

User's Manual
for
SEALS:
Sealant Efficiency Assessment
for Locals and States



*An Evaluation and Benchmarking Tool for Administrators
of Community Sealant Programs*

Program Concept by Susan Griffin & Kari Jones
Programming by Kari Jones with Reidar Hagtvedt and Tera Bates
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User's Manual by Kari Jones & Susan Griffin

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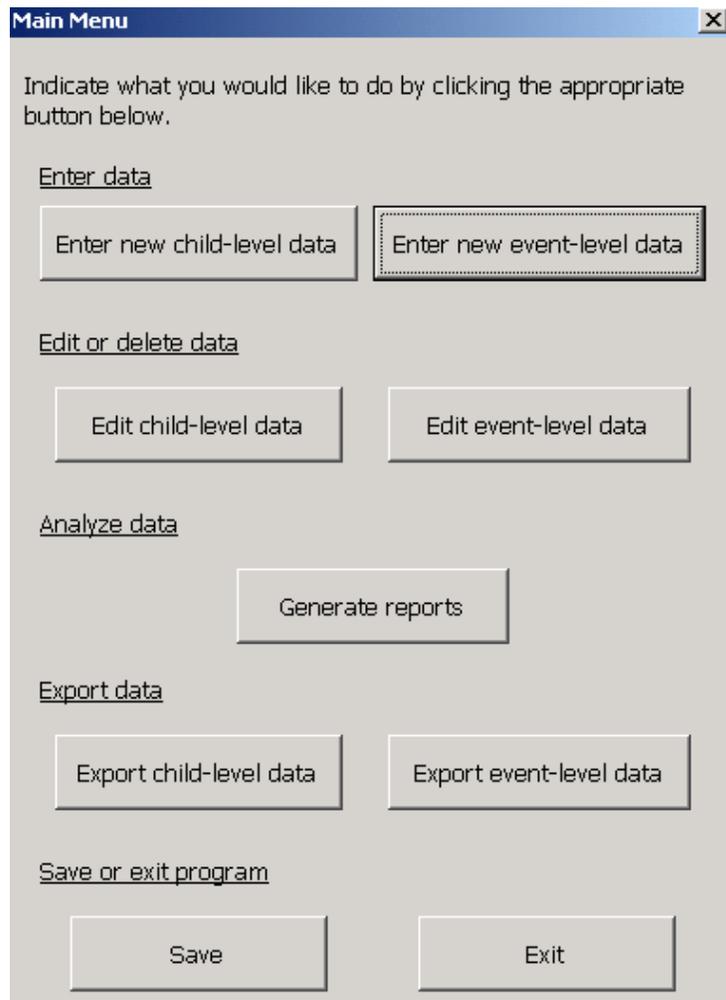
I. Statement of Purpose

SEALS is designed to capture data regarding your sealant program in a form that allows you to generate summary reports both for an individual event and for your program as a whole. SEALS also saves your data in a format such that state-level program administrators (in states with decentralized programs) may use the data from your program and other programs in the state to generate summary reports at the state-wide level.

You will enter the event-level data from the “SEALS Event-Level Data Collection Form” for each site (or event). You will also enter data regarding each participant/patient at each event from the “SEALS Child-Level Data Collection Form”s. Then you may generate, print, and export reports and/or export your raw data to create graphs or do additional analysis.

II. Overview of the Program

The program centers on a Main Menu, which is displayed: when you start the program, when you finish any task, and when you cancel any task.



9 buttons on the Main Menu allow you to: (1) enter child-level data, (2) edit (including delete) previously entered child-level data, (3) enter event-level data, (4) edit (including delete) previously entered event-level data, (5) generate summary reports, (6) export your child-level data to a new Excel file, (7) export your event-level data to a new Excel file, (8) save your data, and (9) exit the program.

III. Running the Program

Do not run the program from a floppy disk or CD; save it to your hard drive first.

Make sure that the file did not save as "Read-only". To do this, start Windows Explorer. (In Windows 98, click on "Start", then "Programs", then "Windows Explorer". In Windows XP, click on "Start", then "All Programs", then "Accessories", and finally "Windows Explorer".) Find the file in the folder in which it was saved. Right-click on the file name (e.g. SEALSv3) and click on "Properties". On the "General" tab, under "Attributes", make sure that "Read-only" is not checked. If it is, click on the checkmark to toggle it un-checked, and click "Apply".

The program is best viewed with the screen area set to 1024 by 768 pixels. [This is achieved by clicking Start at the bottom left-hand corner of the screen; next click Settings, then Control Panel. In the Control Panel window, double-click on Display, click on the “Settings” tab and move the pointer under the “Screen area” section until it reads “1024 by 768” and click OK.]

To start the SEALS software, simply open the file in Excel.

A dialog box may appear warning you that the program contains macros. You must choose to “Enable Macros” to run the program.

NOTE

To enable macros, your security in Excel must be set to medium or lower. [This is achieved by clicking “Tools” on the menu at the top of the Excel screen. Next click Macro, and then click Security. Choose Medium and click OK.]

The computers in some workplaces require an administrator to lower the security level.

A dialog box appears, welcoming you to the SEALS program. Choose “Begin!” to see the Main Menu.

A. Entering Child-Level Data

On the Main Menu, click on “Enter new child-level data.”

“Choose or enter the event attended”

You will see a dialog box entitled “Choose or enter the event attended.” To ensure that the data is stored properly, you must tell the software the name of the event attended by the child or children for which you are about to enter data. *Each individual event should be assigned a single, unique name.*

NOTE

The screening and sealing at a particular school commencing during a given school year along with the retention checks of these sealants would collectively be a single event. The screening and sealing (and subsequent retention checks of these sealants) at a different school or at the same school commencing during a different school year would be a separate event. If additional sealants are prescribed for a child during a retention check, this screening, sealing, and any subsequent retention check would be part of a new event.

Click on the arrow/triangle in the right-hand side of the white box to see the list of events for which you have already entered (event-level and/or child-level) data.

Click on the name of the event attended by the child or children for whom you wish to enter data, then click "Enter."

ONLY IF THE EVENT ATTENDED IS NOT ON THE LIST, type the name of the event in the white box, then choose "Enter."

WARNING

Before entering a new event name, review the list of event names carefully for alternate formulations. For example, you may have previously listed Lincoln Elementary School as "Lincoln" or "Lincoln Elem" or "Lincoln Elementary" etc.

