



Survey of West Virginia School Districts

School-Based and School-Linked Oral Health
Services in 2008-2009

West Virginia School Health Technical Assistance and Evaluation Center
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Marshall University
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**Survey of County School Systems
School-Based & School-Linked Oral Health Services
West Virginia
2008-2009**

Background

The Surgeon General's report released in 2000 recommends the development of more

"Sealants and fluoridated water have been found effective both at protecting teeth and saving money. Sealants cost one-third as much as filling a cavity and have been shown after just one application to prevent 60 percent of decay in molars. And for every \$1 invested in water fluoridation, communities save \$38 in dental treatment costs, according to the CDC."

-- Pew Center on the States, The Cost of Delay

preventive, school-based oral health services, especially school-based sealant programs, fluoride rinse programs and the use of public-private partnerships. A just-released report from the Pew Center on the States assessed and graded states on whether and how well they are employing eight proven and promising policy approaches to ensure dental

health and access to care for disadvantaged children. West Virginia is among eight states that received an "F".¹ The six benchmarks that West Virginia failed to meet are:

1. High risk schools with sealant programs
2. Hygienists allowed to place sealants without dentist's prior exam
3. Pays medical providers for early preventive health (e.g., fluoride varnish)
4. Dentists' median fees reimbursed by Medicaid
5. Authorizes new primary care dental providers
6. Tracks data on children's dental health

Through funding from the Benedum Foundation, the School Health Technical Assistance and Evaluation Center at Marshall University provides technical assistance to communities to encourage the development and improvement of school based oral health services. As part of this effort, an on-line survey of county school systems was conducted during the spring and summer of 2009. The survey was a follow-up to a survey of county school nurses conducted in 2006-2007. This second survey was designed by the Marshall staff with input from the Office of Healthy Schools in the West Virginia Department of Education. The request to participate in the survey was sent by the Office of Healthy Schools to the designated school nurse coordinator or contact in each county. Several follow-up requests and reminders were sent during the summer and into the fall of 2009.

Purpose

The purposes of the survey were:

1. To measure progress in expansion of school-based oral health services in each county;

2. To identify issues, needs and barriers to implementing school-based oral health services; and
3. To develop a county-level directory describing current school-based oral health services. The directory is available at www.wvsbha.org.

This report addresses the first and second purposes above.

Results

RESA	Response Percent	# Responding / #Total Counties in RESA
1	5.1%	2 out of 6
2	10.3%	4 out of 5
3	7.7%	3 out of 4
4	10.3%	4 out of 6
5	12.8%	5 out of 9
6	12.8%	5 out of 5
7	23.1%	9 out of 12
8	17.9%	7 out of 8
<i>answered question: 39</i>		
<i>skipped question: 0</i>		

Thirty-nine of West Virginia's 55 counties completed the survey. In most counties, the school nurse coordinator was the respondent. In some counties, the school nurse coordinator referred the survey to someone else for completion. School nurses responded from 29 counties; dental hygienists responded for five

counties; three administrators and a dentist comprised the remainder. RESA 7 is the most heavily represented of the eight RESAs (Regional Education Service Agency), with 23% of the responding counties. It also has the largest number of counties of any RESA.

The following counties responded to the survey.

- | | | | |
|-------------|----------------|---------------|----------------|
| 1. Barbour | 11. Grant | 21. Marion | 31. Pocahontas |
| 2. Berkeley | 12. Greenbrier | 22. Marshall | 32. Randolph |
| 3. Boone | 13. Hancock | 23. Mercer | 33. Roane |
| 4. Braxton | 14. Hardy | 24. Mineral | 34. Taylor |
| 5. Brooke | 15. Harrison | 25. Mingo | 35. Tucker |
| 6. Cabell | 16. Jackson | 26. Monroe | 36. Upshur |
| 7. Calhoun | 17. Jefferson | 27. Morgan | 37. Wetzel |
| 8. Clay | 18. Kanawha | 28. Ohio | 38. Wirt |
| 9. Fayette | 19. Lincoln | 29. Pendleton | 39. Wood |
| 10. Gilmer | 20. Logan | 30. Pleasants | |

