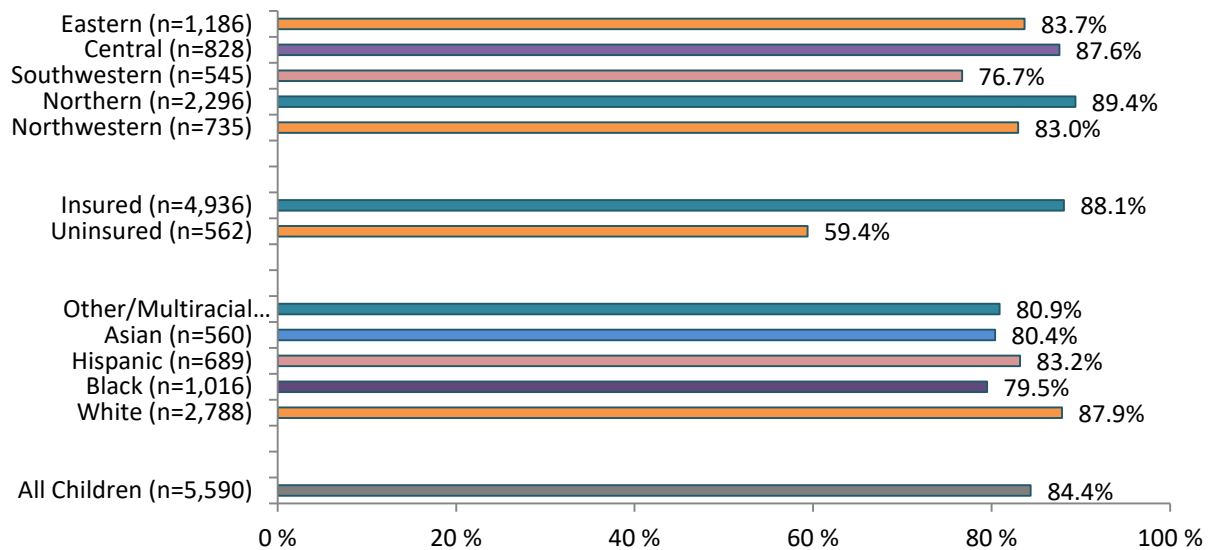
- OH-7: Increase the proportion of children, adolescents and adults who used the oral health care system in the past year.

A summary of dental visit status in the past year is provided in Figure 4. The most notable population characteristic associated with whether a child had a dental visit in the past year was dental insurance status. In 2014, 88% of insured children reported a visit in the past year versus 59% for those identifying themselves as uninsured. This was virtually unchanged from 2009. The 2014 BSS instrument did not distinguish the purpose of the dental visit in the data collection. The 2014 BSS identified a child as having had a visit in the past year, for any reason, which is more in line with the language of Healthy People 2020 OH-7. However, it was determined by the 2009 3rd grade BSS, that nearly 80% of visits were for preventive services.

⁷ Marinho VCC, Worthington HV, Walsh T, Clarkson JE. 2013 Fluoride varnishes for preventing dental caries in children and adolescents. Cochrane Summaries. July 2013. Available at <http://summaries.cochrane.org/CD002279/fluoride-varnishes-for-preventing-dental-caries-in-children-and-adolescents>

⁸Gooch, B et al. 2009. Preventing Dental Caries through school based dental sealant programs. JADA. 140;11:1356-65. November 2009. Available at [http://jada.ada.org/article/S0002-8177\(14\)64584-0/fulltext](http://jada.ada.org/article/S0002-8177(14)64584-0/fulltext)

Figure 4: Prevalence of Dental Visit in Past Year by Selected Demographic Characteristics, 3rd Grade Children, Basic Screening Survey, 2014



Program Production and Impact on Oral Health

School-based Preventive Services

VDH remote supervision hygienists provide preventive care visits in a school-based setting to deliver dental assessment, dental sealants, fluoride varnish applications, oral health education and, in some settings, cleanings. Low income children in qualified schools who do not have a dental home are also referred to dental providers. In addition to providing clinical preventive services, VDH hygienists are responsible for program development in their geographic area. Hygienists spend substantial effort working with school administration, staff in schools, and with parent groups to provide information about the dental sealant program and to encourage participation. The hygienists also meet with local private dentists and safety net providers to introduce the program, gain acceptance, and facilitate referral of children with treatment needs.