If you store data for a single event under 2 or more slightly different names, the reports generated for these events will be meaningless. If you accidentally name one event twice, the data (both event-level and child-level) for one of the event names must be re-entered under the other event name and the duplicate entries deleted.

“Enter child-level data”

Next, you will see the user form entitled “Enter child-level data.”

The screenshot shows a software window titled "Enter child-level data" with a close button (X) in the top right corner. The window contains the following elements:

- Instructions:** A text box explaining that the user will enter child-level data for a chosen event. It notes that the "Q" number in parentheses indicates the question number from the SEALS Child-Level Data Collection Form. It also states that 99 should be entered for missing data. A final instruction says: "To record your entries and enter data for another child at this event, click 'Next/Enter' below. To record your entries and return to the main menu, click 'Last/Enter.' You may press 'Cancel' to return to the main menu. Note that data currently entered on the form will be lost."
- Event:** A text input field containing the word "test".
- Demographic Fields:** ID# (Q4), Sex (Q5), Grade (Q6), Age (Q8), and Race/ethnicity (Q9). The race/ethnicity section includes checkboxes for White, Black/African American, Asian, Hispanic, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, Other, and Race/ethnicity missing. There are also input fields for Special health care needs (Q10) and Medicaid/SCHIP status (Q11).
- I. Screening:** A section with input fields for Untreated Cavities (Q12), Caries Experience (Q13), Sealants Present (Q14), Treatment Urgency (Q15), Referral (Q16), and Decayed or filled surfaces (Q17) with sub-fields a and b.
- II. Preventive Services:** A section with input fields for the number of surfaces sealed (Q18) with sub-fields b and c, and Fluoride treatment received (Q19).
- III. Follow-Up:** A section with input fields for the number of program sealants retained (Q20) [If no followup performed, enter 99] and Referral Visit (Q21).
- Navigation Buttons:** Three buttons at the bottom: "Last/Enter", "Next/Enter", and "Cancel".

On this form you will enter data collected on the “SEALS Child-Level Data Collection Form.” See Appendix A for a sample of this form.

The "Q" numbers in parentheses on your screen correspond to the question numbers on the paper form. You will complete this user form once for each child at the chosen event. The name of the event attended by the child for whom you are entering data appears (as a reminder) in a white box in the upper right-hand corner of the form.

To enter or edit data for any question, click in the box next to the question number. You may press the Tab key or Enter key to move sequentially through the questions on the screen; press the Shift key at the same time as the Tab key to move backwards through the boxes.

HINT

Data for Q9 may be entered without using the mouse by tabbing through the race/ethnicity categories and pressing the spacebar once to “check,” and again to “uncheck,” the highlighted category.

You must enter data for all questions. If you leave a question blank, you will receive an error message. If the data concerning a particular question is missing or has not yet been collected, enter “99” as its value.

Q4: Enter a **unique** ID number for each child at any event. This may be up to 15 characters in length.

Q5: Enter the child’s sex. Your entry must be numeric: 0 = Male, 1 = Female

Q6: Enter the child’s grade in school. Enter 0 for Kindergarten. Only grades 0 through 12 are accepted.

Q8: Enter the child’s age; only ages between 4 and 18 are accepted.

Q9: Check all race/ethnicity categories that apply.

To check a box you may either left-click on it with your mouse, or, if you prefer using the keyboard, tab through the race/ethnicity categories and press the spacebar once to “check,” and again to “uncheck,” the highlighted category.

If race/ethnicity data is missing on the paper form, check the last box – “Race/ethnicity data missing.”

Q10: Enter the child’s special needs status. Your entry must be numeric: 0 = No, 1 = Yes

Q11: Enter the child’s Medicaid/SCHIP status. Your entry must be numeric: 0 = Medicaid, 1 = SCHIP, 2 = neither, 99 = unknown

Q12: “Untreated cavities” includes any cavities in any teeth, not just those charted.

Q13: Caries experience means treated or untreated decay in any teeth, not just those charted.

Q20 & 21: If a follow-up has not yet been performed or will not be performed, enter “99” for both questions. You may edit these values if and when a follow-up is performed.

Q20: At retention check, record only the number of retained sealants that were placed by your program; do not count sealants delivered privately or by another program.

To record your entries and enter data for another child at this event, click "Next/Enter."

To record your entries and return to the Main Menu, click "Last/Enter."

You may press "Cancel" at any time to return to the Main Menu; however, the data currently on the form will not be saved.

B. Editing Child-Level Data

1. Simple Edits

On the Main Menu, click on "Edit child-level data."

"Choose the event attended"

You will see a dialog box entitled "Choose the event attended" - the program needs to know the name of the event attended by the child or children for which you wish to edit data.

From those listed in the white box, click on the event attended by the child for which you wish to edit data, then click "Enter."

"Choose the record to edit"

Next you will see a dialog box entitled "Choose the record to edit." Select the ID number of the child whose record you wish to edit, and click "Edit Record."

"Enter child-level data"

You will see the "Enter child-level data" form with the data previously entered for this child. The name of the event attended by the child for whom you are editing data appears (as a reminder) in a white box in the upper right-hand corner of the form. Make the desired changes. Click "Next/Enter" to save the updated information and choose another children from the same event for which you wish to edit data; click "Last/Enter" to save the updated information and return to the Main Menu.

2. Deleting a Record

On the Main Menu, click on "Edit child-level data."

"Choose the event attended"

You will see a dialog box entitled "Choose the event attended" - SEALS needs to know the name of the event attended by the child or children for which you wish to delete data.

From those listed in the white box, click on the event attended by the child whose data you wish to delete, then click "Enter."

"Choose the record to edit"

Next you will see a dialog box entitled "Choose the record to edit." Select the ID number of the child whose record you wish to delete, and click "Delete Record."

You will see a warning message specifying the record you are about to delete. If this is the correct record, press "Yes." To cancel the operation, press "No."

C. Entering Event-Level Data

On the Main Menu, click on "Enter new event-level data."

"Choose or enter the event name"

First, you will see a dialog box entitled "Choose or enter the event name."

Choose the name of the event for which you wish to enter data from the list (which may be seen by clicking on the arrow in the right-hand side of the white box), then click "Enter."

ONLY IF no child-level data has previously been entered for this event, and its name does not appear on the list, type the name of a new event in the box, then click "Enter."

