

Texas Vaccines for Children 2007 Instructions for Completing the Gain/Loss Calculation Table (Item #57) And Recommended 60-Day Stock Levels (Item #56)

INTRODUCTION

The purpose of completing the Gain/Loss Calculation Table and recommended 60-day stock levels is to assess how well the provider or clinic accounts for, and manages its' vaccine stock. Good inventory management is important to ensure a clinic has enough vaccine to adequately vaccinate their clients, yet not so much that it results in wastage. Because TVFC can contribute up to thousands of dollars of vaccine at no cost to a TVFC provider, it is important each provider or clinic manages their vaccine wisely.

Some clinics may be using the Pharmacy Inventory Control System (PICS). The primary purposes of PICS is to provide the state with "real-time" inventories, apply minimum and maximum stock levels for each antigen, automate vaccine orders, improve vaccine administrative data, inventory control and recall/quarantine measures, and reduce emergency orders. PICS uses minimum/maximum levels. The PICS roll-out schedule for private providers begins with a pilot process in region 07 in 2007, and is to gradually roll-out to the remainder of the state through 2008. The roll-out schedule is always subject to revision. If a clinic is using PICS, you will not do a Gain/Loss Calculation Table and the item # 56 and 57 will be answered "na".

If the provider is not using PICS, your purpose as a TVFC site reviewer is to:

- Review the provider's Monthly Biological Reports (C-33s) to determine, in general, how complete and accurate their accounting is, and
- Compile the vaccine usage to calculate the "recommended stock level" of each TVFC vaccine. When compared to the stock the clinic normally keeps on-hand, you will be able to advise the clinic on whether they should increase or decrease their stock levels to make the most efficient use of vaccines.

You will then use the results from these analyses to answer item #56 – appropriate vaccine stock levels, and item #57 – vaccine gain/loss on the Site Survey. Though most of this work involves simple math calculations, you will find some of the inventory forms you evaluate will demand a bit of critical thinking skills to decipher numbers and possible errors.

GETTING STARTED: MATERIALS AND TOOLS

To start, you will need:

- Copies of the clinic's C-33) for the past 12 months. The clinic should have these available for you upon arrival. It is a good idea to make sure they have all of the copies ready when you first arrive.
- The Gain/Loss Calculation Table (Excel Spreadsheet): The Gain/ Loss Calculation Table is the fourth sheet (tab), labeled "Vaccine Gain-Loss" in the computerized version of the site survey. The results from the Gain/Loss Calculation Table are entered in item #57 of the Site Survey.
- A Calculator: You will need a calculator to perform basic calculations or to explore discrepancies on the C-33s.

PREPARING THE MONTHLY BIOLOGICAL REPORTS

Use the C-33s for the most recent 12 months that the clinic submitted to their regional or local health department or vaccine depot.

- If the clinic does not have any C-33s, you should first mark Item #55 (clinic performs monthly vaccine inventory) in the site survey report as "n" for no. Then, you would answer Items #56 and #57 as "na" for not applicable. In the 'Other Comments' area of the 'Corrective action/Comments' column, write "see #55" to reference why they were not applicable.
- Check that all 12 consecutive C-33s are available. If the clinic does not supply you with all 12 months, make sure the clinic did not include two months' data reported on one report. If you do not get a complete set, use only the most recent set of consecutive months (see description below). Note in the 'Other Comments' area of the 'Corrective action/ Comments' column for Item #55 "only X months used". Include a short explanation of why the C-33s are missing. Fill in this number in the "Based on how many previous months" field in the left column of Item #57.
- The C-33s should be placed in consecutive order, with the first (oldest) month placed on top of the stack.

Example: *January 2006 (top of stack) to December 2006 (bottom of stack) for site survey date January 12, 2007.*

- You will use the vaccine inventory data from the most recent set of consecutive months, which normally should be 12 months. If there is a break in the sequence of C-33s, ask the clinic if possibly two months' data was reported on one report. If one or more of the months are missing, you should use only the most recent consecutive set of months (see example below).

School-based providers: If you are reviewing a school-based provider that returns ALL of it's vaccines to a depot over the summer, you will collect as many C-33s, starting with the most current month, until you have 12 C-33s. In essence, you would not consider the months the school had no vaccine as 'missing C-33s' (see example).