In FY17, 4,123 children returned a permission form and were assessed by a dental hygienist in a school-based setting, 2,863 received sealants, and 8,851 fluoride varnish applications were provided. A child could be assessed and not be a candidate for a dental sealant due to the identified status of the permanent molar teeth including “filled”, “decayed”, “previously sealed”, or those molars “missing” or not fully erupted into the mouth. Additionally, in some areas, children receive multiple varnish applications over the course of twelve months. A total of 1,519 children were identified as having other oral health needs and referred to community providers. Over the past eight years, this program has increased the number of children receiving sealants annually from 346 in FY10 to 2,863 in FY17. With the loss of two local sites in FY 17, there was a slight reduction from FY 16 in the "Number of Children Screened for Sealants and Varnish" (Table 2.)

There continues to be a year over year increasing trend in the number of school divisions participating in the prevention programs and the clinical services provided to children. In any given year, there are generally some periods of position vacancy and in FY17, as previously noted, one smaller program was discontinued entirely. However, the remote supervision staff continues initiatives to expand the programs' reach and scope in communities and to improve efficiency in delivery of services. The FY17 school production data reflects this effort with strong output in spite of the loss of one full-time equivalent provider at the beginning of the year.

Across all dental preventive program venues, VDH provided clinical services in FY17 to a child population that is 55% insured with Medicaid and 45% uninsured. VDH identifies schools as eligible by National School Lunch Program status and then provides services to all children with consent regardless of insurance status. Medicaid revenue is collected, when available, to help sustain the program, but a large number of children are provided critical preventive services without reimbursement. In the absence of these VDH programs it is very likely many children would go without the benefit of dental sealants to prevent future disease. According to the VDH BSS of 3rd grade children in 2014, children with insurance were significantly more likely to have at least one dental sealant, than uninsured children.

School programs vary in their elected participation, with some of the newer programs not yet having the school engagement that is enjoyed by districts with long-term health department/school relationships. As VDH expands preventive services programs across the Commonwealth, few challenges are encountered and community support is generally outstanding. VDH is engaged on an ongoing basis with the hygiene staff to share "lessons learned" and "best practices" to facilitate program acceptance and participation. Past experience has shown that a continuous presence in the schools and community, over time, results in increased school and parent support for these programs. Additionally, programs are monitored and adapted to best serve the targeted population while remaining consistent with public health science recommendations. For example, in FY13, routine application of fluoride varnish was initiated in conjunction with screening appointments to increase program impact. Additionally, a proposed trial addition of prophylaxis services for school-based programs in Hampton and Cumberland Plateau was implemented smoothly in FY17 and appears to have had the intended effect of increasing school program acceptance and child participation. Future program evaluation efforts will target decision makers to assess the value of this added service more definitively.

Having provided thousands of fluoride varnish treatments in schools as well as clinical settings, it is possible VDH programs contributed to the very slight reduction in 3rd grader caries experience from 2009 to 2014 noted in Figure 2. Oral health surveillance data collection during school-based encounters has continued through FY17 in support of a national CDC effort to capture additional data on the current dental status of children. This will complement oral disease status assessments such as the BSS in the future, with the goal of accurately determining Virginia trends for all children.

VDH School-based services production is summarized in Table 2.