NOTE

The screening and sealing at a particular school commencing during a given school year along with the retention checks of these sealants would collectively be a single event.

The screening and sealing (and subsequent retention checks of these sealants) at a different school or at the same school commencing during a different school year would be a separate event. If additional sealants are prescribed for a child during a retention check, this screening, sealing, and any subsequent retention check would be part of a new event. *Each individual event should be assigned a single, unique name.*

WARNING

Review the event names carefully for alternate formulations of the desired event. For example, you may have previously listed Lincoln Elementary School as "Lincoln" or "Lincoln Elem" or "Lincoln Elementary" etc.

If you store data for a single event under 2 or more slightly different names, the reports generated for these events will be meaningless. If you accidentally name one event twice, the data for one of the event names needs to be re-entered under the other event name and the duplicate entries deleted.

“Enter event-level data”

Next you will see a user form entitled “Enter event-level data.”

The screenshot shows a software window titled "Enter event-level data". It contains the following fields and sections:

- Instructions:** A text box explaining the purpose of the form and providing instructions on how to use it.
- Input Fields:** School year (Q3), Site type (Q4), Dental chairs (Q5) with sub-fields a, b, c, Org. hours (Q6), Site time (Q7) with sub-fields a, b, c, d, OH education (Q8) with sub-fields a, b, Dates (Q9) with sub-fields a, b, c, Caries status criteria (Q10).
- Personnel:** A table with columns for "Dental Hrs (a)" and "Other Hrs (b)". Rows include Screening (Q11), Sealant delivery (Q12), and Retention check (Q13).
- Grade level targeted (Q15):** A grid of checkboxes for Kindergarten, 1st grade, 2nd grade, 3rd grade, 4th grade, 5th grade, 6th grade, 7th grade, and No grade.
- Pop targeted (Q14):** A single input field.
- Teeth Targeted (Q16):** A list of checkboxes for First molars, Second molars, Premolars, and Incisors.
- # consent forms (Q17):** An input field with the instruction "(Enter '0' if unknown.)"
- Type of consent (Q18):** An input field.
- Sealant material (Q19):** An input field.
- Placement procedure (Q20):** An input field.
- Value of resources used:** A group of input fields for Labor costs (Q21), Equipment costs (Q22), Instrument costs (Q23), Administrative costs (Q24), Consumables costs (Q25), and Other costs (Q26).
- Buttons:** "Enter" and "Cancel" buttons.
- Event:** A dropdown menu currently showing "School4".

On this form you will enter data collected on the “SEALS Event-Level Data Collection Form.” See Appendix B for a sample of this form. The "Q" numbers in parentheses correspond to the question numbers on the paper form. The name of the event for which you are entering data appears (as a reminder) in a white box in the bottom right-hand corner of the form.

NOTE

You must enter all event-level data for a given event at once. You will receive an error message if any fields are left blank. If you enter “99” for missing data, all calculations will be performed using 99 as the value of the variable.

You may press the Tab key or Enter key to move sequentially through the questions; press the Shift key at the same time as the Tab key to move backwards through the boxes.

HINT

Q15 & Q16 may be answered without using the mouse by tabbing through the categories and pressing the spacebar once to “check,” and again to “uncheck,” the highlighted category.

Q3: Enter the 4-digit year that the school year began. For example, for the '02-'03 school year, enter 2002.

Q5b: If you choose to enter the event-level data for an event after only the screening phase for the event is completed, no sealant delivery will have been performed. Enter 0 until sealants are delivered; the value may be edited at that time.

Q5c: If you choose to enter the event-level data for an event after only the screening and sealant delivery phases for the event are completed, no retention checks will have been performed. Enter 0 until follow-ups are performed; the value may be edited at that time.

Q6, Q7, & Q8a:

Please enter times in quarter hour increments using the decimals .25, .5, and .75.

Q7b: If you choose to enter the event-level data for an event after only the screening phase for the event is completed, no sealant delivery will have been performed. Enter 0 until sealants are delivered; the value may be edited at that time.

Q7c: If you choose to enter the event-level data for an event after only the screening and sealant delivery phases for the event are completed, no retention checks will have been performed yet. Enter 0 until follow-ups are performed; the value may be edited at that time.

Q8a: To calculate the number of child hours of oral health education offered, multiply the length of each educational session by the number of children in attendance. For example, if a half hour was spent with an assembly of 60 students, and one hour was spent in a classroom of 20 students, the number of child hours of oral health education offered is $(0.5*60) + (1*20)$, or 50 hours.

Q9: While some phases of the event may take place over several days, choose a single representative date for each phase. While these dates may need to be recorded precisely on the child-level data collection forms (as they represent medical records and dental prescriptions), the dates on the event-level form are used only to determine whether the time between sealant placement and retention checks is less than 8 months, 8 – 14 months, or greater than 14 months.

Dates should be entered in 8-digit format, including slashes. For example, January 1, 2000 should be entered 01/01/2000.

NOTE

Please enter 12/31/1998 for the date of any phase that has not yet taken place or will not take place. For example, if screening and sealing have been performed but the follow-up is several months away, enter 12/31/1998 for 9.c.

HINT

If you use the “12/31/1998 placeholder, don’t forget to edit date values later when the sealant phase or follow-up is performed; if other data is updated but these dates remain unchanged, some summary and performance measures will be calculated excluding relevant data.

Q12 & Q13: If you choose to enter the event-level data for an event before sealant delivery or retention checks for this event are completed, enter 0; these values may be edited when sealant delivery and/or retention checks occur.

Q14: If sealants are offered to all children at a given school, this value should reflect the percentage of all children at the school on free or reduced lunch. However, if sealants are only

offered to children below a certain income threshold, estimate the percentage of these children on free or reduced lunch.

Q15 & Q16: Check all targeted grades and teeth that apply; do not check grades or teeth that were included only incidentally and not as a rule.

HINT

To check a box you may either left-click on it with the mouse, or, if you prefer using the keyboard, tab through the categories and press the spacebar once to “check,” and again to “uncheck,” the highlighted category.

Q17: Enter the number of consent forms sent; or enter “0” if this value is unknown. If you enter “99,” relevant summary and performance measures will reflect 99 consents distributed.

Q18: Positive consent requires that a parent or guardian to sign a consent form allowing delivery of sealants. Under passive consent, parents are merely notified, and children are seen/treated unless the parent signs a form stating otherwise.