Example: *You are given C-33s for January 2006 to December 2006 (12 months).*

- *February 2006 C-33 is missing (11 reports total)*
- *Use ONLY March 2006 through December 2006 (9 C-33s used)*
- *Submit the entire set of copied C-33s provided to you*
- *Write on the face sheet (report on top of stack), in the lower right corner, the # C-33s used/# C-33c total = write "9/11"*

School

Example: *Your site visit is in October 2007. The school nurse's office does not give vaccine out over the summer, so the nurse sends all it's vaccine back to a school district depot on May 17, 2007. When she returns for the new school year on August 10, 2006, she retrieves the vaccine from the depot and restocks her vaccines. Therefore, there are no C-33s for June or July (no vaccine).*

- *Collect C-33s for September 2007-backwards until you collect 12 months of C-33s*
- *This means you should have C-33s for August 2007 – September 2007, if the only "break" in C-3s3 is for June & July*
- *When you do the accounting & calculations, you should ignore the missing June & July C-33s (consider May → August as consecutive months)*
- *Therefore, you should have 12 C-33s to use for your calculations*

- Even though the order of Items #56 and #57 would have you complete the recommended stock level first, you will find it best to complete the Gain/Loss Calculation Table (Item #57) first. Therefore, these instructions show how to complete the Gain/Loss Calculation Table first. To do this, you may use either a calculator or create your own spreadsheet.

COMPLETING THE GAIN/LOSS CALCULATION TABLE (Item #57)

- Opening the Gain/Loss Calculation Table

The Gain/Loss Calculation Table ("gain/loss table") is on the fourth sheet or "tab" in the computerized version of the DSHS Imm QA On-Site Evaluation Report. To get to the Gain/Loss Calculation Table, open the DSHS Imm QA On-Site Evaluation Report and look for the labeled tabs on the bottom of the screen window. Select the fourth tab, labeled "Vaccine Gain-Loss", to open the worksheet. If you have already filled in the header information (see Header tab), the PIN number, clinic name, your name, and the review date should automatically be filled in on the worksheet.

- Completing the Gain/Loss Calculation Table

Start with the set of consecutive C-33s you've compiled (see the "Preparing the Monthly Biological Reports..." section above). Open the DSHS Imm QA Site On-Site Evaluation Report and click on the Gain/Loss tab to open the Gain/Loss Calculation Table. Fill in the columns as illustrated below. Fill in the columns with the original data. If, while filling in the table, you notice math or transcription errors, do not change them and then enter corrected information – this negates what you are doing, which is checking for accuracy.

Fill in the columns in the table as described below:

The EASIEST way to fill in this table is to complete Columns A & F first. Then complete columns B, C, D and G.

- **In order to get Excel to automatically add the totals for columns B, C and D for each vaccine:**

- Click in the cell under the appropriate column for the designated vaccine
- Hit the '=' sign on your keyboard
- Enter the number of vaccines from the designated month
- Hit the '+' sign on your keyboard
- Enter the next number from the next month
- Hit the '+' sign and then the next number, etc and continue until all the months totals for the designated vaccine have been entered
- Then hit the Enter key to get your total
- If you make a mistake, you can hit F2 on your keyboard (while in the cell) and it will take you back to where you were without having to reenter any numbers
- Do this for each vaccine for each month for columns B, C and D

Make sure you fill in ALL columns (use 0's), even if there are no vaccines in stock.

Vaccine type	A Doses on hand – Beginning of first month	B Doses received	C Doses administered	D Doses sent back: Vaccine depot, LHD, RHD or other provider	E A+B–C–D (what they should have on-hand)	F Doses on-hand at the end of the last month	G Net doses lost or gained
Corresponding column(s) on C-33: For each vaccine listed in this column: (read across this row for how to fill out each column)	Column A Go to 1 st month from the reports used and enter beginning inventory # here: No calculation needed	Columns B&C added together Add together all “doses received” and “doses returned” for the reports used and enter total here	Column E Add together all “doses admin” for the reports used and enter total here	Columns F&G added together Add together all “doses sent back” and “doses issued out” for reports used and enter total here	None – Result of Gain/Loss DO NOT ENTER – Automatically calculated by spreadsheet	Column H Go to the most recent month of the reports used and enter the recorded “doses on hand at end of month”: No calculation needed	None – Result of Gain/Loss DO NOT ENTER – Automatically calculated by spreadsheet: If gain/loss seems large recheck calculations

Understanding the Site Survey Approach to Vaccine Gain or Loss

When TVFC providers submit C-33s to DSHS, these C-33s should be complete and accurate. This vaccine gain/loss indicator addresses how accurately the clinic accounts for its vaccine doses. When there is a discrepancy between the calculations on paper and the actual ending inventory, then a “gain” or “loss” occurs. A clinic with reasonable accounting practices should have an overall percent gain or loss < 5%. Any gain or loss > 5% may signal vaccine documentation, calculation or monitoring problems.