**Table 2: School-based Program Summary Data Provided under Remote Supervision,
All Grades FY10 – FY17**

Year	Number of Participating Health Districts	Number of Participating School Divisions	Number of Children Screened for Sealants or Varnish	Number of Children Referred for Treatment	Number of Children Sealed	Number of Teeth Sealed	Number of Teeth Sealed per Child (average)	Fluoride Varnishes Applied
FY10	3	8	485	248	346	1277	3.7	N.A
FY11	3	9	1029	474	543	1909	3.5	N.A.
FY12	3	10	1274	819	746	2281	3.0	N.A.
FY13	5	16	3011	1094	831	3186	3.8	1794
FY14	7	23	3982	1220	1746	6109	3.5	3754
FY 15	6	21	4955	1181	1993	6918	3.5	5445
FY 16	12	31	4363*	1386	2583	8328	3.2	6272
FY17	12	34	4123	1519	2863	8635	3.0	8851

** In order to maintain consistency with other reporting obligations, beginning in FY 16 “Number of Children Screened for Sealants and Varnish” represents a count of unique individuals only. Previously some children may have been screened twice during the data collection period.*

Sealant programs are only effective if the sealants that are placed are retained. Sealant retention is evaluated in two ways: follow-up assessments and quality assurance evaluations. The program protocol requires annual follow-up assessments by hygienists to evaluate retention of sealants placed during the prior year. This yields retention rate data and provides the opportunity to place new sealants on teeth previously unable to be sealed at the first appointment and to replace lost sealants. Follow-up is dependent on children returning to the same school in consecutive years, parents continuing to sign children up for services, and schools participating in the program consistently. Therefore, the sealant retention data is limited to the available sample.

In FY17, the aggregate retention rate calculated statewide for all sealants evaluated during “Follow-up” visits was 93.3%. The VDH Dental Quality Assurance Manager performs an annual onsite quality assurance evaluation, and directly observes a sample of patients to evaluate and corroborate calculated retention rates. The observed one-year retention rates for individual providers reviewed in FY17 were all within the desired 90-100% range. These rates are consistent with other state programs with a long history of success, including the long-running Ohio School-Based Dental Sealant Program and others, which use the performance standard rate of >90% for long-term (one year minimum) retention.

Under the remote supervision model, assessments are conducted and sealants are applied at the same visit utilizing a hygienist and assistant only. As expected, this is a more efficient and cost effective modality for providing preventive services than alternative protocols requiring an initial examination by a dentist followed by a separate visit for a child to receive preventive services. In FY17, the cost per sealant application for VDH remote supervision programs was calculated through modeling to be \$27.22 per sealant. The increased VDH cost per sealant over prior years (\$22.59 in FY16) was the result of a slight decrease in the number of sealants applied per child, as might be expected over time with ongoing programs, and more inclusive costs distribution

implemented in 2017. In an effort to include the total program cost of delivering a sealant beyond the administrative time and fixed and variable costs associated with each provider, an adjustment was added per sealant to reflect the “distributed costs” per sealant of managing the program and the funding streams. An additional 13% cost was attributed to each sealant following typical grant valuation metrics for program support. According to the 2016 American Dental Association Fee Schedule for the South Atlantic Region, the average charge in private dental offices for placing a dental sealant on one tooth was \$53.00.⁹ Smiles for Children Virginia Medicaid reimbursement per sealant is \$32.28. The VDH remote supervision sealant delivery model continues to be cost effective relative to most alternative provider resources. It is additionally important to recognize two less tangible impacts from school-based dental sealant programs. There are societal savings from caries averted and thus the “savings” realized from avoided expensive dental restorative work over a lifetime and there is a reduction in parent production loss when school programs reduce parent appointment obligations for children.¹⁰

Bright Smiles for Babies Preventive Services

In addition to preventive services that are offered through schools, VDH dental hygienists operating under remote supervision working in the BSB program provide services through WIC clinics, Head Start, and the Care Connections for Children medical specialty clinics. This affords opportunities to provide preventive and educational services and fluoride varnish, when appropriate, to low-income children and their parents, and children with special health care needs. The BSB program utilizes non-dental settings as a means of accessing children aged five and under who otherwise may not receive early preventive dental services. Early preventive care can positively impact dental caries experience throughout childhood. With 45% of the VDH programs’ target population being uninsured, there are significant concerns many children may not otherwise receive preventive services. According to the VDH BSS of 3rd grade children in 2014, an uninsured 3rd grade child is 1.5 times more likely to have at least one tooth with untreated decay than an insured child.

