CDC Tools to Estimate School Sealant Program Cost and Benefit

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SOME PRELIMINARIES

School Sealant Program (SSP) Return on Investment (ROI)



Economics 101

- Calculations vary by perspective
 - Societal includes productivity losses and uses resource costs
 - Payer (e.g., Medicaid) uses fees for restorations and sealants
- Discount future costs and outcomes
- Benefit = averted cavities * cost per cavity
 - CDC SSP Excel Benefit Tool
- SSP Cost = SSP cost per student/tooth
 - CDC SEALS Cost Calculator Web App

SSP BENEFIT TOOL

Benefit = Averted Cavities * Cost per Cavity



Before



After

Per Child Data Collection Requirements *

- Screening data prior to sealant placement
 - Child's age
 - Presence of sealants
 - Number DF 1st Molars
- At sealant placement
 - Number 1M sealed
- 9 to 15 months after placement
 - Number of program sealants retained

* Programs sealing 2nd molars need to collect number 2nd molars with DF, sealed and retained.

Excel Tool Calculation: Annual Attack Rate (AR)*

Age (1)	1M at risk (2)	DF1M (3)	AR (4)	Annual AR (5)
7	1000	100	10%	10%
8	1000	195	20%	10%
Average				10%

^{*}Griffin et al., J Public Health Dent, 2015; Griffin et al., Health Affairs, 2016

Excel Tool Calculation: 1M Cavities w/o SSP*

Year	Sound	Cavities
0	3000	
1	2700	300
2	2430	570
3	2187	813
4	1968	1032
5	1771	1229
6	1594	1406
7	1435	1565
8	1291	1709
9	1162	1838

^{*}Griffin et al. J Public Health Dent, 2015

Excel Tool Calculation: 1M Cavities with SSP*

		Sound	
Year	Sound Sealed	Unsealed	Cavities
1	2670	297	33
2	2424	489	87
3	2230	615	156
4	2074	693	233
5	1948	737	315
6	1846	756	399
7	1761	756	483
8	1691	744	565
9	1632	722	645

^{*}Griffin et al., J Public Health Dent, 2015

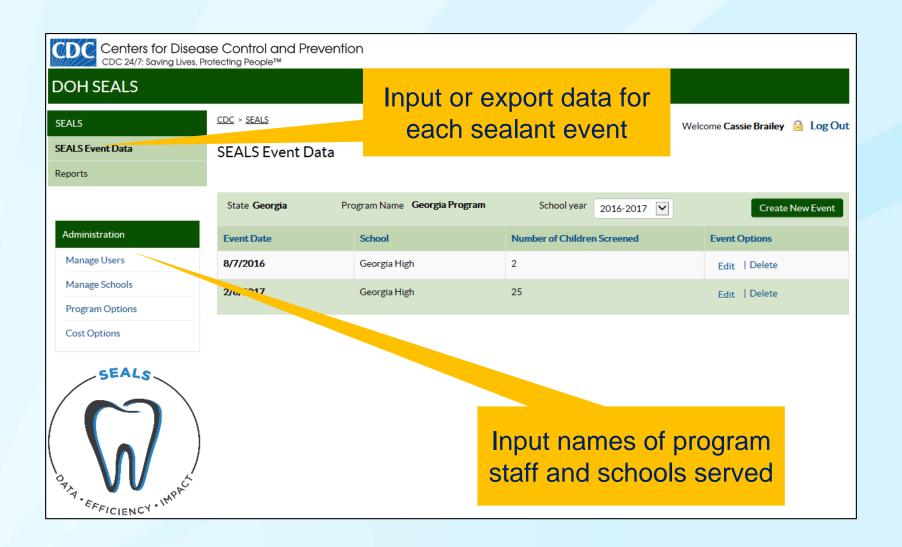
Excel Tool Calculation: Benefit

- Averted Cavities = 1838 645 = 1193
- Cost per cavity (Societal)*
 - Productivity losses = \$21
 - Restoration costs = \$139
 - Total = **\$160**
- Benefit = 1193*\$160 = \$190,880
 - Per child \$191