Services Provided

During the 2008-2009 school year, did any of the schools in your county have a program to provide any of the following oral health services to students either directly or through collaboration with local dental providers?	% answering yes
Screenings/assessments by school nurses/dental hygienists	46%
Fluoride rinse/supplements	36%
Dental Exams by a dentist	28%
Cleanings	18%
Sealants	20%
Restorative care (fillings)	10%
Fluoride varnish	10%
<i>Answered question: 39</i>	
<i>Skipped question: 0</i>	

Participants were asked if any of the schools in their county had a program to provide any of the following oral health services to students, either directly or through collaboration with local dentists, during the 2008–2009 school year. Less than half of the counties conducted screenings or assessments; only 39% reported that fluoride

rinse/supplements were provided in any of their county's schools; and only four counties had provided any sealants.

Setting

Please describe the setting for oral health services, selecting as many as apply.	Percent	Count
On site -- In the schools	92.9%	26
Off site -- At a central school location	14.3%	4
Off site -- In a private dentist office	10.7%	3
In a mobile dental van	3.5%	1
Other	3.5%	1
<i>Answered question:28</i>		
<i>Skipped question:11</i>		

Among those stating that they have services of any kind, 93% provide services in the schools; four counties include a central school location; three counties identified private dentists' offices as one of their settings; and one county listed the county health department.

Number of Students Receiving Services

Students who received:	#
An oral health screening/assessment by school nurses/dental hygienists	21,291
Fluoride rinse/supplements	11,400
Fluoride varnishes	204
Sealants	960
Dental exams by a dentist	6,623
Cleanings	3,200
Restorative care (fillings)	1,544
<i>Answered question: 26</i>	
<i>Skipped question: 13</i>	

Respondents were asked to estimate how many students received various services in the school program during the 2008–2009 school year. Kanawha County accounts for the majority of sealants, exams and restorative services, followed by Lincoln, Morgan and Monroe counties.

Support

How are the services paid for? Check all that apply	
Supplies/equipment from Office of Maternal, Child and Family Health	44.4%
County school system contributes funding to help support program	33.3%
Volunteer time from local dentists & hygienists	33.3%
Third party billing (Insurance, Medicaid, CHIP)	33.3%
Grant / Foundation support/ Other	33.3%
Schools provide transportation to off site dental location	3.7%
<i>Answered question: 27</i>	
<i>Skipped question :12</i>	

For the 27 counties that offer some types of services, support is from a variety of sources including county school system funding, volunteer time from local dentists, third party billing, and grants. Among the "other" category, two counties listed "volunteers," one mentioned teacher aides and two counties did not know the sources of support.

Fluoridation

Fluoride rinse/supplements in schools are recommended for schools with high percentages of

Do you and/or the school nurses know the fluoride levels of the water systems or wells supplying the residences and schools of students?	
No	76.3%
Yes, for both residence and school	15.8%
Yes, for schools only	7.9%
Yes, for residence only	0.0%
<i>Answered question: 38</i>	
<i>Skipped question: 1</i>	

high-risk students and communities with less than optimal fluoride levels. Survey participants were asked if they and/or the school nurse knew the fluoride levels of the water systems or wells supplying the residences and schools of the students. An astounding 76% reported that they were not familiar

with the fluoride levels of the water systems or wells in their county.

Of those schools above - where a majority of students come from communities with less than optimal fluoridation - what percentage consistently/routinely provide fluoride rinse/supplement programs in the school?	
Don't know	47.4%
Less than 25%	36.8%
25-50%	5.3%
Over 50%	5.3%
Over 75%	5.3%
<i>Answered question: 38</i>	
<i>Skipped question: 1</i>	

When asked what percentage of schools in high risk communities routinely provide fluoride rinse/supplements, most did not know and almost 39% said that it was less than 25%.

