

State Comparison Report

Findings for School Sealant Programs in 17 States Funded by DOH (2013–2014)

Coverage: Median % of high-need schoolsⁱ with SSP (Table 1)

- ALL Median = 15.8 (mean = 20.2%; 16 states reporting)
 - RURAL Median = 16.0 (mean = 19.3; 13 states reporting)
 - URBAN Median = 17.6 (mean = 20.2%; 13 states reporting)
- % of high-need school with SSP by state
 - <25% -- 12 states
 - Between 25% to 50% -- 4 states
 - Between 50% to 75% -- 1 state

Risk status of children screened by school sealant program (Median value, Table 2)

- 49.9% with caries experience, defined as treated or untreated decay (National average: US children, aged 6 to 11 years, 53.2%ⁱⁱ)
- 35.1% had untreated decay (National average: U.S. children, aged 5 to 11 years, 20.4%ⁱⁱⁱ)
- 6.19% had urgent treatment need
- Annual 1st molar attack rate was 6.3% (Estimated value for U.S. children, aged 6 to 8 years, 4.0%^{iv})

Number and median age distribution of children receiving sealants (Table 3)

- 88,319 children received dental sealants
 - 62.02% aged 6 to 9 years
 - 26.79% aged 10 to 12 years
 - 9.47% aged 13 to 15 years

Impact

- Among children screened by SSP, sealant prevalence increased from 33.1% prior to sealant delivery to 71.5% after sealant delivery.
- Estimated prevented cavities equal about 1 cavity over 9-years per child sealed^v

For further investigation

- Number of high-need urban (Table 4)
- About 35% of teeth sealed are not permanent molars
- Number of children sealed per school was 15

Table 1. Coverage: Percentage of high-need schools with sealant program in funded states, 2013-2014

State	Urban	Rural	All
	17.4	18.4	18.1
A	29.5	15.1	24.7
B	27.7	0.0	27.7
C	2.2	1.3	2.0
D	22.0	39.3	32.5
E	NR	NR	3.1
F	NR	NR	28.0
G	NR	NR	12.1
H	34.4	8.2	15.8
I	1.8	7.2	5.1
J	12.8	17.0	13.9
K	0.0	2.3	1.8
L	17.8	0.0	17.4
M	44.4	41.3	43.2
N	0.0	27.5	14.9
O	4.7	20.4	14.1
P	67.8	71.7	69.0
Median	17.6	16.0	15.8
Average	20.2	19.3	20.2

*NR= Not Reported

Table 2: Risk status of children screened by school sealant program in funded states, 2013-2014

State	Caries experience (%)	Untreated decay (%)	Annual probability 1st M develops caries	Urgent treatment need (%)
	59.80	36.90	0.056	3.50
A	NR	33.12	NR	NR
B	45.30	19.60	0.074	0.60
C	65.36	39.08	0.040	8.23
D	50.1	18.60	0.050	NR
E	49.70	33.82	0.070	25.13
F	35.00	27.50	0.092	5.87
G	48.40	34.30	NR	6.50
H	44.35	44.35	0.060	2.14
I	54.10	35.40	0.158	15.00
J	42.10	37.80	0.060	3.30
K	NR	40.00	NR	NR
L	54.40	44.90	0.119	8.60
M	57.30	14.80	0.049	0.30
N	NR	NR	NR	35.00
O	45.90	36.10	NR	8.14
P	57.00	34.80	0.065	4.70
Median	49.90	35.10	0.063	6.19
Average	50.63	33.19	0.075	9.07
US	53.2	20.40	0.040	N/A

Table 3: Sealant delivery by age group and tooth type in funded states

State	No. sealed	Children			Mean no. per child	Sealed Teeth	
		6 to 9 yrs (%)	10 to 12 yrs (%)	13 to 15 yrs (%)		1M (%)	2M (%)
A	4892	57.69	28.03	9.42	4.12	57.97	9.05
B	3750	77.71	21.44	0.51	3.01	89.52	10.47
C	1604	56.23	26.00	16.40	3.98	56.28	11.78
D	1275	63.84	34.75	1.25	3.43	79.41	6.18
E	5650	62.16	25.17	12.19	5.75	45.39	11.28
F	2121	65.87	17.30	15.13	3.32	71.45	23.86
G	4119	NR	NR	NR	3.16	94.76	5.24
H	3138	18.27	61.76	12.69	2.67	100.00	0.00
I	2304	60.49	21.15	11.38	3.47	80.47	14.82
J	740	74.19	25.54	0.27	3.46	91.06	6.99
K	21446	65.17	21.58	9.51	3.96	60.91	10.32
L	58	58.62	27.59	1.72	3.78	100.00	0.00
M	1289	96.95	3.05	0.00	2.24	100.00	0.00
N	9573	45.06	31.90	22.18	3.68	75.69	24.10
O	1435	61.95	31.22	6.48	3.90	100.00	0.00
P	1099	40.04	35.40	16.92	6.35	36.73	11.57
Median	23826	62.09	29.91	5.67	3.51	70.86	13.38
Total	2304	62.02	26.79	9.47	3.51	79.41	10.32
	88,319						

Table 4: Number of high-need schools served by sealant programs¹

	URBAN	RURAL
FUNDED STATES	582	1261

ⁱ Defined as urban school with >50% students on free/reduced lunch program or rural school. Definition of high-need in rural area determined by each state.

ⁱⁱ NHANES 1999-2004, most recent data brief to report caries experience in mixed dentition.

ⁱⁱⁱ NHANES 2005 to 2008; most recent data brief to report untreated decay in mixed dentition.

^{iv} Estimated using methodology in Griffin et. al., 2014. Mean DMFT for children 6 to 8 years was 0.19 and sealant relevance was 0.203 in NHANES 1999–2004. Mean DMFT among children without sealant equals $0.19/(1-0.203)$, 0.24. Assuming only permanent teeth with caries are 1st molars yields DMFT per 1st molar of 0.06. Midpoint age for 6 to 8 year-olds is 7.5 so 1st molars have been in mouth 1.5 years (1st molars erupt on average at age 6).

^v Actual value per child was 0.869. Estimate based on annual 1st molar attack rate of 6.3% and 1st year retention rate of 86% using methodology in Griffin et. al., 2014.