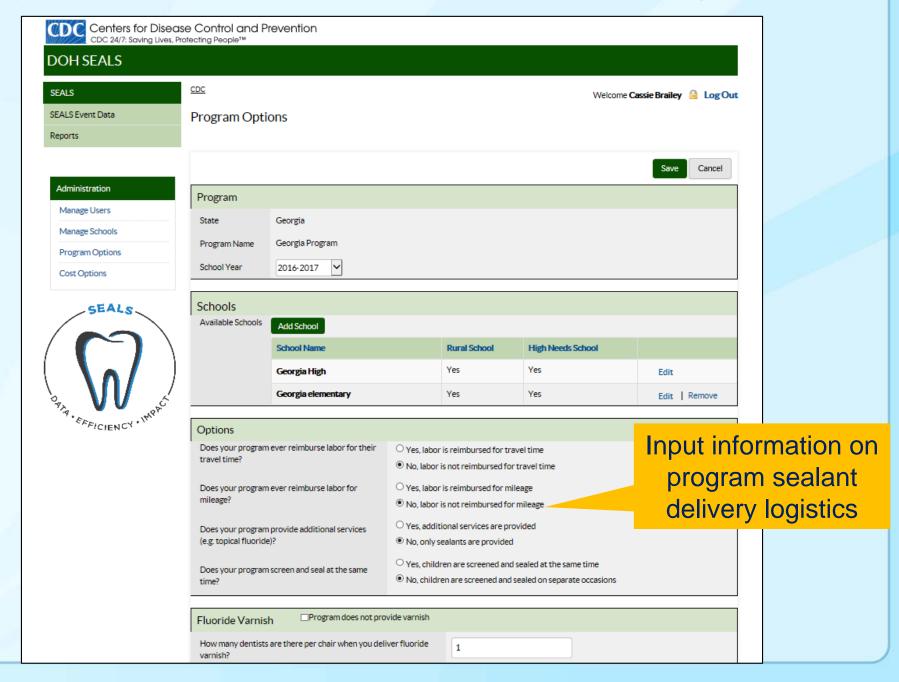
SEALS WEB APP ESTIMATE SSP COSTS



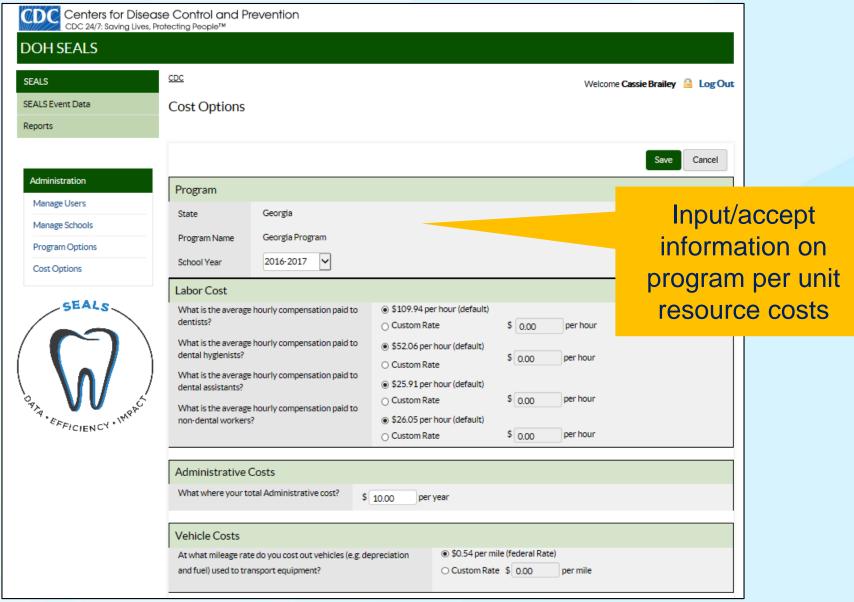
Input Information on SSP Profile



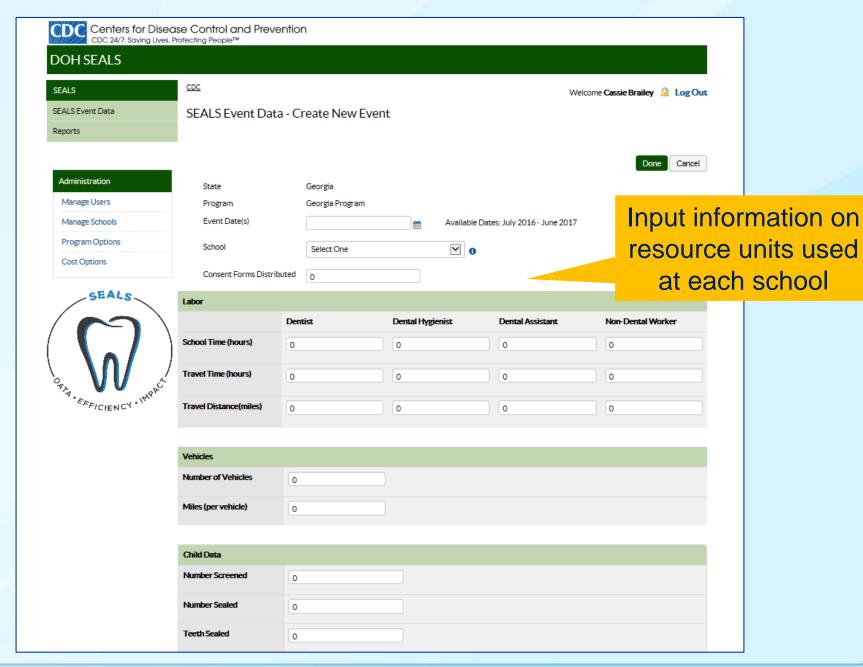
Input Information on SSP Delivery Logistics



Input or Accept Values for SS{ Costs_{per unit}



Input Information on Number of Resource Units Used



SEALS Web App Output: Cost Report

SSP COST REPORT

Total Annual Cost \$65,000 Cost per Child \$65



PUTTING IT ALL TOGETHER

If Benefit – SSP Cost > 0, estimate cost-savings

If Benefit – SSP cost < 0, estimate cost-effectiveness ratio

SSP Cost Savings

"It is estimated that over 9 years, ABC Seals saved \$191 in associated dental treatment costs per student receiving sealants. After netting out sealant delivery costs of \$65 per child, ABC Seals saved society \$126 per child sealed."





QUESTIONS?

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