Increasingly, the Dental Health Program staff in OFHS is being engaged in oral health surveillance activities. In addition to the oral disease data captured during school-based clinical assessments, remote hygienists conducted oral health surveys in a variety of population cohorts. In FY17, VDH hygienists, utilizing standardized practices developed by the Association of State and Territorial Dental Directors (ASTDD), conducted a survey and screening of pregnant women in the Women, Infant and Children Supplemental Nutrition Program (WIC) in statistically selected settings across the Commonwealth, as well as initiating a similar assessment of participating Head Start children in centers statewide.

Both the school-based and BSB provider workforce will continue to contribute their collective knowledge of the local communities, their existing collaborative partnerships, and their clinical expertise as patient examiners in support of surveillance activities.

⁹ American Dental Association (ADA). 2016 Survey of Dental Fees. ADA Survey Center, December 2016.

¹⁰ Guide to Community Preventive Services. Improving oral health:dental caries.[www.thecommunityguide.org/oral/caries.html\(caries.html\)](http://www.thecommunityguide.org/oral/caries.html(caries.html)) . Last updated May18, 2016.

WIC-enrolled pregnant women continue to be offered screenings by the BSB hygienists. Protocols and guidance for this program are provided by VDH. Those identified as insured under the new Medicaid/FAMIS expansion for pregnant women are informed and educated regarding the value of utilizing this opportunity. However, the dental services benefit for pregnant women has very strict time constraints limiting services to the first trimester through the end of the month following the 60th day after delivery. To assure effectiveness of the BSB hygienist efforts when screening and referring for care, a protocol and tracking log have been provided to staff to encourage patient compliance and provide follow-up reminders for timely care.

Additionally, as an extension of the BSB program, some VDH dental hygienists provide oral health preventive services to children with special health care needs in medical specialty clinics and in some Head Start settings. The remote hygienists are also actively expanding the integration of oral care into non-dental settings by training physicians and nurses across the Commonwealth to provide the BSB program services during well-child visits for the application of fluoride varnish. Medicaid reimbursement for varnish placement not only helps to partially sustain the VDH program but appears to be an incentive to the private providers to integrate the Bright Smiles for Babies protocol, including periodic varnish application, into their practices.

The BSB clinic services reported for FY17 declined somewhat. The magnitude of the reductions is, however, an anticipated outcome based on the historical services contributions made by the hygienist positions that were vacated. Otherwise, individual program production metrics for the year generally increased over FY16. In FY17, hygienists working in the BSB program screened 6,649 infants and children, provided 5,602 fluoride varnish applications and referred 2,840 to a dental home (see Table 3 below).

Table 3: Services Provided Through “Bright Smiles for Babies” Fluoride Varnish Program, by VDH Dental Hygienists, FY10 - FY17

Year	Number of Health Districts	Number of Children Screened	Fluoride Varnishes Applied	Number of Children Referred to a Dental Home
FY10 - FY11	3	1822	1607	1351
FY12	3	508	483	296
FY13	14	5828	5682	4358
FY14	13	6527	6088	3552
FY15	13	5408	4995	2865
FY16	16	7074	6692	3613
FY17	16	6649	5602	2840

Combined Preventive Services Impact

In FY17, the “remote supervision” hygienist workforce in total provided clinical services with a market value exceeding \$2.7 million. Service value calculations, as determined by Current Dental Terminology Codes from the American Dental Association, include oral screenings (D0190) and assessments (D0191), dental sealants (D1351), education (D1330), topical fluoride

varnish applications (D1206), and a limited number of child (D1120) and adult (D1110, >age 12) prophylaxis services.