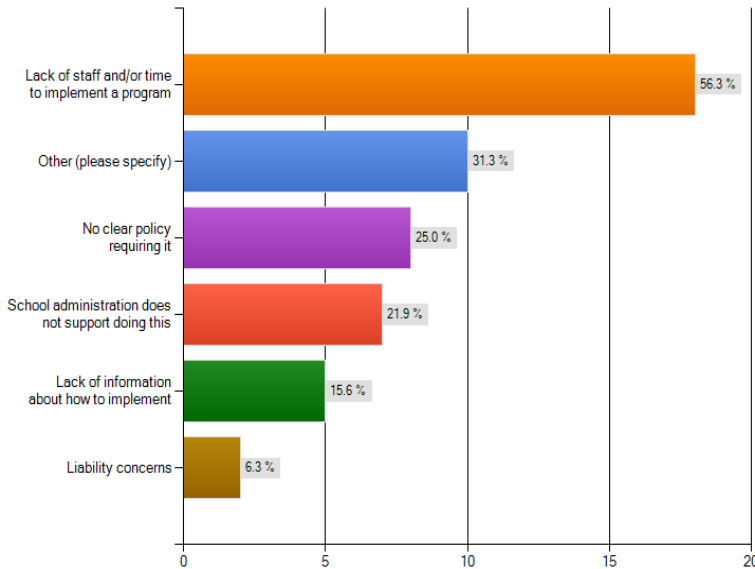
If a fluoride rinse/supplement program is in place in these schools, who dispenses the rinse/supplements? (Please check all that apply)	
No fluoride rinse programs offered or needed	59.5%
School Nurse	21.6%
Parent	8.1%
Teacher	8.1%
Oral Health Educator	2.7%
Health Department Nurse	0.0%
Other (please specify)	18.9%
<i>answered question: 37</i>	
<i>skipped question: 2</i>	

For those school districts providing fluoride rinse, the school nurse was most often the provider. In a few instances, parents, teachers or the regional oral health educator provided the rinse.

Reasons for Not Providing Fluoride Rinse

When asked for reasons that a fluoride rinse program was not implemented in schools with high percentages of students coming from low/non fluoridated communities, thirty-two counties responded. The most frequent reason given was a lack of staff time (56%, N=18).

If a fluoride rinse/supplement program is not offered in schools where a majority of the students have less than optimally fluoridated water, what are the reasons?



However, other reasons are also informative: 25% cited lack of clear policies, 21% said school administration does not support it; and 16% cited a lack of information. Among the “other” reasons given, two additional respondents cited liability issues, and two said it was not needed/that students receive fluoride at home or from dentist.

Referral for Services

Almost half of the respondents did not know of any provisions in the community or within the school system for students who have difficulty getting dental care. Among the “other” category were mentioned school-based clinics, referral to a community health center, the Give Kids a Smile program and a local charity.

Please indicate how your school system and/or community provide for students who have difficulty obtaining needed dental care. (Check all that apply)	
No provisions for care that I am aware of	48.6%
Local dentists accept selected number of children free of charge	29.7%
Public dental clinic	10.8%
Transportation is provided	8.1%
Other (please specify)	16.2%
<i>answered question: 37</i>	
<i>skipped question: 2</i>	

Mouth Guards

Are mouth guards provided to students who engage in the following sports?	Yes	No
Baseball	7	21
Basketball	8	20
Football	30	3
Soccer	4	22
<i>answered question: 33</i>		
<i>skipped question: 6</i>		

West Virginia follows the recommendations of the National Federation of High Schools for specific sports. The Federation recommends that mouth guards be required for varsity and junior varsity football. However, dental

professional standards recommend guards for many of the other sports, especially wrestling. In West Virginia, some school districts provide mouth guards to the football team; others require students to purchase their mouth guard.

Technical Assistance Needs

Respondents were asked to select from a list of ideas for helping them to improve access to dental services. The top three were 1) a list of local dentists who will accept Medicaid; 2) having a dental hygienist to develop and provide services; and 3) information and training about water fluoride levels.