The key to approaching this item is to understand you are evaluating the clinic’s vaccine dose accounting practices, not their vaccine management practices. In other words, “vaccine losses” are accounting number losses due to poor documentation or calculation errors: i.e., these are not vaccines “lost” due to wastage or expiration. As long as the number of vaccine doses received, administered, wasted, and returned, etc. all add correctly to match ending inventories, there should be no gains or losses recorded.

Entering and Interpreting Results for Item #57

As you fill in the table columns, the worksheet will automatically calculate the net doses lost (a negative number) and the net doses gained (a positive number), along with the overall loss and the overall gain. These percentages from the Gain/Loss Calculation Table will be automatically filled in for you on Item #57 of the Site Survey. If there is no loss and/or no gain, a “0” will show in the appropriate box(es). You cannot edit these boxes.

Though the table fills in the gain/loss boxes in the far left column, you must use the pull-down list to select the number of months used to calculate this value. If you were not able to use 12 months of data due to one or more missing C-33s, note the actual months used, e.g., June 2003-December 2003 in the ‘Other Comments’ area of the ‘Corrective Action/Comments’ column and add an explanation why months were missing.

Vaccine Gains

When the ending inventory from the last C-33 (Column F) is more than the computed Gain/Loss ending inventory (Column E), the clinic has MORE vaccine than the computed numbers indicate they should have.

Some examples of why you might find a “vaccine gain”:

- An inventory shipment (vaccine doses received) has not been recorded
- Vaccine doses returned to the clinic stock have not been recorded
- Vaccines waiting to be returned to DSHS, etc. have been counted in the ending inventory, though they have been recorded as already sent back to DSHS
- Multi-use vials actually contain more than recorded (doses received = 10 doses, actual= 12 doses)

Vaccine Losses

When the ending inventory from the last C-33 (Column F) is less than the computed Gain/Loss ending inventory (Column E), the clinic somehow has LESS vaccine than the computed numbers indicate they should have.

Some examples of why you might find a “vaccine loss”:

- Vaccine doses administered have not been recorded
- Vaccines returned to the Local Health Department (LHD), DSHS or issued to other providers have not been recorded

General errors that could result in either a gain or loss:

- The beginning inventory from the first month is wrong (transcribed wrong from past month)
- The ending inventory from the last month is wrong (math error somewhere across the row)
- Math errors – Clinic staff or TMF reviewer

If either the overall gain or overall loss is > 5%, the clinic is not accurately accounting for its inventory. This should signal a review of the C-33s month by month, to pinpoint the possible cause of the problem. If you are able to determine whether the problem is a single miscalculation, transcription errors or missing documentation, then discuss this with the appropriate staff and note this in your comments. If you help make corrections on the C-33s, do not change your entries in the gain/loss table. Encourage the staff to perform physical counts of inventory at least monthly to double-check their documentation.

CALCULATING THE RECOMMENDED 60-DAY STOCK LEVEL (Item #56)

Clinics can handle their vaccine stock more efficiently by actively monitoring and maintaining stock levels of vaccines based on actual usage. The recommended 60-day stock level is a method to help clinics determine what the appropriate stock levels for each vaccine should be, in general. This level is calculated from the past usage data gathered from the C33s.

For each vaccine, follow the steps outlined below:

- Get the total number of doses administered from Column C of the Gain/Loss Calculation Table
- Calculate the “average doses administered” by dividing the total doses by the number of months used for the results:

Example: 8 months used to complete gain/loss table

160 = Column C “total doses administered” for DTaP (sum of 8 months’ doses admin)

$160 \div 8 = 20$ (average monthly doses of DTaP used)

- Calculate the estimated 60-day stock level (2.0 months’ worth) by multiplying the average monthly doses used by 2.0

Example: 20 average monthly doses used x 2.0 = 40 (60-day Stock Level)

- Use the results to fill in the boxes for each vaccine in the far left column in Item #56. If a vaccine listed is not stocked, enter a “0” in the box for that vaccine.
- The “Doses on Hand Previous Month” will be automatically populated in item #56 from your Gain/Loss entry in column F
- Compare the recommended 60-day stock level results with the “Doses on Hand Previous Month” for that vaccine. In general, most of the vaccines should be reasonably close, unless there is some reason otherwise, like seasonal demand (school entry July through September). Also consider whether the clinic population has changed in size or other characteristics.

Once you have calculated and entered the recommended 60-day stock levels in the Site Survey, refer to the instructions for Item #56 for specific guidelines for how to interpret the results and mark the item appropriately.