Dental Health Education - Dental hygienists provided dental health education to a variety of customers in programs across the Commonwealth. Teacher, parent, and student education sessions were conducted in many schools to increase knowledge of the dental preventive services program, to motivate participation in the school-based programs, and to stress the importance of accessing preventive services in the community when available. Other venues included WIC clinics, preschool programs such as Head Start, and professional trainings for nurses and other health providers. Through group and chairside activities, oral health education was provided by VDH remotely supervised hygienists to 23,863 individuals in FY17.

Summary and Future Plans

The remote supervision program continues to support the VDH transition from dental clinical services to dental preventive services. As this report indicates, the remote supervision model has been a successful alternative method of delivery for safety net dental program services that has increased access for underserved populations. Preventive services are provided to more individuals at a lower cost compared to those requiring a licensed dentist to examine a patient. The resulting referrals to private community dentists for comprehensive diagnosis and treatment services also encourage care-seeking behavior by parents and the desirable establishment of a “dental home” for children in the private provider community.

As the program matures, the lessons learned and best practices identified are informing a continually improving model for the remote hygienists’ role in the community. In 2016, VDH conducted a staff satisfaction survey in client schools. A total of 122 school staff members were contacted, of which 62 responded; 98.4% stated they were very satisfied (82.3%) or satisfied (16.1%) with the VDH services program in the schools. The majority of school nurses and principals, 97%, agreed they would recommend the program to other schools. Survey participants were also given the opportunity to provide specific suggestions. The need for greater promotion of the program and enhanced efforts to improve child participation were consistently emphasized. Currently, participation in VDH school-based preventive services is voluntary for schools. Therefore, it will continue to be the mission of the VDH staff to educate schools and communities about the prevention resources VDH offers and the opportunities it can provide in the school setting. VDH continually faces the challenge of clarifying for education decision makers the differences between VDH school-based programs and other options available to schools which often focus only on insured children.

The VDH Dental Transition Plan noted that stakeholders, with VDH support, promoted the value of extending remote supervision to other providers serving underserved and challenged populations; such as hospitals and nursing homes, charitable safety net facilities, and Community Health Centers. During the 2016 General Assembly session, SB 712 was passed to revise § 54.1-2722 of the Code of Virginia “License; application; qualifications; practice of dental hygiene”. The new legislation provided, in subsection “F”, a protocol for “remote supervision” practice for hygienists not employed by VDH. The passage of this legislation was a natural evolution from the VDH success in the Commonwealth with “remote supervision” as reported to

the Board of Dentistry. This legislation, which was signed into law subject to the development of regulations to be finalized in September 2016, were intended to further expand access to care, particularly in public and charitable settings, as well as long term care facilities. When it was determined the language in SB712 created some barriers to functional implementation of programs, the legislative language was amended in the 2017 General Assembly Session. HB1474 modified the Code of Virginia, effective July 1st 2017, and directed regulations be developed by the Department of Health Professions that will make it more practical for other dental provider entities to utilize a remote supervision model similar to the VDH protocol. VDH shares with all Virginia oral health stakeholders the desire to most efficiently optimize access to prevention services as one strategy for addressing dental challenges. VDH will continue to assess available community services in an evolving provider environment to assure its programs assist those most in need and without alternative resources.

VDH's goals continue to be utilizing remote supervision hygienists to bring preventive services to targeted schools with significant numbers of under-resourced families, developing and expanding child and infant interventions with a focus on fluoride varnish, increasing establishment of dental homes in local communities for infants, children and adults and identifying and informing oral health needs in communities through ongoing surveillance.

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Appendix A: Code of Virginia effective July 1, 2017

Code of Virginia Title 54.1. Professions and Occupations Chapter 27. Dentistry

§ 54.1-2722. License; application; qualifications; practice of dental hygiene.

A. No person shall practice dental hygiene unless he possesses a current, active, and valid license from the Board of Dentistry. The licensee shall have the right to practice dental hygiene in the Commonwealth for the period of his license as set by the Board, under the direction of any licensed dentist.