Which of the following would be useful to improve access to dental services for your students? Select all that apply.	
List of local dentists currently accepting children who are uninsured or have Medicaid.	70.3%
Information/training/toolkits on how to develop a school based dental services program.	43.2%
A registered dental hygienist to develop and provide school based/linked services to students.	54.1%
Information about water fluoride levels in our community	43.2%
A school based / linked dental clinic	40.5%
Nothing is needed - this issue is not a priority for our schools	5.4%
Other	24.3%
<i>answered question: 37</i>	
<i>skipped question: 2</i>	

Among the “other” suggestions:

- Improved Medicaid reimbursement process for dentists
- Fluoride in county water systems
- Training for board of education on the importance and/or benefits of fluoride rinse program
- Funding to provide restorative care for children

Conclusions and Discussion

The reasons for poor oral health status in West Virginia are complicated and multifaceted. Improvement in oral health status will ultimately depend upon many factors, most of which are outside of the control of schools. However, schools do play an important role in prevention and provide an opportunity to reach a significant portion of the population. However, school nurses are usually understaffed and often overwhelmed by the health needs of their students. The lack of resources within schools, the shortage of school nurses and the many demands on their time

make it difficult for them to develop any prevention programs. Oral health tends to take a backseat to needs that are more urgent. Results of this survey indicate that in 2008-2009:

1. Comprehensive school-based oral health prevention programs are limited to a few counties, usually those with more dentists and more resources.
2. Less than half of the counties conducted screenings/assessments in any schools: this is actually a decline since 2006–2007 but is not a surprise because it was during this time that the Council of School Nurses recommended that it is outside the scope of practice for the school nurse to perform mass dental screenings; and that school nurses should be encouraging and using the dental screen documented on the student’s enrolling HealthCheck documentation which is completed by the student’s primary care provider as part of a comprehensive wellness screening. Also during this period, the Governor’s Kids First Initiative and WV Board of Education Pre-K Policy 2525 changed the school enrollment screening process to the child’s medical home through HealthCheck.
3. Three-fourths of the respondents did not know the fluoride levels of the water in their counties;
4. Nine counties reported offering sealant programs; with a total of 960 students served;
5. Only 39% of the counties conduct fluoride rinse programs in any of their schools;
6. The most frequent reason given for not providing fluoride rinse was a lack of staff time (18 counties, 56%); however, other reasons are also informative: eight counties (25%) cited lack of clear policies; 21% said school administration does not support it; 16% cited a lack of information and four counties (12%) mentioned liability concerns.
7. Almost half of the respondents did not know of any provisions in the community or within the school system for students who have difficulty getting dental care.

Recommendations

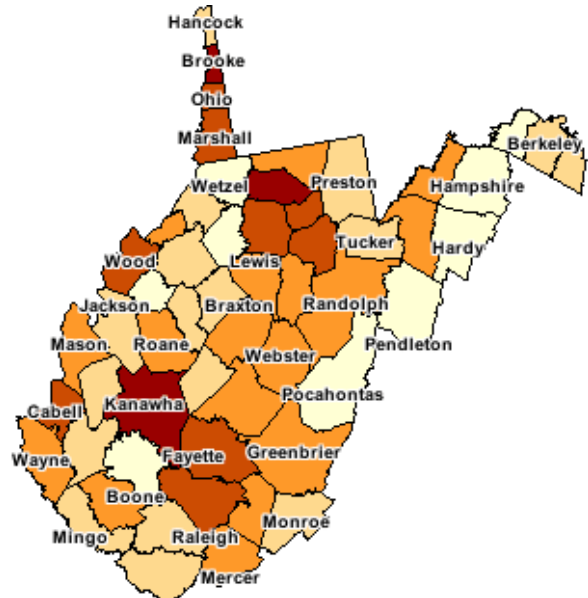
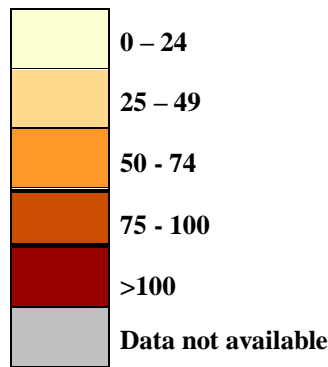
Several activities can be undertaken to support school-based efforts to improve access to oral health services and increase prevention practices. Most can be done with existing or limited additional resources:

1. Access: Schools and local dental societies should collaborate to ensure access to services for any student in need. There is a precedent for this in the Headstart program. Local dental societies work with Headstart to ensure that any child in need of dental care receives services. This model could be expanded to the schools.