Q21 – Q26: Enter the amount in dollars *without* the dollar sign (\$).

Detailed instructions for calculating costs may be found in Appendix C.

To record your entries, click "Enter." You may click "Cancel" at any time to return to the Main Menu; however, the data currently on the form will not be saved.

D. Editing Event-Level Data

1. Simple Edits

On the Main Menu, click “Edit event-level data.”

“Choose the event to edit”

You will see a dialog box entitled “Choose the event to edit.” Click on the name (in the white box) of the event for which you wish to edit data, then click “Edit Record.”

“Enter event-level data”

You will see the “Enter event-level data” form with the data previously entered for this event. The name of the event for which you are editing data appears (as a reminder) in a white box in the bottom right-hand corner of the form. Make the desired changes, then click “Enter.”

2. Deleting a Record

On the Main Menu, press “Edit event-level data.”

“Choose the event to edit”

First, you will see a dialog box entitled “Choose the event to edit.” Click on the name (in the white box) of the event for which you wish to delete data, then click “Delete Record.”

You will then see a message specifying the records you are about to delete. If these are the correct records, press “Yes.” To cancel the operation, press “No.”

WARNING

All event-level AND child-level data for this event will be deleted if you click “Yes.”

E. Generating Reports

1. Event-Level Reports

On the Main Menu, click on “Generate reports.” You will see a dialog box entitled “Choose type of report”.

Check the box next to “Event-level”, then, from the list in the white box, click on the name of the event for which you would like to generate a report.

Click “Enter.”

A message will be displayed stating the number of children for whom you have entered child-level data for this event. You may use this information to verify that all of the child-level data for this event has been entered. Click “OK.”

The report will be visible on the screen. A sample of this report is found in Appendix D.

You may print the report by clicking on “Print This Report”.

You may export the report as an Excel file by clicking on “Export Report.” A new file will open, which will temporarily be titled “Book1” or “Book2” or “Book3” etc., depending on how many new files have been opened during this session of Excel. It contains your report in a worksheet labeled “EventReport”. However, you will not be able to access the new file until you exit SEALS. As it has not already been saved, we recommend saving this new file as soon as you exit SEALS.

Return to the Main Menu by clicking on “Back to Main Menu.”

2. Program-Level Reports

On the Main Menu, click on “Generate reports.” You will see a dialog box entitled “Choose type of report”.

Check the box for “Program Level.”

Type the name of your program (as you wish it to appear on the program report) in the white box below the heading “Enter the name of your program.”

In the boxes provided, enter the amount that your program received from the state in grant funds and Medicaid reimbursements for the (school) year of the report. Enter “0” if none were received.

SEALS will use retention check data to calculate your program’s retention rate. This rate is used as the first year’s retention rate in calculating the number of cavities averted by your program. (See the Technical Notes to the Program-Level Report for more details about the calculation of these measures.) If retention checks have not been performed, or if the calculated retention rate is not representative of your program, you may enter an estimated retention rate, which SEALS will use to calculate caries averted. Simply check the box to the left of “Override calculated retention rate” and enter the estimated retention rate in the white box to the right. This value must be between 0 (signaling 0% retention) and 1 (signaling 100% retention). If you want SEALS to calculate the retention rate from your retention check data, leave these boxes blank. If the retention rate is not overridden and no retention check data has been entered, the retention rate and cavities averted will be reported as “0”.

Click “Enter.”

The report will be visible on the screen. A sample of this report is found in Appendix E.

You may print the report by clicking on “Print This Report.”

You may export the report as an Excel file by clicking on “Export Report.” A new file will open, which will temporarily be titled “Book1” or “Book2” or “Book3” etc., depending on how many new files have been opened during this session of Excel. It contains your report in a worksheet labeled “ProgramReport”. However, you will not be able to access the new file until you exit SEALS. As it has not already been saved, we recommend saving this new file as soon as you exit SEALS.

Return to the Main Menu by clicking on “Back to Main Menu.”

F. Exporting Data

You may export your child-level or event-level data for further analysis – for example, to create graphs, or to calculate other values required for a grant applications, etc.

1. Exporting Child-level Data

On the Main Menu, click “Export child-level data”. A new file will open, which will temporarily be titled “Book1” or “Book2” or “Book3” etc., depending on how many new files you’ve opened during this session of Excel. It contains your child-level data in a worksheet labeled “Child_Level”. You will not be able to access the new file until you exit SEALS. As it has not already been saved, we recommend saving this new file as soon as you exit SEALS.

2. Exporting Event-level Data

On the Main Menu, click “Export event-level data”. A new file will open, which will temporarily be titled “Book1” or “Book2” or “Book3” etc. depending on how many new files you’ve opened during this session of Excel. It contains your event-level data in a worksheet labeled “Event_Level”. You will not be able to access the new file until you exit SEALS. As it has not already been saved, we recommend saving this new file as soon as you exit SEALS.

G. Saving Your Data

Whenever the SEALS software is exited for any reason, your data will be saved first, even if the software crashes and the SEALS program closes. However, if your *computer* crashes, you may lose the data that has been entered since you last saved your work or exited the program. Thus, we recommend saving your data often by clicking “Save” on the Main Menu.

H. Exiting the Program

On the Main Menu, click “Exit.” Your data will be saved, and the file will close.

I. Sending Your Data to the State Administrator

Run a Program-level Report and enter the correct values for “state grants” and “Medicaid reimbursement” in the dialog box entitled “Choose type of report”.

Without updating the data in any way or running other reports, return to the Main Menu. Export your child-level data. Export your event-level data.

Exit the SEALS program.

Save the child-level data and event-level data files UNALTERED.

Send all three files to your State Administrator, noting the contents of each file.

IV. Frequently Asked Questions

Q: How can I determine if I entered data for a certain event?

A: On the Main Menu, click “Edit event-level data.” Review the list of event names (if your list of events is long, it may be necessary to scroll through the list). If you do not see the name of the event in question, you have not entered event-level data. If you see the name of the event in question, click on the event name, then click on “Edit Record.” If data is already entered, it will appear in the window on the screen; click “Cancel” to return to the Main Menu. If no data is entered for this event, a message box will announce this fact; click “Cancel” to return to the Main Menu.

Q: How can I review the event-level data I entered for a particular event?

A: On the Main Menu, click “Edit event-level data.” Click on the name of the event in question. Review the data. Revise as necessary. Click “Enter”.