B. An application for such license shall be made to the Board in writing and shall be accompanied by satisfactory proof that the applicant (i) is of good moral character, (ii) is a graduate of a dental hygiene program accredited by the Commission on Dental Accreditation and offered by an accredited institution of higher education, (iii) has passed the dental hygiene examination given by the Joint Commission on Dental Examinations, and (iv) has successfully completed a clinical examination acceptable to the Board.

C. The Board may grant a license to practice dental hygiene to an applicant licensed to practice in another jurisdiction if he (i) meets the requirements of subsection B; (ii) holds a current, unrestricted license to practice dental hygiene in another jurisdiction in the United States; (iii) has not committed any act that would constitute grounds for denial as set forth in § [54.1-2706](#); and (iv) meets other qualifications as determined in regulations promulgated by the Board.

D. A licensed dental hygienist may, under the direction or general supervision of a licensed dentist and subject to the regulations of the Board, perform services that are educational, diagnostic, therapeutic, or preventive. These services shall not include the establishment of a final diagnosis or treatment plan for a dental patient. Pursuant to subsection V of § [54.1-3408](#), a licensed dental hygienist may administer topical oral fluorides under an oral or written order or a standing protocol issued by a dentist or a doctor of medicine or osteopathic medicine.

A dentist may also authorize a dental hygienist under his direction to administer Schedule VI nitrous oxide and oxygen inhalation analgesia and, to persons 18 years of age or older, Schedule VI local anesthesia. In its regulations, the Board of Dentistry shall establish the education and training requirements for dental hygienists to administer such controlled substances under a dentist's direction.

For the purposes of this section, "general supervision" means that a dentist has evaluated the patient and prescribed authorized services to be provided by a dental hygienist; however, the dentist need not be present in the facility while the authorized services are being provided.

The Board shall provide for an inactive license for those dental hygienists who hold a current, unrestricted license to practice in the Commonwealth at the time of application for an inactive license and who do not wish to practice in Virginia. The Board shall promulgate such regulations as may be necessary to carry out the provisions of this section, including requirements for remedial education to activate a license.

E. For the purposes of this subsection, "remote supervision" means that a public health dentist has regular, periodic communications with a public health dental hygienist regarding patient treatment, but such dentist may not have conducted an initial examination of the patients who are to be seen and treated by the dental hygienist and may not be present with the dental hygienist when dental hygiene services are being provided.

Notwithstanding any provision of law, a dental hygienist employed by the Virginia Department of Health who holds a license issued by the Board of Dentistry may provide educational and preventative dental care in the Commonwealth under the remote supervision of a dentist

employed by the Department of Health. A dental hygienist providing such services shall practice pursuant to a protocol adopted by the Commissioner of Health on September 23, 2010, having been developed jointly by (i) the medical directors of the Cumberland Plateau, Southside, and Lenowisco Health Districts; (ii) dental hygienists employed by the Department of Health; (iii) the Director of the Dental Health Division of the Department of Health; (iv) one representative of the Virginia Dental Association; and (v) one representative of the Virginia Dental Hygienists' Association. Such protocol shall be adopted by the Board as regulations.

A report of services provided by dental hygienists pursuant to such protocol, including their impact upon the oral health of the citizens of the Commonwealth, shall be prepared and submitted by the Department of Health to the Virginia Secretary of Health and Human Resources annually. Nothing in this section shall be construed to authorize or establish the independent practice of dental hygiene.

F. For the purposes of this subsection, "remote supervision" means that a supervising dentist is accessible and available for communication and consultation with a dental hygienist during the delivery of dental hygiene services, but such dentist may not have conducted an initial examination of the patients who are to be seen and treated by the dental hygienist and may not be present with the dental hygienist when dental hygiene services are being provided.