2. Screening: Through West Virginia State Board of Education Pre-K Policy 2525 and the inception of Governor Joe Manchin’s Kids First Initiative, schools are working with medical providers and parents to ensure that a HealthCheck or comparable comprehensive health screening, including a dental screen, is performed prior to school entry. The HealthCheck dental screen includes the documentation of the last dental home visit, water source including fluoridation and any current dental problems. The recently adopted State Oral Health Plan includes goals to provide professional development and training on oral health to medical providers. Such training, along with continuous quality improvement by primary care providers, is needed to ensure the quality and effectiveness of dental screenings provided during the annual HealthCheck exam.

3. Technical assistance for implementing fluoride rinse programs: Tools, resources and information about fluoride levels, liability and fluoride rinse programs would make it easier for school nurses to take a leadership role in implementing such programs. The WV Office of Maternal, Child and Family Health recommends fluoride rinse programs in areas with a non-fluoridated water supply, newly fluoridated areas, and areas where natural fluoride content is inconsequential. However, identifying these areas is time - consuming and complicated. There are 542 public water service districts in West Virginia². According to the CDC, 69.8 % of the state’s population has fluoridated water.³ Forty-three counties in West Virginia have less than 75% of the population with adequate fluoridation⁴.

Percentage of total county population receiving fluoridated water



Among the population served by public water supplies, 91% have adequate fluoridation. While this is higher than the national average, there are still twelve counties where less than 75% of the population on public water supplies receives adequate fluoride. Those counties are Boone, Hardy, Hampshire, Mason, Pendleton, Pocahontas, Preston, Morgan, McDowell, Wyoming, Tucker and Wetzel.⁵ Providing this information to school - nurses and school wellness committees – would help to facilitate action.

In addition to county-specific information about fluoridation levels, tool kits and resources could be developed to address such topics as parent consent, use of volunteers, policies related to fluoride rinse/supplements, and training of teachers and volunteers.

4. Awareness and marketing: Increasing awareness about the importance of oral health, the benefits of school-based programs and how to implement such programs would encourage school systems to focus attention on this issue. Training materials and tool kits designed for specific audiences – board of education members, parents, teachers, school administrators and school nurses – could be developed and made available to school systems.

5. Funding for sealant programs in schools: Dental sealants have been approved for use for many years, and are recommended by professional health associations and public health agencies, particularly for children at high risk for tooth decay.⁶ The Task Force on Community Preventive Services strongly recommended school-based or school-linked dental sealant

programs in their 2002 report⁷. As the Pew Center has stated, sealants cost one-third as much as filling a cavity. According to the most recent data for West Virginia (1998), among 8-year-olds, only 37% had sealants.⁸ A recent partnership between the Claude Worthington Benedum Foundation and the Appalachian Regional Commission is providing one time funding to seventeen counties for school-based dental services, including sealants. As those projects get underway, they will contribute information on the oral health status of children and the issues regarding implementation of school-based oral health services. Funding to continue and expand this initiative would be a cost- effective investment in prevention.

6. Mouth guards: More study regarding the use of and recommendations for mouth guards would be helpful in establishing whether the current requirements are sufficient. An analysis of the number of mouth injuries resulting from various sports and the cost to schools of providing free mouth guards should be conducted.

7. Regular Data Reporting: If West Virginia is to measure progress in meeting national standards or benchmarks, it is critical to collect data. This survey provides a baseline against which to measure progress but only thirty-nine counties responded. Ideally, this survey would be repeated every 2-3 years and all counties would be expected to provide a routine set of data.

¹ The Cost of Delay, Pew Center for the States, <http://www.pewcenteronthestates.org>

² <http://apps.nccd.cdc.gov/MWF/SearchResultsV.asp>

³ http://apps.nccd.cdc.gov/gisdoh/waterfluor_id.aspx?fid=WV

⁴ <http://apps.nccd.cdc.gov/gisdoh/waterfluor.aspx>

⁵ <http://apps.nccd.cdc.gov/gisdoh/waterfluor.aspx>

⁶ <http://apps.nccd.cdc.gov/gisdoh/child.aspx>

⁷ http://www.cdc.gov/OralHealth/publications/library/burdenbook/pdfs/DS_factsheet.pdf

⁸ WV Oral Health Plan, Office Maternal, Child and Family Health,
http://www.wvdhhr.org/mcfh/ICAH/oral_health_program.asp