Q: How can I tell for which children I have already entered child-level data?

A: On the Main Menu, click “Edit child-level data.” In the window entitled “Choose the Event Attended,” click on the name of the event in which the children in question participated. The ID #s in the list box correspond to those children for which you have already entered data. Click “Cancel” to return to the Main Menu.

Q: How can I review the data I entered for a particular child?

A: On the Main Menu, click “Edit child-level data.” In the window entitled “Choose the Event Attended,” click on the name of the event in which the children in question participated. In the window entitled “Choose the Record to Edit”, click on the ID# of the child in question. Review the data. Revise as necessary. Click “Last/Enter”.

Q: How can I generate a program-level report for a subset of events?

A: Open the SEALS file that contains all of your data. **SAVE THE FILE UNDER ANOTHER NAME**, e.g. RuralSchoolsOnly.xls. From the Main Menu, select “Edit event-level data;” choose the name of one of the events that you wish to be **EXCLUDED** from your subset of events; click on “Delete record.” This will delete all event-level and child-level data for the chosen event. Repeat this process for all events you wish to **EXCLUDE** from your subset. From the Main Menu choose “Generate reports” and generate a program-level report. The report will reflect only those events in your subset.

Q: I was working in SEALS when an error message appeared on the screen and the program closed; my computer did not crash and Excel is still running. What happened?

A: SEALS experienced a problem, whereupon it closed the active file. Your data has been saved. Simply open the program again and continue where you left off. If the same problem recurs, check the relevant pages of the User’s Manual for warnings or indications of possible user error. If none is found, contact the software designer through Susan Griffin at the CDC at sig1@cdc.gov or 770-488-6064.

APPENDIX A

SEALS Child-Level Data Collection Form

SEALS Child-Level Data Collection Form

1. Program Name: _____ 2. Event/Site Name: _____
 3. Patient Name: First _____ Last _____
 4. ID #: _____ *Each child's ID # must be unique for that event; do not use duplicate ID #'s at any one event.
 5. Sex: _____ (0 = Male, 1 = Female) 6. Grade: _____ (0 = Kindergarten) 7. DOB _____ 8. Age: _____
 9. Race/ethnicity (Check all that apply): ___ White ___ Black/African American ___ Asian ___ Hispanic
 ___ American Indian/Alaska Native ___ Native Hawaiian/Pacific Islander ___ Other
 10. Special health care needs: _____ (0 = No, 1 = Yes) 11. Medicaid/SCHIP status _____ (0=Medicaid, 1=SCHIP, 2=neither, 99=unknown)

I. Screening – **D** = decay, **F** = filled, **M** = missing, **S** = sealant present, **PS** = prescribe sealant,
RS = recommend reseat, **no mark** = no treatment recommended

1	2-O	2-L	3-O	3-L	4	5	12	13	14-O	14-L	15-O	15-L	16	Sealant Prescriber's Signature

														Date
32	31-O	31-B	30-O	30-B	29	28	21	20	19-O	19-B	18-O	18-B	17	Fluoride Prescriber's Signature
KEY: O=Occlusal, L=Lingual, B=Buccal														
Date														

Comments:

12. Untreated Cavities: 0 = No untreated cavities 1 = Untreated cavities present	13. Caries Experience: 0 = No caries experience 1 = Caries experience	14. Sealants Present: 0 = No sealants 1 = Sealants present
15. Treatment Urgency: 0 = No obvious problem 1 = Early dental care 2 = Urgent care	16. Referred for treatment: 0 = No 1 = Yes	17. Decayed or filled surfaces: a. 1 st molars b. 2 nd molars <div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; width: 40px; height: 20px;"></div> <div style="border: 1px solid black; width: 40px; height: 20px;"></div> </div>

II. Preventive Services - Mark the teeth/tooth surfaces where sealants were placed with an **S**.

1	2-O	2-L	3-O	3-L	4	5	12	13	14-O	14-L	15-O	15-L	16	Provider's Signature

														Date _____
32	31-O	31-B	30-O	30-B	29	28	21	20	19-O	19-B	18-O	18-B	17	

Comments:

18. Number of surfaces sealed among: a. 1 st molars b. 2 nd molars c. other <div style="display: flex; justify-content: space-around; width: 100%;"> <div style="border: 1px solid black; width: 40px; height: 20px;"></div> <div style="border: 1px solid black; width: 40px; height: 20px;"></div> <div style="border: 1px solid black; width: 40px; height: 20px;"></div> </div>	19. Fluoride treatment received: 0 = none 1 = varnish 2 = gel/foam/rinse
---	---

III. Follow-Up - Mark teeth/tooth surfaces where sealants were retained with an **R**.

1	2-O	2-L	3-O	3-L	4	5	12	13	14-O	14-L	15-O	15-L	16	Evaluator's Signature

														Date _____
32	31-O	31-B	30-O	30-B	29	28	21	20	19-O	19-B	18-O	18-B	17	

Comments:

20. Number of surfaces retaining a program sealant:	21. Subsequent visit for restorative treatment: 0 = No 1 = Yes 99 = Unknown, no follow-up performed by program
---	---

APPENDIX B

SEALS Event-Level Data Collection Form

14. Population targeted: _____
 0 = < 20% of children in free or reduced lunch program
 1 = ≥ 20% & < 40% of children in free or reduced lunch program
 2 = ≥ 40% & < 50% of children in free or reduced lunch program
 3 = ≥ 50% of children in free or reduced lunch program
 4 = other target
 5 = no target
15. Grade level(s) targeted (Check all that apply):
 _____ Kindergarten _____ 1st grade _____ 2nd grade
 _____ 3rd grade _____ 4th grade _____ 5th grade
 _____ 6th grade _____ 7th grade _____ no grade level targeted
16. Permanent teeth targeted (Check all that apply):
 _____ First molars
 _____ Second molars
 _____ Premolars
 _____ Incisors
17. # of consent forms distributed: _____ (Enter "0" if unknown.)
18. Type of consent: _____
 0 = Positive
 1 = Passive
19. Type of sealant material used: _____
 0 = Light-cured
 1 = Self-cured
 2 = Combination
20. Sealant placement procedure: _____
 0 = 2-handed
 1 = 4-handed
 2 = Combination

Value of total resources used, by category*

21. Labor costs _____
22. Equipment costs _____
23. Instrument costs _____
24. Administrative costs _____
25. Cost of consumable goods _____
26. Other costs _____

*Costs in 21 – 26 summed over all events for the year should equal the total value of resources used by your program for the year.