Notwithstanding any other provision of law, a dental hygienist may practice dental hygiene under the remote supervision of a dentist who holds an active license by the Board and who has a dental practice physically located in the Commonwealth. No dental hygienist shall practice under remote supervision unless he has (i) completed a continuing education course designed to develop the competencies needed to provide care under remote supervision offered by an accredited dental education program or from a continuing education provider approved by the Board and (ii) at least two years of clinical experience, consisting of at least 2,500 hours of clinical experience. A dental hygienist practicing under remote supervision shall have professional liability insurance with policy limits acceptable to the supervising dentist. A dental hygienist shall only practice under remote supervision at a federally qualified health center; charitable safety net facility; free clinic; long-term care facility; elementary or secondary school; Head Start program; or women, infants, and children (WIC) program.

A dental hygienist practicing under remote supervision may (a) obtain a patient's treatment history and consent, (b) perform an oral assessment, (c) perform scaling and polishing, (d) perform all educational and preventative services, (e) take X-rays as ordered by the supervising dentist or consistent with a standing order, (f) maintain appropriate documentation in the patient's chart, (g) administer topical oral fluorides under an oral or written order or a standing protocol issued by a dentist or a doctor of medicine or osteopathic medicine pursuant to subsection V of § 54.1-3408, and (h) perform any other service ordered by the supervising dentist or required by statute or Board regulation. No dental hygienist practicing under remote supervision shall administer local anesthetic or nitrous oxide.

Prior to providing a patient dental hygiene services, a dental hygienist practicing under remote supervision shall obtain (1) the patient's or the patient's legal representative's signature on a statement disclosing that the delivery of dental hygiene services under remote supervision is not a substitute for the need for regular dental examinations by a dentist and (2) verbal confirmation from the patient that he does not have a dentist of record whom he is seeing regularly.

After conducting an initial oral assessment of a patient, a dental hygienist practicing under remote supervision may provide further dental hygiene services following a written practice protocol developed and provided by the supervising dentist. Such written practice protocol shall

consider, at a minimum, the medical complexity of the patient and the presenting signs and symptoms of oral disease.

A dental hygienist practicing under remote supervision shall inform the supervising dentist of all findings for a patient. A dental hygienist practicing under remote supervision may continue to treat a patient for 90 days. After such 90-day period, the supervising dentist, absent emergent circumstances, shall either conduct an examination of the patient or refer the patient to another dentist to conduct an examination. The supervising dentist shall develop a diagnosis and treatment plan for the patient, and either the supervising dentist or the dental hygienist shall provide the treatment plan to the patient. The supervising dentist shall review a patient's records at least once every 10 months.

Nothing in this subsection shall prevent a dental hygienist from practicing dental hygiene under general supervision whether as an employee or as a volunteer.

1950, pp. 983-985, §§ 54-200.2, 54-200.4, 54-200.7 through 54-200.9, 54-200.11; 1968, c. 604; 1970, c. 639; 1972, cc. 805, 824; 1973, c. 391; 1975, c. 479; 1976, c. 327; 1986, c. 178; 1988, c. 765; 1990, c. 441; 1997, c. 855; 2002, c. 170; 2005, cc. 505, 587; 2006, c. 858; 2007, c. 702; 2009, cc. 99, 506, 561; 2011, c. 289; 2012, c. 102; 2013, c. 240; 2016, c. 497; 2017, c. 410.

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Appendix B: Protocol for Virginia Department of Health Dental Hygienists to Practice in an Expanded Capacity under Remote Supervision by Public Health Dentists

Title of document: Protocol adopted by Virginia Department of Health (VDH) for Dental Hygienists to Practice in an Expanded Capacity under Remote Supervision by Public Health Dentists

Reference to 18VAC60-20-220: Regulations Governing Dental Practice – Dental Hygienists

Filed by: Virginia Board of Dentistry

Date filed: September 7, 2012

Document available from:

Board of Dentistry

9960 Mayland Drive, Suite 300

Henrico, VA 23233

Definitions:

- “*Expanded capacity*” means that a VDH dental hygienist provides education, assessment, prevention and clinical services as authorized in this protocol under the remote supervision of a VDH dentist.
- “*Remote supervision*” means that a public health dentist has regular, periodic communications with a public health dental hygienist regarding patient treatment, but who has not done an initial examination of the patients who are to be seen and treated by the dental hygienist, and who is not necessarily onsite with the dental hygienist when dental hygiene services are delivered.