APPENDIX C

Calculating Event Costs

Calculating Event Costs

This appendix offers suggestions for calculating each of the six categories of costs on the Event-Level Data Collection Form; these include labor, equipment, instruments, administrative, consumable goods, and other.

LABOR

Paid Labor

The cost of labor hired by your program equals the total amount paid in wages, benefits, and other forms of compensation, except reimbursements for travel. Reimbursements for travel are “OTHER” costs; see below.

Volunteer Labor

You must first assign a job classification to each volunteer at your event (i.e., dentist, dental hygienist, dental assistant, etc.). To calculate the value of this labor, we suggest multiplying the total number of hours worked by volunteers in each job classification (exclude travel time) by the corresponding median hourly wage in Table 1. Alternatively, you may go to <http://www.bls.gov/oes/current/oesrcst.htm> and look up average hourly wages for these job classifications in your state.

Table 1: Suggested hourly costs of volunteer labor

Job classification	Median hourly wage (including benefits)
Dentist	\$82.82
Dental Hygienist	\$22.09
Dental Assistant	\$13.25
Other	\$10.63

Example

For a 5-hour event where a dentist screened children for one hour and two dental hygienists were present for the whole event, your total labor costs would be $1 * \$82.82 + 2 * 5 * \$22.09 = \$303.72$.

EQUIPMENT

Annual Cost

Calculating the annual cost of your equipment requires three pieces of information - the useful life of the equipment, the discount rate (we recommend using 3%), and the value of the equipment (i.e., purchase price). To obtain the annual cost of your equipment, divide its value by the annuity factor: ($Annual\ Cost = \frac{Value}{Annuity\ Factor}$). We suggest using a useful life of 8 years for each piece of equipment (annuity factor = 7.23). Annuity factors are provided in Table 2. In addition, costs as quoted by DNTLWORKS for various pieces of equipment are provided in Table 3.

Include OSHA-required items that do not have to be replaced every year in the “equipment” category, employing an estimated useful life appropriate for your program. Cost estimates for various OSHA-required items are also presented in Table 3. (We are unable to offer a suggested cost for first aid kits because types, components, and prices vary so widely – please check catalogs or on-line retailers.)

Table 2: Annuity factors for different useful lives (3% discount rate)

Useful life in years	Annuity Factor ¹
1	1
2	1.97
3	2.91
4	3.83
5	4.72
6	5.58
7	6.42
8	7.23
9	8.02
10	8.79
11	9.53
12	10.25
13	10.95
14	11.63
15	12.30
16	12.94
17	13.56
18	14.17
19	14.75
20	15.32
21	15.88
22	16.42
23	16.94
24	17.44
25	17.94

¹ We assume that benefit and costs are accrued at beginning of year.

Example

Suppose your program had five 8-hour events and that you paid \$1,000 for a dental chair with an 8-year useful life. The annual cost of the chair would be \$138.31 ($=1,000.00/7.23$) in year 1, \$138.31 in year 2, and so on through year 8. After year 8, the annual cost to your program of this piece of equipment would be \$0.

Table 3: Costs of selected equipment and infection control durables

Equipment (Model Number)	Purchase Price
Chair (#4006) ²	\$1078
Compressor (#1500) ²	\$1482
ProPak 1 Cart (#1000) ²	\$1185
Pro Seal Cart (#1310) ²	\$3190
Pro Cart 1 (#2600) ²	\$4615
Equipment cart (#8003) ²	\$190
Overhead light (#6133) ²	\$785
Curing light (#2704) ²	\$400
Operator stool (#4110) ²	\$478
Assistant stool (#4210) ²	\$783
Autoclave (#7001) ²	\$5047
Ultrasonic piece (#2700) ²	\$706
Instrument Tray ³	\$36
Eyewash stations ⁴	\$53
Bloodborne pathogen spill kits ⁴	\$10
Chemical hazard spill kits ⁴	\$68
First aid kits	variable

Purchased versus Borrowed Equipment

If you borrowed the dental chair described in the example above (i.e., the chair is used by other programs) you would need to determine how much of the annual cost should be charged to your event. We suggest dividing the number of hours your program used the chair by 2000 (this is the number of hours the chair would be available during the year, assuming a 40 hour work week and 50 work weeks per year). The annual value of the chair should then be multiplied by this proportion.

Example

If an event lasted 3 days, each day equaling 8 hours (including set up and break down time) and the total travel time was 3 hours (1 hour per round trip) then your event used the chair (or had the chair unavailable for other's use) for 27 hours. Thus $27/2000$ or 1.35% of the chair's annual cost should be charged to your program. The cost of the chair at this event would be \$1.87 ($=0.0135*\138.31). Sum over all events.

² Costs from October 2005 DNTLWORKS catalog

³ Value obtained from price quotations on the Internet

⁴ Costs provided by Midge Pfeffer.

Program Van

If your program owns a van, or a personal vehicle is used *exclusively* for the sealant program, you can estimate the annual cost of the van with the methodology described in this section (i.e. for equipment). To estimate costs associated with a personal vehicle that is used both for the sealant program and other uses (e.g. personal), see the “OTHER” costs section below.

INSTRUMENTS

Costing permanent instruments should be handled the same way as equipment, except that we suggest using a useful life of five years (annuity factor = 4.72) for permanent instruments. The cost of disposable instruments equals the cost of the instrument times the number of instruments used by your event. Costs for various instruments are provided in Table 4.

Table 4: Estimated instrument costs

Instrument	Per Unit Cost
Mirror	\$1.68
Disposable Mirrors	\$0.45
Explorers	\$14.36
Garners (pair)	\$16.96
Ball burnisher	\$21.53
Handpiece	\$95.66

ADMINISTRATIVE

This category captures the costs of managing and sustaining your program. Administrative costs include the costs of activities such as grant writing and Medicaid billing. Administrative time includes organization, setup, breakdown, and cleanup. For administrative labor costs, be sure to include both regular salary and benefits. Administrative costs may also include phone charges, utilities, copy and fax services, office supplies, postage, and rent on any space *used exclusively for your program*. Cost of office furniture or equipment *used exclusively for your program*, such as computers, copy machines, fax machines, etc., should be converted to annual costs in the same manner as dental equipment; see the “EQUIPMENT” section above.

Examples of administrative activities include

- Organizing events (e.g. creating, distributing, and collecting consent forms and information handouts)
- Data entry
- Program report preparation
- Supplies management (e.g. ordering, inventory, storage)
- Clerical support
- Organizing pre- and post-event activities
- Grant management
- Grant writing
- Delivering presentations to professional, community, or school groups (e.g. for the purpose of organizing events or requesting support)
- Following up on presentations (e.g. soliciting support or preparing thank you messages)
- Scheduling staffing

- Assembling give-away packets
- Preparing charts
- Orientation for staff/volunteers
- Storage of equipment
- Case management/follow up of referrals
- Following up on medical history questions
- Determining Medicaid eligibility
- Billing
- Making follow up phone calls for referrals, consents, etc. (direct patient/parent connection)
- Scheduling retention checks

CONSUMABLE GOODS

Sealant material

For donated sealant material, Wisconsin Seal A Smile estimates that a kit valued at \$100 serves about 50 children at 4 teeth per child.

Infection Control and Safety Costs

This category includes infection control and safety items that are used up in one year, such as Sharps containers, water testing kits, biohazard waste bags, and costs of autoclave services.

Soft Goods⁵

Be sure to include your costs for provider gloves, mask, tray and head rest covers, sterilization bags, and other paper items. It might be convenient to categorize your disposable costs into three phases: screening, sealing, and checking children for sealant retention. If you perform screening and sealing separately, below are suggested average costs per child for each of these phases.

Screening = \$1.57⁶

Sealing

(2 handed) = \$2.08⁷

(4 handed) = \$3.23⁸

⁵ Cost estimates based on data provided by Nancy Rublee.

⁶ Estimate includes provider gloves (\$0.36), mask (\$0.79), tray cover (\$0.02), head rest cover (\$0.04), air water syringe tip (\$0.20), and paper towels and disinfectant (\$0.10). An additional charge of \$0.06 was added for sterilization bag.

⁷ Estimate includes provider gloves (\$0.36), mask (\$0.79), patient bib (\$0.05), tray cover (\$0.02), saliva ejector (\$0.04), air water syringe tip (\$0.20), and for dri-angels, cotton, gauze micro benda-brush, mouth spray, disinfectant (\$0.56). An additional charge of \$0.06 was added for sterilization bag.

(When screening and sealing are performed together, fewer soft goods may be required than the sum of the estimates above.)

If retention checks are performed separately, this cost has been estimated to be \$1.33⁹.

OTHER COSTS

Other costs include:

- Pro-rated malpractice insurance
- Mileage for personal vehicle(s) used for your program
[Multiply your program-related mileage by the U.S. Government reimbursement for mileage (\$0.485 in October 2005)¹⁰]
- Costs associated with in-classroom education, including materials, labor, and travel
- Reimbursement of paid labor for travel
- For volunteers who travel at least 1 hour each way, travel time multiplied by cost per volunteer labor hour (See Table 1) **plus** mileage at U.S. Government reimbursement rate for mileage (see above)
- Fuel and maintenance costs of vehicles owned by the program and personal vehicles used *exclusively* for the program

⁸ Estimate includes provider gloves (\$0.72), mask (\$1.58), patient bib (\$0.05), tray cover (\$0.02), saliva ejector (\$0.04), air water syringe tip (\$0.20), and for dri-angels, cotton, gauze micro benda-brush, mouth spray, disinfectant (\$0.56). An additional charge of \$0.06 was added for sterilization bag.

⁹ Estimate includes provider gloves (\$0.36), mask (\$0.79), tray cover (\$0.02), and paper towels and disinfectant (\$0.10). An additional charge of \$0.06 was added for sterilization bag.

¹⁰ Value based on U.S. Government reimbursement for mileage base on depreciation of vehicle and fuel costs;
http://www.gsa.gov/Portal/gsa/ep/contentView.do?contentId=9646&contentType=GSA_BASIC

APPENDIX D

Sample Event-Level Report

SUMMARY STATISTICS FOR EVENT:

School1 2004 - 2005

General Demographics

Site type	School		
Grade(s) targeted	2nd, 6th		
Teeth targeted	First Molars, Second Molars		
Mean age	9.4		
Mean grade	3.8		
% male	50.0	% reporting sex	100.0
% Medicaid patients	42.9	% SCHIP patients	28.6
% on neither	28.6	% reporting Medicaid/SCHIP status	87.5
% White‡	28.6	% Asian‡	14.3
% Black/African American‡	28.6	% Hispanic‡	14.3
% American Indian/Alaska Native‡	14.3	% Other‡	14.3
% Hawaiian/Pacific Islander‡	14.3	% reporting race	87.5

Summary of effectiveness in targeting high-risk populations that lack access to care

	#	%* of participants	% response	rank**
1. Participants with untreated decay (baseline) [¶]	4	57.1	87.5	1
2. Participants with urgent dental needs (baseline)	2	28.6	87.5	1
3. Participants with early dental needs (baseline)	2	28.6	87.5	1
4. Participants with treated or untreated decay (baseline)	6	85.7	87.5	1
5. Participants with sealants present (baseline)	2	28.6	87.5	1
6. Percentage of targeted students (those receiving consent forms) on free or reduced lunch		>=40% & <50%		

Summary of effectiveness of targeting high risk teeth

1. Does event target 1st molars of second graders?	Yes
2. Does event target 2nd molars of sixth graders?	Yes

Summary of effectiveness in reaching target population

1. Type of consent form (See also #3 & #9 in the next section)	Positive
---	----------

Summary of services delivered

	value	% response	rank**
1. Number of children screened	8		
2. Number of screened children with special health care needs	1		
3. Children screened as a percentage of consent forms distributed	6.7		1
4. Number of children sealed	7		
5. Number of 1st molar surfaces sealed	11		
6. Number of 2nd molar surfaces sealed	10		
7. Number of other tooth surfaces sealed	3		
8. Percentage of screened children with at least one sealant after event	87.5		
9. Percentage of screened children subsequently sealed*	100.0	87.5	1
10. Average number of surfaces sealed per child sealed	3.4		
11. Number of children receiving fluoride varnish	2		
12. Number of children receiving other fluoride treatments	2		
13. Number of children referred for dental care	4		
14. Percentage of children referred for dental care*	66.7	75.0	
15. Number of children receiving oral health education	100		
16. Average hours of oral health education received per student	0.5		