Management:

- Program guidance and quality assurance shall be provided by the Dental Program in the Division of Child and Family Health at VDH for the public health dentists providing supervision under this protocol. Guidance for all VDH dental hygienists providing services through remote supervision is outlined below:
 - VDH compliance includes a review of the remote supervision protocol with the dental hygienist. The hygienist will sign an agreement consenting to remote supervision according to the protocol. The hygienist will update the remote agreement annually attaching a copy of their current dental hygiene license, and maintain a copy of the agreement on-site while providing services under this protocol.
 - VDH training by the public health dentist will include didactic and on-site components utilizing evidence based protocols, procedures and standards from the American Dental Association, the American Dental Hygienists’ Association, the Centers for Disease Control and Prevention, Association of State and Territorial Dental Directors, as well as VDH OSHA, Hazard Communication and Blood Borne Pathogen Control Plan.
 - VDH monitoring during remote supervision activities by the public health dentist shall include tracking the locations of planned service delivery and review of daily reports of the services provided. Phone or personal communication between the public health dentist and the dental hygienist working under remote supervision will occur at a minimum of every 14 days.
 - VDH on-site review to include a sampling of the patients seen by the dental hygienist under remote supervision will be completed annually by the supervising public health dentist. During the on-site review, areas of program and clinical oversight will include appropriate

patient documentation for preventive services (consent completed, assessment of conditions, forms completed accurately), clinical quality of preventive services (technique and sealant retention), patient management and referral, compliance with evidence-based program guidance, adherence to general emergency guidelines, and OSHA and Infection Control compliance.

- No limit shall be placed on the number of full or part time VDH dental hygienists that may practice under the *remote supervision* of a public health dentist(s)
- The dental hygienist may use and supervise assistants under this protocol but shall not permit assistants to provide direct clinical services to patients.
- The patient or responsible adult should be advised that services provided under the remote supervision protocol do not replace a complete dental examination and that he/she should take his/her child to a dentist for regular dental appointments.

Remote Supervision Practice Requirements:

- The dental hygienist shall have graduated from an accredited dental hygiene school, be licensed in Virginia, and employed by VDH in a full or part time position and have a minimum of two years of dental hygiene practice experience.
- The dental hygienist shall annually consent in writing to providing services under remote supervision.
- The patient or a responsible adult shall be informed prior to the appointment that no dentist will be present, that no anesthesia can be administered, and that only limited described services will be provided.
- Written basic emergency procedures shall be established and in place, and the hygienist shall be capable of implementing those procedures.

Expanded Capacity Scope of Services:

Public health dental hygienists may perform the following duties under *remote supervision*:

- Performing an initial examination or assessment of teeth and surrounding tissues, including charting existing conditions including carious lesions, periodontal pockets or other abnormal conditions for further evaluation by a dentist, as required.
- Prophylaxis of natural and restored teeth.
- Scaling of natural and restored teeth using hand instruments, and ultrasonic devices.
- Assessing patients to determine the appropriateness of sealant placement according to VDH Dental Program guidelines and applying sealants as indicated. Providing dental sealant, assessment, maintenance and repair.
- Application of topical fluorides.
- Providing educational services, assessment, screening or data collection for the preparation of preliminary written records for evaluation by a licensed dentist.

Required Referrals:

- Public health dental hygienists will refer patients without a dental provider to a public or private dentist with the goal to establish a dental home.
- When the dental hygienist determines at a subsequent appointment that there are conditions present which require evaluation for treatment, and the patient has not seen a dentist as referred, the dental hygienist will make every practical or reasonable effort to schedule the patient with a VDH dentist or local private dentist volunteer for an examination, treatment plan and follow up care.