Summary of quality of services delivered

	value	value	rank**
1. Number of referrals that resulted in a dental visit	2		
2. Percentage of "early dental care" referrals that resulted in a dental visit*	50.0		1
3. Percentage of "urgent care" referrals that resulted in a dental visit*	50.0		1
4. Number of children evaluated for sealant retention 8 to 14 months from delivery	5		
5. Number of children evaluated for sealant retention <8 months / >14 months from delivery	0	0	
6. Percentage of sealed children evaluated for sealant retention	71.4		
7. Sealant retention rate / # children based on	0.875	5	1

Summary of efficiency of input usage

rank*	value	rank**
1. Total cost	\$750.00	
2. Cost per child screened	\$93.75	
3. Cost per child sealed	\$107.14	
4. Cost per surface sealed	\$31.25	
5. Labor cost per child screened	\$12.50	
6. Equipment cost per child screened	\$12.50	
7. Instrument cost per child screened	\$12.50	
8. Consumable goods cost per child screened	\$25.00	
9. Administrative cost per child screened	\$25.00	
10. Number of children screened per chair hour	0.50	1
11. Number of children sealed per chair hour	0.44	1
12. Number of children checked for sealant retention per chair hour	1.25	1
13. Number of labor hours per chair hour during screening	1.50	1
14. Number of labor hours per chair hour during sealing	1.50	1
15. Number of labor hours per chair hour during retention check	5.00	1
16. Administrative time (including organization, setup, and breakdown) per child screened (in hours)	1.50	
17. Type of sealant material used	Light-cured	
18. Sealant delivery procedure	2-handed	

‡ The sum of the percentages in all racial/ethnic groups may exceed 100%, as more than one group may be reported per child.

* based on responses not entered as "99"

** Rank relative to other events in this program for which the summary measure could be calculated.

Number of events in this program: 3

¶ Criteria: WHO

APPENDIX E

Sample Program-Level Report

SUMMARY STATISTICS FOR PROGRAM: test**2004 - 2005****GENERAL DEMOGRAPHICS**

Number of events held	3		
% male	50.0	% reporting sex	100.0
% Medicaid patients	42.9	% SCHIP patients	28.6
% on neither	28.6	% reporting Medicaid/SCHIP status	87.5
% White‡	28.6	% Asian‡	14.3
% Black/African American‡	28.6	% Hispanic‡	14.3
% American Indian/Alaska Native‡	14.3	% Other‡	14.3
% Hawaiian/Pacific Islander‡	14.3	% reporting race	87.5

Summary of effectiveness in targeting high-risk populations that lack access to care

	value	%* of participants	% response
1. Participants with untreated decay (baseline)	12	57.1	87.5
2. Participants with urgent dental needs (baseline)	6	28.6	87.5
3. Participants with early dental needs (baseline)	6	28.6	87.5
4. Participants with treated or untreated decay (baseline)	18	85.7	87.5
5. Participants with sealants present (baseline)	6	28.6	87.5
6. Percentage of events targeting children in schools with <20% of students in free or reduced lunch program	0.0		
7. Percentage of events targeting children in schools with >=20% & <40% of students in free or reduced lunch program	0.0		
8. Percentage of events targeting children in schools with >=40% & <50% of students in free or reduced lunch program	100.0		
9. Percentage of events targeting children in schools with >=50% of students in free or reduced lunch program	0.0		

Summary of effectiveness of targeting high-risk teeth

1. Percentage of events targeting 1st molars	100.0	
2. Percentage of events targeting 1st molars of second graders	100.0	
3. Percentage of events targeting 2nd molars	100.0	
4. Percentage of events targeting 2nd molars of sixth graders	100.0	
5. 1.5-year attack rate in 1st molar surfaces (baseline) / based on # children	0.292	12
6. Estimated 9-year decay increment in 1st molar surfaces without program	29	
7. Among children age 12+, percentage of decayed or filled 2nd molar surfaces / based on # children	25.0	6
8. Estimated 9-year decay increment in 2nd molar surfaces without program**	26	

Summary of services delivered	value	% response
1. Number of children screened	24	
2. Number of screened children with special health care needs	3	
3. Number of children sealed	21	
4. Percentage of screened children with at least 1 sealant after event	87.5	
5. Percentage of screened children subsequently sealed*	100.0	87.5
6. Average number of surfaces sealed per child sealed	3.4	
7. Number of children receiving fluoride varnish	6	
8. Number of children receiving other fluoride treatments	6	
9. Number of children referred for dental care	12	
10. Number of children receiving oral health education	300	
11. Average hours of oral health education received per student instructed	0.5	

Summary of quality of services delivered	value		
1. Number of referrals that resulted in a dental visit	6		
2. Percentage of "early dental care" referrals that resulted in a dental visit*	50.0		
3. Percentage of "urgent care" referrals that resulted in a dental visit*	50.0		
4. Number of children evaluated for sealant retention 8 to 14 months from delivery	15		
5. Number of children evaluated for sealant retention <8 months / >14 months from delivery	0	0	
6. Sealant retention rate / # children based on	0.875	15	
7. 1st molar cavities averted by program (9-year horizon)	23		
8. 2nd molar cavities averted by program (9-year horizon)¶	21		

Summary of efficiency of input usage	Total outlays	Direct state funds	State funds + Medicaid reimb
1. Total cost	\$2,250.00	\$1,000.00	\$2,000.00
2. Cost per child screened	\$93.75	\$41.67	\$83.33
3. Cost per child sealed	\$107.14	\$47.62	\$95.24
4. Cost per surface sealed	\$31.25	\$13.89	\$27.78
5. Cost per cavity averted	\$50.80	\$22.58	\$45.15
6. Number of children screened per chair hour	0.50		
7. Number of children sealed per chair hour	0.44		
8. Number of children checked for sealant retention per chair hour	1.25		
9. Number of labor hours per chair hour during screening	1.50		
10. Number of labor hours per chair hour during sealing	1.50		
11. Number of labor hours per chair hour during retention check	5.00		
12. Administrative time (including organization, setup, and breakdown) per child screened (in hours)	1.50		

‡ The sum of the percentages in all racial/ethnic groups may exceed 100%, as more than one group may be reported per child.

* based on responses not entered as "99"

** based on 1st molar attack rate

¶ based on cavities averted per sealant for 1st molars